



RESPONDING TO THE UNEMPLOYMENT CHALLENGE: A JOB GUARANTEE PROPOSAL FOR GREECE

AN ADDENDUM

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Preface

This addendum to our June 2014 report, “Responding to the Unemployment Challenge: A Job Guarantee Proposal for Greece,” updates labor market data through 2014Q3 and identifies emerging employment and unemployment trends. The overarching aim of the report, the outcome of a study undertaken in 2013 by the Levy Institute in collaboration with the Observatory of Economic and Social Developments of the Labour Institute of the Greek General Confederation of Labour, is to provide policymakers and the general public research-based evidence of the macroeconomic and employment effects of a large-scale direct job creation program in Greece, and to invite critical rethinking of the austerity-driven macro policy instituted in 2010 as a condition of the loans made to Greece by its eurozone partners—the “troika” of the European Central Bank, European Commission, and International Monetary Fund.

The question is no longer whether this policy has failed, but rather what must be done to repair the damage caused by its failure. And the damage is so deep—over three-quarters of the massive job loss in Greece occurred under the troika’s stewardship—that merely putting an end to austerity is nowhere near sufficient. Even if the Greek economy were to miraculously bounce back to its precrisis growth rate, it would take almost a decade and a half to return to precrisis employment levels.

Although the number of jobless declined slightly, from 1.32 million to 1.23 million, in the first three quarters of 2014, the share of the long-term unemployed (those out of work for four or more years) rose from 18.2 percent to 25.1 percent—an unemployment trend that is showing signs of becoming structural. Although men’s share of long-term unemployment has risen faster than that of women, women have been impacted more than men in terms of overall unemployment: in 2014Q3, with an overall unemployment rate of 25.6 percent, the corresponding unemployment rate for women was 29.2 percent, while the rate for men was 22.6 percent. In the same quarter, the youth unemployment rate (those aged 15 to 24) rose to an unprecedented 49.5 percent. However, unemployed youth represent a

relatively small percentage of the overall unemployed in Greece—12.6 percent, versus 19 percent for the EU-17—making recent EU proposals focusing exclusively on youth unemployment highly problematic.

As the proportion of employers and wage and salaried jobs declined throughout the recession, the “self-employed without staff” employment category rapidly expanded. These highly vulnerable workers, who do not have access to unemployment, social security, or health benefits, now make up 25 percent of the workforce. If this “coping” trend continues, we may be witnessing the beginning of a structural shift in employment, with more people in the working-age population forced to choose between long-term unemployment and marginal “own-account worker” status.

Another marked labor trend in Greece is the continuous decline of the working-age population (those aged 15–74) at a rate of 0.5 to 1 percentage point per year since 2008, reflecting both a lack of labor demand and the resulting cross-border flight of skilled labor. Of the full-time private sector employees that remain, more than half receive monthly wages of €1,000 or less. Standards of living are severely suppressed, and emergency property tax and VAT increases have further eroded disposable income. Under these conditions, in-work poverty is a clear challenge.

Recovering from a crisis of this magnitude requires bold public action that matches the scale of the problem. Our report makes the case for the implementation of a direct job creation program in Greece—a “job guarantee” (JG) that would offer paid employment on work projects providing public benefits in the areas of physical and informational public infrastructure, environmental interventions, social service provisioning, and educational and cultural programs. For this purpose, we simulated the results of implementing a JG in 2012, varying the size of the program (from 200,000 to 550,000 directly created jobs) and the monthly wage offered (€586, the current minimum wage, and €751, the previous minimum wage).

The results are promising. Depending on the size of the program, a job guarantee would have provided paid employment to

between 22 percent and 64 percent of the roughly 1.2 million unemployed in 2012, based on a total annual outlay of between 1.5 percent and 5.4 percent of GDP. However, because a substantial portion of that outlay would be recouped through higher revenues, the *net* cost would be between 0.6 percent of GDP (for the 200,000 JG) and 2.2 percent of GDP (for the 550,000 JG).

Even if financed entirely by an increase in borrowing, implementing the direct job creation program would actually *reduce* the size of Greece's public debt relative to its GDP. The government's deficit would rise, but because growth would rise even faster, the public debt-to-GDP ratio would decline in every scenario—and the bigger the program, the faster the decline. For a midrange JG (300,000 directly created jobs), Greece's debt ratio would shrink by four to five percentage points, depending on the wage level, and the largest program studied (550,000 directly created jobs) would reduce the debt ratio by nine percentage points—a remarkable result that underscores just how counterproductive the troika's austerity strategy has been.

Direct job creation on a comparable scale has been tried, and has succeeded, elsewhere. And the required outlay for the midrange (300,000) JG—2.3 percent of GDP (or 1 percent net)—is well in line with what other countries have invested in the course of dealing with their own, far more manageable, crises. Greece must move beyond austerity, and when it does, direct job creation offers a promising path to recovering from the policy mistakes of the last five years.

Dimitri B. Papadimitriou, *President*

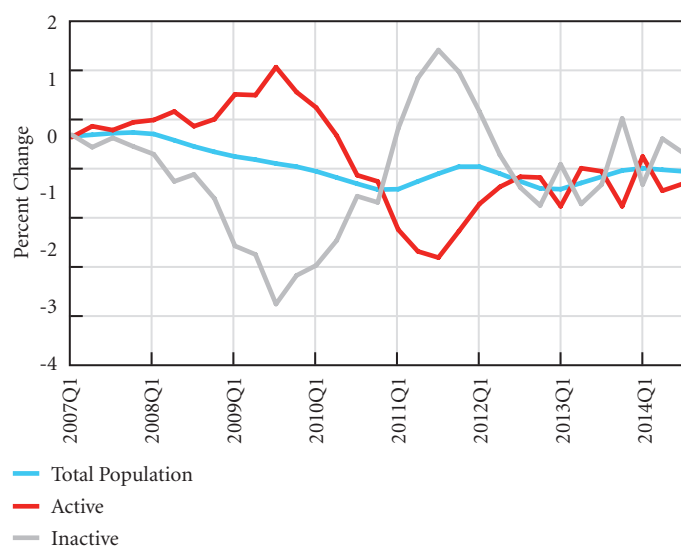
April 2015

EMERGING TRENDS IN EMPLOYMENT AND UNEMPLOYMENT

This update illustrates current Greek labor market conditions and is intended to aid better-informed discussion of the public employment initiative detailed in our June 2014 report, “Responding to the Unemployment Challenge: A Job Guarantee Proposal for Greece.” That report drew on 2012 public survey data—the latest available at that time. In February 2015, data became available through 2014Q3, by which time the labor market had stopped contracting but recovery was still not within sight: total job losses since the onset of the crisis in 2008 had reached more than one million, or nearly 24 percent of all jobs in Greece.

A striking trend of the Greek labor market is the continuous decline of the working-age population (those aged 15–74), as shown in Figure 1. After reaching a peak of 8.48 million in the fourth quarter of 2007, we observe the accelerating decline in this population group after the onset of the crisis, at a rate of 0.5 to 1 percentage point per year. This decline implies that inactivity is no longer the mirror image of economic activity among the population; hence, we observe a decline in both categories. It is the emigration of skilled Greek workers that is attributable to the decline in economic activity, and the observed stability in

Figure 1 Population Trend in Greece, Quarter-on-Quarter Change (in percent)



Source: Eurostat

unemployment for the last couple quarters is not necessarily a positive development (Papadimitriou et al. 2014b).

The emerging picture underscores the ongoing, devastating reality of the Greek labor market. It also focuses our attention on aspects that have received less attention (i.e., the gender dimension of unemployment and the evolution of own-account work) and provides evidence that allows the correction of distorted views presented in public discourse by the mass media and politically motivated narratives, including the size of public employment, the analysis of youth unemployment, etc. Above all, this addendum highlights the urgent need for a large-scale public policy response.

