Mapping the Socio-Economic Indicators of Greece from the Implementation of the Monetary Policy and the Tax Administration

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Abstract
The economic crisis that led to a decline in private consumption in the period 2009-2016 is the main factor that has accelerated developments in the country's business map, in the sense that in many cases of business development in Greece there are structural weaknesses revealed by the crisis. This confirms that the country's economic crisis cannot be an alibi for the many problems of the Greek economy.

The impact of the economic crisis differs not only between countries where low- and middle-income countries are more affected by developed countries but also within countries. The dramatic decline in wages and pensions has led to a decline in the purchasing power of citizens. The debt crisis, the weakening of demand in the context of addressing the competitiveness of the Greek economy and the significant structural interventions in the labor market, affected supply and demand in the labor market and its participants.

The purpose of this paper is to present the social and economic indicators of our country by implementing the policy of the memorandums and the Tax Administration. In particular, a mapping exercise is being undertaken in the period 2009-2016:

• The number of starts, change of tax office and business holidays
• The business map of our country
• Unemployment rates as they have been in our country
• The degree of contribution of austerity programs and memorandum policies to addressing unemployment.
• The areas and categories of occupations where the highest unemployment rates have occurred.
• The role of Tax Administration in addressing these problems.

Keywords: tax administration, entrepreneurship, memoranda, unemployment, GIS

1. Introduction
In recent years, Greece has been experiencing significant changes in social and economic terms due to the economic crisis. In order for Greece to cope with the economic crisis and move on the path of progress, it has been involved in the process of signing Memoranda of Understanding in cooperation with the European Commission, the European Central Bank (ECB) and the International Monetary Fund (IMF). The Memorandum is an economic adjustment program which sets out measures that the country will have to respect in order to get into economic growth. These programs are also accompanied by borrowing contracts that are necessary for the Greek economy to operate during their observance, since due to its troubled financial situation, the country will not be able to address the financial markets and expenses will far exceed the revenue.

The main objectives to be achieved by the implementation of the program are to support the economy's liquidity, to consolidate the financial situation of Greece and to create a competitive economy based mainly on exports and investments. In order to achieve these objectives, a series of ambitious and interrelated policies relating to the financial sector, the financial sector and the improvement of competitiveness (e.g. budget deficit mitigation, liquidity support, recapitalization of banks, improvement of the business environment). When a country's "go to hand" program is its responsibility. In order to pass, the representatives of the authorities of this country should consult with the Institutions.
The Institutions propose the objectives for each area of action of the program and the government is considering and deciding on concrete measures to achieve these objectives. This therefore means that the process of taking and implementing the measures of the Memorandum is a task for governments. Finally, the Institutions check every three months whether the measures are being properly implemented and proposes the disbursement of the installment of the loan. (Papastathis, 2012)

2. Theoretical Framework

2.1 Memoranda Signed by Greece

In the period 2009-2016 our country has received a total of € 301.9 billion from the Support Mechanism (EU, ESF and DTN), with the obligation to apply hard budgetary adjustment.

During this six-year period, the country has undergone many political and economic developments. But there is no doubt that the biggest change was in the psychology and lifestyle of Greek citizens. With wages, pensions and income in general declining as well as social benefits being reduced or even disappear, Greek citizens became more serious, responsible, restrained and hardworking. At the same time, however, they became even more pessimistic and uncertain, with the result that a large number of citizens left the country and settled (often permanently) abroad hoping to find a better future. For the Greek government, the implementation of the economic measures contained in the memoranda was something unprecedented and unclear, with the government changing many times and many of the measures not being implemented.

2.1.1 The First Memorandum (May 2010 - December 2011)

In May 2010, the first loan agreement was signed for a total of € 110 billion. The main objective of the memorandum was to meet the needs of our country for the next two years. Unfortunately for Greece, tackling the problem was not that easy. The delay in adopting structural measures, the attempt to circumvent the Memorandum's agreement, the difficulty of persuading the public to implement reforms, and the indecisiveness of the political costs of tough decisions, cost in time and money, leading to the signing of the second memorandum (Papantoniou, 2013).

