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**Immigrants and Greece: pensions at crossroads: an analysis of the people who claim a part of their pension from the Greek Social Security System and a calculation of the respective liability**

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## Immigrants and Greece: Pensions at crossroads

### *An analysis of the people who claim a part of their pension from the Greek Social Security System and a calculation of the respective liability*

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## Introduction

**G**reek people have witnessed a massive current of immigration in the last ten years. People from all over the world reach Greece looking for work and better living conditions. There are a few reasons which explain this influx.

To begin with, Greece is at the crossroad of three continents, Europe, Asia and Africa. Thus, people who come from underdeveloped and developing countries have easier access to the European continent through Greece, by land or sea. Their ultimate goal, based on statistics, is to stay for a few years and then move on to Central and West Europe or immediately do so.

Furthermore, Greece is part of the European Union and therefore abides by the EU legislation which respects and protects people who are willing to work in any EU state or who are refugees from any warzone or totalitarian regimes.

Tradition also plays its part. Greek people have always been friendly and hospitable. They have always welcomed foreigners and this can be traced back to the Greek Mythology. Zeus was the protector of foreigners and the act of treating them kindly was considered a virtue. Even now, with the financial crisis looming above Greece and a few people having strong feelings against foreigners the vast majority of the Greek people empathize with and support people from other countries trying to earn a living in Greece.

Finally, certain conditions help immigration to Greece flourish. Greece has had a tradition in agriculture, but lately people working on land are becoming fewer and fewer. Hence, when certain types of crops have to be planted or collected, seasonal workers are needed from abroad. Since this type of work, along with others, does not need special skills it is easier for people to land in Greece and provide the work in need. Other examples are the nursing of people of the third age and housekeeping.

## 1. Analysis of types of immigrants by legal status

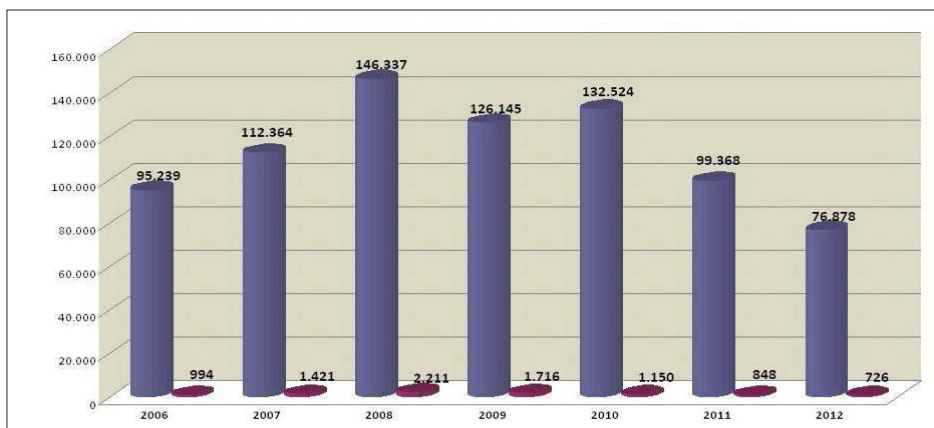
**A**s mentioned before, a lot of people reach the Greek border yearly. As expected, not all of them fulfill the criteria for migration or have legitimate permits.

Unfortunately, the hundreds of islands and islets, the thousands of kilometers of coastline and the land connection to four other countries (Albania, FYROM, Bulgaria, Turkey) provides for illegal entrance with a very low risk of getting caught. Thus, most of the people setting foot on Greek territory do so illegally. This phenomenon has become very acute in the past few years.

