Papers

Greek Crisis: A Macreconomic Analysis

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Abstract

In 2009, due to its large budget deficit of 15.3 %, Greece, a Member Nation of the European Union, entered into an economic crisis,. Even after two financial bail-outs, Greece was unable to recover from its debt crisis. Greece debt crisis is still a massive drawback for the euro area and also to the global economy. This paper attempts to provide a macroeconomic perspective on the crisis by analyzing its background, entry of Greece into the Euro area, macroeconomic performance through the years since entry, the reasons for Greek crisis, geopolitical tensions surrounding the bail-out measures, and what lies ahead for the Greek government. The analysis presented in this paper is based on the major macroeconomic indicators for the time period between 2001 and 2014.

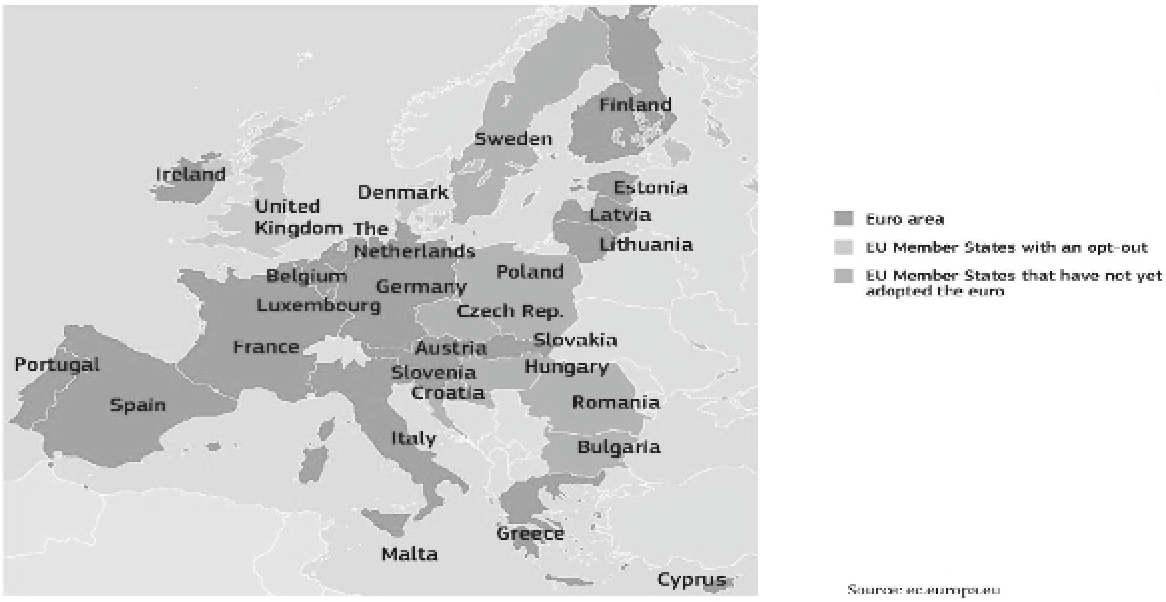
Keywords: *Euro Area, Greece, Economic Crisis, Macroeconomic Analysis.*

1. Introduction

The year 1999 marked the birth of *euro* issued on salary slips, receipts and bills. However, only in the year 2002, did the physical form of *euro* come into existence through banknotes and coins. Introduction of *euro* is a remarkable achievement in the process of integrating European economy, which started with the formation of European Economic Community in 1957 (Union, 2015). The European Economic Community allowed free movement of goods, people, services and capital among the Member Nations. Even though common market was in place, due to multiple currencies, it was hard for the trade to grow vigorously. In 1992, the Maastricht Treaty (also referred as the “Treaty on the Functioning of the European Union”) determined to have a strong and stable currency for Europe. So, after seven long years, the *euro* was introduced as a 'virtual' currency in the year 1999. *Euro* became the second largest economy in the world after US dollar, with the expansion of the euro area. The ultimate purpose of *euro* and EMU is to generate greater amount of employment and profit maximization, thus allowing European economies to flourish. Using *euro* as national currency has certain benefits. Some of them are, a firm and dependable currency, zero costs of currency exchange, improvising economy, a bold say for the EU in the global economy, and barrier free international trade and gains.