2.1.2 The Second Memorandum (March 2012 - June 2015)

In March 2012 the second fiscal adjustment program of € 165 billion is signed.

2.1.3. The third memorandum (August 2015 - August 2018).

The third economic adjustment program for Greece begins officially with the signing of the Memorandum of Understanding (MoU) and lasts for three years. It began on August 19, 2015, and will run until August 2018. The amount of funding for the entire program is up to € 86 billion. The money will be given after successfully passing the evaluations from the implementation of the Memorandum of Understanding so that there are security controls to ensure proper compliance.

2.2 The Total Amount Received by Greece Through the Memoranda

The distribution of Greek borrowing in the three memoranda is as follows in Table 1 (Sarafidis, 2016):

Table 1. Total forecasted loan amount in the 3 memoranda (€ billion) (Source: Sarafidis, 2016)

<table>
<thead>
<tr>
<th></th>
<th>GLF</th>
<th>IMF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st MoU (May 2010 - December 2011)</td>
<td>52.9 (72.5%)</td>
<td>20.1 (27.5%)</td>
<td>73 (100%)</td>
</tr>
<tr>
<td>2nd MoU (March 2012 - June 2015)</td>
<td>EFSF</td>
<td>IMF</td>
<td></td>
</tr>
<tr>
<td>3rd MoU (August 2015 - August 2018)</td>
<td>ESM</td>
<td>IMF</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>269.8 (89.4%)</td>
<td>32.1 (10.6%)</td>
<td>301.9 (100%)</td>
</tr>
</tbody>
</table>

1 The joint fund that managed the bilateral loans Greece signed with the rest of the EU countries; it was named Greek Loan Facility (GLF).
2.2.1 The Amount of Greece's Debt

According to the Public Debt Report of the Public Debt Management Agency, the central government debt at 30/6/2019 amounts to € 356,5 billion. In detail, the Central Government debt categories are presented in the following Figure 1:

![Central Government Debt Schedule as of 30-6-2019](http://www.pdma.gr/en/)

3. Social Indicators of Greece from the Application of the Memorandums

The economic crisis leads to precarious work, unemployment, and eventually poverty that leads to the social exclusion of more and more groups, which is a source of various mental disorders.

3.1 Indicators of Poverty

According to the Bank of Greece report, relative poverty rose by 8% in 2015, after a decline of 7.1% in 2014. The relative poverty rate was down by 0.4% in 2010, down by 2.8% in 2011, a zero change in 2012 and a 1.5% increase in 2013 (State Budget Office, 2016), as shown in the following Tables 2 & 3.

The effects of fiscal measures on poverty indicators %

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>relative poverty</td>
<td>-0.4</td>
<td>-2.8</td>
<td>0</td>
<td>1.5</td>
<td>-7.1</td>
<td>8</td>
</tr>
<tr>
<td>poverty gap</td>
<td>-0.6</td>
<td>-2.9</td>
<td>0.4</td>
<td>-2.0</td>
<td>-9.7</td>
<td>11.1</td>
</tr>
<tr>
<td>seriousness of the risk of poverty</td>
<td>-1</td>
<td>-1.7</td>
<td>0.7</td>
<td>-4.4</td>
<td>-11.9</td>
<td>14.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>relative poverty</td>
<td>-3.5</td>
<td>-3.3</td>
<td>-0.7</td>
<td>-0.8</td>
<td>-9.2</td>
<td>9</td>
</tr>
<tr>
<td>poverty gap</td>
<td>-1.4</td>
<td>-3.0</td>
<td>0.6</td>
<td>-3.4</td>
<td>-10.8</td>
<td>12.8</td>
</tr>
<tr>
<td>seriousness of the risk of poverty</td>
<td>-1.1</td>
<td>-0.6</td>
<td>1.0</td>
<td>-5.9</td>
<td>-13.2</td>
<td>16.1</td>
</tr>
</tbody>
</table>