More specifically, in the years 2006 through 2012 hundreds of thousands of people tried to cross the Greek borders illegally and were arrested. In the following diagram, provided by

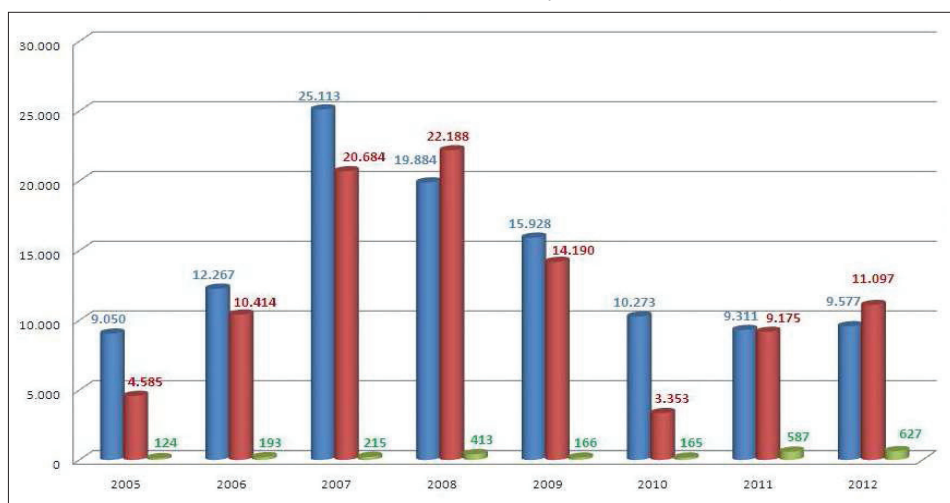
the Hellenic Police, one can see how many people have been arrested per year and how many traffickers were also arrested.

**Graph 1: Arrested illegal immigrants and traffickers by police and marine authorities for the years 2006 through 2012**



Furthermore, a lot of people come to Greece and ask for political or other asylum. Of these, only some are accepted and can be seen below in green color.

**Graph 2: Applications for International Protection, rejections and International Protection numbers for the years 2005 through 2012**

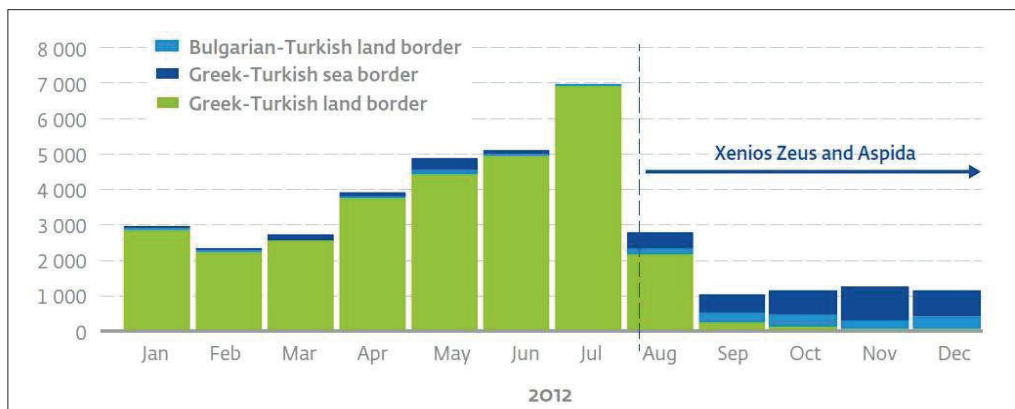


Note: includes applications from previous years

It is worth mentioning that before the 2008 recession authorities anticipated that more people would decide to permanently stay in Greece but since then, most of them are trying to move to stronger economies, like the central or northern Europe.

An effort has been made in the last year to curtail the influx of illegal immigrants, implementing stronger controls (code named Xenios Zeus and Aspida) especially at the Greek-Turkish borders. This can be witnessed when looking at the graph below, which has been issued by FRONTEX in its 2013 Annual Risk Analysis:

**Graph 3: Results of the implementation of the Xenios Zeus and Aspida operations**



## 2. Analysis of the people contributing to the pension system

**F**ocusing on the people who are registered with the authorities, many of them declare their working status and start working legitimately and contributing to the Greek Social Security pension system (GSSS), vesting pension rights. This also helps legal immigrants renew their permits. Most of them contribute to the social security fund for employees, as is expected. Since reliable and complete data is available for this fund only at this point, and the majority of people coming to work in Greece register as employees, this paper will deal exclusively with the latter.