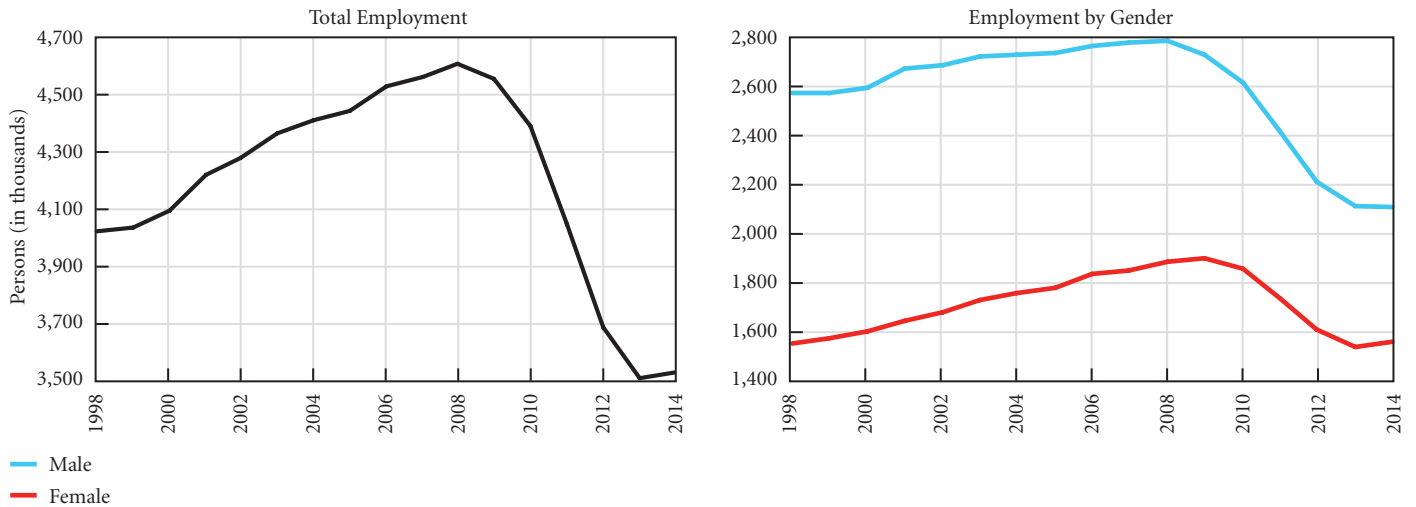
THE YEARS PRIOR TO THE CRISIS

Greece joined the European Union (EU) in 1981 and adopted the euro in 2001. During the decade preceding the current crisis, the country had experienced healthy GDP growth rates and substantial gains in employment. Between 1998 and 2008, cumulative net job creation amounted to 587,000 positions. The roughly 53,400¹ new jobs created per year favored women—32,700 jobs for women vs. 20,700 for men (Figure 2). This was a welcome development, as female labor force participation in Greece had, until then, lagged far behind male participation rates. Given the country’s prevailing age demographics, this steady job creation resulted in unemployment converging to the EU average, declining from 11–12 percent at the end of the 1990s to 7.7 percent by 2008.² This trend came to an close in 2008. And since 2008, unemployment has skyrocketed, with Greece shedding more than one million jobs by 2014.

Historically, Greece is unique among eurozone countries for its high agricultural sector employment—albeit with significant reductions in total employment levels over time. Another important feature of the economy is the presence of a very large number of small-size businesses.³ Rooted in the absence of large-scale capital formation in agriculture and limited development of large-scale industry, small- and medium-size enterprises (SMEs) have maintained a strong presence. However, a reduction of employment in family-operated, small-scale agriculture and husbandry, together with a distributional shift of labor toward services and public sector employment, has been taking place over the last 20 years.

In regard to the latter—public sector employment—a few words are in order. While a convincing argument may be advanced regarding the clientelist approach used in hiring public

Figure 2 Total Employment and Employment by Gender, 1998–2014 (persons, in thousands)



Note: Figures for 2014 are averages based on Q1–Q3 data.

Sources: Eurostat, LFS; authors' calculations

sector employees, contrary to oft-repeated and erroneous information, the size of public sector employment relative to total employment in Greece has always remained within the range of other EU countries. The evidence to that effect is provided by International Labour Organization (ILO) data. In 2010, ILO-STAT reported that the public sector in Greece accounted for 22.34 percent of the total number of employed; in France, 19.98 percent; and in the UK, 25.12 percent.⁴

From 2000 through 2007, employment was expanding across most sectors of the Greek economy, save for agriculture, animal breeding, hunting, fishing, and forestry. While manufacturing, transportation, storage, and communication remained relatively flat, several industries demonstrated healthy employment growth. Most striking were the gains in construction, real estate, wholesale and retail, public administration and defense, education, health, social work, and other community activities. Not surprisingly, much of the employment creation in construction went to male laborers. The overwhelming majority of workers hired over this period, however, were women—many entering the labor force for the first time. Wholesale and retail offered the greatest percentage of growth and absolute number of jobs for women, but gains were also notable in the number of women employed in the traditionally feminized public (and private) service sectors: education, health, social, and community work. The sectoral structure of the economy that had emerged by the time the crisis hit made em-

ployment highly vulnerable to abrupt reductions in domestic consumption demand and government expenditures—both of which had contributed the most to the “spectacular” growth and employment generation of the 10 years leading up to the crisis.

THE DECLINE IN EMPLOYMENT, 2008–2014Q3

Over the entire period from 2008 to the third quarter of 2014, employment declined precipitously (as reported in Figure 1), amounting to more than one million eliminated positions.⁵ The negative impact on employment of the early crisis period was significant, and the pace of job loss accelerated after 2010 and the beginning of the troika period. In 2010 alone, more than 167,000 jobs disappeared, but it was 2011 and 2012 that delivered the full impact of the austerity measures, with job losses of 278,600 and 188,000, respectively. In 2013, job losses were comparatively moderate at 24,300 positions. We observe a moderate gain of 103,200 jobs during the first three quarters of 2014, but total employment remains one million jobs short of its precrisis level.

Changes in Employment by Sector

Taking the 2008–14 crisis period as a whole, as can be seen in the second column of Table 1, the biggest losses occurred in construction (244,000 jobs), manufacturing (234,000), and wholesale and retail trade (210,900). Public sector employment saw a

Table 1 Decline in Employment by Industry, 2008–10 and 2008–14

Industry	2008–10	2008–14
Agriculture, forestry, and fishing	35,000	-26,900
Mining and quarrying	-4,200	-5,900
Manufacturing	-85,700	-234,000
Electricity, gas, steam, and air-conditioning supply	-7,800	-5,800
Water supply; sewerage, waste management	2,500	-9,100
Construction	-84,600	-244,000
Wholesale and retail trade, and repairs	-38,000	-210,900
Transportation and storage	-8,500	-45,000
Accommodation and food service activities	-10,300	-10,900
Information and communication	4,600	-3,400
Financial and insurance activities	-3,300	-31,200
Real estate activities	-2,800	-3,500
Professional, scientific, and technical	-30,100	-40,300
Administrative and support service activities	-1,100	10,000
Public administration and defense; compulsory social security	-9,000	-67,400
Education	-9,200	-36,900
Human health and social work activities	12,100	-24,200
Arts, entertainment, and recreation	-9,500	-14,000
Other service activities	-5,700	-22,100
Activities of households as employers	13,800	-27,700

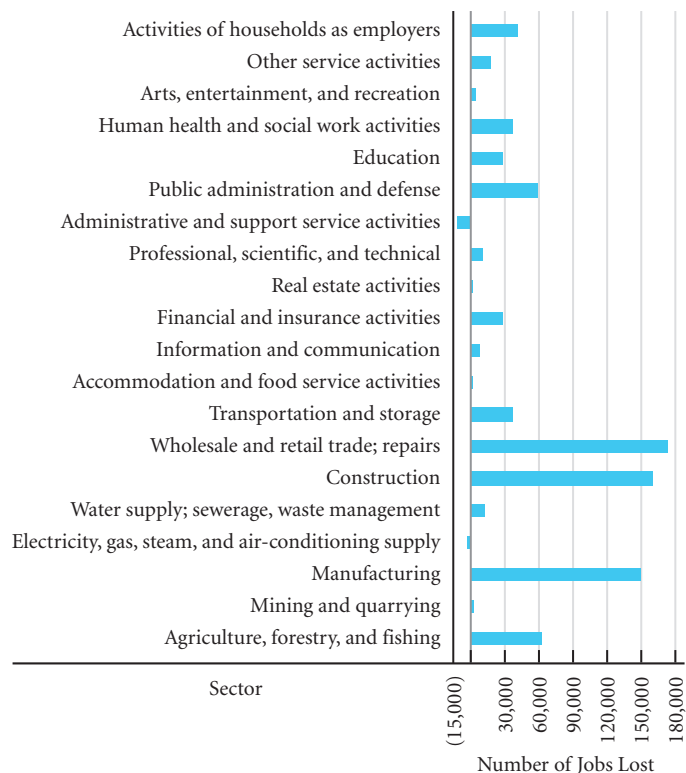
Note: All figures correspond to year-on-year Q3 comparisons.

Source: Eurostat, LFS; authors' calculations

decline as well, with a reduction of 67,400 positions. Finally, education saw the loss of 36,900 openings, while health and other social services lost another 24,200. During the first phase of the crisis in Greece—that is, between 2008 and pre-troika 2010—the decline in employment across sectors amounted to a total of 241,800 positions (Eurostat). Only six sectors added jobs: agriculture, forestry, and fishing, 35,000 jobs; water supply, sewerage, and waste management, 2,500; information and communication, 4,600; human health and social work activities, 12,100; and activities of households as employer, 13,800 jobs. Manufacturing (85,700 jobs lost) and construction (84,600 jobs) were hit the hardest (see Table 1).

