

## **Social Responsibility and Professional Football in Greece: some preliminary reflections.**

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### **Prologue**

The current (in progress) PhD thesis looks at the implementation process of various social practices/programmes that being undertaken in Greek and English professional football. The prime objective is not to report in detail or describe those processes implemented by professional football clubs practices or programmes; the contrary, emphasis will be placed on how the football clubs' officers perceive these programmes and their implementation, and how their sense-making compares with the outcomes of the implementation processes<sup>2</sup>. Also, an attempt will be made to address questions concerning whether there are contextual elements that shape the implementation of these social programmes (and if so, what they are) and the officers' sense-making of them, and how these officers define the success and/or failure of this process. Thereafter, an attempt to compare the findings from the Greek football context with those from the English context will be made, in order to explore whether the same observations apply to both cultures, and which contextual elements have more variation between one culture and another and why.

This paper, however, limits itself to a number of issues which are a) to introduce the reader to the current state of professional football in Greece, b) to describe part of the examined literature that relates to the historical roots of Greek football, c) to chronicle the business and society relationship and d) to briefly discuss the underlying socio-political context for Corporate Social Responsibility (CSR) implementation practices in Greece.

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<sup>2</sup> Exploring Multi-National Enterprises in a completely different context, Athanasopoulou (2007) has also looked at the implementation process of CSR practices. Her study has provided useful theoretical insights for the current research project.

## Introduction

Football is not only the most popular sport in Greece; it is also a sport with remarkable economic and political dimensions. During a time when the business side of Greek football is penetrating more and more of the market, some new concepts in the Greek socio-political context such as Corporate Social Responsibility (CSR) or/and Corporate Citizenship (CC) have been gaining impetus amongst business leaders, opinion makers, media professionals and the government itself (Tsakarestou, 2005). According to Carroll (1999), CC is an extension of a lineage of study in the management literature that conceptualises the role of business in society, and as this paper discusses further, this lineage has, most notably, been dominated by the notion of CSR. For Crouch *et al.* (2001), citizenship theories have been a matter of academic discourse since the 1980s, but as these authors suggest “*two types of experiments with citizenship seem to be emerging: those concerned with the extension of the market, that is the re-expression of the market freedoms as integral to, rather than in conflict with citizenship; and those concerned with trying to transcend formal political patterns with more social and participative approaches*” (2001:8).

At this stage, if a premise could be made it would be that corporate citizenship is a political commitment undertaken by professional football clubs towards predominantly local communities and their stakeholders. The methodological approach adopted for this research, however, leaves little room for such premises; this is because everything remains to be explored.

First, the paper sets the scene by briefly looking at the “*extension of the market*”, before addressing the origins of Greek football. It follows a ‘historical’ review of the business-and-society relationship before a brief discussion of the development of CSR in Greece takes place. The paper concludes by briefly discussing the theoretical and methodological foundations upon which the research will be grounded.

## Football’s “*transformation*”

Taylor referring to English football views the 1992-93 season, when the Premiership began, as the “year zero” for the game (2004:50). For Greek football, Dimitropoulos (2006) refers to the year 1979<sup>3</sup> as its ‘cornerstone’, however, this paper view 2006 as the “year zero” for contemporary Greek football since this was when the Greek Super League<sup>4</sup> was established. Indeed, over the last few years, Greek football has experienced the most notable ‘transformation’ in its history. Despite the fact that football clubs are still largely loss-making privately owned companies<sup>5</sup>, they are increasingly being incorporated into the commercial leisure sector, something that ultimately has rendered the sport of football into a business sector of its own. A recent study conducted by the Greek Institute of Sport Business found that the sport industry produced an estimated turnover of around €2.5 billion annually of

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<sup>3</sup> In 1979 Greek football went professional. This means that a football club is now considered to be a limited liability company where its capital and assets are divided into shares held by the owner(s).

<sup>4</sup> Super League is the organising body of Greece’s top tier professional football.

<sup>5</sup> The company maintains the parent club’s name (accompanied by the acronym S.A. “Société Anonym”), emblem and other distinctive features (i.e. colours). Under this legal structure, the practical aspect, however, that connects the amateur and the professional club derives from the fact that the legislature provided that the company, in return for the use of emblems, winning titles and land for recreational facilities, would have to pay ten percent (10%) of its net revenue (from gate receipts and other commercial uses) to the parent club in perpetuity.

which 65% is provided by the football sector alone<sup>6</sup>. As a consequence, football has been subject to a growing body of analysis on the grounds of governance, commercialisation and business practices. Although this research recognises the significance that the formation of the Super League has had on this ‘transformation’, for reasons that will be explained later, it will not treat the 2006-2007 season as a ‘starting point’ but, instead, as a reference point.

Some authors have proposed an individualistic account of this ‘transformation’ of the ‘*people’s game*’ (i.e. Conn, 1997), while others have argued that a more thorough approach that takes into account the wider historical and social context is required (i.e. King, 2002, 2003). Corroborating this latter line of thinking, Holt notes that football’s development -or ‘transformation’- bears witness to many of the dominant socio-economic and political trends of the last century – the growth of an industrialised and increasingly affluent society, the rise and fall of nationalism, commercial and technological advances, and the growth of transnationalism and globalisation (2009:21). Whatever the approach, the reality is that football’s ‘transformation’ over the last years has been remarkable, manifesting itself in so many aspects such as player wages, ownership structures (see the multi-shareholding scheme of Panathinaikos FC), sponsorship (OPAP S.A.<sup>7</sup> €73million for the next 2 years), distribution of income, stadium developments (i.e. Karaiskaki football ground, grounds at AEK, Panathinaikos and Larisa to follow), ticket prices (a minimum of €10-12), enormous TV rights deals (€160million over the next 3 years), and merchandising, to name just the most obvious examples.

Given, however, that this research looks at the relationship between football clubs and their local communities, the question is how this ‘transformation’ has affected this relationship. Before going on to deal with this point, an important note needs to be made. This paper deliberately uses the term ‘transformation’ instead of, for example, ‘transition’; this is because the latter term implies, as Girginov and Sandanski (2008:23) point out, “a linear move between two destinations” and “a break with history” (in this case, Greek football pre-1979 to nowadays). Yet, it is hard -if not inappropriate - to detach football clubs from their historical roots, as the following section will discuss. To this end, while the notion of transition may emphasize a destination, transformation implies a process of discovery that unfolds over time and is contingent on past and emerging social, political and economic forces.

### **Greek football: the early years**

According to anecdotal evidence, the sport of football appeared in Greece just before 1900, when English warships began to arrive in the ports of Piraeus, Thessaloniki, Constantinople, and Smyrna, and the crews played football with each other. At the same time, Greek students in English universities and emigrants alike were returning to Greece bringing with them the sport of football. These included Andrianopoulos, who later became the founder of Olympiakos as well as being a player. In 1885, Vlastos concisely translated the rules of football from English into Greek, and a few years later, in 1898, Chrisafis, a very important figure for Greek sport, completed the translation.

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<sup>6</sup> The study findings have been available at [www.iae.gr](http://www.iae.gr) since April 2008.

<sup>7</sup> “Greek Organisation of Football Prognostics”

Giannitsiotis (2002) writes that as early as 1870, the first sport clubs started being established in cities such as Athens, Constantinople, Smyrna and Alexandria – all cities with significant populations and financial power – with the aim of promoting and fostering national pride and identity. However, the same historian notes that sport clubs, at that time, had as their main objective the gradual integration of gymnastics and music into the lives of citizens, while football, as Koulouri (1998) adds, became part of those sport clubs' activities years later, at the beginning of the 20<sup>th</sup> century.

According to Albanidis (2006) the 1896 Olympic Games were the springboard for the formation of the Greek Sport Club Federation (ΣΕΑΓΣ, which since 1928 has been known as ΣΕΓΑΣ). Albanidis associates the appearance and spreading of the new sports, among them football, with the end of the First World War, when Greek soldiers started playing this particular sport. At the same time, when the 'Micrasiatiki Katastrophi'<sup>8</sup> took place (1922) and a number of sport clubs had to be re-established in Athens (these included- Panionios, AEK) and in Thessaloniki (clubs such as PAOK), new Greek sport clubs also appeared and included the sport of football in their (other) activities (i.e. Panellinios, Ethnikos, Panahaikos, Panathinaikos etc). Football's popularity in public life led, in 1926, to the formation of an independent (hence with its autonomy from ΣΕΓΑΣ) federation, the Hellenic Football Federation (HFF). It is important to note that a national federation is the supreme organisation and has the responsibility for the development of the sport that it serves (in HFF's case football).

A legitimate question which could be asked, however, would concern the reasons why football developed at that particular time, and subsequently those reasons that make it so popular in Greek society. These types of questions can only be dealt with if one takes into account the wider historical, social and political circumstances of that time. For example, English historians and sociologists, such as Richard Holt and Richard Giulianotti, explain that football developed in England at a time of rapid urbanisation and had it provided opportunities for expressions of common identity during a period when it was becoming more difficult to feel a sense of belonging to amorphous, ever-expanding towns and cities (Holt, 1989 – cited in Brown et al. 2008). Characteristically Holt states that:

“The massive expansion in the scale and size of urban communities in the second half of the 19<sup>th</sup> century created new problems of identity for their inhabitants...in essence, football clubs provided a new focus for collective urban leisure in industrial towns and cities that were no longer integrated communities gathered around a handful of mines or mills...these inhabitants of big cities needed a cultural expression of their urbanism which went beyond the immediate ties of kin and locality” (Holt, 1989:167).

As Brown et al. (2008:304) note, Holt was not alone in adopting this essentially functionalist reading of the development of links between football clubs and communities. Giulianotti (1999) also believes that early football clubs can be understood as creating “organic solidarity” and “collective consciousness” within the potentially atomised urban environments that were common by the beginning of the 20<sup>th</sup> century.

This socio-economic environment in England, as described by the English scholars, has similar characteristics with the respective period of “*Mesopolemou*”<sup>9</sup> in Greece. Among the very few (if any) academic works based on sound theoretical foundations, Papageorgiou (2007) notes that during this time (and hence when most of the football clubs were

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<sup>8</sup> The deportation of Greeks by the Turks from Constantinople, Smyrna and other major cities of the Turkish coasts.

<sup>9</sup> The period between the two World Wars

established), the arrival of the refugees after the “Micrasiatiki Katastrophi”, the recession in which the Greek State was, as well as the increased urbanisation, all led to the marginalisation of a significant number of people; in other words, an intensive social stratification was taking place. Against this background, both the establishment and the popularity of football clubs took the form of a “social reaction”.

It is known that the citizens of large cities during the “Mesopolemo” were predominantly blue-collar workers or junior civil servants with very low income (Papageorgiou, 2007). Within such a context of hard-working conditions, limited leisure time and other types of difficulties (the notion of “political clientelism” in the ever more expanding role of the State has been an emotional struggle for all parties involved), football was one of the answers which allowed daily problems to be forgotten. Papageorgiou writes about this ‘escape’:

*“The lads usually met before the game in somebody’s house or in a traditional ‘kafeneio’<sup>10</sup>, and talked about the game. They also discussed family matters there, problems and incidents at work etc [...]. For the majority of these men, this was the only opportunity during the entire week to associate with their friends, and football was the best excuse to do so” (2007:36).*

It is apparent, therefore, that, after a delay of almost half a century, Greek society was facing similar socio-economic circumstances to those that had existed in England. As there, too, the establishment and popularity of football clubs in Greece, as well as their close relationship with the local communities can be explained if one takes into account the wider social, economic and political circumstances of that time.

### **Business and society relationship: a historical review**

As already mentioned, in its broadest sense, this research is positioned within the domain of business and society. Although both terms will be contextualised in a later stage of the study, for now, two rather vague definitions will help to set the scene. Carroll and Buchholtz (2006:5) define business as “the collection of private, commercially oriented organisations, ranging in size from one person proprietorships to corporate giants”, while society is defined as “a community, a nation, or a broad grouping of people having common traditions, values, institutions, and collective activities and interests” (*ibid.*). Moreover, and according to Frederick (1997:48), by bonding the terms together one implies two things: first, the relationship that business firms have with society’s institutions and nature ecosystems; and second, the field of management study that describes, analyses, and evaluates these complex societal and ecological linkages. However, it has been suggested (see for example Buchholtz and Rosenthal, 1997; Wood, 1991; Lantos, 2001) that a more appropriate title for the field would be ‘business *in* society’, since business is an integral part of society, especially for a ‘phenomenon’ like football which never exists in isolation, but always forms part of society (Arnaut, 2006). While recognising that this clarification is not merely semantic, at this stage and for the sake of clarity in this brief overview, ‘business and society’ is the term that will be used throughout.

Despite the constant debate about the way people regard the relationship between business and society this bond is certainly not a new notion. Of course, there have been a number of comprehensive and useful efforts to chronicle the origins of this relationship (see for example Cannon, 1994; Post et al., 1996) as well as to analyse the emergence of certain parts of the

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<sup>10</sup> A traditional coffee bar where mainly men go to play card and backgammon, and to talk.

notion, including such as Business Ethics (BE), Corporate Social Responsibility (CSR), and Corporate Citizenship (CC) to name but a few. It is true that this section devotes little space to the historical roots of the business and society domain, but it is important to somehow examine the abovementioned constructs in light of the wider development of the field. In addition, exploring its history provides a further window, in attempting to specify what these concepts may actually mean.

Eberstadt (1973 – cited in Jones et al., 2002:21) reports that even in antiquity business was expected to serve the wider community, while later, in medieval times, a good businessman was a man “honest in actions and motives” who “used his profits in a socially responsible way”. In the UK during the Victorian industrial era, the relationship between business and society was predominantly embodied in personnel-related matters. As Cannon (1994:17) characteristically writes, entrepreneurs such as Robert Owen and the Cadburys adopted the approach of ‘enlightened self-interest (*noblesse oblige*)’, hence rejecting the notion that profits and responsibility were inconsistent. In North America, this relationship was mainly expressed through contribution to the fields of education such as endowments for universities or colleges or other charitable institutions (Cannon, 1994:19). It is worth noting, however, that despite the rich philanthropic stance of US entrepreneurs such as Ford, Rockefeller or Carnegie, their drive was always profit, and as Cannon says “they were ruthless in their commercial activities” (1994:20).

According to Lantos (2001) however, the framework that highlighted *modern* [italics added] business and its relationship to society was provided by Adam Smith, with ‘*An Inquiry into the Nature and Causes of the Wealth of Nations*’ (1776). For Smith, capitalism works to create greater wealth than any other economic system, and maximises liberty by allowing individuals freedom of choice in employment, purchases, and investments, hence benefiting society at large. Although it is beyond the scope of this review to critique Smith’s seminal work, it is important to note that his classic book was written in a world of small, local businesses and before the Industrial Revolution. This observation, of course, does not distort the fact that Smith’s ‘invisible hand’ has been a landmark in the history of Western thought (Boatwright, 2007:46) and that it brought a new perspective to how business and society’s relationship can be examined.

There has been a general consensus (cf. Carroll, 1999; Whetten et al. 2002; Windsor, 2001; Frederick 1994), however, that it was Bowen’s (1953) publication of ‘*Social Responsibilities of the Businessman*’ that signalled the commencement of a scholarly discussion over social responsibility and its complementary constructs, which will be examined further. Bowen’s arguments were based on an assertion which, indeed, echoes today’s CSR principles (Breitbarth and Harris, 2008:181). This was that businesses accumulate considerable power, and have far-reaching influence on people’s lives, and that businesspeople are responsible for the consequences of their actions beyond the company’s direct economic interest.

A few years later, Levitt (1958), addressed a ‘*powerful attack* [my italics] on the social responsibility of businessmen’ - as Davis (1960:72) characteristically reports, cautioning that those ‘socially responsible’ viewpoints adopted by businesspeople would actually have adverse effects on the society at large. Notwithstanding Levitt’s warnings, during the 1960s appeals for the conceptualisation of the ‘social responsibility’ movement came to the fore with the most notable examples being those of Davis (1960) and Frederick (1960). Davis recognised that the economic functions of business are primary and the non-economic are secondary, but as he stressed, “the non-economic do exist” (1960:75). Approaching the business and society relationship from the point of view of social power theory, Davis (1960) underlined that those businesses that failed to balance social power with social responsibility,

would fail in the long-run to achieve their primary objectives (i.e. the economic functions). In a similar tone, Frederick (1960) called for the development of an adequate theory of business responsibility. He claimed that the collapse of the *laissez-faire* philosophy had created a philosophical vacuum, but that the five currents of thought about business responsibility developed since the 1950s failed to offer a clear-cut, substantive meaning of the social responsibilities of the businessman (1960:58).