Comparing the data of the insured with the data of the people who legitimately reside in Greece from the Ministry of Interior, we see that only 59% of the people are registered as employees. If we take into account another percentage in agriculture and self-employment it is still evident that a lot of people live in Greece without working or declaring work.

### 2a. Analysis by country of origin

Coming back to the social security fund for employees, it is really interesting that people contributing from almost every corner of the world can be found. Citizens of most countries on the other side of the planet even in the far end of the earth when compared to Greece work there and contribute to the system. In the following map, the countries from which citizens have come to Greece and provide work there can be seen:

Graph 4: Active employees working in Greece, indicating countries of origin



The total number of insured employees from abroad in 2011 is 347.693.

As is expected, some of the countries provide most of the people while others only very few. Thus, it is deemed meaningful to look at the 20 countries with the people working in our country.

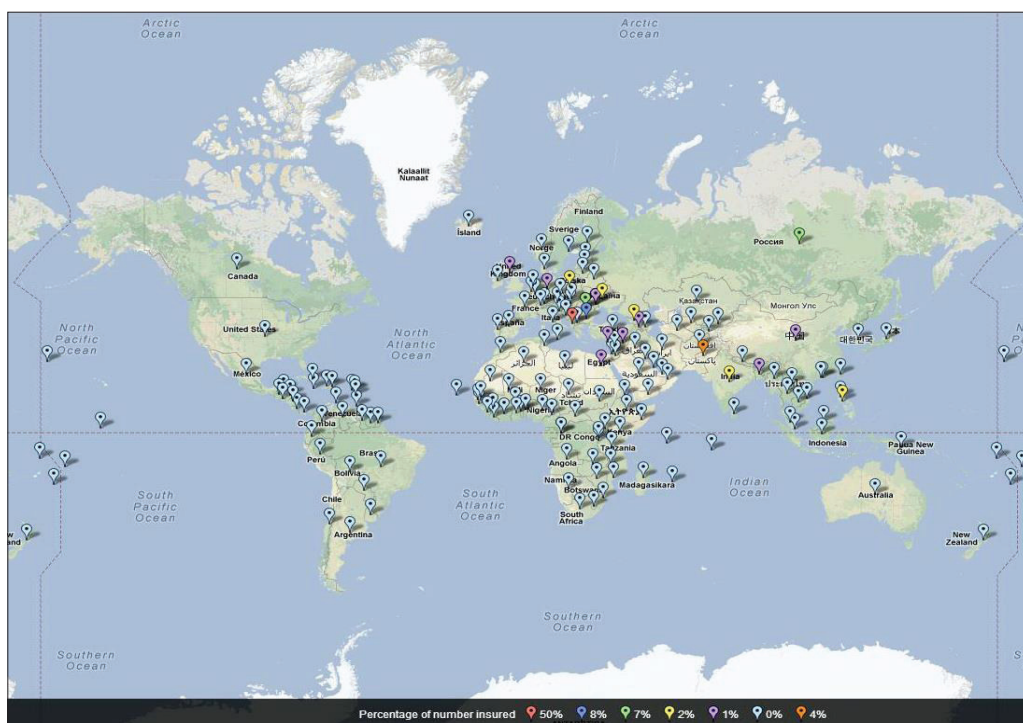
Table 1

Greece - Employees from third countries in 2011				
	Countrycode	Number of insured in the year 2011	Country	Percentage of number insured
1	AL	172.389	ALBANIA	50%
2	BG	28.184	BULGARIA	8%
3	RO	23.126	ROMANIA	7%
4	RU	22.764	RUSSIAN FEDERATION	7%
5	PK	15.567	PAKISTAN	4%
6	GE	8.223	GEORGIA	2%
7	PH	7.063	PHILIPPINES	2%
8	PL	6.223	POLAND	2%
9	UA	6.168	UKRAINE	2%
10	IN	5.517	INDIA	2%

11	EG	5.096	EGYPT	1%
12	BD	4.996	BANGLADESH	1%
13	GB	3.524	UNITED KINGDOM	1%
14	SY	3.138	SYRIAN ARAB REPUBLIC	1%
15	MD	3.135	REPUBLIC OF MOLDOVA	1%
16	DE	2.342	GERMANY	1%
17	CY	2.242	CYPRUS	1%
18	CN	2.026	CHINA	1%
19	AM	1.880	ARMENIA	1%
20	YU	1.655	FORMER YUGOSLAVIA	0,5%

Looking at a map of the percentages based on country of origin of the employees working in Greece, one can get a better idea of the existent situation:

**Graph 5: Percentages of employees working in Greece by country of origin**



As we can see, a lot of people have come to work in Greece from neighboring countries, but some of them come from far away, most of the time indicating a pattern of the way people decide to move to another country.