The years of austerity follow (2010–14), and they paint a much grimmer picture, with more than 77 percent of the reduction in employment (811,400 positions) taking place during this period. All sectors—with the exception of water supply, sewerage, and waste management, and administrative and support ac-

Figure 3 Loss of Employment by Sector, 2010–14



Note: All figures correspond to year-on-year Q3 comparisons.

Sources: Eurostat, LFS; authors' calculations.

tivities—incurred job losses, with the majority occurring in the highly distressed private sector. Wholesale and retail trade (which lost 38,000 jobs in 2008–10) heads the list, with 172,900 workers losing their jobs, followed by construction and manufacturing, which shed roughly 159,400 and 148,300 positions each; agriculture, forestry, and fishing, 61,900 jobs; and public administration, 58,400 jobs⁶ (Figure 3).

Changing Distribution of Employment by Professional Status

In concert with the sectoral job shedding, the composition of employment by professional status / worker status has been changing in troublesome ways. The official International Classification of Status in Employment (ICSE) definition separates “employed persons” into four distinct groups: (1) *employees*, namely, waged and salaried workers; (2) *employers*, that is, the self-employed who hire other workers; (3) *own-account workers*,

the self-employed who work on their own without hiring other employees; and (4) *family contributing workers*, who hold self-employment jobs in an establishment operated by a relative, with no financial compensation and too little involvement in its operation to be considered a partner. The distribution of employed persons along the ICSE reflects the structure of employment but engenders repercussions for public finance. For example, less developed economies tend to have a smaller wage and salaried class, large unpaid family worker cohorts, and substantial own-account worker segments. Correspondingly, employee and employer contributions make up a smaller proportion of general taxation. Because the allocation of labor by worker status reflects the structure of an economy, even small movements across ISCE boundaries take place gradually and over prolonged periods of time. For example, in the case of EU-17 (eurozone) and EU-27 countries as a whole, one observes extreme stability when comparing the years 2010 and 2013, as shown in Table 2.

This is not, however, the case for Greece. Two key observations emerge from Figure 4. First, we note that, as compared to EU-17 and EU-27 countries, the Greek economy had a much lower proportion of wage and salaried employees (roughly 20 percent less) prior to the crisis. In 2008, 65 percent of all employed persons were wage and salaried employees; by 2014, this

share had gone down to 64 percent, while the EU-17 average of 85 percent remained the same (with Spain and Portugal at 82 percent and Italy at 75 percent).

Second, the ICSE distribution has changed in the past four years: the proportion of employers and unpaid family work has dwindled, and while the proportion of wage and salaried employees has also lost ground, all of the difference was absorbed by the "self-employed without staff" category. In other words, the "own-account work" slice of a continuously shrinking employment pie expanded from 21 percent in 2008 to 25 percent in 2014. Own-account workers, it must be kept in mind, are identified by the ILO as the most vulnerable (together with unpaid family workers) because they do not enjoy access to unemployment, social security, or health benefits, and their hours of employment and earnings are devoid of predictability. The highly paid professionals included in this category notwithstanding, during periods of crisis, the swelling of own-account work is typically associated with misery, informality, and precarious forms of subcontracting. Rather than interpreting own-account employment as increased entrepreneurial activity, it is best understood as a coping strategy and a form of employment distress. If this trend continues, we may be witnessing the beginning of a structural shift in employment, with more people in the working-

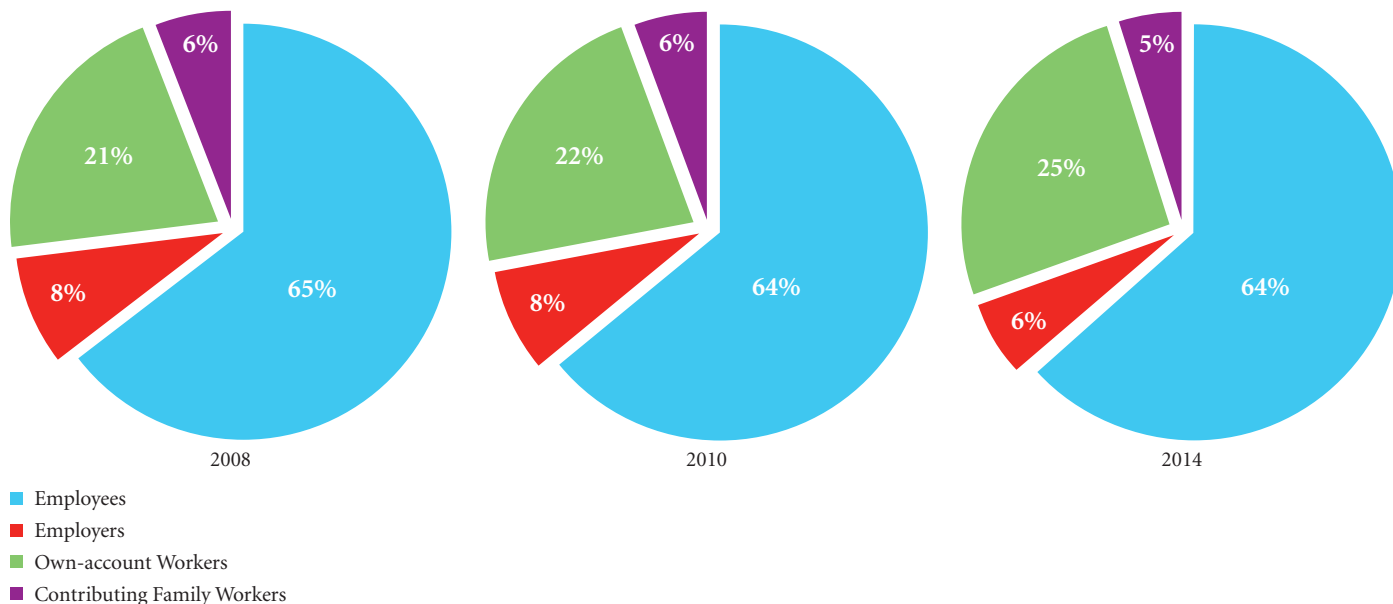
Table 2 Distribution of Employment by Professional (Worker) Status, EU-27 and EU-17 (aged 15–64)

Worker Status	Persons (in thousands)			Percentage		
	2008	2010	2014	2008	2010	2014
EU-27						
Employees	186,243.6	180,552.4	182,331.7	83.50	83.09	83.55
Employers	10,064.5	9,686.9	9,269.2	4.51	4.46	4.25
Own-account workers	22,839.5	23,480.1	23,635.9	10.24	10.81	10.83
Contributing family workers	3,908.2	3,582.6	2,991.4	1.75	1.65	1.37
Total	223,056	217,302	218,228	100.00	100.00	100.00
EU-17						
Employees	122,383.5	118,912.2	118,364.8	84.01	83.89	84.21
Employers	7,636.6	7,297.5	6,893.0	5.24	5.15	4.90
Own-account workers	13,898.0	14,120.8	14,125.5	9.54	9.96	10.05
Contributing family workers	1,758.7	1,417.4	1,170.3	1.21	1.00	0.83
Total	145,677	141,748	140,554	100.00	100.00	100.00

Note: All figures correspond to year-on-year Q3 comparisons.

Source: Eurostat, LFS

Figure 4 Distribution of Employment by Worker Status (15 years of age and older)



Sources: Eurostat, LFS; authors' calculations

age population forced to choose between long-term unemployment and distressed “self-employment without employees” status.

In summary, the loss of employment over the past seven years is directly traceable to the decimation of the private sector—with manufacturing, retail and wholesale trade, and construction accounting for more than 65 percent of the jobs that disappeared. The public sector has also lost some jobs, but in the years ahead we are certain to see intensification in the elimination of government jobs, a result of the troika’s obiter dictum. In the meantime, there is clear evidence that the category of own-account workers is expanding. With this background in mind, we turn next to a detailed analysis of the structure of joblessness in Greece.

UNEMPLOYMENT TRENDS

Unemployment in Greece rose by a perilous 370 percent between 2008 and the end of 2013Q3—from 363,900 persons to 1,320,300 persons in less than six years⁷ (ELSTAT). One year later, the number of unemployed had declined slightly, to 1,229,400, as depicted in Figure 5.