The seminal 1970 article by the neoclassical economist Milton Friedman arrived in the search for a theoretical framework in which social responsibility could position itself, and further complicated the controversy over the business and society relationship. Friedman's assertion was that in a free economy, so long as a business engages in open and free competition without deception and fraud, it has a sole responsibility: to use its resources and engage in activities designed to increase its profits.

From this statement, it is evident that Friedman recognised the legal and ethical responsibilities that businesses have towards society. On this basis, his stance has been mistakenly regarded by many scholars as the best example of the extreme position in a continuum describing the role of business in the business and society relationship. Lantos (2001:602), for example, writes that it was Carr's (1996) classic *Harvard Business Review* article that deserves this position; this is because Carr wrote that "one's duties to the employer as a loyal agent override other moral obligations" (Lantos, 2001:603). Another point from Friedman's article that deserves more attention is the fact that he refers to publicly-held companies and not privately-owned business (i.e. sole proprietorship or partnership). As Friedman (1970) characteristically states:

*"The situation of the individual proprietor is somewhat different. If he acts to reduce the returns of his enterprise in order to exercise his 'social responsibility', he is spending his own money, not someone else's. If he wishes to spend his money on such purposes, that is his right, and I cannot see that there is any objection to him doing so"*

Lantos (2001:601) regards Friedman's viewpoint as, being, somehow, valid since the owners of an unincorporated business are accountable only to one another regarding their business performance, and therefore they are not subject to the market for corporate control. In other words, they may define the mission and goals of their organisation however they wish.

While Friedman's view raised the debate over business' responsibility to society, it was Carroll's (1979) three-dimensional conceptual framework which sought to elucidate this relationship, under the heading of 'Corporate Social Responsibility'. Carroll's model was developed on the basis of: i) the entire range of business' responsibilities (i.e. economic, legal, ethical, discretionary) ii) the social issues involved (i.e. consumerism, environment, discrimination, product safety, occupational safety, shareholders) and iii) types of social responsiveness (i.e. reaction, defence, accommodation, pro-action). For now, the paper refers to only one of the three dimensions of the proposed model; the one that concerns the four fundamental categories of business' responsibilities.

Carroll acknowledged that the first and foremost social responsibility of business is economic in nature (1979:500). This is because, according to Carroll, the business institution is the basic economic unit in society and serves this function to support the economic conditions, promote employment and improve societal structure (*ibid.*). The second responsibility prescribed in Carroll's model concerns the legal aspect that entails complying with the law and, which Friedman (1970) describes as, "playing by the rules of the game". For Carroll,

legal responsibilities reflect society's view of 'codified ethics' in the sense that they embody basic notions of fair practices as established by lawmakers (2006:35). The third aspect is the notion of ethical responsibility, which according to Lantos (2001:597) overcome the limitations of legal duties. Even Carroll (1979:500), however, recognised that ethical responsibilities are "ill-defined and consequently are among the most difficult for business to deal with"; yet, for the sake of clarity within this discussion, one could think of ethical responsibilities as encompassing those areas in which society expects certain levels of moral or principled performance (Carroll and Buchholtz, 2006:37). Finally, the fourth category concerns discretionary (or volitional) responsibilities. It is predominantly responsibilities that fall within this category that the likes of Friedman, for example, argue against, since these are left to individual judgement and choice. Discretionary responsibilities might involve philanthropic contributions, conducting in-house programs for drug abusers, or providing day-care centres for working mothers. As said, the vagueness around these expectations has caused a great deal of scholarly debate, not least when even Carroll recognised that the term 'responsibility' may be inaccurately used in describing these actions. In brief, and according to Carroll (1979:500), the emerged definition from this four-part framework could be:

*"The social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organisations at a given point in time".*

The short review above permits two broad observations: first, that social responsibility in the business field has been the subject of much discussion over, at least, the past fifty years; and second, that the study of the business and society relationship was first *conceptually* examined under the heading of Corporate Social Responsibility (CSR) by Carroll (1979). As already stated, however, alternative and/or complementary constructs or frameworks have emerged from CSR and have evolved over time.

### **CSR in the Greek socio-politico-economic context**

According to Tsakareitou (2005) CSR is a *neologism* that has started penetrating the business and political scene in Greece. If concepts such as 'responsibility', 'participatory democracy' and 'cooperation' were introduced into Greece's mainstream political agenda during the elections of 2004 (Tsakareitou, 2005), in 2009 it is upon these concepts that political leaders build their agendas. Characteristically in April 2009 at the London School of Economics, the president of the Panhellenic Socialist Movement (PASOK), George Papandreou, talked about "*citizens' contribution to the creation of a sustainable and inclusive society [...] to create participative societies [...] both business and citizens with rights and responsibilities*". Of course, through a 'political clientalism' culture in the state-citizen relationship, or a "clientelistic capitalism"<sup>11</sup> in the state-business relationship, the Greek State preserves a national symbolic identity, which according to Tsakareitou, separates the public and private sphere, with the former epitomising 'good' and the latter 'evil' (2005:262).

Apart from the Greek State's control over social, economic and cultural spheres, there are some other obstacles to implementing CSR practices in Greece. According to the Social and Economic Committee of Greece (SEC), not only businesses (among them certainly the football clubs) and public officials, but also private citizens are accustomed to operating on

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<sup>11</sup> Papandreou used this concept to highlight the peculiar relationship between the Government and businesses in Greece (LSE, 27<sup>th</sup> April, 2009)



the periphery of the law (i.e. tax avoidance, illegal labour, bribery, favouritism)<sup>12</sup>. This simply highlights the need for a cultural change and not the enforcement of new laws. Papandreou (2009) was referring to “*a Greece where every citizen contributes to the creation of a sustainable and inclusive society*”, and there is no doubt that this can only happen by people starting to comply with the existing laws.

Moreover, the SEC believes that the size along with the management philosophies of most of the companies in Greece makes the implementation of CSR practices harder. Lack of resources and of managerial staff, but mainly the pursuit of short-term profit makes it difficult for these companies to accept that CSR programmes can be an answer to the difficulties they may encounter. This scenario, of course, is reflected in the Greek professional football clubs. But even if the football clubs do regard CSR practices as a new way to foster their relationships with society, Greek citizens themselves are not ready to accept the idea that these clubs have honest intentions to ‘make good’, given the fact that the clubs themselves cause serious problems<sup>13</sup> (i.e. by not trying hard enough to eliminate football violence).

In such a context, implementing CSR practices may seem a very ambitious strategy. However, almost ten years since the Hellenic Network for CSR was established, the awareness within the Greek business community of the importance of CSR is growing. Through CSR, a social transformation can be achieved and it would be safe to believe that citizens and governments and the business community alike can only win by such a transformation.

## **Epilogue**

Football and society have gone hand in hand since the beginning. Should one accept that today’s professional football clubs have become businesses, while taking into account the special relationship these companies have (at least) within their local communities, a marvellous opportunity for both parties may be arising. The question that needs to be answered, however, is crucial: “If professional football clubs can act as ‘corporate citizens’, what should the organisational actors’ role be in the CSR implementation process?”.

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<sup>12</sup> Tsakarestou (2005)

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## **Labour market flexibility in Central Greece: Findings from Workplace Employment Relations Survey**

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### ***Abstract:***

This paper investigates flexible contracts in the Greek labour market. This issue is very controversial in Greece if the high unemployment during the last years is taken into consideration. The main query is whether the Greek labour market is flexible enough according to international standards.

A questionnaire, based on The Workplace Employee Relations Survey (WERS) by the UK was constructed to explore numerical flexibility in the workplace. Adjustments made by academic and research team, from Higher Education Institutions of Greece and UK, and adapt it to Greek standards. Quantitative research methods were used to analyze data from employees in part-time, temporary time, fixed-term, seasonal and agency contracts. In addition, subcontractors, family members, home workers, and subsidized employees provide exceptional information for regression analysis with the above data. Furthermore, information is provided on overtime employment, working time arrangements and the reduction of employees as well as the reasons and methods used for this reduction.

Empirical data were collected in 2006 through the “Archimedes” European funded project. Personal interviews were conducted at 226 businesses in central Greece. Business data came from four Chambers of Commerce and Industry at which all entrepreneurs and businesses are obliged to be registered. To have a representative sample, a proportional stratified sampling dealing with the (a) geographical position and (b) main activity into which the companies are divided was chosen from the total.

Findings can be used for recommendation policies of employment strategies in Greece and other European countries but also for comparative analysis with other countries having used the WERS or similar questionnaires.

Results presented indicate the current situation of flexible forms of employment in central Greece. Subcontracting and temporary time contracts seem considerably stronger than part-time and short-time contracts respectively. Also, the high participation of family members in Greek businesses (especially in micro-enterprises) inflates informal employment. Strong points of the paper are that: (1) it considers all categories of enterprises; micro, small and medium (2) new factors in flexible contracts (family members, subcontracting and trainees) are studied.

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## **1. INTRODUCTION**

Labour markets have been going through dramatic changes over the past two decades. Low rates of economic growth, as a result of the recession in European Union (EU) countries in the first half of the nineties, have brought about changes in the management of production and the role of employment (Rompolis-Chletsos, 1995). Generally, the problem of unemployment has been at the centre of discussions for many years within Europe and elsewhere. Despite its decrease in Europe in the previous years, unemployment is still considered - especially in nowadays cause of the financial crisis - not only an economic but also a major social issue in the EU. Flexibility is now considered the key element in the organisation and greater labour flexibility, in particular, has become of vital importance to firms.

In Greece, at the end of 1974, after the seven year military dictatorship which had suppressed union activity, wages increased dramatically in both the government and private sectors while the unemployment rate was at a low of about 3 percent. During the 1980s and early 1990s, the performance of the Greek labour market deteriorated sharply (Demekas et al, 1996). The unemployment rate increased to an average of 8 percent in the 1980s and close to 10 percent in the 1990s (Bank of Greece, 1998). This development reflected fundamental changes in the supply and demand for labour.

Recently, according to the OECD (2001) performance has been poor and labour market rigidities still need to be tackled. Even though a new package of labour market reforms was introduced in 2004, further reforms will be necessary (OECD, 2005). The standardized unemployment rate has fallen from 12 percent of the labour force in 1999 to around 9 percent in 2006, but still remains among the highest in OECD (OECD 2007). Moreover, the Greek labour market is still characterized by low employment and participation rates, and a high level of unemployment, particularly among youth and women.

One of the main characteristics of the Greek labour market is the large proportion of State employment since it is considered the largest employer (Demekas et al, 1997 & Papapetrou E., 2006). It has the biggest public sector, broadly defined in percentage employment terms, among members of the OECD (Pirounakis N., 1997). This is perhaps the root problem of the modern Greek economy with government employees enjoying constitutionally-guaranteed life employment, much more lax conditions, and a generous pension system, including favorable early retirement provisions (IMF, 1999). In the last decade however, employment policy has changed. This has resulted in a reduction of hiring in public administration positions as well as an increase in unemployment (Nikolaou N., 2000). A large number of newly hired employees in the public sector lately come from temporary contracts (fixed-term contracts or subcontracting) which keep stable the share of total temporary jobs in total employment.

## **2. The Labour Flexibility featu**

It is evident that flexible working methods are a permanent feature of the modern employment market (Field, 1996). Since the early 1980s it has been at the centre of the European debate and labour market flexibility has interested scholars in economics, industrial relations as well as policy makers. The creation of a single European market as well as the increasing globalisation of markets have forced companies to be able to keep up with all modern management and human resource management trends, such as labour market flexibility, so that they can compete effectively in the constant changing business environment.

Trying to define the labour market flexibility we focus on the most famous distinction of labour market flexibility is given by Atkinson. (Atkinson 1984; Atkinson and Meager 1986). However, at the firm level, many diverse classifications have been identified during all these years: we conclude to the following types. Thus, there are three principal means of securing flexibility:

- (1) Numerical flexibility defined the process which the employer - based on the changes in the demand for their products/services - react respectively by adjusting the number of employees. It may be achieved using working arrangements such as part-time, short-time, temporary time (fixed-term contracts, seasonal, etc), outsourcing, homework, telework etc (Michie, 2001)
- (2) Functional flexibility can be defined as “the ability of companies to improve their operating efficiency by reorganising the methods of production and labour content (multiskilling, decreases in job demarcations, increased employee involvement) in order to keep pace with changing [demand conditions or] technological needs” (Koshiro, 1992 & Monastiriotis, 2003)
- (3) Wage flexibility is achieved where wage levels are not decided collectively and there are more differences between the wages of workers (Chung, 2006).

Generally, this issue, of flexible employment has been the cause of public debate in most countries (Voudouris, 2004). Atypical or non-standard forms of employment is realised as a term which covers a wide range of work styles and employment practices. Broadly speaking, it is used to describe all kinds of employment, which differ from the traditional 9-5 full time work with a permanent contract (Avramidou, 2001). The use of flexible forms of employment (part-time, shift work, temporary work, fixed term work, sub-contracting, seasonal work, tele-working, home working, and subsidized employment) is one of the main recent underlying employment trends in European Union (EU) countries.

The majority of job openings in EU in the 1990s have been part-time positions, rather than full-time (Voudouris, 2004). Thus, it seems that the overall level of flexible work is clearly increasing. However, the pattern varies substantially across the EU due to differences in labour regulations, resulting in different forms of flexibility in different countries (Voudouris, 2004). Even though labour regulations may vary from country to country, there are certain issues in the EU that stand for all member countries, as they

share a common goal. Labour market adjustment and employment issues are at the top of the European social policy agenda (Mihail, 2003).

Employment has been written into the Amsterdam Treaty, in the employment and social chapter. It commits the Member States to take coordinated action in promoting policies for the creation of employment (Mihail, 2003). All Member States are therefore working towards the model set by the EU, with Greece trying to combat unemployment (which is high and growing) and solve other employment issues, via the use of flexible forms of employment. Other than combating unemployment on a national level, companies have their own reasons for adopting atypical methods of employment, with the main one being reaching excellence in the workplace. This is translated as: improved recruitment and retention; reducing absenteeism; reducing costs; extending hours of operation; and improving customer service.

Therefore, any request for flexible work should be seen not primarily as an obstacle to overcome, but an opportunity to re-evaluate and improve the way work is organized. At the same time, new communication technologies are offering a range of flexible working methods such as hot-desking, tele-working and back-office relocations (Field, 1996). The aim of non-standard forms of employment is to recruit only the required number of staff in the required capacities at any point in the business' life (Kelliher, 1989).

The purpose of the research in this paper is to study the types of flexible employment. What is the legal framework of Greek labour market: is this regulated? What is the reality of employment in Greek businesses? Can these forms of employment find ways to increase the employment rates and expand businesses in Greece? Can businesses use these "atypical" employment forms without prevention of the labour law?

These questions are of main importance for Greek enterprises taking into consideration that international organizations such as OECD, IMF and other Greek organizations (Bank of Greece, Alpha Bank) argue with some other organizations (Institute of Employment of General Confederation of Greek Labour) and many academics about the labour flexibility in Greek enterprises.

Similar studies on employment and labour flexibility have taken place in Greece and abroad. Previous research in Greece has investigated small and medium enterprises. In addition, studies on flexible working practices are limited and remain primarily descriptive according to the following academics (Papalexandris, 1997; Kufidu and Michail, 1999; Michail, 2003; Voudouris, 2004). Some of the above investigations refer only to part-time and temporary contracts; others examined only the use of independent contractors and subcontractors as forms of flexible employment. The strong point of our research is that we addressed micro-enterprises as well as small and medium enterprises taking into consideration "new" types of flexible employment such as family workers and subsidized employees.

### **3. REGULATION ON FLEXIBLE FORMS OF EMPLOYMENT**

The Greek employment protection legislation was drafted principally with permanent, full-time employees in mind (Michail, 2003). Flexible forms of employment were later



introduced to the Greek labour market in an effort for the Greek State to keep up with the tendencies that prevailed in the rest of Europe (Gravoglou S. and Kikilias E., 2001).

Furthermore, additional laws on labour relations and regulations try to provide better protection of atypical workers, while at the same time attempt to record the size of atypical employment. More analytical information about non-standard forms of employment is provided below:

### **Part-Time Employment**

Part-time work is the employment in which the daily or weekly working hours are shorter than those of standard or full-time employment, accompanied by correspondingly reduced pay. The application of part-time employment could be possible in Greece based on the fundamental principle of freedom to conclude a contract (article 361, Civil Code).

Under the law (1892/1990, Article 38) this type of employment requires an individual agreement between employee and employer, which may be concluded at the commencement of the employment relationship or during its existence, and must be in writing. Two other additional laws 2639/1998 and 2874/2000 were introduced for better social protection of part-time workers as well as for the obligatory registration of this type of employment at the Labour Inspectorate for the better monitoring of the system.