The Euro group is a non-official entity where the discussions around the responsibilities of *euro* are held by Finance Ministers of the euro area. The primary role of the group is to coordinate economic policies between the Member States of the euro area. Once in six months, euro group puts its work programme into action. The programme sets the framework for future euro group meetings and identifies main areas of attention. The Member States of the European Union (EU) are those who have embraced *euro* as the currency unit throughout the euro area. As of now, there are nearly 340 million people in the euro area, and it will tend to increase in future as the Union expands. All the Member States of the European Union are included within the Economic and Monetary Union (EMU) and their economic activities are coordinated in a way to fulfill the objectives of EU's economic growth and development.

2. Euro Nations



Source: ec.europa.eu

When *euro* came into existence in 1999, 11 countries of the European Union made the cut to form the euro area. The 11 countries at that time were Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, The Netherlands, Portugal and Spain. The latest addition to the euro area was Lithuania in 2015, thus making 19 EU Member States. Greece entered in 2001 as the 12th member of the euro area. The other Member States that have adopted *euro* as their currency include Slovenia, Cyprus, Malta, Slovakia, Estonia, and Latvia. Member Nations that have not yet adopted *euro* are Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden, and United Kingdom. Among the non-euro nations, Denmark and United Kingdom are 'opt-outs', and can join in future if they wish to (Union, 2015).

3. The Maastricht Treaty

According to Article 127(1) of the Treaty on the Functioning of the European Union, the most important purpose of the European System of Central Banks (referred as 'ESCB') is to control price fluctuations and maintain stableness in the market. Article 127(2) of the Treaty defines the role of ESCB, which includes setting up and executing monetary policy of the EU. The other roles include smooth functioning of payment systems, and to deal with foreign reserves of the Member Nations. Even though Member Nations are mostly responsible for economic policy within the euro area, respective national governments must align their economic policies to achieve the common goal of stability, growth and employment (Consolidated Version of the Treaty on the Functioning of the European Union, 2012). The Stability and Growth Pact (SGP) is one of the major tools for achieving EU's economic objective, by introducing restrictions on large budget deficits and government debts.

4. Greek entry

Article 3(1)(c) of the Maastricht Treaty states that the "*Union shall have exclusive competence in the areas of monetary policy for the Member States whose currency is the euro*." According to Article 126(1) of the Treaty, the Member Nations should be free from exuberant government budget deficits. Article 126(2) of the Treaty defines two criteria to maintain price stability and growth. First, ratio of fiscal deficit to GDP at market prices should not be more than 3 per cent, and second, ratio of government debt to GDP at market prices should not be more than 60 per cent. In order to enter into the euro area, Member States of the European Union are expected to satisfy 'convergence criteria' laid out in the Maastricht Treaty. Article 140 of the Treaty defines on the 'convergence criteria' that the Member States should follow to make an entry into euro area. The criteria are that the long-term interest rate should not exceed 2 %; inflation rate should not be more than 1.5 %; and no competitive currency devaluations with exchange rate fluctuations not exceeding 2.5 % (Consolidated Version of the Treaty on the Functioning of the European Union, 2012). Along with this, Stability and Growth Pact (SGP) proposed by Germany was to prevent Member Nations from falling into large deficits. Greece, on the other hand, despite failing on meeting the 'convergence criteria' (as seen in Table 1) entered the euro area in 2001, with the help of top investment bankers fudging false data about the macroeconomic conditions of Greece.

Table 1: Greece's Macroeconomic Status before 2001

	1998	1999	2000	Limit
Ratio of Government debt-GDP at market prices	*89.2 %*	*88.5 %*	*99.64 %*	***60 %***
Ratio of Budget deficit-GDP at market prices	*4.13 %*	*3.38 %*	-	***3 %***
Inflation rate	*4.53 %*	*2.15 %*	*2.89 %*	***1.5 %***
Long-term interest rate	*8.48 %*	*6.30 %*	*6.10 %*	***2 %***

Source: Eurostat (extracted on 13.08.2015)

As seen from the (Table 1) above, it was obvious that Greece was never eligible to enter the euro area and the current outcome was not entirely unanticipated. Despite failing to meet the requirements of the convergence criteria, EU qualified Greece to enter the euro area in 2001. Greece, which is situated at the east corner of Europe, came into the ambit of EU, as a 12th Member State. By adding Greece into the euro area, EU wanted to show the world that it is the largest Union of Nations, and can handle Nations even at the far end.