In terms of disposable income, a catalyst for the worsening in 2015 shows, according to the report, that measures voted in the third memorandum and implemented since summer, such as increased pension contributions for health care and
direct taxes, due to the abolition of the special tax treatment of farmers and the abolition of the additional tax on rental income (small positive effect). Measures of the first two years of fiscal adjustment - 13th and 14th pension cuts and the imposition of a solidarity levy in 2010, as well as the introduction of the Specialized Structured Electrically Exacted Area Fee (ETSD), an increase in the business fee, an increase in the solidarity levy and an increase in unemployment contributions in 2011 - caused the largest decrease in disposable income of households (by 4.2% and 6.9% respectively). Accordingly, the fiscal consolidation over the next two years, gradually passing the weight of the adjustment from taxes to cuts or redistribution of expenditures, brought, according to the Bank of Greece, more modest reductions (2.0% in 2012 and 3.1% 2013). In 2014, the first year of fiscal relaxation, household disposable income increases by 1.2%, to be reduced again marginally in 2015.

In 2018 the population in Greece at risk of poverty or social exclusion decreased by three percentage points compared with 2017, at 31.8% of the total population (3,348,500 individuals), according to the Survey on Income and Living Conditions of ELSTAT. This decline is remarkable and is attributed to both the recovery of the economic activity and income as well as to the strengthening of social protection. We note, however, that the country’s population being at risk of poverty or social exclusion remains significantly higher than the Euro area average, as shown in the following Figure 2.

![Figure 2. Share of people at risk of poverty or social exclusion in Greece and the Euro area (Source: Parliamentary Budget Office, 2019).](image)

### 3.2 Prosperity Indicators

In an OECD report on the well-being of citizens and their living conditions, it is estimated that our country is doing well enough on the basis of all the criteria of prosperity, apparently in the following figure, by being close to the average condition in a large number of parameters of the Better Life Index such as:

- balance of life - work,
- sense of security,
- life satisfaction,
- health,
- participation,
- environment,
- education,
- society,
- work,
income and,
house.

Economic theory argues that it is important to study and analyze consumer and savings behavior of households. Households hold financial data (currency, deposits, stocks, etc.) and non-financial items (such as dwellings, equipment, etc.), which make up their total wealth. When the value of these assets increases, households estimate that they are richer and increase consumption. Consumption is mainly influenced by disposable income and changes in household wealth (Bank of Greece, 2016).

3.3 Industrial Relations

But the real economy is influenced, albeit indirectly, by labor relations. The perception that the Greek labor market is trying to achieve in the labor market, through the measures outlined in the Memoranda of Understanding, is the strong competitiveness of businesses at the expense of labor relations and social structures. Thus, steady and full employment is gradually being degraded and more flexible forms of work involving lower wages and workers' rights are adopted. In addition, the way in which collective agreements and remuneration are formulated, redundancies are liberalized and the working time is elasticized with what it can mean for earnings (Kozis, 2012).

3.4 Indicators of Economic Freedom

The "economic freedom" of the Heritage Foundation, a conservative think tank in the US, is a composite indicator that measures four categories of variables: rule of law, government size, regulatory efficiency and freedom of economic activity (Karamanis, 2017). Greece, in this case, as shown in the following figure 2, follows a downward trend.

![Activity of economic freedom in Greece during 1995 – 2015 (Source: Karamanis, 2017)](image)

It is noteworthy that an improvement in the country's position is observed between 1999-2000 and the three-year period 2006-2009. On the contrary, a significant fall is observed during the 2009-2016 crisis. It is also important that in 2016 Greece has a rating of 53.2, ranking it in the group of countries with a "Mostly Free Economy", with a global average of 60.7 ("moderately free" economy) and the average of Europe 66.9 (similarly "moderately free" economy). Lastly, the index is showing a significant decline in the last two years (2015-2016), according to the diagram below.

According to Karamanis (2017), the degree of freedom of the economy is impressively positive in dealing with poverty and inequality, thereby enhancing social cohesion, keeping pace with the foundation of social and political rights, tackling illiteracy, fighting corruption and substantially increases the quality and life expectancy. In addition, according to the Heritage Foundation, countries with high economic freedom have a double indicator in terms of environmental protection than countries with limited financial freedom.