Contrary to the expectations of Greece’s Ministry of Finance (MoF) that the unemployment rate would decline to 24.6 percent by the end of 2012, the rate of unemployment continued its

Table 3 Long-Term Unemployment Level by Duration, 2013Q1–2014Q3 Average

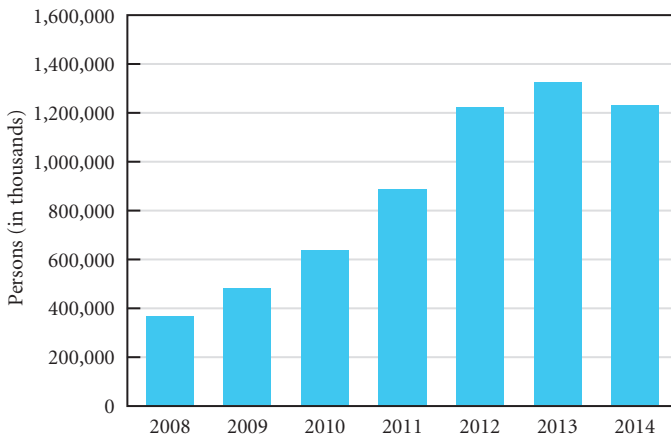
Months Out of Work	Persons (in thousands)		Percent Share	
	2013	2014	2013	2014
12 to 17	196.0	168.4	14.8	13.7
18 to 23	148.0	136.6	11.2	11.1
24 to 47	330.2	314.1	25.0	25.5
48 +	239.8	308.0	18.2	25.1

Note: The sum does not add up to 100 percent since those unemployed for less than 12 months and nonrespondents are not included in this table.

Source: Eurostat, LFS; authors' calculations

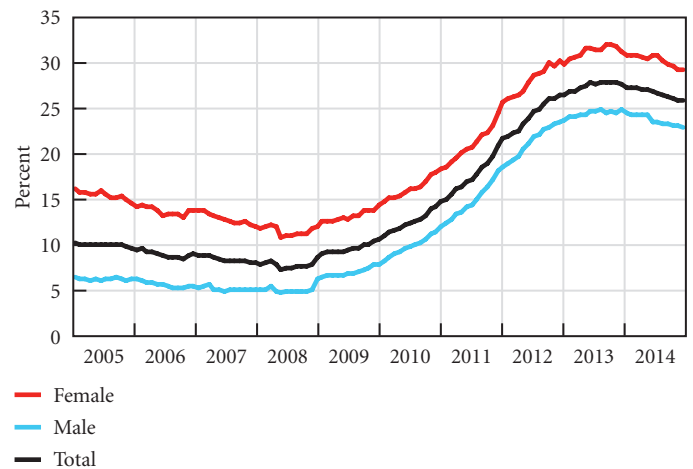
upward trend, and in October 2013 registered a new high of 27.8 percent. The unemployment rate was 25.8 percent as of November 2014—still more than 2 percent above the MoF projection for 2012. Women’s unemployment rates, a topic we will return to later, have traditionally been higher than men’s, and this trend has persisted throughout the crisis, as documented in Figure 6.

Figure 5 Unemployment Level, 2008–14 (persons, in thousands)



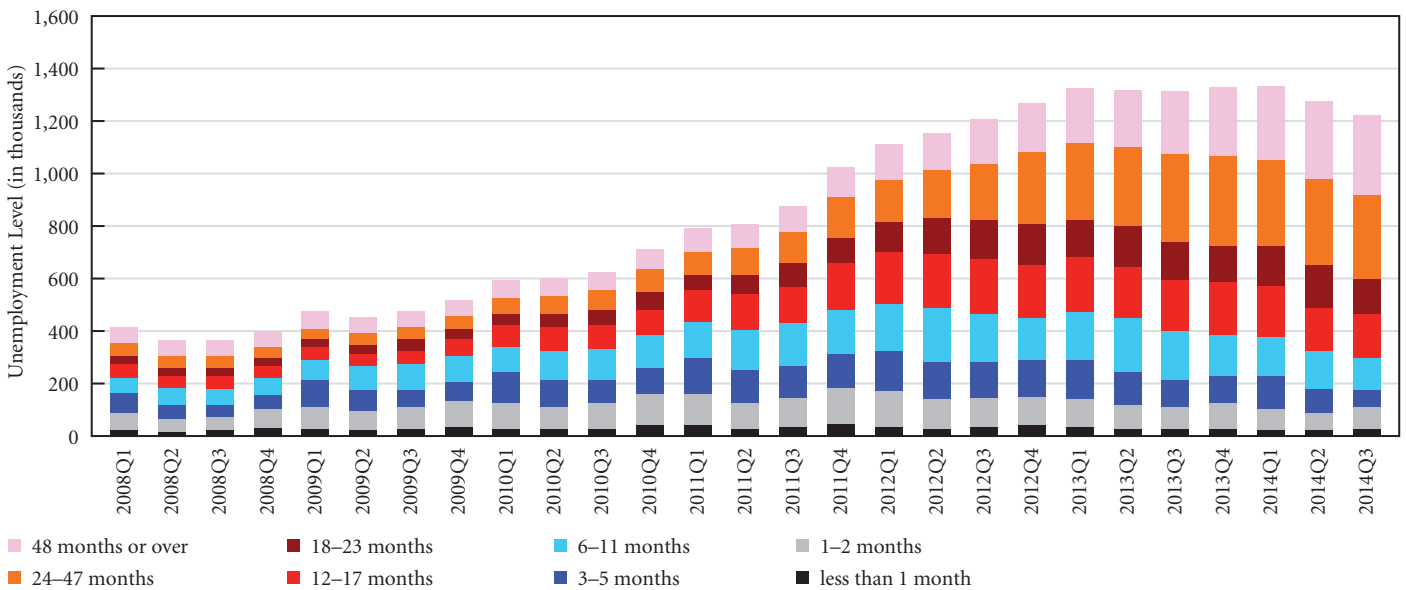
Source: ELSTAT, LFS, Q3 data

Figure 6 Unemployment Rates, Total and by Gender, 2005–14 (monthly average, in percent)



Source: Eurostat, LFS

Figure 7 Unemployment by Duration (level, in thousands)



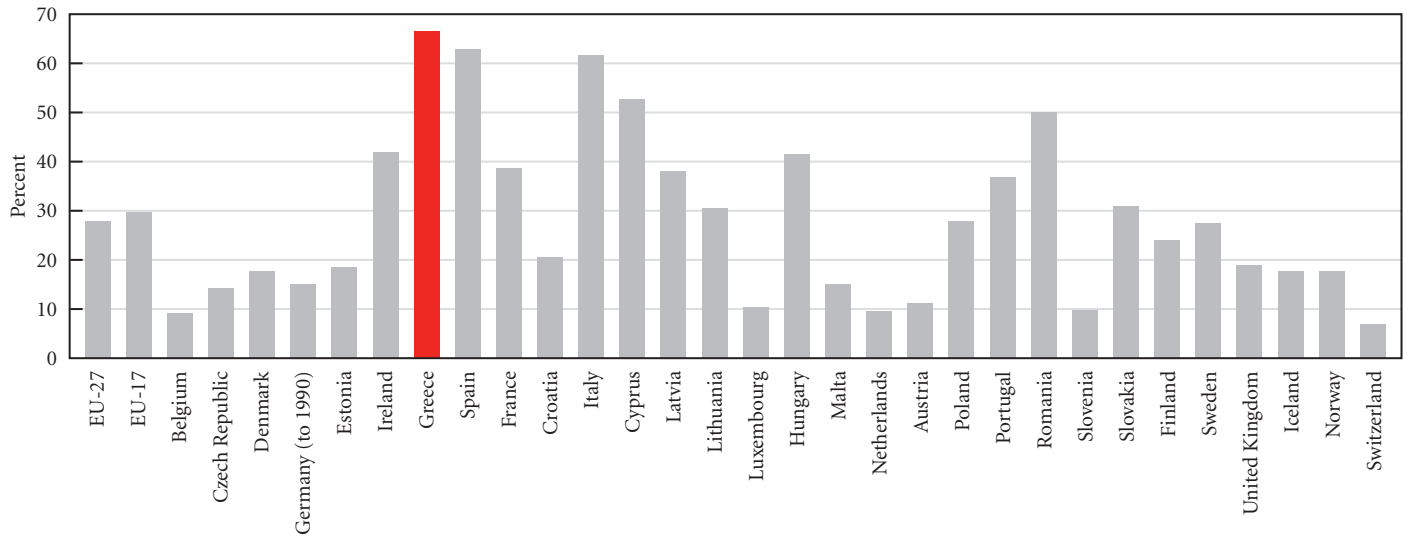
Source: Eurostat, LFS

Long-Term Unemployment

What makes the above figures even grimmer is the length of time people have been out of work. As of 2013Q3, out of 1.32 million unemployed persons, 239,800 had been out of work for more than four years; 330,200, for two to four years; and 344,000, for one to two years. By 2014Q3, despite a decline in unemployed

persons to 1.23 million persons, 308,000 were out of work for more than four years. As a result, the group's share increased from 18.2 to 25.1 percent of all unemployed workers between 2013 and 2014 (Table 3). The increase in the extremely long-term unemployed led to the upward trend in long-term unemployment. In 2013, 69.2 percent were unemployed for a year or