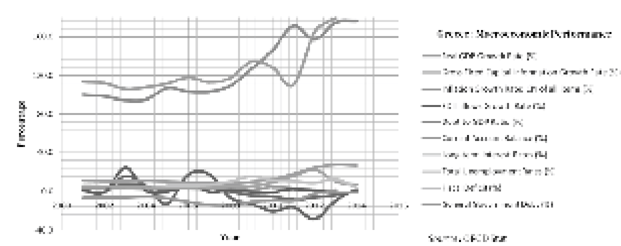
5. Greece's macroeconomic performance: 2001 – 2014

When Greece joined the euro area in 2001, its GDP per capita was US$ 20,696.1, the lowest in the time span of fourteen years. In 2004, it was US$ 25,109.7, an increase of 17.6 %, the reason being the event of Summer Olympics in Athens. Among all, the highest GDP per capita (US$ 30,872.4) was observed in the year 2008. For the year 2014, it was US$ 26,015.6, declining considerably over the years. The ratio of Real Effective Exchange Rates (REER) in 2001 was 85.3 per cent, the lowest in the fourteen year duration. The ratio reached to its peak in 2009 registering a high of 101.4 per cent. In the year 2014, the ratio has come down to 95.3 per cent. Total tax revenue for the year 2001 stands at 33.2 per cent, the highest of revenue collected in 2002 at 33.9 %. Over the fourteen year period, total tax revenue of the Greece government floated between 30 % and 34 % (see Appendix-Table 3).

In 2001, immediately after entering the euro area, Greece's debt-to-GDP ratio was 100.1%. During the Athens Summer Olympics, debt-to-GDP ratio reduced to 95.07 %, one of the lowest over the years. When the crisis triggered in 2009, the debt-to-GDP ratio was at 126.77 %, jumping from 109.3 the previous year. Recently in 2014, the debt-to-GDP ratio has shown a tremendous increase registering 176.31 %, a highly unsustainable ratio. Current account balance during 2001 was at -6.8 %, lowest registering in the year 2008 at -14.4 %. In the year 2013, it was at 1.2 %, highest over the years after Greece entry into the euro area. Long-term interest rates in 2001 were at 5.3 %, the lowest seen in 2005 at 3.6 %. From the year 2005, interest rates were increasing at a steady rate and it reached the peak in 2012 at 22.5 %. Unemployment rate.

Unemployment rates during the Greek entry were at 10.7 % in 2001. The lowest unemployment rate was seen in the year 2008 at 7.8 %. In the year 2013, the rate was at 27.5 %, highest among the duration of fourteen years, the reason being economic crisis and its austerity measures. In 2014, the unemployment rate was registered at 26.6 %. Greek's budget deficit was at the peak in 2009 at 15.3 %, which asked for bail-out funds and consequent austerity measures and reforms (Figure 1).

Figure 1: Macroeconomic Performance: 2001-2014



Over the years, the budget deficit was fluctuating wildly; in 2014, it was 3.5 %. In 2001, the General government debt of Greece was at 113%. In 2003, surprisingly it was at its lowest for the fourteen year period, registering 105.9 %. Over the years, due to various austerity measures and economic crisis, Greek's general government debt has increased, reaching its peak in the year 2013 at 179.2 %. In terms of real GDP, the growth rate was at 3.74 % during 2001, and the highest was observed at 6.64 % in 2003. From 2006 onwards, the growth rate was declining and in the year 2011, it registered a negative growth rate at 8.86 %. Recently in 2014, real GDP growth rate was at 0.77 %. Growth rate of Gross fixed capital formation (otherwise called 'investment') in the year 2001 was at 1.42 %, and in the year 2007, it registered a highest of 17.78 % for the fourteen year period. The lowest growth rate of investment was observed in the year 2012 at -28.66 %, in the year of the second bail-out. The growth rate of investment was at 2.66 % in the year 2014. Inflation rate (Consumer Price Indices of all items) was at 3.4 % in the year 2001. Highest growth rate of inflation was registered in 2002 at 3.6 % and the lowest was at -1.3 % in the year 2014. The growth rate of FDI inflows into Greece in 2001 was 0.1 %. Surprisingly, FDI inflows peaked to 24.4 % in the year 2003, when the announcement for Athens Olympics was made. When the economic recession hit the country, the growth rate of FDI inflows was at –0.5 %. Recently available data for the year 2013 shows that the country's growth rate of FDI inflows was at 0.5 % (Figure 1).