3.5 Unemployment

The crisis in employment is also emerging in our country with rising unemployment trends. Today, despite the significant economic growth in recent years, the Greek employment model is characterized by high unemployment rates, a low participation rate of the economically active population in the labor market and the creation of low-quality jobs.
The highest unemployment rate is in July 2013 reaching 27.5%. Since then, there has been a slight downward trend. It is worth noting that the unemployment rate at the end of 2016, according to the Hellenic Statistical Authority announcement on 9/2/2017, stood at 23% (1,100,118 unemployed), or three times that of January 2009 (7.9%).

Unemployment varies greatly from region to region, since it is significantly affected by changes in the working population, seasonal employment, age composition and the effects of aging. In particular, it is affecting more and more people today and finding work has become an everyday struggle for many. The problem of unemployment in our country is largely due to institutional factors and to the attitude of the Greeks, and therefore its fight requires the immediate change of political and social institutions in conjunction with other factors such as attracting investments that will contribute to the recovery of the Greek market. Active employment policies and training programs can help to reduce unemployment, especially in social groups facing the most serious problem (Bank of Greece, 2016)
3.6 Reducing Purchasing Power

The dramatic decline in wages and pensions has led to a decrease in the purchasing power of citizens and the use of stocks (deposits) to meet the different needs. From 2010 to 2016, according to GEMI data, 270,303 businesses were opened and 290,934 businesses closed.

Figure 6. Total number of unemployed during the period 2012-2019 (Source: Trading Economics, 2019)

Figure 7. Total number of unemployed during the period 2016-2019 (Source: Parliamentary Budget Office, 2019).

Figure 8. Evolution of the number of enterprises opened during the period 1/1/2010 to 31/12/2016 (source: Hellenic General Commercial Registry, 2017)
Businesses that were not exporting were affected by the fall in domestic demand, since they did not find buyers and thus started to reduce turnover, revenues and profits. Some of them were forced to cut salaries in the best of cases, while others cut off staff to balance their finances. Some have ceased to function as they have failed to meet the satisfaction of loan and employee and supplier payments (Markantonatou, 2013). Indeed, high tax rates, given the great mobility of capital between countries and competition in the taxation of profits, to attract investment, appear to be a bottleneck in the process of economic growth. At the same time, unemployment and poverty have increased their rates, a logical consequence of what has been said above about the closure of businesses (Liargovas et.al., 2018).

3.7 Misery Index of Greece (Misery Index - MI)

Misery Index MI was devised by Arthur Okun and is an indicator of the current economic situation in a country. It is a measure of the economic well-being of citizens for a particular economy and is calculated by the sum of the unemployment rate and the rate of inflation for a given time. A high poverty index means that there is weak economic activity and high inflation rates in the country, leading to what we call stagflation.

Bloomberg is ranked fourth, with Greece ranked fourth, with Venezuela ranked first in the third consecutive year, on the basis of inflation and unemployment prospects.

In particular, Greece accounted for 23.2 points and ranks fourth, the first of the European countries. Greece even increased its points compared to last year when its “performance” was at 22.7, although it remained stable in fourth place.

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Figure 9. Evolution of the number of enterprises closed during the period 1/1/2010 to 31/12/2016 (source: Hellenic General Commercial Registry, 2017)

Figure 10. Graph of misery index of countries period 2016 – 2017 (Source: Bloomberg surveys, 2017)
4. Direct and Indirect Taxes

Direct and indirect taxes on businesses and taxable citizens have increased. The increase in taxes, coupled with a decline in purchasing power, has caused a shock to Greek society. Higher tax rates, tax cuts, income cuts and more expensive products on the market have created suffocation. At the same time, unemployment and poverty have increased their rates, a logical consequence of what has been said above about closing or grievancing businesses (INE-GSEE, 2014). Indeed, as pointed out in the State Budget Bureau report, tax increases discourage work and entrepreneurship (on the supply side) and thus blur the prospects for recovery.

Each government should implement a long-term export promotion plan with specific objectives and priorities. This plan should be implemented systematically and independently of any other development policy (Liargovas et. al., 2018).