Figure 8 Involuntary Part-Time Employment as a Percentage of Total Part-Time Employment, 2013



Source: Eurostat, LFS

Table 4 Distribution of Unemployment by Educational Attainment Level, 2014Q3

Highest Level of Educational Attainment	Persons	Percentage	Cumulative	Cumulative Percentage
Primary education (6 years – Dimotiko) or less	168,260	13.7	168,260	13.7
Gymnasio (3 years of secondary education)	143,445	11.7	311,705	25.4
Lyceum (3 years beyond Gymnasio)	470,871	38.3	782,576	63.7
Technical education institutions (TEIs)	143,348	11.7	925,924	75.3
Bachelor’s degree (university)	281,232	22.9	1,207,155	98.2
Ph.D. or master’s degree (university)	22,215	1.8	1,229,370	100.0
Total	1,229,370	100.0		

Source: ELSTAT, LFS; authors’ calculations

longer; in 2014, this number rose to 75.4 percent. Given the ongoing crisis and the lack of labor demand, long-term unemployment is set to stay at high levels for many years to come, as the short-term unemployed progressively move into long-term status, as illustrated in Figure 7. As is by now well documented, since the 1980s, long-term unemployment, when it continues, becomes structural unemployment, limiting the prospects for reemployment due to both the deterioration of workers’ skills and increased discrimination by employers.⁸

Moreover, involuntary underemployment in Greece is the highest among European countries, primarily for economic reasons; 66.4 percent of the underemployed report they want to

increase their hours of work to full-time (Figure 8). The corresponding averages for the eurozone and EU-27 are 26 percent and 28 percent, respectively. It is noteworthy that the share of involuntary part-time workers among total part-time workers was 62.9 percent in 2012.

Related to part-time employment is the incidence of poverty. In Greece, according to Survey of Income and Living Conditions (SILC) data, in 2012 the poverty rate among part-time workers was more than double compared to full-time workers, at 27.3 percent and 13.4 percent, respectively (ELSTAT).⁹ In 2013, the gap in the at-risk-of-poverty rate for part- and full-time workers—at 27.0 percent and 10.7 percent, respectively—widened.

Distribution of Unemployment by Educational Attainment Level

It is useful to have a clear understanding of the skill composition of the unemployed, since this serves as an indicator of their future prospects in terms of wages and job opportunities. We use educational attainment (years of schooling) as a proxy for skill level.

Our interest lies in understanding the compositional nature of the characteristics of the unemployed (the share of a group in the total pool of unemployed). Accordingly, the figures presented in Table 4 pertain to the proportion of individuals within an educational attainment group to the total pool of unemployed. In the third quarter of 2014, 782,576 of the unemployed (63.7 percent of the total) had an attainment level of secondary education (Lyceum) or less; among these, 143,445 persons (11.7 percent) had only three years of high school (Gymnasio) or less, and an additional 168,260 had completed a primary level of education (Dimotiko) or less.

The Gender Dimension of Unemployment

Even before the crisis, as illustrated in Figure 6, unemployment rates among women were higher than those for men, especially if one considers that the overall female labor force participation is low (roughly 44 percent for women vs. 64 percent for men in 2010). In 2008, for example, when the unemployment rate was 7.7 percent, the unemployment rate for men was 5.1 percent, while that for women was more than double, at 11.4 percent. As the crisis unfolded, newly unemployed women boosted these already worrisome numbers. Historically, female unemployment, even in absolute numbers, has been higher than that of men, as Table 5 clearly shows. In November 2009, for example, there were 300,000 unemployed women vis-à-vis 229,000 unemployed men. By 2010, with the recession deepening and despite its effects on male-intensive industries, out of 711,000 unemployed workers, 382,000 were women and 329,000 were men. Women continued to outstrip men in terms of unemployment until November 2012, when the trend (in absolute numbers) reversed, with men exceeding women. It reversed again, however, in November 2014, in that there were more women than men among the unemployed, though the gap was not as significant as it was before 2012.

For the third quarter of 2014, with an overall unemployment rate of about 25.6 percent, the corresponding unemployment rate for women was 29.2 percent, while the rate for men was 22.6 percent. Despite the lower unemployment rate among men, their share of long-term unemployment has increased faster than that of women (Table 6).

Table 5 Unemployment Levels, Male and Female, Various Years

Month/Year	Female	Male	Total
November 2009	300,000	229,000	529,000
November 2010	382,000	329,000	711,000
November 2011	527,000	500,000	1,027,000
November 2012	633,000	649,000	1,282,000
November 2013	666,000	671,000	1,337,000
November 2014	617,000	612,000	1,229,000

Source: Eurostat, LFS

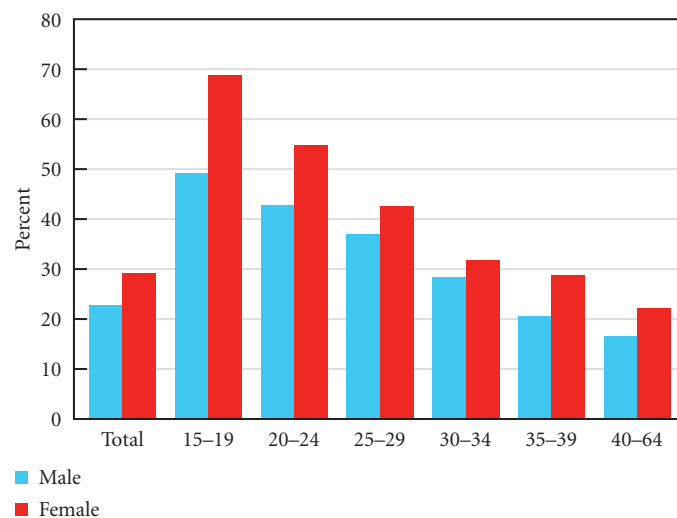
Table 6 Long-Term Unemployment Rates, by Gender (in percent)

Year	Male	Female	Total
2008	40.0	51.6	47.1
2010	38.3	49.8	44.6
2012	56.4	61.7	59.1
2013	66.0	68.2	67.1
2014	75.3	75.5	75.4

Note: 2014 corresponds to Q3.

Source: Eurostat, LFS, as a percentage of total unemployment

Figure 9 Unemployment Rates by Age and by Gender, 2014Q3 (in percent)



Source: Eurostat, LFS

While youth unemployment has received a lot of attention in Greece and more generally in Europe, women's unemployment during the crisis has remained below the policy radar. We examine the age distribution of the unemployed below, but we want to highlight that the outlook for women finding gainful employment across *all age groups* is bleaker than that for men, as is clearly illustrated in Figure 9.

Youth Unemployment

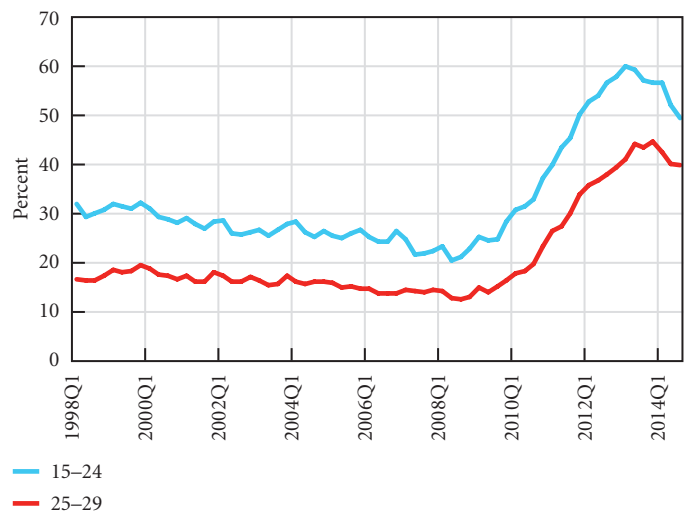
The youth unemployment rate has been universally much higher than the rates for other age categories of unemployed workers. In 2008, youth unemployment was already high at 22.1 percent, compared to an overall unemployment rate of 7.7 percent. By 2014Q3, the unemployment rate of job seekers aged 15 to 24 had shot up to an unprecedented 49.5 percent, while the rate for the next age cohort (ages 25–29) stood at 39.7 percent (Figure 10).

The extraordinary increase in the youth unemployment rate from 22.1 percent in 2008 to an average of 54.2 percent in 2012, and to 58.7 percent on average for the first three quarters of 2013, has elicited alarm and strong interest from the political leadership of many European countries, including Greece.

A traditional public policy response to the youth unemployment challenge takes the form of active labor market policies (ALMPs). These sorts of policies seek to foster an increase in the supply of labor. Their focus is on increasing the employment prospects of youth via (1) improving their employability through short training courses to better match their skills to labor market needs, (2) endowing them with initial work experience by incentivizing enterprises through wage subsidies to hire them as new entrants, and (3) fostering entrepreneurship through small grants and advising/extension services. What we notice, however, is that current labor market conditions have changed dramatically, and the ALMPs need to be reframed.