Short-time employment is a category of part-time work where the contract of employment remains unchanged and the nature of the reduction may be characterized by the alternation of periods worked (hours, days, weeks, etc.) and periods not worked (EMIRE)

The part-time employment rate in Greece has followed a different path than in the rest of the EU countries. The most important differences evident are the low average earnings, the high employers/employee social insurance contributions, the extent and attitude towards the informal economy and immigrant labour. Thus, while part-time employment as a proportion of total employment in the EU-15 has been increasing during the last twenty years, reaching 16.6 percent of total employment, in Greece it has stagnated at about 5.5 percent (OECD 2004).

In addition the female share in part-time employment is 78.5 percent for women in EU-15 and almost 68 percent for women in Greece. It is obvious that Greece is still amongst the member states with the lowest percentage of part-time workers - almost entirely due to the general lack of interest in it expressed by both employers and employees. It is also very important to mention that according to Labour Force Survey Results (2001), 44 percent of the part-timers in Greece would prefer to have full time work but have settled with this type of employment because full-time jobs were not available.

Finally, in 2003 a new law (3174/2003) allows public sector organisations to recruit unemployed people and other groups on a part-time basis or fixed-term contracts. The main characteristic of this law is that the candidates must be selected from vulnerable groups (long-term unemployed, people with disabilities, etc).

### **Temporary Employment**

Temporary employment is the most “popular” form of employment in Greece and represents 10.9 per cent of the total workforce in Greece (EIRO, 2007) However, there is

a lack of definition of temporary employment while the institutional framework in which this operates is not clearly defined. According to OECD (2002) the distinction between temporary and permanent jobs is complex and differs significantly between countries. This may be the reason why Greece doesn't have a clear legal framework for temporary employment. However, OECD (2002) considers as temporary jobs those forms of dependent employment, which, by their nature, do not offer workers the prospect of a long-lasting employment relationship.

This type of employment can be separated into three categories:

*Fixed-term contracts* are the most common form of temporary employment. A series of clauses in Chapter 180, Articles 648-680 of the Civil Code and also law 2112/1920 and law 2639/98 define the fixed-term labour agreements. What is characteristic of this contract is that the termination of this kind of job is determined by objective conditions. The EU directive 70/1999 has been adopted by the presidential decree of the Greek government in April 2003. According to this, the longest duration of the continuing contracts is two years. In any other case (over two year's duration) the fixed-term contract is transformed into an indeterminate duration contract.

*Seasonal work* differs from fixed-term contracts only by the seasonal activity of the company in specific durations of the year. Seasonal employment has high proportions in the tourism industry (restaurants and hotels) and in the food processing industry as well as in the public sector trying to cover the seasonal needs of workforce.

*Temporary Agency Work (TAW)* is the third category of temporary employment in Greece. The state passed a new law (2956/2001) on employment services, which includes the operation of temporary employment agencies. Temporary employment via a third party means work provided to another employer (the indirect employer), for a limited period of time, by employees associated with their employer (the direct employer) under a contract or a relationship of subordination for a fixed or indeterminate period. (EIRO, 2001). For the first time the new legislation lays down specific rules on the establishment, operation and obligations of agencies (Soumeli 6 E., 2001). Thus, as a result, the Manpower Employment Organization (OAED) loses its monopoly on job brokerage.

### **Subsidised Employment**

In the field of active labour market policies, the main types of intervention continue to be subsidised employment (wage subsidies and start-up incentives) and training. The management and the application of these subsidised employment schemes come from the Manpower Employment Organization (OAED) under the supervision of the Ministry of Employment and Social Protection. This is characterized by a highly centralized structure, however recently other governmental departments have been involved both in the engagement and the delivering of pro-active labour market policies (Karantinos, 2006). The wage subsidies as a category of subsidised employment -which is investigated in this study- was initially applied in 1982 in Greece under a programme called Subsidies of the New Posts (EU, 2004) while in 1998 a new measure of employment has introduced called Stage (acquisition of professional experience for post-secondary and tertiary education graduates). Both measures are occasionally offered and announced by the government to the participants (businesses and the unemployed).

The goal is to try to motivate businesses to hire new employees (under this flexible employment) for a specific duration. Thus, unemployed people (especially longterm or other members of vulnerable categories) gain work experience and become more competitive in the labour market.

In addition, Manpower Employment Organization offers wage subsidies under trainee schemes for the work placement or internship of students of technical high schools or tertiary education institutes.

Evaluations of the above two active labour market policies have been conducted from research or academic organisations as well as public or quasi public organisations. The latter conclusions of the evaluations are mixed. PAEP (OAED's own affiliated research institute) has negative results for the New Posts programme and a reshaping is recommended for the Stage programme involving greater control by Manpower Employment Organization (OAED). Another research institute (KEPE) finds that the employment subsidy programme is effective in restricting unemployment and generating gains (mostly income support for unemployed workers) (Karantinos, 2006).

### **“Family” Employment**

Family workers are mostly found in micro-enterprises. These are mainly familyowned businesses with individual legal status. Taking into consideration that 96.1 percent of enterprises in Greece have less than 4 employees and 2 percent of them have between 5 and 9 employees it is very clear why micro-enterprises account for 63 percent of total employment in Greece (Kikilias, 2005). Parents, siblings and extended family-members work in family businesses (Sardeshmuck, 2006). The main question arising is how many of them are legally paid or not?

According to the European Employment Observatory Review (2004) undeclared work is bound to be higher in activities with a high incidence of family workers (who represent 8.6 percent of the total workforce or 351,600 persons) and the self-employed (who represent 24 percent of the total or 1 million persons). The majority of family workers are females (Vaiou, 2001) who are registered by the National Statistical Services of Greece as housewives but contribute as illegal workers to the survival of micro-enterprises in Greece. Furthermore, the workplace in these businesses is considered as a kind of extension of the family relationship (Vaiou, 2001). However, these kinds of family members have no rights to a pension scheme and no labour taxes have been paid to the Social Security Office. This is definitely a part of the underground economy, which according to International Monetary Fund (IMF, 1999) results in a 27.2 percent. Finally, it is evident that Labour Organisations, such as the Labour Inspectorate and Social Security Office that are responsible for the application and enforcement of labour meet many difficulties in controlling the undeclared work.

## **5. METHODOLOGY AND DATASET**

This focuses on the methodology and the dataset of our study. Its aim is to discover what the current situation of flexible employment in Greece is. Data collection is defined as the source that will be chosen, the construction of the questionnaire (the methodological tool which will be adopted or created), the sample of businesses –which sampling analysis

will be followed, the interviews taken place, any obstacles presented and finally the preliminary results of this research.

### **The Sample**

A very important issue arising in this study was the selection of businesses for our sample. In order to have an overall picture of businesses in the Thessaly region, enterprises from all economic sectors were examined. The Chamber of Commerce and Industry was selected as the source of our data. All companies engaged in 9 “commercial activities” are obliged by law to register at the Chambers of Commerce and Industry at the capitals of Prefectures which are defined as Public Sector Entities. After having access to the Thessalian businesses directories the sample to be interviewed was selected. In order to have a representative sample of businesses, a proportional stratified sampling was chosen. The sample was chosen from the total number of businesses of the databases and its stratification deals with the economic fields into which the companies are divided.

### **The Questionnaire**

The next stage was the construction of the questionnaire which was based on The Workplace Employee Relations Survey (WERS) by the UK and is also used in other countries. However, a team of the academic and research staff of Higher Education Institutes: the TEI of Larissa, Greece and the University of Birmingham, Britain made some amendments.

It was very important to take into consideration that Greece has a large number of micro-enterprises, most of them family businesses, and the reaction on employment regulations would be different than in Britain or other countries which use the same methodological tool. Thus, some suggestions could improve the effectiveness of the questionnaire and consequently the results and the analysis of the data collected. Modifications were made on questions to the WERS questionnaire to make it more suitable or adaptable to Greek standards.

### **The Interviews**

Fieldwork was conducted between August 2006 and February 2007 in 4 prefectures of Thessaly, Central Greece through in-depth and face to face interviews with the owner/manager/accountant of the workplace<sup>1</sup>. Two hundred and twenty six workplaces out of thirty hundred and thirty seven ones provided complete answers to the questionnaire, giving an effective response rate of sixty seven per cent. Furthermore twenty six enterprises had one employee and it has been excluded from our sample.

Each interviewee asked a standard “core” range of questions with follow-up questions where appropriate. Questions with the five point Likert scale from “strongly agree” to “strongly disagree” were included. Both “hard” (figures) and “soft” (opinions, attitudes) data were collected with 246 variables. A structured protocol was used to collect quantitative information along the following interrelated dimensions of employment in micro-enterprises: (a) full-time males & females, (b) flexible contracts (especially

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<sup>1</sup> All firms in the survey belong to the private sector.

temporary time as well as part-time, short time, etc) (c) family member employees & subsidized employees (d) labour legislation and new hiring (e) gender labour issues

## 6. PRELIMINARY FINDINGS & DESCRIPTIVE STATISTICS

The main aim of the present research was to investigate the current situation of flexible employment in Thessaly, Greece. Two hundred and six (206) Greek workplaces replied to the questionnaire studying what labour flexibility is for employers. Preliminary findings are presented below:

Usually surveys with number of employees are categorized in small-medium-large scales firms. However, in our case, almost all firms belong to the small medium enterprises (according to EU standards<sup>2</sup>). Adopting the categorization of firm size<sup>3</sup>, the sample provides data from totally 206 workplaces (table 1), where 126 workplaces in “strict” micro enterprises (56 firms with 2-4 employees and 70 firms with 5-10 employees), 34 workplaces in small-sized firms (11-19), 37 workplaces in medium-sized firms (20-49), 9 workplaces in large scaled firms (50 or more employees). As the first column shows, the large majority of private sector workplaces in Thessaly’s population of firms (and in Greece generally) are very small, 98% being under 10 employees in size. Indeed, in the whole of Greece, only 0.3% of private workplaces employ more than 50 workers.

Table 1 and Figure 1 are also containing information about the identity of Greek businesses surveyed as well as the number of employees per economic activity. This survey developed a sample of almost three thousand five hundred (3519) employed people. Less than half of the labour force (forty seven percent) work full-time under permanent basis. Furthermore, businesses with more than 11 employees present much higher rates than those of micro enterprises (less than ten employees). It is indicated that the majority of the workforce (seventy percent) in larger workplaces is dealing with regular employment. On the other hand, micro-enterprises indicate that less than half of their personnel have an employment contract in regular basis (9-5 full time work with permanent contract). As far as for flexible contracts temporary employment seems the other 11 percent are part-time workers, almost 37 percent of the personnel of our survey work with flexible contracts. The most important factor that should be considered in the mapping out of a policy for the Greek labour market is the size of a company.

A further aspect of Table 1 is the glimpse it provides of another important Greek institution, the family firm. In fact, our questionnaire did not have a precise question on family ownership, only asking if “family members” are regularly employed. The family firm is treated leniently by the Social Security authorities – as are small firms generally (since there is a backlog of tax audits, the government permits small firms to pay lower tax in order to speed the process – OECD, 2001, 33). As can be seen, the employing of

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<sup>2</sup> European Classification of SMEs (1-249 persons employed); (a) micro enterprises (1-9 persons employed); (b) small enterprises (10-49 persons employed); (c) medium-sized enterprises (50-249 persons employed) and large enterprises defined those with 250 or more persons employed). [http://ec.europa.eu/enterprise/enterprise\\_policy/sme\\_definition/index\\_en.htm](http://ec.europa.eu/enterprise/enterprise_policy/sme_definition/index_en.htm)

<sup>3</sup> Since the majority of our businesses survey belong to micro-enterprises we “categorize”

family members is common in all workplaces, only falling off in the very largest, 100+, category.

Table 2 gives details of the Thessaly's industry composition as implied by the survey, together with a comparison of small workplaces in the WERS. As can be seen, only about nine percent of Thessaly's workplaces are categorised as manufacturing. It is obvious that the highest percentage of the workforce is occupied in the tertiary sector, in two basic economic sectors: (a) wholesale and retail trade and (b) hotels and restaurants

In figure 2 we classify these flexible contracts of employment. It is noted that one of the highest percentages comes from family workers with a high percentage of the total workforce especially in micro enterprises. In addition, the highest percentage of flexible form of employment comes from temporary employment, especially from males. These percentages of 11.7 of males and almost 4.0 of female participation are higher than the overall representation in Greece (almost 11 percent). The percentage of agency workers is almost zero showing that temporary employment agencies are a relatively recent phenomenon in Greece. The new legislation hasn't been adopted in Greece except in some circumstances in Athens, the capital of Greece.

Both part-time and subsidized employment is relatively low in our survey and confirms the lack of use of these flexible forms on national level. Wage subsidies, provided by Public Employment Services (PESE), are used by few companies. Work placement for students from tertiary education as well as technical high schools is very limited and not noticeable.

## **6. RESULTS ON TEMPORARY EMPLOYMENT**

Determinants of temporary worker hiring. We now consider the determinants of temporary work among our sample, since, as we have seen, this avenue of flexibility is almost the only one open to labour market participants. A word should be said about the dependent variable, which measures the percentage of the workplace's workforce covered by fixed-term, subsidised and agency-work contracts. A problem is that many firms do not employ temps of any variety in both samples. To circumvent this censoring problem, the estimation is carried out by means of a Tobit procedure. A less demanding method which we use is to construct a dummy for whether an organisation employs any temps or not, and use a probit method.

Our hypothesis is that temporary work is resorted to when regulatory constraints concerning wage and working conditions floors bite, other things being equal. The legal aspect is analysed informally in Mihail (2003, 484), who finds that employers do not feel particularly constrained by the laws, nor helped by them. Voudouris (2004), for her part, does not consider this aspect). We therefore provide here a first formal treatment for Greece. Basically, our test is based on the idea that if a firm feels constrained by EPL, or by national wage agreements, it is more likely to adopt flexible forms of employment which provide an escape route.

Our legal variables under the heading of wage floors are first the proportion of low-wage workers, which should be positively linked to temp employment if firms feel the minimum wage is high. A further variable is coverage by collective agreements, which

should also have a positive link. Under the heading of working conditions floors we have two variables. First, whether the management has taken legal employment relations advice. We predict a positive sign here, on the argument that taking legal advice is a necessary prerequisite for clearing the way for drawing up and/or renewing temp contracts. A second variable is the manager's opinion of the Labour Inspectorate (LI), specifically whether he/she considers the LI an obstacle for employing temps, which should drive down the demand for temps, and hence enter negatively in the equation.

Our estimating equation is as follows:

$$temp = \alpha + \mathbf{legal}.\beta + \mathbf{controls}.\gamma + \varepsilon$$

where *temp* is the measure of temporary worker employment, either the percentage employed, or simply whether or not the firm employs temps; **legal** is a vector of four legal variables, two relating to wage floors, and two to working conditions as discussed above; **controls** is a vector of controls which we discuss next;  $\varepsilon$  is the error term.

Turning to the controls, here we will follow mainly Voudouris (2004), who builds on the classic Abraham and Taylor (1996) specification. Our controls will be as follows:

- Controls for variability of demand which obviously increases the use of temps. This aspect relates to the “buffering” role of temps. Our variables under this heading will include an industry dummy for retailing/services, a sector which faces large changes both annually and weekly, changes which must be hard to cater for without part timers (in one large UK retailer, part-timers working under 5 hours a week form 17% of the workforce – Siebert et al, 2006). A counteracting factor here might be capital intensity which could link positively with the demand for temps – as a way of preventing capital being idle (Voudouris's (2004) Hypothesis 5). Retailing is not capital-intensive. Employment of seasonal workers also indicates demand variability, as might past redundancies. Hence we include both these controls as well
- Controls for the specific training requirements of the job. The payoff to specific training of temps is low, so high training requirements should mean fewer temps. Training requirements can be picked up by variables for the use of part-timers, and young and old workers, all of whom presumably have less training. Thus high proportions of young, old and part-time workers should all link positively to temp worker use. Low paid workers are also likely to have less training, so the proportion low-paid should link positively with temps.
- Controls for difficulties monitoring the job, for “know-how”, and for complex interactions with other people doing the work. These variables have been put forward by Voudouris (2004) as reducing the demand for temps. To some extent these considerations conflict with the training variable for old workers – while older workers are not likely to be trained, many obviously have know-how. Hence the old worker variable could indicate task/monitoring complexity and be negatively associated with the demand for temps. Low-paid workers should also have less complex and easy-to-monitor tasks, reinforcing the positive link between this variable and temp demand. A further variable that comes under this heading is the commitment of the workforce – high commitment presumably going with fewer temps.