6. Greek crisis

From 2001 to 2007, with huge inflows of *euro*, Greece's GDP progressed considerably almost equaling the euro area's average. Despite economic growth in the country, Greece faced some serious issues that lead to the current situation of debt crisis. To start with, most of the economic prosperity was backed by foreign indebtedness rather than equity. As a result, markets were volatile susceptible to market fluctuations. Second, increased inflows of foreign direct investment, for instance, US$ 5357.9 million in 2006, and US$ 4489.9 million in 2008, allowed the Greek government to generate larger public sector employment, and increment subsidies, pensions, and also pay greater salaries. But, there were certain institutional loopholes such as early retirement options that allowed generation of sunk costs. Third, since the entry into the euro area, Greece has never met the 'convergence criteria' not even for once till date. By 2009, the general government deficit was at 15.3 %, the highest over the years, with the general government debt at 134.6 %. Such poor performance in the country's economy created limited interest among private investors to investment. Fourth, the total tax revenue was lowest in the year 2009 at 30.5 %, since Greeks are habitual tax evaders and their tendency to prefer cash over bank transactions. Due to above mentioned reasons, the Greek crisis triggered during late 2009, when credit rating agencies were uncertain of Greece's debt conditions, and downgraded the country's worth.

Bail-out funds

In May 2010, the troika (European Commission, European Central Bank, and International Monetary Fund) reacted to the Greek debt crisis by lending US$ 144.74 billion (Euro110 billion*)* as first bail-out fund. This fund was provided for the purpose of preventing sovereign default, and to meet the financial needs of the government from May 2010 to June 2013. The funding was provided along with austerity measures, institutional reforms and privatization, but didn't happen in any significant way. In February 2012, EU came up with a second bail-out fund of US$ 166.67 billion (Euro 130 billion*),* along with US$ 61.54 billion (euro 48 billion) to recapitalize banks. This bail-out fund included debt write-off of 53.5 % for private creditors holding Greek government bonds. The measures included 22 % cut in minimum wages. Even the second bail-out fund failed eventually. Later in July 2012, when the condition of Greece had not shown any improvement, ECB chief of that time announced that policy makers will do anything to save the euro area, which made the markets soar. In December 2012, International Monetary Fund committed loan of another US$ 10.51 billion (euro 8.2 billion) as a means to support Greece to come out of its debt crisis. But, in January 2014, Syriza government led by Alexis Tsipras came to power with the political agenda of ending further austerity measures. Out of 358.89 billion US *dollars* (323 billion *euro*) debt, Greek has to pay US$ 44.44 billion (euro 40 billion) to private banks, another US$ 44.44 billion (euro 40 billion) to IMF and ECB, and the remaining US$ 279 billion (euro 243 billion) to the euro area Member States led by Germany, France, Italy and Spain. In March 2015, ECB introduced 'quantitative easing' to the euro area Member States to maintain price stability of *euro*, and to avoid bankruptcy. In July 2015, with the total debt at US$ 358.89 billion (euro 323 billion)*,* public debt at 170% of GDP and unemployment rate at 26%, Tsipras government rejected the last troika proposal and called for referendum. Despite 61 % of results declared 'NO' through referendum, Tsipras had to agree to the terms and conditions of the creditors, failing to comply would lead to bankruptcy and political tension across the country.

The recent bail-out conditions

The third bailout package that Tsipras government agreed upon was to hand over US$ 55.56 billion (euro 50 billion) of Greek assets to a special fund that will be dedicated solely to paying off debt. In return, Greece will get US$ 91.1-95.6 billion (euro 82-86 billion) as bailout fund over a period of three years duration . The latest measures include higher taxes, cuts to government pensions, IMF's close supervision on the domestic economy, and public administration will be overhauled under the equally sharp eye of the European Commission. Short-term loans Greek government had sought would not be forthcoming in the absence of a full bail-out. There could be no backtracking on commitments the Greeks had already made on issues such as pension reform and VAT. Reforms must come before any discussion on restructuring Greece's debt (ASSOCIATED PRESS, 2015). Third bail-out would involve fresh conditions in areas like product-market reforms and collective bargaining rules. Mr Tsipras gave way to IMF demands on VAT, agreeing that most goods should come under the highest 23 % rate, and scrapping the 30 % discount enjoyed by Aegean islanders. Change in Pension System include conditions such as – with immediate effect, minimum pensions will be payable only at 67, the statutory retirement age; many loopholes that let people retire early will close. By 2023 almost all people will be eligible to retire at the earliest at 62 with payments actuarially reduced from the amount they would get at 67, unless they have contributed for 40 years.