Unemployment is primarily the result of a lack of demand for labor, both for the young and for more mature working-age adults. Training may be important for some, but the "brain drain" seen in the migration of Greece's educated youth signals a misdiagnosis of the root causes of unemployment. Subsidies to firms may have some impact, but only to a limited extent, because firms also face a lack of demand. Fostering entrepreneurship is also important, yet the trouble for existing and aspiring entrepreneurs rests with the reluctance of commercial banks to lend; and when banks do make loans, they tend to lend at interest rates far above the corresponding European levels, putting start-

Figure 10 Youth Unemployment Rates, 1998–2014Q3 (in percent)



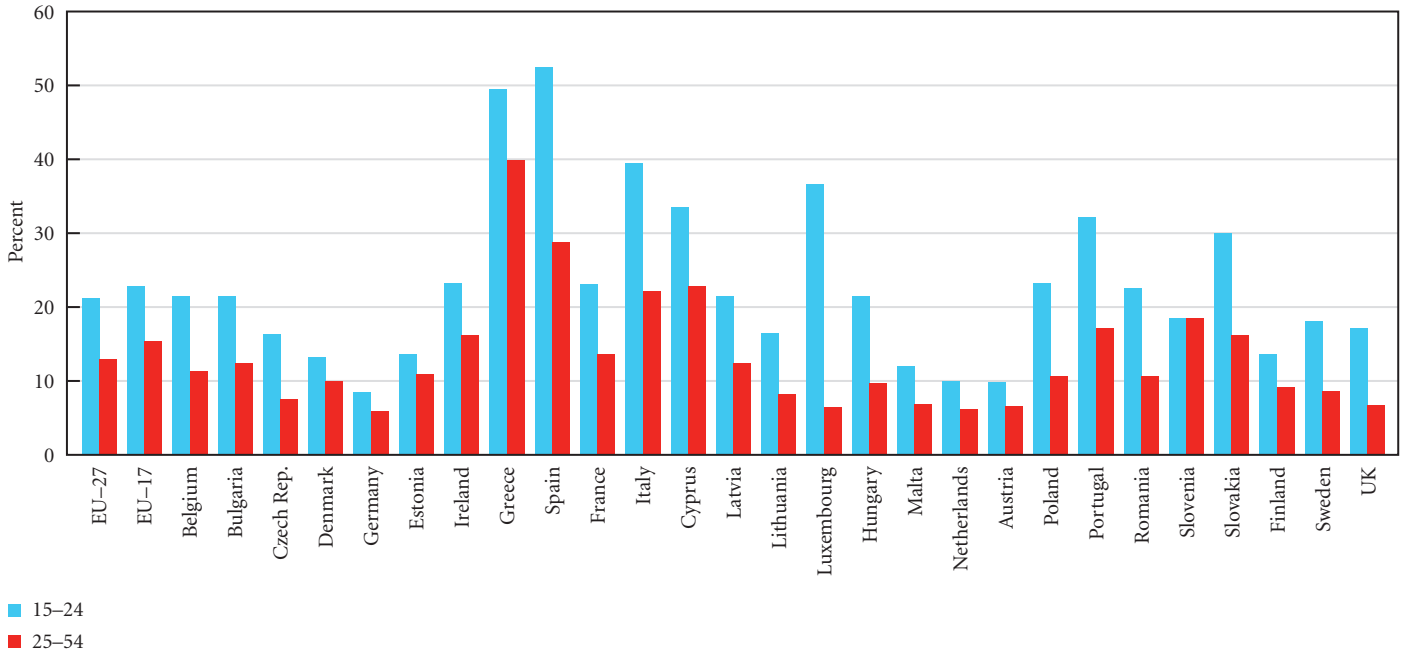
Source: Eurostat, LFS

up firms at a disadvantage. The fact that, in terms of the overall reduction in employment, there was a larger decrease in the number of employers than in the number of employed illustrates this to a certain extent.

But the key issue is that the age composition of the unemployed has undergone an extraordinary transformation, which must be taken into account in policy interventions. For example, one year into the crisis, in 2009Q1, the total number of unemployed workers aged 15 to 24 was 89,600, while the total for those aged 25 or older was 375,500. The corresponding numbers in 2013Q2 were 158,500 unemployed persons under the age of 25, an increase of 110 percent, while among those aged 25 or older, the number of jobless reached 1,171,500—an increase of 226 percent. Between 2013Q2 and 2014Q3, the share of youth unemployment did not change significantly, and in fact was lower than the EU-27 and EU-17 average of 21.5 and 19 percent, respectively. Clearly, youth unemployment is not a uniquely Greek challenge.

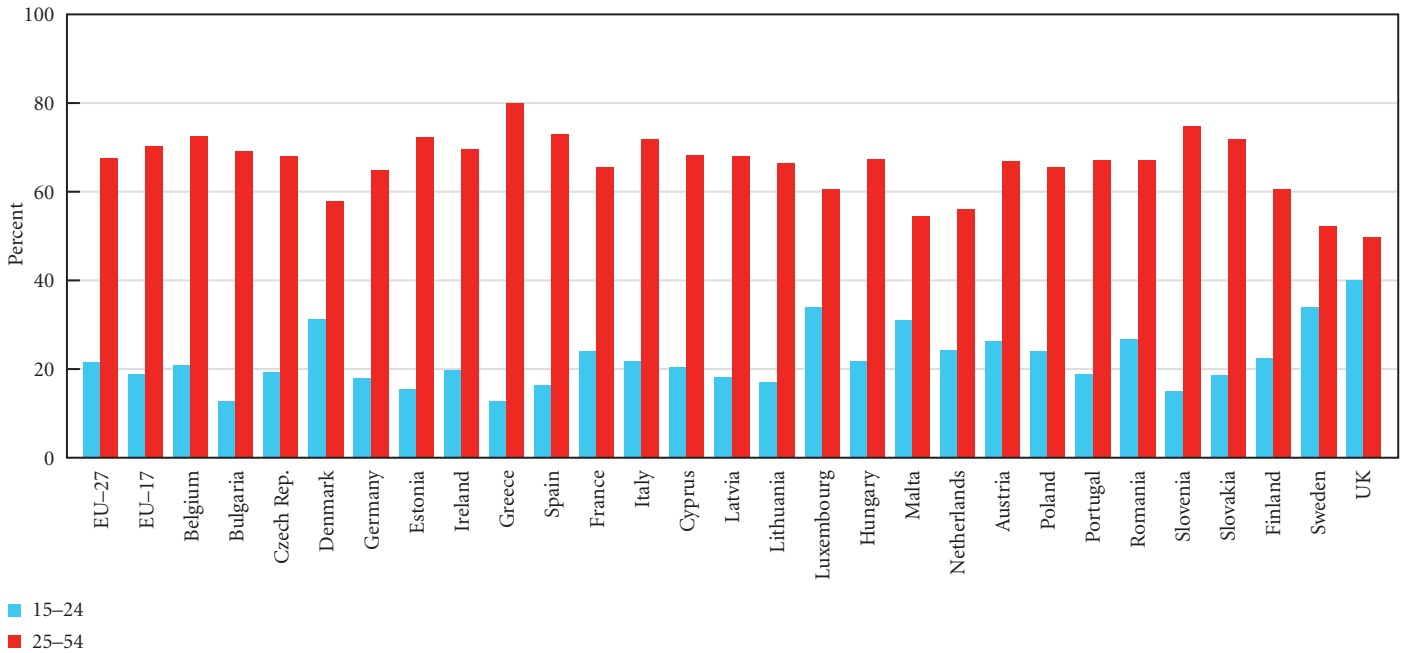
In 2012, according to Eurostat, there were 3.4 million unemployed young people aged 15 to 24 in the eurozone, but roughly four times as many unemployed workers (12.6 million) between the ages of 25 and 54; in Greece, those numbers were 173,000 and 950,000, respectively. In 2014Q3, there were 3.3 million unemployed young people in the eurozone, or 19 percent of the total unemployed; in Greece, out of 1.23 million unemployed workers, 154,300 were between the ages of 15 and

Figure 11 Unemployment Rate by Age Group, 2014Q3 (in percent)



Sources: Eurostat, LFS; authors' calculations

Figure 12 Unemployment Share by Age, 2014Q3 (in percent)



Sources: Eurostat, LFS; authors' calculations

Table 7 Distribution of Youth Unemployment by Educational Attainment (aged 15–29), 2014Q3