- A control for specific, non-routine tasks, for example, the technical worker on a special project. Our variable here is whether the firm uses any non-routine sub-contracting (“routine” being defined as cleaning, security, catering and maintenance).
- We also control for firm size on the argument that larger firms will face a greater variety of problems, and thus will need more solutions, of which temporary workers will be one. Of course, when the dependent variable is simply whether or not the workplace employs temps, we will need a firm size variable on the RHS simply to allow for the fact that bigger workplaces are bound to employ more of every type of worker, including temps.
- A final control we add is whether the firm has increased temp, part-time or non-routine sub-contract work over the past 5 years. This variable can be thought of as indicating a management desire for change, or else a change in the firm’s circumstances, both of which should reasonably be held constant.

Table 3 gives the means and standard deviations of the variables for the TERS. The main difference is that the percentage of temps is 13% on average over the TERS sample. The other notable differences between the two countries are in part-timers, as we have already seen, in the proportions of young and old workers, and finally, in the percentage of minimum workers which is much higher in Thessaly.

Let us turn finally to the results, which are given in Table 4. Going down the rows in turn, we see no effect for non-routine sub-contracting, though it has the correct sign for the TERS. The retail/service variable is strongly negative. This result goes against the idea that the turbulence in retailing/service calls for temp workers. Of course, this idea has less force in the UK, where part-timers can and do absorb the turbulence. The result indicates that other industries such as manufacturing and construction use temps more, which can perhaps be explained in terms of the need to keep capital from being idle in these capital-intensive industries. At least the seasonal worker variable is strongly positive for the TERS, which makes sense. Any redundancies, our other buffer variable, is insignificant.

Part-timers have significant, opposite, signs in the two equations. In Thessaly it might be that part-timers are an alternative form of flexibility to temp workers. In other words, business which has managed, with difficulty, to secure some part-time workers might not wish or need to go to the trouble of securing permission for temp worker contracts as well.

The percent old worker variable is strongly negative. This sign squares with the argument that older workers signal an environment where know-how is important. The percent young worker variable, for its part, is insignificant in both equations.

We now turn to the important wage floor variables, coverage by the minimum wage, and by collective agreement. The variables are both significant but have opposite signs. The positive sign of the minimum wage variable fits with the argument that if firms feel pressured by a high minimum, they will employ on a more temporary basis. However, the collective bargaining variable does not. A possible explanation is that where many workers are covered by the minimum, the manager regards the sectoral wage agreement



as unimportant (the two variables are negatively correlated). On this view, high collective bargaining coverage indicates a rich firm, which is not driven to employ temps.

Finally, there are the two variables relating to legal consultations. The first, consulting with a lawyer over ER matters in the past two year, has a strong positive coefficient. We interpret this to mean that the management is “clearing the way” for temp workers. The second variable is whether the manager considers the LI an obstacle to gaining temporary worker permissions. While this variable has the correct negative sign, it is not significant. However, the coefficient on the legal advice variable is large, and can be taken to signal the importance of the law for the firms in Thessaly. This view gains additional support from the fact that the parallel UK variable, consultation over ER matters with ACAS, has no significance whatever.

## **7. CONCLUSIONS**

We have mentioned that the Greek labour market is performing badly, more specifically, being third last in the OECD both for its high proportion of long-term unemployment (over 50%), and for its high youth unemployment (over 40%). We have seen that the Greek labour market is also highly regulated, with high wage and working conditions floors. It is hard not to conclude that these two facts are related.

The purpose of this paper is to go to the micro level, using a mini-WERS (by the UK) constructed for Greek conditions (the TERS), and to show with greater precision how the legal constraints might affect firm decisions. We focus on temporary employment, both because this type of employment is the almost the only source of flexibility open, and because it is the avenue into work most likely to be available to the “outsiders” such as the young and the long-term unemployed. Our basic hypothesis is that firms resort to temporary work when they feel constrained by the law. Temporary work is thus a form of insurance for the poorer firms which cannot cope with the wage and working conditions floors enforced by strict labour regulation.

As regards the determinants of the demand for temps, we have two important results. First, there is the significant positive sign of the minimum wage variable. This sign fits our hypothesis in that where firms have many workers on the minimum they are likely to worry about the possibility of a rise in the minimum, and hence will employ on a more temporary basis. Our second important result is the large coefficient on the legal advice for employment relations variable. We take this result to signal that where firms feel constrained by employment relations laws, they are more likely to adopt flexible forms of employment which provide an escape route.

Underlying Greek labour market performance there are other variables on which we have not touched such as high taxes, and the proportional representation type of electoral system, whose consensual nature makes it reform difficult – and which gives the established corporatist actors such as the public sector unions great power. Our results apply only to a small part of the big picture, but they do suggest that labour law matters, and it has an adverse effect on the have-nots.

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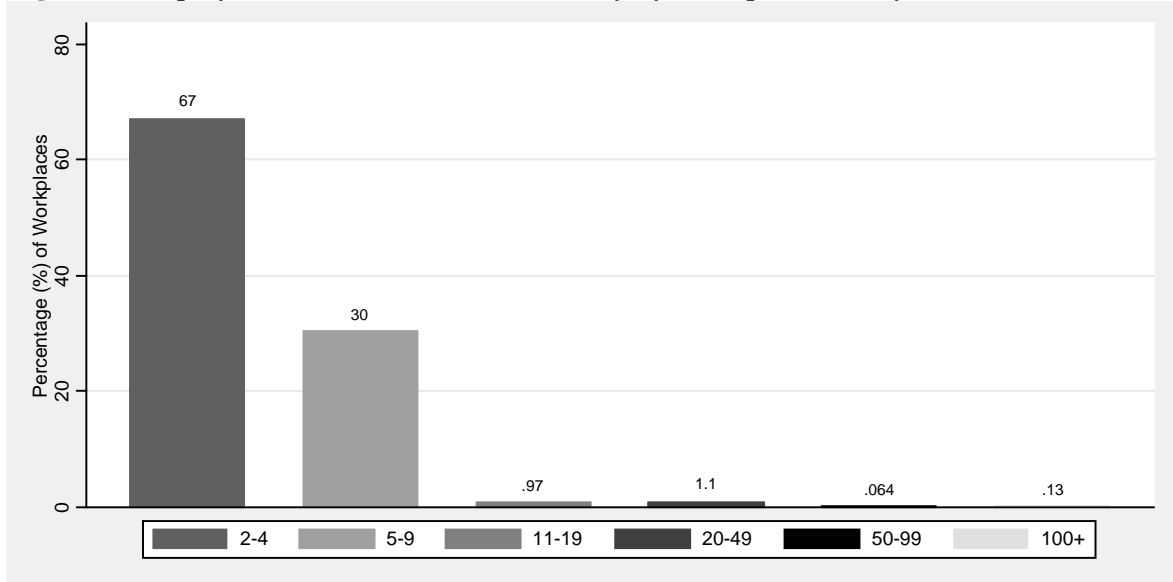
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Figures & Tables

**Figure 1:** Employment Distribution of the Survey by Workplace Survey

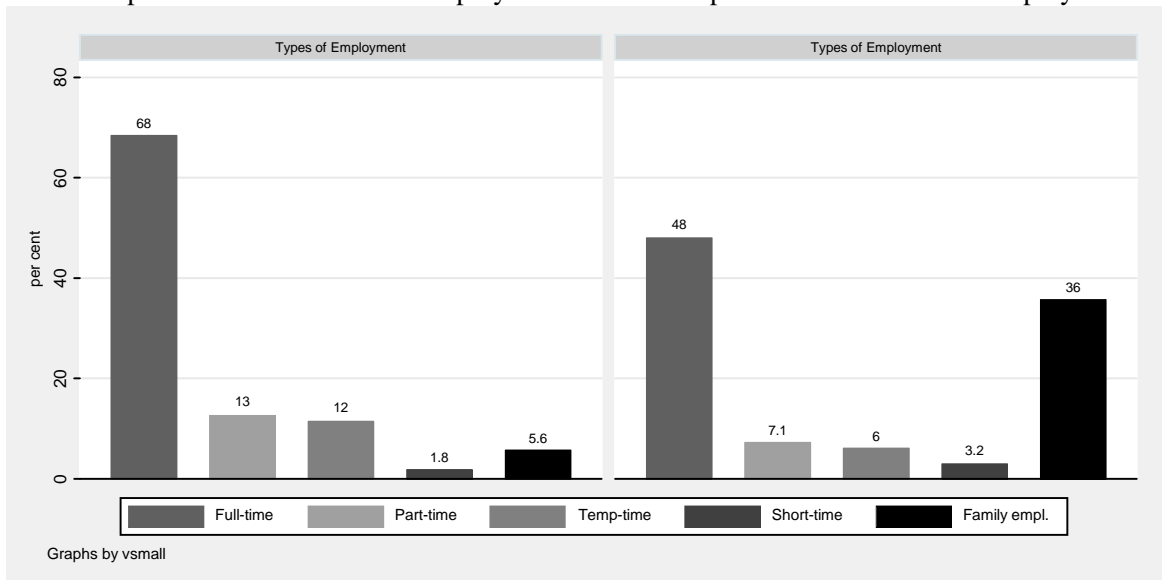


Base: All workplaces with 2 or more employees.  
 Figures are weighted and based on responses from 206 firms.

**Figure 2:**

Distribution by Employment Type  
 Workplaces with more than 11 employees

Distribution by Employment Type  
 Workplaces with less than 10 employees



Base: All workplaces with 2 or more employees.  
 Figures are weighted and based on responses from 206 firms.

**Table 1: Distribution of the Survey Sample by Workplace Size and Family Interest**

How many employees are there in this workplace?	Weighted		Employs family members	
	base*(%)	Sample (%)	No	Yes
2-4	138 (67)	56 (27)	39	61
5-10	64 (31)	70 (34)	33	67
11-19	2 (1)	34 (17)	56	44
20-49	2 (1)	37 (18)	62	38
50-99	0.1 (..)	3 (1)	33	67
100+	0.3 (..)	6 (3)	67	33
Total	206	206	37	62

**Source and Notes:** Figures are from the Thessaly Employment Relations Survey (TERS). Survey weights have been used to calculate the percentages of workplaces employing family members. The oversampling of larger workplaces in the TERS can be seen clearly here (e.g., workplaces of size 50+ form about 5% of the sample but only 0.4% of the provincial population).

**Table 2: Industry & SME Composition**

Percent of Workplaces

Industry Category	Thessaly Employment Relations Survey		SME Composition *	
	Weighted percentages*	Sample Number (**)	Micro-Enterprises > 10 employees	Small & Medium <11 employees
	Manufacturing	9 %	21 (975)	96.5
Construction	6	17 (411)	90	10
Wholesale & retail	50	81 (203)	95	5
Hotels & restaurants	20	42 (461)	94	6
Transport & communication	2	4 (35)	98	2
Financial & other business services	3	7 (183)	98	2
Education & health	1	15 (401)	93	7
Other services	10	16 (250)	95	5
Total	100	203 (3519)	95.4	4.6

**Notes:** \* Survey weights have been used to calculate all percentages.

\*\* The number of employees is given in parentheses.

**Table 3: Means and Standard Deviations for Variables used in the Regression Analysis**

	Thessally – TERS
Percent of workers temporary including fixed term contract and agency workers	.13 (.27)
any non-routine subcontracting	.32 (.49)
retail/service	.69 (.46)
any redundancies	.22 (.41)
any seasonal workers	.10 (.30)
any part-time workers	.26 (.13)
percent old workers, >51	.10 (.22)
percent old workers, >51	.10 (.22)
percent young workers, <21	.03 (.14)
dummy =1 if firm has > 75% of workers on the minimum wage‡‡ (coverage of minimum wage)	.44 (.49)
increase in temps/part-time/subcontract workers over past 5 yrs	.13 (.33)
family owned	.60 (.49)
taking ER advice (from lawyer or ACAS)‡ over past 2 years	.27 (.44)
manager considers LI obstacle for temp workers	.22 (.41)
manager considers workers committed	.74 (.44)

**Notes:** Standard deviations are given in parentheses. All statistics are calculated using survey weights. ‡‡ Low wage means below minimum wage plus employer taxes (Eu11,000/yr) for Greece, and for the WERS means wage < £5/hour

**Table 4: Determinants of Temporary Work**

Depended variable: Percent of temporary workers including fixed-term contracts, agency, trainees and subsidized workers

Independent variable	Thessaly TERS Coefficient – <i>t-value</i>	P>  t
any non-routine subcontracting	.095 (1.14)	0.255
any family-employees	.022 (0.26)	0.799
any redundancies	-.127 (-1.19)	0.237
any seasonal workers	.753 (5.13***))	0.000
any part-time workers	-.156 (-1.61)	0.109
percent old workers, >51	-.848 (-2.60***)	0.010
percent young workers, <21	.143 (0.41)	0.681
majority covered by national & sectoral wage agreement	-.126 (-1.33)	0.184
majority paid by minimum wages	.145 (1.83*)	0.070
any increase in subcontract or part-time workers over past 5 yrs	.0099 (0.08)	0.933
any increase in subcontract or part-time workers over next 2 yrs	.105 (1.30)	0.197
firm taking ER advice from acc and law in last 2 yrs	.176 (2.12**)	0.035
managers considers LI obstacle	-.153 (-1.35)	0.179
managers considers workers committed	-.007 (-0.08)	0.934
manufacture	-.563 (-1.56)	0.122
wholesale & retail	-.593 (-1.74)	0.085
hotel & restaurants	-.789 (-2.22**)	0.028
transport	-.307 (0.73)	0.467
real estate	-.312 (-0.80)	0.427
education (private)	.221 (0.61)	0.545
health (private)	-.333 (-0.83)	0.406
culture	-.596 (-1.60)	0.112
construct	-.042 (-0.12)	0.904
number workers employees	.0002 (0.23)	0.820
Constant	.265 (0.72)	0.475
observations	200, 125 left-sensored at 0	
pseudo R <sup>2</sup>	.380	
standard error	.038	0.795
/sigma	.3851219	

**Notes:** Tobit regression is required here to allow for the fact that many workplaces have zero temp work. It is important to note that while taking advice on ER issues over the past 2 years has a significant positive link with using temp workers the link is much stronger in Thessaly. This link implies that firms in Thessaly using temp workers are more influenced by the law, as we would expect given the prescriptive Greek labour law framework.





## The 4th Hellenic Observatory PhD Symposium on

### *Contemporary Greece & Cyprus*

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#### **Immigrants as rural labour force: a factor of demographic and economic revitalisation of rural Greece**

**Konstantinos Pappas<sup>1</sup>**

#### **Abstract**

Demographic, structural and social factors have led to increased labour deficiencies which have substantial negative implications for the cost of production and the competitiveness of Greek agriculture during the last years. Additionally, the sectoral mix in many rural areas in Greece has been changing in favour of the non-agricultural sectors, whereas the agricultural sector is still important in a good number of rural areas. The local labour markets are particularly diverse due to their increased dependence on family farms, small-scale businesses, informal employment and tourist activities.

The massive arrival of migrants after the collapse of the regimes of Central Eastern European Countries in 1989, seen in retrospect, has offered solutions to these pressing problems generating, at the same time, new demands for labour and new job positions in agriculture and the countryside in general.

This paper draws from an empirical study conducted in 2006 that concerned the in depth analysis of the implications from migrants' presence in the rural economy and regional labour markets of the geographical region of Epirus, Greece. Epirus is a border, marginal and lagging behind, by any index used by the EU to measure economic performance, region.

On the basis of quantitative data, the paper aims to analyze and interpret the diverse impact of migrants on different rural localities. Semi-constructed questionnaires from 212 small businesses and family farms are collected and analyzed, and their results are presented on this paper.

The main hypothesis is that migrants may not be conceived strictly as an agricultural labour force since they seem to be highly mobile within rural areas, but they should be rather considered more widely, as a rural labour force, which has multiple implications on rural society and economy of Greece.

**Keywords:** migrants, local labour markets, rural labour force, rural Greece, Epirus

#### **Introduction**

Over the past three decades, the demographic factors, connected with the massive rural exodus of the 1960s, as well as the restructuring of agriculture and the expansion of other, non-agricultural activities, have caused labour shortages unfulfilled by the indigenous population in rural Greece (Kasimis and Papadopoulos 2001). Such labour deficiencies are explained not only by demographic and structural factors but also by social factors connected with the rejection of low-status, unskilled and badly-paid jobs in rural areas by the younger generation. Improvements in the level of education and the standard of living as well as the spread of urban consumption patterns, in the past three decades, led to the creation of high expectations by the younger generation, who looked for jobs outside agriculture and away from rural areas. Moreover, the integration of women into the labour market, the accompanying changes in family

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structures and the lack of adequate social infrastructures have resulted in increased demands for domestic support work (King 2000, Lazaridis and Psimmenos 2000).