5. The Role of the Tax Administration

According to article 20 par.2 of Law 2753/1999, the tax administration means all the departments of the Ministry of Finance dealing with the application of tax legislation, with the collection of public revenue, tax compliance control and support operation of the above services. In fact, we are talking about “an administrative mechanism that can not only diagnose and design appropriate changes to the tax system, but also to implement them” (Tatsos, 2012: 489).

The dominant role of the tax authority is (Sotiropoulou & co., 2012: 201):

a) the levying of taxes and obligations payable in accordance with the law and with such conditions or means of enhancing confidence in the tax system and administration,

b) the formation of a tax administration next to citizens and businesses with the possibility to offer substantial assistance in fulfilling their tax obligations (in a simple, fast and inexpensive way), responding quickly and effectively to taxpayers’ demands, with the vision of developing relations mutual trust between the parties involved.

Therefore, the role of the Tax Administration is particularly important in addressing the above problems in enterprises, because the problems they face are not only of a quantitative nature (multiple tax burdens, high tax rates, reduced tax base due to tax evasion) but also of a qualitative nature, as it is aggravated by problems of multiplicity, complexity of tax laws, (Deloitte, 2013). More generally, the issue of Tax Administration is very important, since as good and growth-friendly as tax reform can be, if tax administration is ineffective, then this reform will also fail.

It is striking that all companies, wherever they come from, consider tax certainty as the most important factor in investing in an economy. The most important factors contributing to fiscal uncertainty are related to frequent changes in tax legislation and to the ambiguity and regression in the tax authorities’ clarifications and clarifications (Deloitte, 2014).

It should be noted that multiplicity is a key feature of tax legislation and is compounded by the number of amendments made each year, sometimes with many separate tax laws, sometimes with additions to non-tax laws, and the fact that many times the existing tax provisions are implicitly amended by later ones, with the result that the finding of legislation regulating a particular relationship or transaction has become a very difficult task (Stephanos & co., 2013: 57). Therefore, frequent legislative changes do not permit long-term planning and in practice weaken legal certainty by facilitating corruption and tax evasion.

To see how complicated the tax administration is today, let's see how many circulars the Ministry of Finance publishes each year (Rapanos, 2012: 4): in 2009 it issues 54 circulars, in 2010 it issues 196, in 2011 it issues 251 and in 2012 until April issues 81 circulars. More specifically as shown in Table 5, we have the number of circulars issued by the Ministry of Finance (Maruthappu & co., 2016: 626) per fiscal section:

<table>
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<tbody>
<tr>
<td>Income</td>
<td>73</td>
<td>145</td>
<td>129</td>
<td>151</td>
</tr>
<tr>
<td>Code of Tax Evidence</td>
<td>41</td>
<td>37</td>
<td>41</td>
<td>97</td>
</tr>
<tr>
<td>VAT</td>
<td>41</td>
<td>74</td>
<td>44</td>
<td>102</td>
</tr>
<tr>
<td>Other taxes</td>
<td>90</td>
<td>175</td>
<td>256</td>
<td>272</td>
</tr>
<tr>
<td>Capital taxation</td>
<td>32</td>
<td>26</td>
<td>43</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>277</td>
<td>457</td>
<td>513</td>
<td>695</td>
</tr>
</tbody>
</table>

Table 5. Number of circulars from the Ministry of Finance (Source: Maruthappu & co., 2016)

Tax administration is the link between tax legislation and tax payers. With this content it is obvious that it determines the realization of the revenues provided for in the respective State Budget and ultimately the actual tax burden. Experience has so far shown that the most tax-intensive tax legislation drastically loses its value and does not produce
the expected results and the results sought if it does not have the appropriate tax services to apply it (Stephanos et al., 2013: 60).

In Greece, of course, the phenomenon of the complexity of the tax system became explosive, as with the passage of time the lack of codification of the tax legislation combined with corporate pressures, accumulated a number of exceptions, exemptions and special regulations (KEPE, 2000). All of these reasons explain to a great extent why there is so much complexity and the volume of tax legislation. As a result of the complex legislation in Rapanos (2014), the cost of meeting citizens and businesses and the administrative costs of taxation are particularly high. Indeed, this complexity of tax legislation translates into high transaction and administrative costs for the State.

References


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