## 2b. Analysis by annual insurable earnings

Further on, when analyzing from the perspective of the highest and lowest annual insurable earnings, things are quite different. People that earn more come from countries with stronger economies as is expected. It is worth noting here that the earnings are calculated on the days of contribution of each group, not the full year (300 working days).

**Table 2**

Greece - Employees from other countries in 2011 by highest annual insurable earnings					
	Country code	Number of insured in the year 2011	Country	Percentage of number insured	Average Annual insurable earnings
127	SG	8	SINGAPORE	0%	31.131,27
75	KR	73	SOUTH KOREA	0%	28.368,16
124	LU	8	LUXEMBOURG	0%	28.268,05
76	JP	69	JAPAN	0%	25.001,58
136	IS	6	ICELAND	0%	23.635,65
116	MT	10	MALTA	0%	20.568,23
159	BN	1	BRUNEI DARUSSALAM	0%	20.524,98
168	SR	1	SURINAME	0%	18.720,85
113	MY	12	MALAYSIA	0%	18.531,11
73	AR	76	ARGENTINA	0%	18.185,71
22	FR	1.416	FRANCE	0%	16.900,09
156	TD	2	CHAD	0%	16.558,08
123	HT	8	HAITI	0%	16.431,59
30	US	656	UNITED STATES	0%	16.279,14
17	CY	2.242	CYPRUS	1%	16.277,20
63	PT	113	PORTUGAL	0%	16.236,41
103	NZ	24	NEW ZEALAND	0%	15.442,40
152	TW	3	TAIWAN	0%	14.846,37
153	YE	3	YEMEN	0%	14.285,24
164	KN	1	SAINT KITTS AND NEVIS	0%	14.132,67

## 2c. Analysis by average working days

As regards the average working days in 2011, with 300 being the maximum, the table shows again quite a variety. We can see that people from the Philippines, one of the most popular groups of foreign employees in Greece, tend to work more than other popular groups – or more correctly declare more of their work.

Table 3

Greece - Employees from other countries in 2011 by average working days					
	Country code	Number of insured in the year 2011	Country	Percentage of number insured	Average days of contribution in 2011
154	BZ	2	BELIZE	0%	300
164	KN	1	SAINT KITTS AND NEVIS	0%	300
168	SR	1	SURINAME	0%	300
163	KI	1	KIRIBATI	0%	283
153	YE	3	YEMEN	0%	281
143	CV	4	CAPE VERDE	0%	278
156	TD	2	CHAD	0%	273
165	LS	1	LESOTHO	0%	272
130	NI	7	NICARAGUA	0%	260
132	ZW	7	ZIMBABWE	0%	255
152	TW	3	TAIWAN	0%	247
105	NP	21	NEPAL	0%	241
123	HT	8	HAITI	0%	235
138	BJ	5	BENIN	0%	234
7	PH	7.063	PHILIPPINES	2%	231
115	PA	11	PANAMA	0%	230
145	KW	4	KUWAIT	0%	227
75	KR	73	SOUTH KOREA	0%	227
131	TM	7	TURKMENISTAN	0%	225
113	MY	12	MALAYSIA	0%	224

## 2d. Analysis by vested rights

Finally, in the table below we can see the people that have vested most rights at the end of 2011:

Table 4

Greece - Employees from other countries in 2011 by total working days					
	Country code	Number of insured in the year 2011	Country	Percentage of number insured	Total working days at the end of 2011
168	SR	1	SURINAME	0%	5.434
123	HT	8	HAITI	0%	3.523
141	MZ	5	MOZAMBIQUE	0%	3.225
156	TD	2	CHAD	0%	2.973