In such an environment, migrants arrived in Greece 'en masse' after the collapse of the regimes of Central Eastern European Countries in 1989. Easily crossed borders with the Balkan neighbours and extensive coastlines turned Greece quickly into a migrant receiver.

The arrival of migrants, seen in retrospect, has offered solutions to these pressing problems generating, at the same time, new demands for labour and new job positions in agriculture and the countryside in general (Kasimis and Papadopoulos 2005).

Their presence helps to the survival of sectors that have particular economic and social importance, as agriculture, and strengthens the labour markets flexibility. Progressively, while immigrants fill the "holes" in the labour markets, they create, in the same time, additional needs, affecting even in the local societies' way of life.

Immigrants in rural areas of Greece usually find work in small businesses, in various local service activities and on family farms. The effects of their presence in the local labour markets vary across sectors and geographical regions but, also, reflect the fragmented character of the Greek labour markets.

Under these circumstances, immigrants may not be conceived strictly as an agricultural labour force, but they should rather be seen more widely, as a rural labour force, which has multiple implications on rural society and economy of Greece.

### **The empirical research: method and study areas**

This paper draws from the empirical study conducted in the framework of a PhD research. The study took place between May and October 2006 and concerned the in depth analysis of the implications from migrants' presence in the rural economy and regional labour markets of the geographical region of Epirus, Greece.

Epirus is a border, marginal and lagging behind, by any index used by the EU to measure economic performance, region. Given the dire socioeconomic conditions of the region as a whole it was considered important to investigate in detail the different aspects of migrants' 'multifunctional' role in rural areas. One aspect of this is migrants' engagement in employment positions across various economic sectors and effectively their movement from the agricultural sector to the non-agricultural sectors. A second aspect is the combination of different jobs (seasonally or within a year) which is commonly described as 'pluriactivity'. Finally, a third aspect is the alternation among a wide range of labour tasks, which may be considered as multi-tasking, or flexible labour.

In the Epirus study the research analysis is still in progress and in this paper we restrict ourselves in the presentation of the analysis of the selected material from the 183 questionnaires that were addressed to farming households employing migrants. Those households were found through the 2006 registry of the Ministry of Interior, Public Administration and Decentralization, which is responsible for issuing the work and residence permits of foreign migrants. All farm households which were registered as employing migrants were interviewed. Only a small number of farmers had stopped employing migrants since the last year. Moreover, as expected only 10 per cent of the farmers were women.

The distribution of farm households by type and size is depicted in Table 1. One main remark is that the large majority of farming households in all three areas combine agriculture and stockbreeding. Secondly, the study area in Ioannina includes a limited

number of small farms, while the majority of farm households own large farms (over 10 ha). The other two areas have a similar farm structure, in which over 35 per cent are small farms and approximately 42 per cent are large farms.

**Table 1. Type and size of farm households by study area**

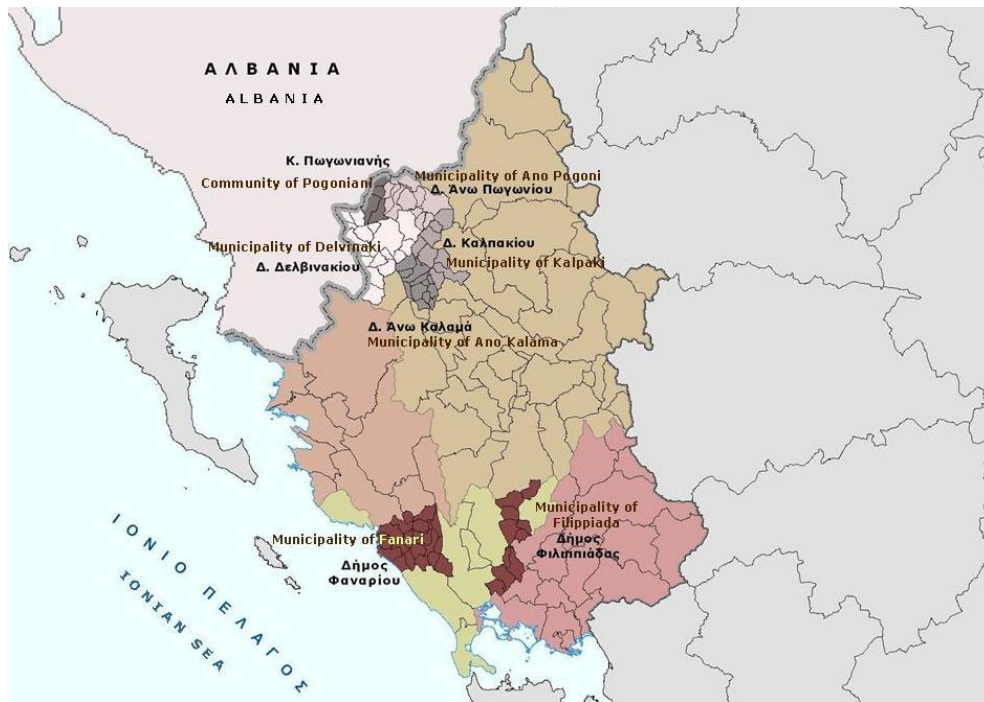
<b>Variables</b>	<b>Study area in Ioannina</b>	<b>Municipality of Filippiada</b>	<b>Municipality of Fanari</b>	<b>Total</b>
Number of farm households	76 (41.5%)	17 (9.3%)	90 (49.2)	183 (100.0%)
Agricultural farms	4 (5.3%)	2 (11.8)	21 (23.3%)	27 (14.8%)
Stockbreeding farms	3 (3.9%)	0 (0.0%)	3 (3.3%)	6 (3.3%)
Mixed Farms	69 (90.8%)	15 (88.2%)	66 (73.3%)	150 (82.0%)
Farm size <5 ha	16 (21.1%)	6 (35.3%)	33 (36.7%)	55 (30.1%)
Farm size 5-10 ha	13 (17.1%)	4 (23.5%)	19 (21.1%)	36 (19.7%)
Farm size over 10< ha	47 (61.8%)	7 (41.2%)	38 (42.2%)	92 (50.3%)

Source: Survey research 2006.

The respondents are the total population of farmers registered as employing migrants in the three study areas defined as paradigmatic in the Epirus region. Therefore, they do not constitute a statistical sample but the total population of concern. On the basis of farmers' responses to the questionnaire, the paper depicts migrants' employment opportunities and structure as well as their impact for households' and farms' survival and/or expansion.

The working hypothesis of the research study was that migrants participate in the rural economy in a differentiated manner depending on the specific characteristics of the agricultural sector, the existence of off-farm employment opportunities and the area. Thus, different types of rural areas were selected using geographical, demographic and labour market criteria (see Figure 1).

The *first study area in Ioannina* (which consists of Municipalities of Ano Pogoni, Delvinaki, Kalpaki, Ano Kalamas and the Community of Pogoniani) has a population of 10,870 inhabitants and it is characterised by significant ageing which is three times over the national average (3.0 against 1.1). It is an exemplar of a *remote, mountainous area characterized by traditional agriculture and livestock farming* in which migrants play a crucial role in supporting the social fiber of the region and the improvement of the natural and built environment (97 per cent of documented migrants are Albanians). Migrants are mainly employed in agriculture (44 per cent), while nearly 8 per cent work in the processing sector, 31 per cent in the constructions and 11 per cent in the services. The area is sparsely populated, while its population continued to decline in the 1990s. This is due to the emigration of the younger indigenous population in search of better living standards and higher social aspirations. The local economy is dominated by small and medium size agricultural holdings and by a small number of enterprises.



**Figure 1. The three study regions in Epirus**

The *second study area* is the *Municipality of Filippiada* (Prefecture of Preveza) with a population of 8,911 inhabitants with ageing index identical to the national average. This lowland area with a significant development of all economic sectors (i.e. agriculture, construction, small-scale manufacturing and trade) is an exemplar of an *agro-industrial, food processing area* in which migrants are spread in every economic sector as land workers, builders, industrial workers, cleaners, etc. The majority of them are Albanians (95 per cent) who are mainly employed in agriculture (38 per cent), while 15 per cent work in the processing sector, 23 per cent in the constructions and 17 per cent in the services. Despite the relative decrease of the population in the 1990s, the younger generation remains in the area taking over the farm holdings and/or the family enterprises. The local economy is dominated by small and medium size family farms, an important number of pig growing enterprises and a number of medium and large size meat processing and standardization firms.

The *third study area* is the *Municipality of Fanari* (Prefecture of Preveza) which has a population of 8,429 inhabitants and an ageing index marginally higher than the national average. It is a coastal area with extensive agricultural development and a developing tourist sector (for the indigenous population) acting complementarily to agriculture, which is considered as an exemplar of a *coastal multi-sectoral, pluriactive area* in which migrants provide labour in agricultural and in tourism. The majority of them are Albanians (93 per cent) who are mainly employed in agriculture (46 per cent), while 6 per cent work in the processing sector, 29 per cent in the constructions and 13 per cent in the services. The farms are either agricultural or mixed, combining agriculture and livestock. The farming sector is gradually abandoned by the younger generation.

The three study areas cover discrete places on a continuum from the mountainous to the lowland zone of a remote and marginal geographical region with significant socioeconomic and infrastructure problems. It is important to note that on the basis of the Population Census 2001 data, in all three areas nearly 65 per cent of migrants are unskilled labourers, while nearly 24 per cent is recorded as skilled farm labour.

Unskilled labour should be considered as flexible and multifunctional labour, not constrained by sectoral barriers, which in the case of Albanians implies that they may move away from agriculture and towards better paid jobs in the constructions and services.

## **Research findings**

### *Implications upon the farms and the local economy*

Migrants' employment has become a structural characteristic of family farming in rural areas and this is evident through the analysis of the migrants' employment implications on farms, the households and the local economy in Epirus.

Almost 31 per cent of the farms expanded considerably and 19 per cent got modernized, while 33 per cent experienced no change and 17 per cent decreased their size. For those farms where changes were carried out, the most important reasons stated by farmers were: the increase of their family labour, their participation in a subsidised investment programme and the securing of migrant labour. Thus, migrant labour has been considered as one of the main reasons for farm change and restructuring. Moreover, to the question whether the availability of migrant labour has influenced farmers' decision to implement changes in their farm, more than a quarter stated that it was one of the main reasons.

Overall, the large majority of farmers consider migrants' contribution to their professional activities as important (74 per cent), while the rest as less important or of no importance. At the prospect of declining numbers of migrants, over half of the farmers admit it will have negative implications for their farm. The main reasons stated are: there would be lack of wage labour, they wouldn't be able to keep their farm, their production would decrease, they would not be able to carry out the heavy tasks and they would get more tired. Among those who claim that the decrease in the number of migrants won't have any implication for their farm the most important reasons are that they or their family would do the job, they would find someone else, they don't depend so much on migrant labour and they don't mind because their farm is small in size. There is a distinction between large and small farms which looms large if one wants to understand migrants' implications for farming. Those farmers who consider migrant employment necessary for their operation are mostly those who have large farms, while the smaller farmers are less dependent on migrant labour. This refers mostly to the 'marginal-border' area which contains a higher proportion of large farms compared to the other two areas (see Table 1).

This distinction is also evident from farmers' responses to the possibility of rising migrant wages and to the implications for their farm. The majority of farmers think that the rise of labour costs will have negative implications for their farm (73 per cent), while for the rest it won't have any implication (26 per cent). As the most important implications they consider: the cost of production will be increased and there will be economic difficulties, some of the farmers would cease employing migrants, there would be problems with production, some farmers will not be able to keep their farm and they would sell it and the farmers would be based only on their work and the production would decrease. A relatively important percentage of the farmers will face significant problems for their survival and some of them may cease farming. Depending on the size and on the availability of family labour the farmers may respond to raising incomes by decreasing their production and/or employing only

family labour. For smaller farms, the decrease in the availability of migrant labour or the increase of labour costs would have significant implications for their survival.

Asked about the implications of migrant employment for the members of the farming household, farmers consider as the most important the fact they were able to maintain their farm. Second in importance was the fact that the farmer has more spare time and, therefore, he managed to obtain another job, the farmer has more time to spend in the organisation of his farm, the migrants substituted for farmers' inability (e.g. due to old age, health problems etc.) to work in their farm and there was a more effective operation of the farm. Thirdly, a number of farmers managed to expand their farm due to migrant employment, which can be observed in the 'agro-industrial' and 'multisectoral-multifunctional' areas. In the case of the 'marginal-border' area in which many large stockbreeding farms belong to aged farmers an option is (especially there is no succession) the non-expansion or even the reduction of farming animals.

For the other family members the most important implications are: they perform the less heavy tasks, they work on the farm but they are students at the same time, they have more spare time, they ceased working on the farm and they do only the housework and they have time to do another job.

As a result, migrant employment has led to a reshuffling of family member roles and to the rearrangement of their labour time on the farm. To male farmers, migrants offered the social status of the employer and at the same time they reduced the workload by taking up the heavy and dangerous tasks. For a small number of farmers, the professional/ entrepreneur farmers, migrants became sophisticated 'toolkits' and they undertook a supervising role on the farm leaving for their employers the tasks of managing and marketing of their produce. For farming women, migrants had a dual impact. Their work 'liberated' them from the chains of agricultural tasks and allowed them to seek for off-farm employment and/ or focus on 'housework'. A male farmer (54 years) from the 'marginal-border' area stressed that he «decided to employ a migrant mostly because [his] wife is afraid of flocking the sheep and not for getting rid-off some farming tasks». Another aged farmer from the same area expressed an interesting position:

«If someone is employed in farming he cannot find a wife. Until recently only Albanian women married shepherds, but now even these avoid doing so. They want to be ladies. Generally, if your wife does not help, you cannot keep it [the farm]. Women work more because [after farming] they return at home and there they don't rest, since they have the housework».

In some cases, migrant employment generated new labour demands for women, such as preparing food for migrants and confirmed women's role as 'assisting' labour in the farm household. Such reaffirmation of women's assisting role is more evident in the relatively larger, more mechanized and intensive farm households (Papadopoulos 2006).

In all three regions the large majority of Greeks acknowledge as positive or very positive the contribution of migrants in both the agricultural and in the non-agricultural sectors. The positive evaluation of their contribution is higher in the marginal-border area where their presence is considered more necessary and probably inevitable.

More specifically, migrants' contribution to the local economy is considered by the majority of the farmers as positive (64 per cent), while a small number claims that it has been negative and the rest have an unclear opinion (by saying that migrants have

both positive and negative impact). The positive contribution of migrants is mostly attributed to the fact that they spend their money locally for their living (76 per cent), they increase the local production by doing all kinds of jobs (20 per cent), and they help the older farmers to keep their farms (4 per cent). The farmers in the 'marginal-border' area show relatively higher percentages of positive responses in comparison with the 'multifunctional' area.

When negative implications are mentioned, those are connected to the quality of their work and the results upon the quality of production. Some farmers state that despite the fact they don't need farm workers they employ migrants because they 'feel sorry' for them. Some others claim they will not need them after the modernisation of their holdings; very often the latter is carried out with the support of migrant labour. The negative impact of migrants in the local economy is mainly the fact that they save money and invest them in their own country. Meanwhile, a small number of farmers relate migrants to the unemployment of locals.

On the issue of unemployment, the three fifths of the farmers consider it as a problem in the area, while the rest do not recognise it as problem. However, the majority of the farmers (60 per cent) in the 'marginal-border' area do not consider unemployed to be a problem, while only one third to one fourth of farmers in the other two areas share the same view. The main reasons for the unemployment are: the fact that the locals are simply searching for better jobs (43 per cent), there are no jobs available (31 per cent) and the availability of low cost migrant employment (18 per cent).

The sectors recorded as gaining the most out of migrant employment are agriculture and construction. The reasons for that are the availability of low cost labour, the fact that there no Greeks/ locals who would be ready to do those jobs and the fact that migrants do the heavy agricultural tasks. Those who experience the negative implications of migrant employment are the local construction workers and the unskilled labourers.

### *Permanent and seasonal migrant labour*

Almost all seasonal and permanent workers employed in farm/livestock holdings of the three study regions are migrants. Their differences concern the character and intensity of farm/livestock activities. In the lowland regions of the marginal-border area of Ioannina, in most of the area of Fanari and in the whole area of Filippiada migrant employment is mostly seasonal. Only in the mountainous part of the border area is employment mostly permanent as shepherds in livestock holdings (Table 2).

Nearly one third of the farms employ permanent migrant labour. All permanent workers are Albanians. The tasks that permanent workers perform vary a lot: nearly 54 per cent carry out only the unskilled tasks, 37 per cent do all tasks and only 9 per cent specialize on the skilled tasks. The skilled tasks are limited and therefore the most common tasks recorded are: grazing the sheep/goats, milking and/or feeding the animals, trimming the animals, cleaning the stables, loading/unloading and harvesting. On average each permanent worker works for 205 days per farm, but the period differs between the areas. Permanent workers work for longer periods in the 'agro-industrial' area compared to the 'marginal' and the 'multifunctional' areas. However, due to the larger farm/livestock size in the 'marginal' area the average number of immigrant labour is higher than in the other two areas (see Table 2).