Highest Level of Educational Attainment	Persons	Percentage	Cumulative	Cumulative Percentage
Primary education (6 years – Dimotiko) or less	21,976	5.9	21,976	5.9
Gymnasio (3 years of secondary education)	29,297	7.8	51,274	13.7
Lyceum (3 years beyond Gymnasio)	154,139	41.3	205,412	55.0
Technical education institutions (TEIs)	52,585	14.1	257,997	69.1
Bachelor’s degree (university)	110,134	29.5	368,131	98.6
Ph.D. or master’s degree	5,118	1.4	373,250	100.0
Total number of unemployed	373,250	100.0		

Source: Eurostat, LFS; authors’ calculations

Table 8 Distribution of Unemployment by Age and Educational Attainment, 2014Q3 (in percent)

Highest Level of Educational Attainment	15–29	15–64	Cumulative	
			15–29	15–64
Primary education (6 years – Dimotiko) or less	5.9	13.5	5.9	13.5
Gymnasio (3 years of secondary education)	7.8	11.7	13.7	25.2
Lyceum (3 years beyond Gymnasio)	41.3	38.4	55.0	63.6
Technical education institutions (TEIs)	14.1	11.7	69.1	75.3
Bachelor’s degree (university)	29.5	22.9	98.6	98.2
Ph.D. or master’s degree	1.4	1.8	100.0	100.0
Total	100.0	100.0		

Source: Eurostat, LFS; authors’ calculations

24—12.6 percent of the total. Unemployed youth represent a relatively small percentage of the category of all unemployed persons in Greece, and the recent focus and proposals of the EU authorities to deal with youth unemployment exclusively (i.e., the Youth Employment Initiative of 2012 and the Youth Job Guarantee¹⁰) are problematic. The policy response is also based on a misdiagnosis of the problem, and hence focuses on the three pillars mentioned above (training, employability, and entrepreneurship¹¹). Figure 11 indicates that youth unemployment rates are extremely high across countries, but the reality confronting Greece and the EU countries—except Sweden, the UK, and, to some degree, Finland and Malta—is that the share of workers over 25 years of age make up the vast majority of the unemployed (Figure 12). In Greece, the youth unemployment share of overall unemployment was less than 13 percent in 2014. Employment policies must be cognizant of this reality.

It is also useful and instructive for policymakers to know the educational attainment of this age cohort. Among unemployed youth aged 15 to 29, 205,412—or 55 percent of the total—had an educational attainment level of Lyceum or less in 2014 (Table 7). The comparable figure for those aged 15 to 64 is about 63.6 percent (Table 8). The difference of 8.6 percentage points accounts for those 15-to-29-year-olds who were still in school. We can, then, conclude that low educational/skill levels may be much more challenging for the unemployed of a more mature age.

Next, we observe in Table 8 that the unemployment share of the cohort that has attained a Lyceum graduation degree is roughly the same for these two age groups (41.3 and 38.4 percent, respectively). The next educational level, those with a bachelor’s degree or higher, exhibits a bias (6.6 percentage points) against the younger cohort. Finally, we notice that unemployment is higher for the 15-to-29-year-olds who have

already acquired technical skills (i.e., the graduates of TEIs) as compared to the average unemployed. We can again conclude that lack of education/skills is not the key cause of the 15-to-29-year-old age group being unemployed—at least, no more so than for the average unemployed person.

The overemphasis of public policy on remediation through skill enhancement is, then, an ineffective response. To face the scourge of unemployment in earnest, we need to recognize that the trouble with the country’s historic number of idled workers is a lack of effective demand. Its depth is extraordinary, and it must be met with massive investment, achievable only through a well-coordinated plan implemented by the public and private sectors.

DISTRIBUTION OF MONTHLY EARNINGS OF EMPLOYEES IN THE PRIVATE SECTOR, 2012

Reduction in unemployment in the near future will depend on new hiring in both the private and public sectors. The latter, unwisely, is expected to downsize dramatically if the country is to fulfill the troika’s mandates. Assuming for the moment that private sector job creation takes place, it is important to understand the prevailing wage and salary environment within which the unemployed will be offered a job.

Following agreements defined in the second Memorandum of Understanding with the troika, the Greek government introduced employment protection legislation (Law 4046/2012) in February 2012 to comply with conditionalities of the bailout. The aim of the new legislation was to effect a rapid reduction of labor costs (internal devaluation), as discussed earlier. The legislation mandated a 22 percent decrease in the minimum wage *in the private sector*, with a further reduction for young workers (aged 15–24) of 32 percent. The new gross minimum wage was accordingly reduced from €751 per month to €586, and to €511 for younger workers. When employee contributions are deducted (at a rate of 16.5 percent), the new legislated minimum net take-home pay amounts to €489, and €427 for youths, down from the previous minimum level of €627.

The policy of internal devaluation and other detrimental changes to employment protection have devastated the wage-earning classes. This ill-advised policy orientation was predicated on the expectation of export growth as the result of increased competitiveness via the suppression of labor costs. This has not come to pass. Instead, lower earnings have reduced the already anemic demand for nontradables—putting further pressure on

domestic production for domestic consumption, and hence, on employment.

The reduction of the minimum wage has been accompanied by a large number of additional actions (beginning in 2010) that have all but decimated labor rights and collective bargaining. According to the ILO (2013), “Since May 2010, Greece has been witnessing extensive and rapid legislative changes in labor law and collective bargaining conditions which are unprecedented in Greek and European political history.” Below we analyze the distribution of monthly earnings (i.e., wages and salaries) of Greek employees in the private sector¹² using information from ELSTAT’s 2012 Labour Force Survey (LFS).¹³

We begin by identifying the subset of employed persons we will focus on. Table 9 indicates that, in 2014, out of 3,586,885 employed persons, 2,311,414 (64.4 percent) were employees. These workers can be grouped into three categories, according to the legal status of the hiring entity (enterprise) that employs them: (1) core public sector, (2) broader public sector (various legal entities of public and private law that are controlled by state and public organizations, municipal and communal enterprises, enterprises managed by the government, etc.), and (3) private enterprises. It is this last category (employees in private enterprises) that we are interested in.

The massive reduction in employment that has taken place in the private sector during the crisis years is apparent when we consider that, by 2012, only 1,515,109 individuals (63.73 percent of the total number of employed) worked in private sector enterprises.¹⁴ Excluding part-time workers and those hired seasonally in agriculture (so as to avoid underestimating monthly earned incomes) gives us the net number of 1,039,924 persons (60.23 percent of all private sector employees). Table 10 reports

Table 9 Professional Status of Employed Workers, 2014Q3

Professional Status	Persons	Percentage
Employees (wage and salary)	2,311,414	64.4
Self-employed with staff	223,272	6.2
Self-employed without staff	879,975	24.5
Family worker (assistant in family business)	172,224	4.8
Total	3,586,885	100.0

Source: ELSTAT, LFS

the take-home earnings composition of these private sector full-time nonagricultural employees.

The results are telling: the majority of *full-time* wage and salaried employees in the private sector—64.7 percent, or a total of 672,669 persons—receive monthly take-home pay of less than €1,000. In fact, more than half of all full-time private sector employees (51.3 percent) earn less than €900 per month. Approximately one out of five *full-time* wage and salaried employees in the private sector earn €699 or less; that is, €52 less than the minimum wage that prevailed up until 2012 (prior to the wage reduction required by the troika’s Memorandum II). Adding workers who for economic reasons work part-time but wish to have full-time jobs, we obtain a total of 145,724 workers who receive less than the pre-February 2012 legal minimum wage.

We conclude this section with a few remarks on poverty. Poverty rates among the unemployed are higher than among the

employed, at 45.8 percent and 15.1 percent, respectively, according to 2012 SILC data.¹⁵ But looking at absolute numbers, it is clear that in-work poverty is a severe problem in Greece, with 560,170 persons (Table 11) among *all* the employed found to be below the poverty line (SILC 2013).¹⁶ Still, among the 2,377,200 *employees* (all of the wage and salaried workers in the private and public sectors, both full-time and part-time), we find 215,605 in poverty (less than 10 percent of the total). In contrast, among the 1,385,800 *employed persons except employees*—which combines the more than 930,000¹⁷ “self-employed without staff” with the “employers” category (self-employed with staff)—we find 344,565 poor.

These findings invite further reflection.¹⁸ First, in absolute numbers, among the poor, 560,170 persons are employed and 521,885 are unemployed. Hence, the share of the “employed” among the poor is slightly larger (by 38,285 persons) in comparison with the unemployed (in absolute numbers). This does not change the fact that the probability of being poor, if unemployed, is much higher than the probability of being *employed* and poor.

Second, despite the pitiful picture that emerged when we examined the distribution of private sector employees by monthly wages, the vast majority of the employed in poverty come from the “employed persons except employees” (the self-employed and employees). This is the case in absolute terms (344,566 as compared to 215,605) and in relative terms (a poverty rate of 24 percent versus 9 percent among employees). One way of interpreting this is that many among the “self-employed without employees” are self-employed as a coping strategy, not because of entrepreneurial fervor, accepting for themselves below-poverty earnings simply because they do not have other viable employment alternatives.