Greece - Employees from other countries in 2011 by total working days					
	Country code	Number of insured in the year 2011	Country	Percentage of number insured	Total working days at the end of 2011
165	LS	1	LESOTHO	0%	2.709
161	JM	1	JAMAICA	0%	2.706
130	NI	7	NICARAGUA	0%	2.588
153	YE	3	YEMEN	0%	2.540
132	ZW	7	ZIMBABWE	0%	2.425
10	IN	5.517	INDIA	2%	2.362
138	BJ	5	BENIN	0%	2.362
87	VN	56	VIETNAM	0%	2.352
154	BZ	2	BELIZE	0%	2.341
170	TJ	1	TAJIKISTAN	0%	2.294
91	CD	42	CONGO	0%	2.286
107	AE	17	UNITED ARAB EMIRATES	0%	2.244
121	SC	9	SEYCHELLES	0%	2.158
166	MW	1	MALAWI	0%	2.102
143	CV	4	CAPE VERDE	0%	2.075
4	RU	22.764	RUSSIAN FEDERATION	7%	2.062

With the minimum amount of working days being 4.500 for retirement, it is evident that some of these people are already really close to getting a pension from the GSSS. Again, patterns can be recognized like the ones for the Indian and Russian groups. In these groups, people have been contributing more and are most probably willing to stay in Greece until they retire with full pension rights.

### 3. Analysis of foreign workers receiving a pension from the Greek Public Pension System

**A**s far as people already receiving a pension or a part of their pension from Greece is concerned, those are a lot less than the ones contributing at the moment, since the system is still maturing as regards foreign employees. While there are actives from 173 countries, 347.693 in number, there are pensioners from only 95 countries and 10.225 in total number. This is reasonable as people from abroad have not yet massively retired through the GSSS. That means, for foreigners the GSSS is yet immature.

Table 5

Greece - Pensioners from other countries in 2012					
	Country Code	Number of insured in the year 2011	Country	Total Retired Until 2012	New retirees 2012
2	BG	28.184	BULGARIA	1809	434
1	AL	172.389	ALBANIA	1559	357
24	TR	1.014	TURKEY	784	33
17	CY	2.242	CYPRUS	444	82
16	DE	2.342	GERMANY	252	67
13	GB	3.524	UNITED KINGDOM	237	50
52	AU	195	AUSTRALIA	232	67
30	US	656	UNITED STATES	205	53
50	CA	223	CANADA	188	43
8	PL	6.223	POLAND	150	36
3	RO	23.126	ROMANIA	125	43
21	IT	1.450	ITALY	124	14
4	RU	22.764	RUSSIAN FEDERATION	121	47
11	EG	5.096	EGYPT	100	20
22	FR	1.416	FRANCE	91	21
5	PK	15.567	PAKISTAN	78	20
6	GE	8.223	GEORGIA	77	15
9	UA	6.168	UKRAINE	68	13
28	NL	759	NETHERLANDS	43	15
19	AM	1.880	ARMENIA	41	5

We can deduce from the table above that the countries whose citizens get awarded most pensions are mainstream since they refer to the past international relationships with Greece. Traditionally, neighboring countries like Albania and Bulgaria have had people working in Greece and hence, it is logical that most pensions are issued to citizens of those countries.

The new trends, like the increased number of people originating from Pakistan, are evident but not yet dominant.

## 4. Some important implications

Two things are worth mentioning in order to complete the knowledge one gets for people from other countries working in Greece. Firstly, a paradox concerning people registered in the fund for employees. When a foreigner is hired by someone in Greece, the latter is in charge of declaring him to the fund and depositing the contributions. The legitimacy of the foreigner's status in Greece, however, is not looked into from within the fund. Thus, there is the paradox of

some people vesting rights in the GSSS while at the same time residing in Greece illegally. The fund would of course be obliged to pay up their accrued contributions or a part of their pension if and when it is issued in Greece (in case they become legitimate) or in another country, which makes the problem even bigger.