It merits attention the fact that one out three permanent workers is employed by his employer in other jobs apart from farming. This additional employment is considered part of worker's 'obligations' to his employer, who often seems to provide free of



charge accommodation to migrants. Evidence for the latter is provided by the fact that almost 61 per cent of permanent workers live in a dwelling provided by the farmer, whereas only 34 per cent stay in rented housing. Interestingly enough, permanent workers in the ‘marginal’ area are mostly staying in a dwelling provided by the farmer, whereas in the ‘agro-industrial’ and the ‘multifunctional’ area the majority stay in rented houses.

In the study we discovered a new form of ‘pluriactivity’. It is a form of ‘all round’ engagement of migrants in two or more jobs as a reflection of a moral obligation to their employers. Nevertheless, that manifests their multifunctional role in local labour markets which need flexible labourers who would fill specific labour gaps, irrespectively of sector, all year long.

**Table 2. Extent of permanent and seasonal labour by study area**

	<b>Study area in Ioannina</b>	<b>Municipality of Filippiada</b>	<b>Municipality of Fanari</b>	<b>Total</b>
% of farms which employ only permanent labourers	30.3	0.0	8.9	16.94
% of farms which employ permanent and seasonal labour	25.0	23.5	2.2	13.66
% of farms which employ only seasonal labour	44.7	76.5	88.9	69.40
<i>Number of farms interviewed</i>	<i>N = 76</i>	<i>N = 17</i>	<i>N = 90</i>	<i>N=183</i>
Average working days of immigrant labour per farm	235	182	113	170.1
Average working days per permanent labourer	198.7	246.7	222.8	205.5
<i>Number of permanent labourers</i>	<i>67</i>	<i>6</i>	<i>12</i>	<i>85</i>
Average working days per seasonal labourer	45.8	33.4	61.6	50.7
<i>Number of seasonal labourers</i>	<i>98</i>	<i>49</i>	<i>121</i>	<i>268</i>

Source: Survey research 2006.

A particularity of permanent workers in Epirus is that only one third of them stay in the area with their family, whereas two thirds are settled in the area alone. This may be due to the younger age of migrants and to the fact that a significant percentage is newcomers. This is supported by the finding that 40 per cent of permanent workers have not been employed before. An internal differentiation is that in Fanari, the ‘multifunctional’ area, there are relatively older migrants compared to Ioannina, the ‘marginal’ area, where there is an inflow of younger migrants. That reflects the fact that when young irregular migrants enter the country stay in the ‘marginal’ area until they either get regularized or build the appropriate networks to move to southern Greece.

This is related to the opportunities for migrants’ mobility within rural Greece. On the basis of qualitative field work material, it is evident that migrants help each other to the extent that they originate from the same area (in Albania), they are relatives and/or belong to the same group. Once they start working in area they tend to bring their relatives, whom they help to find work. Otherwise they do not generally help newcomer migrants because they are afraid that they will take their jobs. There are

testimonies that migrants denounce their fellow migrants to the authorities once they are informed that they have a problem with their permits. Thus, migrant labourers are significantly individualized and pursue their own employment strategies.

Stockbreeding farmers and generally farmers in the 'marginal' area aim at finding permanent migrant labourers. However, when migrants get a work/residence permit and once they have scanned the opportunities for working in the local/regional labour market, they abandon their former employer and stockbreeding and move to more affluent areas and to better paid jobs.

The geographical mobility of permanent labourers is a significant aspect of their employment in the different areas. Especially in the 'marginal-mountainous' area of Ioannina the lack of indigenous labour is more than evident. The young indigenous people leave the area because of the difficulties of finding wives and because of what they consider decent jobs. Particularly, in the mountainous zones of Delvinaki and Ano Pogoni it is a common practice for livestock farms to be deserted not only the young Greeks but even by the migrants themselves who seek better and more rewarding jobs. On the contrary, in the 'agro-industrial' area of Fillippiada the employment of migrants in the agricultural sector is relatively smaller compared to the other sectors. This is explained by the fact that the younger generation remains in their farms and seeks no off-farm employment. In the 'pluriactive' area of Fanari, the large majority of migrants are employed as seasonal agricultural wage labourers and only a small number work as permanent workers.

Moreover, it seems that the farmers manage to keep the same permanent worker for an average of 5-6 years, which leads to the development of strong personal relations between employers and their workers.

Meanwhile, one third of permanent workers have stayed in the country for less than 5 years, another third have stayed for 5 to 10 years and the remaining one third for over 10 years. This means that there is a steady inflow of migrants which offers to local farmers the opportunity to keep labour costs low, especially when the significant geographical mobility of migrants is taken into account. Farmers count on their personal relations with the migrants to keep them for the longest possible period - in those cases that they have found trustworthy workers. Thus, farmers establish networks with migrants in order to tame their mobility patterns proving that what counts is the 'power of flows' against the 'space of flows' (Hannam *et al.* 2006, Sheller and Urry 2006).

The forms of permanent workers' payment deserve attention since they depend on the arrangement with the farmer. Just 53 per cent is paid by the month, 19 per cent by the day, 5 per cent by the week, while 22 per cent is paid the whole amount owed each time the migrant travels back to his country of origin (Albania). This is an indication of a strategy related to the largest possible money saving. The great majority of farmers make a separate agreement with each of their permanent workers, a fact which implies that each employment relation is customised. Only one fifth of farmers follows the market rates and/or pays them the generally set wages. In fact, 77 per cent of permanent labourers have social insurance because they are self-insured - i.e. by paying the contribution on their own - to OGA [the Agricultural Organization of Insurance].

Farmers think that labour costs are high and that migrants' remuneration is approaching that of Greek workers. Wages range between 300-400 Euros per month for those permanently employed in the livestock holdings of the marginal mountainous zone. However, wages of migrants in the lowland areas of Filippiada and Fanari are higher.

In the 'marginal-border' area permanent workers in the agricultural sector work for twice as much as in the 'agro-industrial' area because of the particular labour demands of livestock farming. In the latter area permanent employment is not only limited but also irregular and opportunistic, which means that they move from one employer to the next and change their employment patterns frequently.

The often intriguing issue of permanent workers' labour quality needs to be addressed for it is linked to the labour requirements of farmers. Labour quality is considered high by 41 per cent of farmers and low by just 16 per cent of them. Almost 34 per cent argued that it is neither of them and 9 per cent stated that it depends on the person and the task(s). The main reasons that farmers employ migrants is that they are disciplined, there are no Greek labourers available in their area, the migrants perform a variety of tasks and they work for long hours. It appears that permanent workers' labour is of no lesser quality than that of the locals, while migrants show much more labour flexibility and discipline than the locals.

Permanent workers are considered a multi-task and disciplined labour force which needs to be kept at the same farm for as long as possible at the lowest cost. Farmers in the 'marginal-mountainous' area try their best to regulate the geographical mobility of migrants by establishing personal relations and various 'obligations' (e.g. by offering work all year long, providing accommodation, introducing migrants to friends and relatives, etc.). Moreover, there are extreme cases in which the farmer has declared one migrant as employee and in fact employs another (illegal) migrant.

In all three areas locals talk about a benefiting 'mutual dependence' of the two populations (migrant and local).

Finding seasonal migrant workers is relatively easy because of the large supply of such labour. Seasonal labour is more widely diffused in the two lowland study regions compared to that of the marginal-border region. The large majority of seasonal workers in the three regions are of Albanian nationality employed in unskilled, heavy jobs of crop collection, loading/unloading of agricultural products and to all-round works related to livestock and household support.

On average each seasonal labourer works for 51 days per farm. Those labourers are normally highly mobile within the local labour market, but they may also move between the regional labour markets of the country. The main reason that farmers get seasonal migrant labour is that there are no Greek labourers who would be ready to perform agricultural tasks and they only find migrant labour.

The tasks that seasonal workers perform do not differ from those of the permanent workers. The quality of their work is considered satisfactory in the marginal-border area compared to the lowland agricultural region where demands are higher both in terms of work intensity and quality. In the lowland region work quality is related to the nationality of the migrants and the presence and the overall ability of the employer for supervision.

Normally, farmers find their seasonal workers in the same village or in the nearby villages, while there are cases that migrants themselves ask the farmer for employment. Asked about the reasons of employing seasonal migrant workers, farmers declared that they do it because: they work for long hours, they are disciplined, they perform a variety of tasks, they themselves need unskilled labour, they can perform all available seasonal tasks and they get low wages. Thus, farmers select their seasonal workers on the basis of getting those who are ready to do anything they are asked for and at the same time they do not have high demands. Moreover, seasonal workers are totally unprotected, since they do not have any claims for improved employment conditions and/or relative regulation of agricultural

employment.

Finally, a vital characteristic of migrants' employment is their capacity to self-organize and help each other by passing around to their network the information on available employment positions (permanent and/or seasonal). In reality, those interpersonal networks circulate all kinds of information, about e.g. housing, bureaucratic procedures, local societies, etc. For example, over half of farmers have discovered that migrants have done specific actions to help newcomers in the area. Certainly, in the majority of the cases this involves information/actions for getting a job, help in order to find appropriate housing, help in order to become acquainted in local society, assistance to their relations with public services (bureaucratic procedures often connected with regularization) and assistance to their relations with other migrants in the area. Farmers have witnessed defensive mechanisms of migrant behaviour which enable them to get better information in local societies where no such formal mechanisms seem to operate. Moreover, those defensive mechanisms play the role of adaptation actions which are vital for migrants' long residence, not to mention integration, in local societies. Thus, in the absence of integration mechanisms, migrants' self-organization, networking and individual strategies are responsible for their geographical and social mobility within and across rural areas (Sheller and Urry 2006, Bell 2008).

#### *Migrants' mobility, aspirations and integration prospects*

Over the past few years, 'older' migrants move from seasonal and irregular jobs in agriculture to employment offering greater stability. The search for improved school education for their children has often pulled them out of agriculture. Albanians have shown higher professional and social mobility when compared to other nationalities. They have increasingly moved away from seasonal and opportunistic jobs and have sought more regular and permanent employment. This is confirmed with evidence from other parts of the country too. In agriculture, for example, Albanians are being replaced in particular with Asians (Bangladeshis, Pakistanis, Indians), Bulgarians and Romanians, who often take over the hard, lowly paid, unhealthy jobs. Albanians concentrate their efforts on getting jobs in construction or in setting up their own businesses in either trade, services (tourism) or agriculture through either land renting or sharecropping. If they stay in agriculture, Albanians with a longer residence take a higher position in the work hierarchy as foremen – a product of their long relationship with their employers and the recognition of their hard productive work. Nevertheless, all these above tend to depend on the length of residence in the region, the status of legality, the knowledge of the native language, the 'networking' with local societies and the requirements in the life cycle of the migrant family.

These elements create the capacity for a flexible adjustment to the demands of the labour market and set the preconditions of a professional and social integration (Kasimis, 2008).

Our research has indicated that migrants were relatively more accepted and integrated in the less-developed rural regions than in the developed ones. This has been related to the proportion of migrants in the total population of each region, their family status, and their job characteristics. Local populations show greater acceptance of those migrants living permanently in one region together with their families, as opposed to seasonal/irregular labourers travelling without families.

“...those who live permanently [with their families], the society and the village have accepted; we accept them (...) but the others non-permanent, seasonal labour (...) they cannot adapt. It is those who will leave in a month and then will come again like the swallows” (Albanian migrant, ‘multifunctional’ area).

Migrants and the local populations have overlapping opinions about the prospects for integration. Both populations believe that the prospects for integration are much better for migrants who live in the countryside with their families legally. The status of legality is very crucial, if not the precondition, for the integration of migrants.

It is very characteristic what a migrant said:

“If you do not have your papers, you are sitting on thorns...if you do not have papers you are like a rabbit chased by the dog” (Albanian migrant, ‘marginal’ area).

Such developments have contributed to the development of social differentiations and the formation of new social groups of migrants in rural Greece structured around the following main types:

1. *Migrants employed as permanent or semi-permanent farm labour.* In the case of the presence of family, a gender division of labour is identified: the husband is normally employed as a permanent wage labourer in agriculture and the wife in domestic services and/or in the agro-food processing industry.
2. *Migrants directly engaged as farmers themselves.* The migrant has settled for a long time in the rural region and has either become an independent farmer or sharecropper. If a wife is living with the migrant, she is either helping on the farm or working in domestic services.
3. *Migrants holding off-farm employment.* The migrant is either working permanently as unskilled/semi-skilled construction or industrial worker or, in some regions, as seasonal worker alternating between sectors of the local economies occupying more and more a ‘multifunctional’ structural role in the local labour markets. If the family is with the migrant, the wife is often employed in the services (domestic services or tourism).
4. *Migrants employed as seasonal labour without families.* Irregular male migrants often living in conditions of insecurity and social exclusion without any clear migration plans (Kasimis, 2008).

The aspirations of migrants are differentiated with age. The younger generation wish to stay in Greece and show willingness to move to the cities in search of a more regular and higher employment status, often pursued through better education and training. The older generation are often happy with regular employment irrespective of other conditions and employment prospects. Migrants have adopted strategies that are immediately related to the future of their children.

Similar is the attitude of single Albanians who have been in the country for a few years but have their families behind. They plan to find ways for family unification. Requirements of declared incomes above a certain amount, however, make things difficult but when a young family is back in the country of origin the prime target remains reunification.

Nevertheless, despite the wide acknowledgement of the positive contribution of migrant labour to the rural regions’ economies and the fact Albanians were the fastest

integrating nationality, negative, and often contradictory, opinions of them, reflecting national stereotypes, were still widely expressed during the research.

“[The Albanians are] not good people. They are tough people, they don’t take a word, they are distrusted, thieves and odd...they want you to be over their shoulder” (Woman farmer, ‘marginal’ area).

## **Conclusions**

In the rural regions of Southern Europe migrants increased in numbers in the 1980s and early 1990s and they are extensively irregular and seasonally employed by both entrepreneurial and family farms.

The analysis so far seems to confirm our main hypothesis that migrants cannot be considered as strictly agricultural labour force but they should rather be seen, in a wider framework, as a labour force of the rural areas which has important multiple influences upon the economy and society of these areas.

Nevertheless, the significance of their influence is differentiated among the three areas studied. The significance of the presence of migrants in scale would range between “valuable but not necessary for the holding/enterprise” and “necessary for its survival”. This escalation of significance depends on the mutual interaction between the type of the farm, its size, the oldness of its equipment as well as the number, age and employment of family farm members.

Migrants are employed in all sectors of the economies we studied but undoubtedly agriculture still has the largest part of the share. Their contribution in the preservation of the multifunctional character of the rural regions of Greece is crucial because they provide labour power to fill the long established deficits in the labour market of rural regions caused by demographic, economic, structural and social factors related to the rejection by the younger generation of jobs connected to agriculture and the restructuring towards seasonal and dynamic crops. The differentiation of migrant employment in each region studied is related to the different economic structure of each region and the labour market characteristics. In other words, the more developed are other sectors of the economy the more differentiated and multifunctional is migrant employment.

One could say that what further differentiates the three regions is the availability and characteristics of the indigenous labour force. Thus, the presence of migrants is more evident and vital in the ‘marginal’ area (Ioannina), where a labour deficit is easily identified and less significant in the ‘agro-industrial’ and the ‘multifunctional’ area (Filippiada and Fanari), where the high cost of migrant labour and the maintenance of flexible family labour seem not to justify extensive migrant employment. Nevertheless a closer look at the empirical evidence has shown that they would prefer to employ more migrants if financial conditions allowed it. Migrant employment cannot, by any way, be considered exclusively sectoral employment compared to the employment of the indigenous labour force. Their value is rather judged by their ability to adjust to the differentiated needs of the local rural labour markets.

In the analysis of the implications above, it was discovered that migrant employment was beneficial for agriculture, livestock and construction. This is also widely acknowledged by local employers. Overall two in three questioned believe that the contribution of migrants in local societies is positive because they contribute to

production growth, to the preservation of the holdings of aged people and to supporting the local economy as local consumers (in housing, shopping etc.).

The Greek experience is a valuable frame of reference for the policymakers of most European countries (particularly the South European) as they grapple with the challenges and opportunities of migration. Policymakers must cope with Southern Europe's persistent demographic, structural problems, the informality of rural labour markets and the continued rejection of agricultural work by the younger generation. If not tackled, these issues are expected to negatively affect the future of rural areas at a time of severe worldwide pressures connected with the World Trade Organization negotiations, CAP reforms and the recent EU enlargement.