7. Deepening of the crisis

Because of the brinkmanship drama played by Tsipras and the creditors, Greeks debt crisis has deepened further. With capital controls in place and restricted withdrawal of money, it is difficult for the Greek economy to function smoothly. Prospective losses from a surge in non-performing loans, already very high at 34 % at the end of 2014 will eat into bank capital. On 2015 July 23rd, the ECB provided another set of reforms with Emergency Liquidity Assistance (ELA) worth Euro 900 million. Without money to compensate wages and pensions, the Greek government will have to issue IOUs, creating an informal parallel currency, trading at a huge discount. Greece has slipped back to a mostly cash economy, with capital controls and shuttered banks. Although concern about a “Grexit” has subsided once again, households and especially businesses may now worry about a “bail-in” of big deposits (above Euro 100,000) – converting some of them to equity – in order to recapitalize the banks, as happened in Cyprus in 2013. EU's bail-in rule is not supposed to apply until 2016, but if introduced, would destroy the working capital of small and medium-sized economic activities, the country's central cohesive source of support and stability.

Geopolitics surrounding the bail-out and the crisis

There are Eurocrats who fear that Grexit might compound Europe's migration problem. Over 63,000 migrants (mainly Syrians) have arrived in Greece this (2015) year. The EU relies on “frontline” states like Greece to fingerprint and register as many such people as possible. This co-operation, never solid, could break down entirely. Geopolitical concerns loom large, too. For months some Europeans have feared that a Syriza-led government might seek to strengthen Greece's long-standing ties with Russia. Some European Institutions are already drawing up plans for humanitarian assistance packages for a post-Grexit Greece.

8. The Greek future

On June 30th Greece failed to make US$ 1.72 billion (euro 1.55 billion) payment to the IMF, the biggest default in the fund's history. Five years into the debt crisis, the country has suffered a loss of 25 per cent of its GDP and a debilitating rise in immiseration and the unemployment rate. For all of their railing against austerity, Greek leaders mostly cut deficits instead of promoting growth. In the longer term some hope that the European Stability Mechanism (ESM), permanent bail-out fund of US$ 555.56 billion (euro 500 billion) can become a European Monetary Fund (EMF) that could oversee future rescues, freeing IMF from its European burden. When the earlier bail-outs were agreed to, it was feared that Grexit would cause so much panic in the markets that other vulnerable countries might also be pushed into default. But since then the ECB has put in place a programme of quantitative easing that has kept bond yields low. When Greece eventually got the debt forgiveness in 2012, its official debt to public institutions was excluded. This is the real scandal of the Greek crisis. The current deal is really tough in terms of the fiscal targets; it's punitive, focused on tax hikes rather than cutting expenditures, and probably makes little macroeconomic sense. By forcing the government to remove institutional barriers to competition and innovation the deal will create a sound basis for economic growth and development. In another triumph of wishful thinking, the deal also reckons Greece can soon borrow in private markets. Although previous bail-outs have greatly reduced the burden of interest payments to the euro area creditors, which start only after 2020, Greece's debt stock is now projected to peak at 200 % of GDP. The only option is debt relief. Yet the euro area has put off the decision of whether to extend maturities for another day. The latest Euro summit made it clear that Greek membership of the Euro is transactional and contingent. Greece's debt status is extremely unsustainable as IMF's Chief Christine Lagarde pointed out. To achieve sustainable economy, Greece needs measures such as a nominal haircut of

50 %, interest rate concessions of 70 %, or a debt rescheduling to a 20 year weighted average maturity. In order to avoid 'Grexit' some leniencies are required such as debt relief, thus preserving hard earned sixty years of progress as EU (Consiglio & Zenios, 2015).

Despite causing turbulence among the euro area, what would be the case of Greece's exit (Grexit)? The other side of the argument is that, Greece should bailout and get out of the euro area, freeing itself and start a new beginning. Two immediate negative aspects of Grexit would be that, emergency liquidity assistance (ELA) offered to Greek banks would be stopped, and introducing *drachma* would increase inflation immediately. On rewinding Greece's history into the euro area, tells us that, Greece never met the standards, to be a part of the euro area. Economic experts suggest that, Greece itself should go out of the euro area, and start a new economic recovery, since it has the potential to improve more quickly (BIRD, 2015). Going out of the zone voluntarily would yield considerable benefits for the country, like a new born. First is the benefit of bringing back its own currency *drachma* into world market, which allows them to pull investors and export cheaply, creating employment opportunities in large numbers. In the past half-decade, *euro* has been an obstacle in the growth of the country. Devaluing *drachma* will have high financial gains, since Greece is known for its high income from tourism industry that contributes nearly 18 % of its GDP. The other sectors which would see growth are agriculture industry and service industry along with tourism industry. The other benefit will be to have an independent central bank with its own discretion, irrespective of currently held ECB to carry out monetary policies. The most important of all is to collect tax and have autonomy in decision making rather than receiving criticism from EU and IMF, as instructed by Germany and others. It is high time that Greece should use this chance as an opportunity to learn from its mistakes and progress towards economic welfare.