Secondly, since people from neighboring countries have had vested rights in the GSSS, there have been cases when pensions were issued to people who were believed to have been staying in Greece. Thus, these people had been receiving a pension higher than the one which was in line with their contributions because of legislation which states that whenever the awarded pension is less than a minimum amount, the minimum amount is given. Hence, an outflow of excessive pension amounts was given to foreigners when compared to their accrued contributions and new legislation was passed in 2010 so that any amount given in the form of an extra bonus from the GSSS is only paid to people residing in Greece for their respective working career only.

## 5. Calculation of the liability of the Greek Social Security System

**H**aving analyzed the above, one would look into the amount of money which the Greek Social Security System (GSSS) needs in order to cover the vested rights of the employees who originate from other countries. In order to do that, a few assumptions have to be made.

To begin with, it has to be taken for granted that every one of the insured will finally retire and will claim the already vested part of their pension from the GSSS. Retirement does not have to occur in Greece only. If the country of origin has a pact with the Greek Government concerning pensions, then the GSSS will pay the part of the pension accrued in Greece to the Social Security System of the former. An analysis of the retirement legislation is not given because it would perplex the reader without providing more information since the assumption is made that these people are going to finally retire and claim the exact vested right so far.

Secondly, the annual replacement rate used will be 2%, which refers to years vested before 1/1/2013 for people first insured after 1/1/1993 in the GSSS, according to legislation. Finally, the average annual insurable earnings are used, without taking into consideration the three seasonal payments (Christmas, Easter and annual leave payments). Thus, each country is represented by the average income of all its employees. Also, the average earnings are calculated on a yearly basis, regardless of the amount of days of contribution of the people in each case. Respectively, the average years of contribution are used for each country.

Having finalized the data necessary, the formula which is used for the pension calculation of one person of each country is:

Accrual rate X Average Annual Insurable Earnings X Average Years of contribution

Hence, for all people in the group/country the above has to be multiplied by the amount of employees originating from the respective country as well as the deferred annuity factor, calculated based on the EVK2000 at 1,5% interest rate. Finally, a discount factor has to be used, along with a mortality factor, using the average age of the group, so that the respective amount applies to the end of 2011. The interest rate used is 1,5%, which is the estimated difference between the expected rates of return (2,5%) and the expected inflation (1%).

Proceeding to the calculation, the resulting amount of money is 3.006.445.825€.

This is the reserve that would cover the retirement obligation of Greece in the theoretical case where all the immigrants working in Greece would immediately retire claiming from the GSSS at their 67<sup>th</sup> year of age only the part of their pension already vested.

More realistically, it is the amount of money that the GSSS should set aside – if it were not a Pay-As-You-Go pension system – for all the vested rights of foreign employees. These exact employees may further contribute to the GSSS or may move to another country or their country of origin and use legislation which encourages portability in order to retire. In any case, the aforementioned amount is the reserve which will fund the already vested rights.

## Sources

Greek Social Security fund for employees

Hellenic Police

Hellenic Ministry of Interior

Hellenic Press

Frontex (<http://www.frontex.europa.eu/>)

Graph 4 can be better viewed at: <http://batchgeo.com/map/1b0be99d36047b5e5df3331c50298b5c>

Graph 5 can be better viewed at: <http://batchgeo.com/map/c9ee0af243140f38684e02714b74240c>

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## Biographical Notes

**George Symeonidis** is a Board Member of the Hellenic Actuarial Authority, which monitors pension expenditure in Greece yearly through actuarial analysis. In the past, he has independently produced actuarial valuations for several Greek funds. He follows the Ageing Working Group, the EU subgroup which monitors age related spending in the long-term. Since 2006, he has collaborated closely with the International Labor Organization and has been trained on the ILO model in Geneva. His education includes Pure and Applied Mathematics at a graduate and postgraduate level as well as certified knowledge of Economics used in actuarial valuations. He issues a paper on the Greek Pension System and its recent reform process every year. Address: Hellenic Actuarial Authority, Stadiou 29, Athens, 10110, Greece. Email: [g.simeonidis@eaa.gr](mailto:g.simeonidis@eaa.gr), [george.simeonidis@gmail.com](mailto:george.simeonidis@gmail.com)