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Conference paper for the 4<sup>th</sup> Hellenic Observatory PhD Symposium

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## **Abstract**

Higher education and research have come to the forefront of international debate about economic growth. Research degree education has been seen as central to the development of innovation and international competitiveness in a world where knowledge is the ultimate economic renewable. While human capital and its relationship to productivity, growth and competitiveness is debated, the importance of human capital (and particularly that of doctoral graduates who have accumulated substantial human capital through education) has been identified as a decisive factor. Measures of national investment in this area are increasingly included among the economic indicators intended to inform policy reform and monitor economic progress. The widespread preoccupation of academic literature and policy sector with Science, Technology, and Engineering and Mathematics (STEM) graduates and the increasing importance of doctoral graduates contributing to innovation and research development have reinforced the need to explore the careers of this highly educated group which is the main aim of this research undertaking.

Taking into account the existing evidence for doctoral graduates in Greece, the core of this study will be a survey to explore the early career paths of Greek doctoral graduates in science and engineering educated in Greece and the UK and how they are deployed in the labour market. The rationale for choosing science and engineering graduates lies in the assumed importance for Greek research and innovation in Greek socio-economic policy and because the early career impact of this targeted group can be more easily identifiable by employers in the short term that might be the case for those who have studied other disciplines. In addition, follow-up interviews with a sub-sample of PhD holders will elucidate their experiences and perceptions of doctoral education and its outcomes. Following up on these findings, perceptions, attitudes and underlying rationales (behind policy measures) will be investigated, by interviewing employers and policy-makers about their recruitment and deployment of PhD graduates and perceptions of their role in the Greek economy.

This research will provide new evidence on the career trajectories of doctoral graduates while it will allow for a comparison between Greek and foreign educated workforce by looking at the overall deployment of these groups in the labour market. Apart from contributing to the limited body of knowledge regarding the impact of doctoral education on individual career development and organisational practice it will inform doctoral graduates and the stakeholder communities more widely about the motivations for career decisions, the impact of studying in the UK and Greece and the opportunities that face them in the Greek and global labour markets.

I have currently embarked on my fieldwork and by the time of the conference, I will have conducted part of my research. Thus, the audience of the symposium is ideal and highly relevant to my research and I welcome the opportunity to discuss theoretical assumptions and methodological challenges of collecting the data and draw in their experiences.



# **Researching the early career paths of Greek doctoral graduates in science and engineering who have studied in Greece and UK**

## **Introduction**

The purpose of this paper is to set the academic and policy background for this research and provide information on the current Greek policy context and doctoral graduates' evidence with a view to explain the importance of exploring the early career paths of Greek doctoral graduates in science and engineering who have studied in Greece and UK. It will then describe the methodological tools to fulfill this research undertaking and it will conclude by drawing out current challenges of this research.

The increasing importance of skills and the focus on highly skilled workforce for economic growth and national competitiveness has highlighted the role of higher education, and what is more doctoral education in terms of innovation and knowledge transfer. While higher education remains a national issue, it is increasingly being seen in a global context with mobility and transferable educational standards becoming the flagships of this internationalization 'movement' in higher education. This also underlines the importance of looking at the synergies fostered at doctoral context between education/research, employment and innovation. More specifically, the preoccupation of academic and policy literature on science, technology, engineering and mathematics graduates (STEM) as a catalytic factor for strong economy which is expanded at the doctoral level implies the enhancement of these synergies due to the dominating role of technology in our days. Greek policy documents raise similar issues for a future Greek knowledge based economy in alignment with their European and international counterparts. However, there is little information on how this is translated in the ground, when individuals -Greek PhD graduates- and their careers are becoming the subject of research.

## **Academic and policy background**

### *Human capital*

According to human capital theory, education plays a pivotal role in producing human capital with knowledge and skills that when they are utilised they affect overall productivity leading to economic development. As Lucas (1988) argues, there is a positive relationship between the education of workforce and overall capital productivity since the higher the educational level of the workforce, the more highly skilled have a greater propensity to innovate influencing overall productivity.

Similarly, it has been argued that high educational level of individuals does not only increase their productivity but also the productivity of the people who work with (Perotti, 1993) leading to both high individual returns and wider social returns. In addition, the emergence of new growth theories (Lucas, 1988; Romer, 1986) with their underlying assumption on the 'endogenous' character of technology- based on human capital accumulation- have provided a central role to knowledge and especially to new knowledge production.

Policy-makers have welcomed with much enthusiasm these theories underpinning significant developments in European policy sector such as the Lisbon strategy and the so-called KBE and their linking with higher education and research initiatives, relating them to economic growth and national competitiveness. In addition, evidence from OECD countries (Luintel and Khan, 2005; Gemmell 1997) show that *'on average the flow of new- to -the -world knowledge is likely to be higher in countries that engage more scientists and engineers in the knowledge producing sector'* (Luintel and Khan, 2005, p.22)

However, the human capital assumptions have been challenged and debated. While higher education expansion is a mere fact (OECD, 2003, 2007), the relationship between employment, productivity and economic growth is still obscure (Ashton and Green, 1996). As Keep and Mayhew (2004, p.310) mention *'the main assumptions that underlie the case for expansion have not been probed with sufficient rigor and major policy decisions have been made on evidence that is at best, incomplete and at worst, weak or contradictory'*. There are no clear cut links between proportion of workforce with degrees and economic growth rates (Keep and Mayhew, 1996; Keep et al., 2002) or productivity (Wolf, 2003) with examples such as the UK (Elliott, 2004). Evidence also for Greece show that despite the increasing enrolment and attainment of higher education degrees since 1980s (Katsikas and Therianos, 2004; ESYE, [http://www.statistics.gr/gr\\_tables/S806\\_SED\\_3B\\_TS\\_00\\_05\\_8\\_Y\\_EN.pdf](http://www.statistics.gr/gr_tables/S806_SED_3B_TS_00_05_8_Y_EN.pdf)), it is characterised by low labour productivity and slow employment growth while it has experienced robust economic growth (OECD, 2008). In the light of comparative research of a number of countries, Brown et al. (2008) mention that the *'human capital assumption on which government policy rests is no longer fit for purpose'*. Thus, it is argued that highly skilled workforce will not lead to national economic competitiveness, individual prosperity and social justice if all countries follow the same route (ibid) since the notion of competitive advantage, based on investment to education, will cease to exist. Thus, the KBE advocates are confronted with *'evidence (that) fails to support the argument that today's economy requires a significant let alone exponential, increase in demand for highly skilled workers'* (ibid, p14).

#### *Knowledge-based economy (KBE) and doctoral education*

Academic literature has been extensive on the notion of KBE and its impact to European policies on employment, education training and research & development (Rodrigues, 2003; Lindley, 2000; Lindley 2002). Within the notion of the KBE, the role of knowledge and skills has become pivotal for the transition from a low to a high skill economy that would render economies – such as Europe – as globally competitive. Thus for the policy-makers, R&D investment is considered as the main route to economic growth and socio-economic development, and a crucial component of the Lisbon objectives. In 2002 the Heads of State agreed to devote 3% of GDP to R&D by 2010 and acknowledged the need for the private sector to provide funding reaching 2/3 of the R&D expenditure (Presidency Conclusions, 2002)<sup>1</sup>. European governments have been thus engaged to enhance R&D activities through various

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<sup>1</sup>[http://www.fondazionecru.it/eracareers/documents/research\\_policy/Barcelona%20EUCouncil%202002.pdf](http://www.fondazionecru.it/eracareers/documents/research_policy/Barcelona%20EUCouncil%202002.pdf)

policy mixes (Warda, 2002<sup>2</sup>; Griffith, 2000; European Commission (EC), 2003a) among which to focus on human potential.

The importance of human capital (and what is more of the production of PhDs) is reflected in the development of two composite indicators by the EC to capture ‘knowledge’ dimension<sup>3</sup> of the KBE. The indicators – on investment and performance in the KBE – are comprised of a number of key variables including the numbers of researchers per capita, PhD graduates in S&T as knowledge creation sub-indicators.

Doctoral education and the increasing contribution of researchers have come to the fore of European and national developments highlighted by the various initiatives undertaken: the creation of a European Research Area (ERA) and its overlapping agenda with Lisbon strategy and Bologna process<sup>4</sup>, the European charter of researchers and a code of conduct for the recruitment of researchers, OECD Careers of doctoral holders (CDH project).

The focus of European higher education and research policy on doctoral education and its outcomes outlines the importance attributed to doctoral graduates within the context of KBE and the human capital debate and explains the reasons for undertaking this study. Enders (2005) has commented that *‘the study of career paths of PhD graduates highlights their role as one of the vehicles of knowledge dissemination between academe and other sectors of the society’*. Since there is no research undertaken at the Greek level on doctoral career paths as it will be outlined in the following section, this study will provide information on the role of PhD holders in the context of labor market and other policy perspectives.

## **The Greek context**

While academic literature has been rather extensive on rethinking and reframing doctoral education (Park, 2007; Enders, 2004; Usher, 2002;) and international interest is growing on the outcomes of the PhD on the labour market (Enders 2002; Kivinen et al, 1999; Nerad and Cerny, 1999, 2002; Paul and Peret, 1999) a rather limited body of academic literature has been concerned at Greek level (Galanaki, 2002). More specifically, career paths of doctoral graduates in S&E in Greece has been rather neglected issue in the academic literature despite its emerging importance for informing policy making and practice. However, studies (Livanos, 2008; Tsakloglou&Cholezas, 2001; Glytsos, 1990) have been undertaken based on quantitative data (on a small sample of PhD), exploring the Greek labour market overall but not allowing the further investigation of career paths of doctoral graduates. There is no national graduate survey in Greece, and when Greek graduate surveys are undertaken, they tend not to take their enquiry beyond first degree graduates in specific disciplines (Kougioumtzaki and Kalamatianou, 2008) or particular institutions (Laboratory of Industrial and Energy Economics, 2001). Thus, there is scope for further examination.

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<sup>2</sup> such as : increased funding on governmental research centres, universities or business R&D units, economic incentives for stimulating more R&D activities (e.g. favourable tax treatment, R&D subsidies), establishing patent protection frameworks

<sup>3</sup> Three aspects of knowledge have been emphasized: knowledge creation, knowledge dissemination and knowledge

<sup>4</sup> The Bologna Process in the higher education sector aims to establish a European Higher Education Area (EHEA) by 2010 (EC, 2000). It is an intergovernmental initiative which does not aim in harmonization of national educational systems but on identifying tools for linking them (EUA, 2006)

Career paths will be investigated on the basis of factors such as age, gender, social background, educational and academic performance, choice of discipline, personal motivations and aspirations. Enders (2002) in his longitudinal study carried out on the employment of German PhD holders, has used the same factors to examine the impact of doctoral training on the careers of doctoral graduates. Based on this approach, this research aims to identify and explore the determining power of different variables in the career paths.

To understand and enrich individual data on career paths, it would be important to gather information regarding experiences and perceptions of doctoral graduates and employers regarding the employment/recruitment of the former in Greece. While no research has been undertaken in Greece on this issue, a number of studies in UK (Jackson, 2007; Purcell and Elias, 2006; McCarthy and Simm, 2006; Souter, 2005) have raised the importance of investigating the views and perceptions of both groups, since the information on the availability of career paths of this particular highly skilled workforce will feed policy practice. In particular, Purcell and Elias (2006 – for Social Science PhDs) and Souter (2005- for the University of Leeds) have incorporated perspectives from both employers and PhD graduates in their research in order to compare and contrast ideas from both groups which is also aimed at this study as well.

#### *The Greek economy in the KBE context*

Unarguably, a key influence on Greek public policy has been the notion of KBE as it has been for the rest of Europe. While the EU target for 3% of GDP devoted to research might be feasible at EU level, each country has set its own national targets. Greece aims at 1.5% of GDP for R&D activities out of which 40% of the funding comes from the business sector (GSRT, 2003).

Taking into account the structure of Greek economy, it becomes clear that structural deficiencies of the markets (Oltheten et al., 2003) prevent Greece from ameliorating its economic and industrial performance and meeting the R&D targets. Greece is largely based on the services sector (71% of total GDP)<sup>5</sup> while industry and agriculture have a small share (21% and 7% respectively) (Ministry of Finance and Economy - NSRF, 2007). Greek industry is comprised of small and medium sized enterprises which most of them have the following characteristics: are family owned, are more labour intensive (textiles-clothing, food-beverages-tobacco) rather than technology - intensive (chemicals, machinery-electronics) thus adopting rather than creating technology. Private R&D expenditure is a costly initiative, apparently beyond the means of small domestic firms (ibid) making the target for 40% business funding for R&D even more difficult.

The Greek state acknowledges the significance of enhancing industrial sector focusing on high technology fields, thus, energy and ICT have lately become growing

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<sup>5</sup> The service sector is dominated by shipping and tourism services with the latter being 'the most rapidly growing economic sector' (NSRF, 2006, p24)

industries<sup>6</sup> in Greece. According to the recent Technology Foresight report among which employers perspectives are also depicted (2004)<sup>7</sup>, manufacturing industry must play a strategic role for the future Greek economy through developing new technologies (in bio-technology, energy and informatics) and high added value products. The emphasis on technology is mirrored at policy level in the law 3653/2008 for a new institutional framework on research and technology, where applied research areas of scientific and technological interest under the 7<sup>th</sup> European Framework Programme and the Greek Technology foresight (2004), are included within the National Programme for Research and Technology<sup>8</sup>. Thus, the availability and accessibility of specialised researchers and qualified workforce -especially in fields of S&E closely linked to industry - would both foster innovation and technological advancement and become essential for 'location decisions' of multinational companies establishing their R&D units (EC, 2003a; Dutch Ministry Report, 2004). Consequently, an enhanced supply of doctoral graduates in S&E undertaking research for industry (industry-university collaboration) or working within industry sector could presumably act as catalyst towards the enforcement of high tech industry. On the other side, an increasing demand for doctoral graduates as it is mirrored in the use and recruitment of more doctoral graduates would potentially increase R&D activities in Greece. Therefore, this study will also explore the attitudes of employers towards this highly qualified workforce linked with insights from the Greek policy sector. Thus, it will investigate further and for the first time - in a more qualitative approach (interviews with policy makers) - both the policy incentives and the underlying rationales while policy implications would be identified for the future of this highly skilled part of Greek human capital.

*Greek human capital: Evidence on Greek doctoral graduates (educated both in Greece and UK)*

Taking into consideration the structure of the Greek economy and its current emphasis on research and innovation but also demographic challenges and absence of a coherent LLL strategy<sup>9</sup>, human capital could potentially become the competitive advantage of Greece in its effort to align with the dictations of the KBE for more research, innovation and economic growth. Researchers in universities, research institutes and private firms constitute human capital with great potential in contributing to the KBE.<sup>10</sup> As the EU Science and Research Commissioner Janez Potocnik has said '*Greece needs to invest more in research, infrastructures and reward systems in order to safeguard its most precious commodity: its researchers*'.

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<sup>6</sup> This has been enabled by the adoption liberalization policies dictated by the Greek accession to the EU and the Greek exposure to the international competitive environment.

<sup>7</sup> This initiative launched in 2002 under the aegis of GSRT, was funded by the Third European Community Framework and it was undertaken by 3 partners (Athens University of Economics and Business, National Technical University of Athens, Higher School of Public Health, LOGOTECH A.E, 03/08/08) while various topic working groups consisted of business executives, representatives of professional bodies and chambers, governmental executives, academics, researchers, etc. For more see: <http://ec.europa.eu/research/science-society/index.cfm?fuseaction=public.topic&id=508>

<sup>8</sup> a) health-biotechnology, b) agriculture-food, c) energy-renewable energy sources, d) environment, space, e) information-communication technologies, f) nanotechnologies, materials and new production technologies, g) engineering mechanics, cultural heritage, socio-economic sciences and Humanities.

<sup>9</sup> Greece seems to confront a serious demographic problem since the fertility rate has dropped to 1.28 children per female by 2003. According to projections of the National Statistical Service of Greece (NSSG), the Greek population will both decrease and be dominated by persons aged over 65% (56% of the total Greek population) by 2050. Without considerable reform, it is thus expected that an elderly workforce will have a serious impact on productivity, innovation and growth in an economy that is based and driven by continuously new forms of technology and knowledge.

<sup>10</sup> While research personnel figures express the input resources to R&D activities, the assessment of production of new researchers appears to be essentially confined to identification of numbers of doctorates awarded, constituting an output from scientific and research establishments.

While it has been estimated that approximately 700.00 additional researchers are required at the EU level for the fulfilment of the R&D objective (EC, 2003b), at Greek level the respective projection reaches an increase of 39.000 within 2000-2010 (GSRT, 2003).