Table 10 Distribution of Earnings, Private Sector Full-Time Employees, 2012

Monthly Income	Persons	Cumulative	Percentage	Cumulative Percentage
<=499	37,829	37,829	3.6	3.6
500–699	165,230	203,059	15.9	19.5
700–799	176,566	379,625	17.0	36.5
800–899	153,502	533,127	14.8	51.3
900–999	139,542	672,669	13.4	64.7
1,000–1,099	119,349	792,018	11.5	76.2
1,100–1,299	105,351	897,369	10.1	86.3
1,300–1,599	56,800	954,169	5.5	91.8
1,600–1,749	28,678	982,847	2.8	94.5
>=1,750	57,077	1,039,924	5.5	100.0
(Total)	1,039,924		100.0	

Source: ELSTAT, LFS; authors’ calculations

Table 11 Levels of Employed and Unemployed at Risk of Poverty, 2012 (18 years or older)

	At Risk of Poverty	Total
Employed persons	560,170	3,763,000
Employees	215,605	2,377,200
Employed persons except employees	344,565	1,385,800
Unemployed persons	521,885	1,201,100

Source: Eurostat, SILC; authors’ calculations

Final Reflections

The economic fallout from the austerity regime installed in Greece by the troika, with the acquiescence of three successive governments, has been staggering. Unemployment has skyrocketed to unprecedented levels, and by 2012 the private sector had shed the vast majority of jobs. The level of disinvestment in the Greek economy is manifested in the rapid deterioration of annual gross fixed capital formation (GFCF) in the nonfinancial private sector, which fell from approximately €17 billion in 2008 to €7.5 billion in 2013 (Eurostat), and is expected to fall below €6 billion in 2014.¹⁹ The business sector alone will not be able

to provide the much-needed jobs, not within the relevant time frame and not for the 1.23 million jobless. The devastating economic consequences, though, go beyond the loss of GFCF and GDP. Should we magically return unemployment and the minimum wage to 2008 levels, restoring about one million jobs, even at a minimum wage tax revenue from employers' and employees' contributions would amount to €4 billion annually.²⁰

Government action is urgently needed. As we consider policy options, the following facts are important to keep in mind.

Long-term unemployment emerges as the key challenge, and the process of it becoming structural is already taking shape. The age composition of the unemployed highlights that, even though youth unemployment rates are unacceptably high, the shares of unemployed workers—which are undeniably much larger for those aged 15 to 24—should guide policy. Instead, to truly care for the nation's youth, the previous minimum wage level should be reinstated. Women are being impacted the most, because of preexisting trends that were already working against them prior to the crisis. The majority of part-time workers are ready and willing to work full-time, but full-time employment opportunities are not in sight. The ranks of the self-employed are increasing rapidly. Self-employment is a coping strategy that should be recognized for what it is; namely, distressed own-account work, not heightened entrepreneurial spirit. In addition, it must be kept in mind that more than half of the full-time private sector employees receive wages of €1,000 or less a month. Standards of living are severely suppressed, and emergency increased taxation on property and VATs have further reduced disposable income. The danger of further downward pressure on wages, given the rates of unemployment, should be cause for alarm. Last but not least, under these conditions, in-work poverty is a clear challenge. Nonetheless, the link between unemployment and poverty is too obvious to ignore.

The official rhetoric and the vast majority of active labor market measures (and funds) are misplaced because they continue to focus on (1) improving employability via skill development and training when the economy's main problem is lack of demand for labor, not quality of supply, as evidenced by the "brain drain" currently taking place; (2) enhancing "entrepreneurship" when Greece has roughly double the size of per capita small- and medium-size enterprises as compared to the European average; and (3) providing wage subsidies to private companies to hire more workers, which in the midst of lackluster demand is both ineffective and poses the great danger of turning

current full-time jobs into part-time ones, or replacing them altogether with no-cost subsidized workers. A similar misconception surrounds the age composition of the unemployed. Indeed, while youth unemployment is a longstanding problem in Greece—as well as around the world, including many other Mediterranean economies—the impact of the crisis is much deeper among older workers. Trends in unemployment point to a needed prioritization of addressing long-term joblessness, gender disparities, and the rise of joblessness among the less educated. In addition, the rapid increase in self-employment gives us cause for alarm. Remedial policy prescriptions, focusing only on conventional counseling, vocational training, and wage subsidies, warrant rethinking.

NOTES

1. Such estimates are very sensitive to the start and end dates of comparisons.
2. The European Union's average unemployment rate in 2008 was 7.1 percent.
3. The Greek Ministry of Labour reports that, according to the Ergani Information System, which collects data submitted electronically by all enterprises operating under private sector employer-employee contract agreements, 90.2 percent of all businesses employed between one and 10 workers as of October 2013.
4. Authors' calculations, ILOSTAT, "Employment by Sex and Institutional Sector" series. International comparisons of public sector employment are a little tricky because, beyond the core public sector employment, a number of public and private sector entities that operate under public supervision at the national, state, and local level hire workers under private contract law. The calculations are based on the following definition of public sector employment, provided by the ILO: "Public sector employment covers employment in the government sector plus employment in publicly owned resident enterprises and companies, operating at central, state (or regional) and local levels of government. It covers all persons employed directly by those institutions, regardless of the particular type of employment contract. Private sector employment comprises employment in all resident units operated by private enterprises, that is, it excludes enterprises controlled or operated by the government sector."
5. The reduction in employment is calculated as the difference between the annual employment of 2008 and the average employment between January and September 2014, provided by ELSTAT.
6. All employment data are drawn from Eurostat's website on employment statistics.
7. The average for January to October is 1,350,000 persons. As a reminder, the unemployment rate in 2008 was 7.7 percent.
8. See, for example, Valletta (2013), Ghayad and Dickens (2012), Acemoglu (1995), and the seminal paper by Heckman and Borjas (1980).
9. ELSTAT, "Statistics on Income and Living Conditions 2012: Risk of Poverty," Press Release, November 29, 2013.
10. The Youth Employment Initiative was proposed by the February 7–8, 2013, European Council, with a budget of €6 billion for the period 2014–20. This is clearly inadequate for the 3.4 million unemployed youth, since it amounts to only €1,764 per person for the period. The second initiative, the Youth Guarantee, is a recommendation made by the Council of the EU and is estimated to carry an investment cost of €21 billion; EU countries endorsed the Youth Guarantee on principle in April 2013.
11. Finland and Sweden are two countries that have used this approach to youth unemployment.
12. As mentioned above, the public sector is expected to shed jobs, and therefore any potential new hiring will be taking place in the private sector.
13. Comparisons with previous years is not possible, as the survey questionnaire on wages and salaries reported up to 2010–11 did not include the same categorical values of earnings. For more details, see http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/EU_labour_force_survey_%E2%80%93_data_and_publication#Availability_and_release_of_LFS_microdata.
14. In 2012, we find 465,144 individuals (19.57 percent) working in the public sector; 397,163 individuals (16.71 percent) in the broader public sector. As the private sector shed thousands of jobs, the balance between public and private sector employment that prevailed in the previous 20 years changed dramatically.
15. As a reminder, the official poverty line, using the already depressed incomes of 2011 as a baseline, is €5,708 per year for a single individual, yet only slightly more than double that, at €11,986, for a family of four (two adults and two dependent children).
16. The SILC data reported here pertain to adults 18 years of age or older. Unlike Eurostat's LFS, which begins with 15-year-old workers, the age range of choice in SILC begins with employed persons who are 18 years of age or older. In addition, SILC, unlike the LFS, does not separate out own-account workers from employers.
17. This figure is from the LFS, not SILC, as indicated in the note above.
18. We must keep in mind that poverty status is a household-level variable, and counts the individuals living in a household below the poverty-line income and not simply an individual's earnings. Hence, other social transfers, household composition, and the employment status/ earnings of all household members matter.

19. Eurostat, National Accounts, Nonfinancial transactions [nasa_nf_tr]. Were we to include Government and the Household sector, the corresponding figures would be €56 billion in 2008 and €20 billion in 2013.
20. The annualized total contributions of €330 per month per employee amount to €3,960 per person (see table below). Hence, for one million persons the total is €3,960,000,000. But we must keep in mind that this excludes the customary 13 and 14 months' salary, which would have increased the contributions by an additional €660 million.

Gross Wage (in euros)	Employee Contribution (in percent)	Employee Contribution	Net Wage (in euros)	Employer Contribution (in percent)	Employer Contribution (in euros)	Total Wage (in euros)	Total Contributions (in euros)
751	16.50	124	627	27.46	206	958	330 (124+206)

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