APPENDIX

Table 2: Chronology pf the Greek Crisis

2009 (Sept – Oct)	Papandreou reveals large budget deficit
2010 (Apr – May)	First Greek bail-out; Portuguese bail-out
2010 (Oct – Nov)	Irish bail-out
2012 (Jan – Feb)	Second Greek bail-out
2012 (Feb – Mar)	Second Greek write-down finalized
2012 (May – Jun)	Spanish bank bail-out
2012 (Jun – Jul)	ECB will do "whatever it takes" to preserve the *euro*, lowering bond yields
2013 (Feb – Mar)	Cypriot bail-out
2015 (Feb – Mar)	ECB quantitative easing begins
2015 (May – Jun)	Tsipras calls referendum; Tsipras calls referendum; Bail-out expires, Greece defaults on *euro* 1.5 billion payment to IMF

Table 3: Macroeconomics Performance - a. Greece - Overview

Year	Real GDP growth rate (%)	Invest ment growth rate (%)	Current account balance (%)	Inflation growth rate: CPI all items (%)	Long-term interest rates (%)
2001	3.7	1.4	-6.8	3.4	5.3
2002	3.2	-1.1	-6.7	3.6	5.1
2003	6.6	15.7	-6.5	3.5	4.3
2004	5.0	5.5	-5.4	2.9	4.3
2005	0.9	-12.9	-7.3	3.5	3.6
2006	5.8	17.4	-10.9	3.2	4.1
2007	3.5	17.8	-14.0	2.9	4.5
2008	-0.4	-6.6	-14.4	4.2	4.8
2009	-4.4	-13.2	-10.8	1.2	5.2
2010	-5.4	-20.9	-9.4	4.7	9.1
2011	-8.9	-16.8	-10.0	3.3	15.7
2012	-6.6	-28.7	-2.6	1.5	22.5
2013	-3.9	-9.5	1.2	-0.9	10.1
2014	0.8	2.7	..	-1.3	6.9

Table 3-b: Economic Indicators

Year	Fiscal deficit growth rate (%)	Inflows of FDI (US dollar, billions)	Debt ratio of GDP (%)	Gener al govern ment debt (%)	Total unempl oyment rate (%)
2001	..	1.59	100.1	113.0	10.7
2002	..	0.05	98.28	111.8	10.3
2003	..	1.28	94.26	105.9	9.7
2004	..	2.10	95.07	107.6	10.6
2005	5.6	0.62	106.85	111.4	10.0
2006	6.1	5.36	103.41	117.8	9.0
2007	6.7	2.11	103.08	112.8	8.4
2008	9.9	4.49	109.3	117.2	7.8
2009	15.3	2.44	126.77	134.6	9.6
2010	11.1	0.33	146.01	128.3	12.8
2011	10.2	1.14	171.34	110.2	17.9
2012	8.7	1.74	156.89	164.2	24.5
2013	12.3	2.57	174.93	179.2	27.5
2014	3.5	..	176.31	..	26.6

Table 3-c

Year	Real effective exchange rates ratio (%)	Total tax revenue (%)
2001	85.3	33.2
2002	88.0	33.9
2003	93.6	32.3
2004	95.8	31.5
2005	95.9	32.1
2006	96.6	31.6
2007	98.0	32.5
2008	99.8	32.1
2009	101.4	30.5
2010	100.0	31.6
2011	100.6	32.2
2012	96.8	33.8
2013	95.8	..
2014	95.3	..

End Notes

Exchange-rate of Euro to US dollar assumed at various points of time are shown in the table below

Ref.no.	Date/year	Exchange-rate: Euro per US$
1	2010	0.76
2	2012	0.78
3,4,5,6	2015	0.90

Source: Data extracted on 13th Aug 2015 05:58 UTC (GMT) from OECD. Stat

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