Statistical evidence shows that the number of Greek researchers has doubled from 9,705 to 17,024 within 1995-2005 (ERA – WATCH,<sup>11</sup>), while that of doctoral graduates has increased from 714 in 1997/98 to 2436 in 2006-2007 (NSSG - National Statistical Service of Greece).<sup>12</sup> Figures from the Greek NARIC show an additional inflow of Greek doctoral holders from foreign universities (500-600 annually) in the Greek labour market. In 1999, Greek students comprised one of the five largest groups in the UK while Greece was leading in the enrolment of Greek students in foreign universities in 2006 (Eurostat, 2006). In 2004, 22.826 Greek students out of 42.126 Greek students in foreign universities –more than half- (ISCED 5&6) undertook their postgraduate studies in UK universities (ibid). The hosting capacity and the reputation of UK universities along with the familiarity of Greek students with the English language<sup>13</sup> render UK an attractive destination for studies (ibid). This increasing trend of researchers and doctoral holders- educated within Greece or abroad- demonstrates the increasing investments towards developing highly skilled human capital and knowledge creation. Nevertheless, while there is statistical information on R&D personnel at qualification level in Greece (see Table 1 below) there is no information<sup>14</sup> on doctoral graduates, with home and foreign doctoral degrees and how they compare in the labour market.

Table 1

	1999	2001	2003	2005
<b>Doctoral holders</b>	14076	14371	16713	18613
<b>University graduates</b>	25676	22579	22915	25676
<b>Technological graduates</b>	3504	5445	3976	3504
<b>Other categories</b>	13852	13231	13104	12631
<b>Total</b>	57108	55626	56708	61569

Source: GSRT

As Lianos et al. (2004) mention ‘no research effort has been devoted to examining how well foreign university graduates perform in the Greek labour market when they return home after completion of their studies’. That study (*ibid.*2004) explored the performance of Greek students (of all levels) undertaking their studies abroad irrespective of disciplines, but Greek University graduates were not included. This research nevertheless builds upon findings and results of Lianos et al. (*ibid*) although

<sup>11</sup> For more see :

<http://cordis.europa.eu/erawatch/index.cfm?fuseaction=ri.content&topicID=74&countryCode=GR&parentID=71> , 04/08/08

<sup>12</sup> While it could be assumed that these graduates will enter the Greek research labour market, it should be taken into account that some of them might pursue their careers abroad.

<sup>13</sup> 99.2% of secondary pupils in Greece know at least one foreign language – the most common being English.

<sup>14</sup> Greek LFS provides figures for share in the public sector, self employed but it does not capture research/academic/administrative posts within the public sector and also it does not distinguish doctoral holders from foreign universities

it focuses on Greek doctoral graduates in S&E and it will allow for a comparison between Greek educated and foreign educated PhD holders by employing all the methodological tools for this study.

## **Research methodology**

### *Defining the population of interest*

This research focuses on S&E graduates<sup>15</sup> who are a key part of a dynamic economic strategy. Due to the continuous technology advancement, there is a growing demand for a workforce able to understand and work with and develop new technologies. Moreover, research in S&E fields has a pivotal role to play in the future of European economies taking into consideration EU evidence that demonstrate a 3% growth rate in the number of S&E doctoral degrees between 1998-2005 in EU-27. In 2005, Greece had the highest share (62%) of doctoral degrees in science and engineering in the total number of doctoral degrees (EC, 2007d in EC, 2008, sec1911) highlighting thus the significance that the Greek state attributes to the development of a substantial doctoral workforce in S&E that can become the catalyst towards innovation and enhancement of R&D activities especially in the private sector. S&E field is strategically important regarding the Greek government in line with Europe and its future science and technology policy. S&E has been selected as a group whose 'impact' can be more easily identified than other areas of doctoral study where the fields of study tends to lead to specialisation and equips the graduates for specialist rather than general careers.

### *Graduates who studied in Greece*

This study includes 3 cohorts<sup>16</sup> of doctoral graduates (2002-03, 2003-04, 2004-05) in S&E reaching 1724 doctoral graduates who constitute the sampling frame of this research. Looking closer at the national statistical figures of doctoral graduates per university, it becomes clear that the big majority (80-90%) of S&E PhD graduates have been awarded doctorates from the following five Universities: University of Athens University of Thessaloniki, University of Patras, University of Crete and National Technical University of Athens. Further investigation and assessment of feasibilities is required before the precise boundaries of the target population can be drawn, including access to contact details. While Greece does not have a well established system of career services and alumni offices, doctoral graduates are legally required to submit a copy of their doctoral thesis to the National Documentation Centre of Greece through the secretariat of their department. In this

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<sup>15</sup> The definition of Science and Engineering Graduates springs from the classifications of International Standard Classification of Education (ISCED, for more see: [http://www.unesco.org/education/information/nfsunesco/doc/isced\\_1997.htm](http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm) 08/08/08) according to educational level. While all tertiary degrees are included (ISCED 5a and 5b) and PhDs (ISCED 6), this project will focus on the latter group. Within the S&E fields lay the following studies: life sciences (ISC42), physical sciences (ISC44), mathematics and statistics (ISC46), computing (ISC48), engineering and engineering trades (ISC52), manufacturing and processing (ISC54), architecture and building (ISC58).

<sup>16</sup> Looking at the number of science and engineering doctoral graduates of these cohorts, it is obvious that the proportion of this group is increasing in comparison to the total doctoral graduate population (36% of total doctoral graduates were awarded a science and engineering doctorate in 2002-03 whereas this number reached 51% and 62% in 2003-04 and 2004-05 respectively)

submission, a census document is also attached where contact information such as address, telephone number or e-mail is enquired. Nowadays, the National Documentation Centre holds an archive of 15000 doctoral theses out of which 85 per cent are doctoral theses completed within Greek Universities and 15 per cent by Greek doctoral holders who obtained their theses abroad<sup>17</sup>. Although it was acknowledged that contact information might be outdated in some cases, the secretariat representative confirmed that in the case of relatively recent graduates of the cohorts, it is likely to be reasonably reliable as to be the family-of-origin address. Having embarked on the questionnaire design and the sample construction, these issues became more pertinent which will be discussed further in the challenges section.

### *Greek graduates who studied in the UK*

According to HESA data, 666 Greek students obtained their doctorate in S&E fields (similar fields as above) in UK Universities using the same cohorts (2002-03, 2003-04, and 2004-05). Greek students show strong preference to 'old – traditional' UK Universities. Thus, this study will focus on about 25 Universities that represent 438 out of 666 (approximately 65%) of doctoral graduates and represent UK universities most comparable in tradition, intake and subject-spread in the Greek universities included in the study. While it is anticipated that obtaining information from UK Universities will require a high level of diplomacy regarding acquiring contact information of graduates, people responsible for doctoral graduates will be contacted and requested to send a mail on my behalf with the purpose of the study and the link to the online questionnaire. The Hellenic NARIC<sup>18</sup> holds a database with contact information from Greek doctoral holders from foreign Universities who have applied for recognition of their qualification. This approach was adopted by Lianos et al. (2004), thus the authors will be contacted for research insights and assistance in accessing the data.

It is recognized that contacting these populations will pose challenges but it is hoped that a response rate of 400-500 graduates can be achieved which is expected to be around 30-40% of those for whom current contact details can be established.

### *Methodological tools*

The research methodology is comprised by a survey of two matched samples of doctoral graduates who have undertaken their doctoral studies in Science or Engineering in a) Greece and b) UK and a set of interviews with different groups: sub samples of graduates from both surveys, interviews with employers (Greek and UK) and interviews with policy-makers

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<sup>17</sup> They need to have the formal recognition requirements from the Hellenic NARIC.

<sup>18</sup> On the other side Greek doctoral graduates who have undertaken their doctorates abroad (not included in the statistics) and might return to their homeland to work. The National Academic Recognition Information Centre (NARIC) in Greece provides statistics on the foreign doctorates that are recognised each year (2005=527, 2006=605, Hellenic NARIC, <http://www.doatap.gr/04/08/08>) which are almost half of the annual 'production of doctoral graduates' in the interior of the country.



### *A doctoral graduate survey*

Since the objective is to explore the career paths of Greek doctoral graduates and their utilisation in the Greek labour market, a doctoral graduate survey is selected as the most appropriate for this research topic. The cohorts chosen are 2002-03, 2003-04 and 2004-05 as providing the potential for 'early' careers analysis of doctoral holders and it would minimize information of temporary employment/ further education (postdoc) that more recent graduates would provide. While the outcomes of the survey might not be translated in general conclusions for the population, however it is opted that common issues and trends will arise that will characterise the population. Several graduate surveys [in France (CEREQ, various years), Germany (Enders and Bornmann, 2001), Netherlands (Hulshof et al., 1996) and UK (HESA, various years; Purcell and Elias, 2006)] are employed with the view to inform this graduate survey and lead to meticulously planned question design – for questionnaire and interview – with the view to yield reliable and non ambiguous information. Country specific characteristics will be applied in the Greek context.

The survey will gather information on the individual (and, as far as possible, the wider social returns) in the transition from higher education to employment, and subsequent employment and the development/career opportunities. Exploring the career trajectories of doctoral graduates will provide insight into the main occupational sectors that recruit them and the posts undertaken by Greek doctoral graduates. Moreover, the influences that determine their choice of employment and career progression will be investigated and relate this info to factors such as age, gender, parental occupation, educational background, subject specific characteristics.

The questionnaire has five sections: a) doctoral education and its characteristics, b) current employment situation, c) career history information, d) satisfaction, e) personal characteristics in order to meet the needs for required data. It is at the pilot stage at the time of this paper but it will be launched over the summer.

The questionnaire for the survey is produced in online and hard copy versions but it is hoped that most of the data will be collected online. A short and comprehensive online questionnaire has been developed using SNAP software, available in both English and Greek language versions.

### *Interviews*

While the survey results will provide information about career trajectories, it will form the basis for issues to be followed up with semi-structured interviews; where there are obvious response biases (e.g. under-representation of sub-disciplines) this will be taken into account at the qualitative stage. Matched interviews with doctoral graduates from Greek and UK educated samples will be undertaken with the aim to gather insights on the questionnaire data and examine further perceptions but also issues arising from the survey. Selection of doctoral graduates and the number to be interviewed as representative of significant subgroups will be determined on the basis of the initial analysis of the survey, but it is likely that subgroups will be divided on basis of employment sector (academic, public, private, self –employed), educational background (Greek –UK educated, discipline specific (Biology, Chemistry, Chemical Engineering, etc). The objective is not only to obtain subjective accounts of doctoral

graduates and look closer at their experience of doctoral education and the link with the labour market but also to be able to identify issues that affect the supply side of doctoral graduates and prevent or enable the efficient allocation of this highly skilled personnel such as the following:

1. Why did they undertake doctoral education? What were their motivations and aspirations for education, career plans and labour mobility?
2. To what extent has their discipline specific characteristics determined the career path?
3. What were the reasons for choosing to study to UK or Greece and what impact do they believe that this had on their success so far?
4. To what extent do they perceive that they have been able to access the career opportunities they aspired to?
5. Do they believe that their investment in doctoral education has been justified by the career paths so far?
6. What form have their early career trajectories taken and what are the characteristics of their currently employment including salary levels and other perceived returns
7. How satisfied or dissatisfied are they with their careers to date?

A small sample of employers in the UK and Greek private sector will also be interviewed, the former to inform the interview approach to be taken with the Greek employers with the issue of employing doctoral graduates outside the academic sector. Since UK employers are more engaged into activities linking university research and business than Greek employers, the interview process has already started with the former. Human resource contacts in UK private sector have been approached and a few interviews have been undertaken regarding recruitment of doctoral graduates from engineering and science subjects. Issues such as targeted recruitment, university- academic networks value, specialisation and technical expertise appreciation, added value of this graduate group and general favourable attitude towards PhD graduates were raised.

In the next stage, main employers of doctoral graduates in Greece will be selected such as the Universities and Research Institutes, and the private sector (mainly multinationals or high-tech firms will be targeted rather than small or medium sized firms where no big number of PhDs can be found). The identification of 'research performers' (EC, 2007) in all sectors apart from the employment data in the survey will guide the selection of the interviewees. This set of interviews on the basis of other studies mentioned before (Purcell and Elias, 2006; Souter, 2005) will be undertaken to investigate:

- Recruitment of graduates generally
- Disciplines most frequently targeted
- Skills sought in recruits
- Recruitment of post graduates/type of qualification sought
- Level of specific targeting of postgraduates
- Perceived added value of a PhD
- General perceptions about recruiting researchers
- Understanding / knowledge of access to researchers as potential employees

Through which additional questions will be addressed:

- The demand for doctoral graduates. While greater supply of doctoral holders in S&E is aspired to by the European states, has the labour market informed and developed to absorb this highly qualified group?
- When and why foreign and Greek educated are preferred

Prior to interviews with the policy makers, existing academic literature will be taken into consideration as well as policy documents and empirical studies for general information about the state of research and technology policy, education and labour market in Greece. Greek policy makers (in the Ministries of Education, Labour Market, Development (research is under the aegis of this Ministry) but also actors in European policy making (DG Research, DG Employment, Social Affairs and Equal Opportunities, DG Education and Culture) will be interviewed with the aim to explore:

- the role of doctoral education and its outcomes;
- the importance of an enhanced supply of S&E doctoral workforce at national and European level;
- the relationship between the supply and demand of this highly skilled workforce;
- the phenomenon of labour mobility of PhD holders at national level and policy measures/incentives to avoid it;
- the impact and factors determining the policy incentives and
- the policy measures for promotion of doctoral education, efficient allocation of human resources, policies for raising the demand;

All the interviews will be recorded and transcribed; the findings will be coded and classified into specific themes, for example the sector employment, educational background. The number of interviews is expected not to exceed the number of 30-40 cases due to the limited time scope of the proposed study. However, Nvivo software will be used as a quite useful tool for gathering, organising but also reflecting on the data.

## **Challenges**

### *Constructing and identifying sampling population*

Identifying PhD graduates in S&E subjects was a tricky issue for both graduates from Greek and UK Universities. While the National Documentation Centre had a large database with the PhD graduates' names and their doctoral subjects comprising about 75-80% of total doctoral population in Greece, the contact information was not digitalised and sometimes was not filled in, since providing contact information was optional. After scanning through the latest 5.000 census documents with the help and guidance from the secretariat of the NDC, a list of S&E doctoral graduates was built but often with missing contact information. However, with persistent and continuous efforts mainly through web searches, contact information (mainly e-mail addresses) was retrieved for a sufficiently large percentage of PhD graduates (85% of the list) to allow for robust analysis. Retrieving information for doctoral graduates from UK universities was not as straightforward as it was for the Greek doctoral graduates. Due to the data protection act, institutions cannot provide personal information to third parties and sometimes there is not a comprehensive unified database of PhD graduates

at university level. The different organisational and departmental structures of universities did not allow for a unified approach for all universities. What seems to be common though for this specific population is that the majority of Greek students in S&E have obtained their doctorates from well-established universities which are well known for their research tradition (according to HESA statistics). Moreover, these universities not only have well established alumni databases but also have created alumni groups classified by geographical area or broad subject area. In more than 15 of these universities, organised Greek alumni groups have been identified. An e-mail has been sent to the contacts of these groups to enquire the extent to which their databases cover the majority of Greek alumni doctoral graduates and whether they could forward the online questionnaire to their members. At the same time, individual efforts are undertaken to build a database of Greek graduates from foreign Universities including UK universities irrespectively of the scientific field of the graduates and have been in contact with these individuals. Since data protection issues do not allow for the disclosure of contact information of doctoral graduates, alumni contacts will be asked to send an e-mail on my behalf to their registered members explaining them the aim of the survey and asking them to fill in the online questionnaire. At the same time, the same respondents will be asked to forward this e-mail to other colleagues/friends who would be eligible in taking part in this survey. Thus, the techniques employed in this population would be a snowballing technique according to which, some individuals are being identified (fall within the sample) and they are asked to provide contact information (or forward the questionnaire in this case) of other individuals that meet the sampling requirements (Oppenheim, 1992).

Professional associations, big conferences on S&E and PhD websites are also being considered as additional options for identifying Greek PhD graduates in S&E but there are concerns of cross-posting and inserting bias to the sample.

### *Response rate*

Under the assumption that most PhD graduates will be professionals (since the unemployment rates for this group is amongst the lowest ones amongst the graduates (ESYE, 2008) with busy timetables, reaching a high response rate is posing some challenges.

Response rates on doctoral graduates' surveys vary among surveys due to the different sampling and collection data procedures. What should be mentioned here is that most surveys on PhD holders have been nationally coordinated efforts where huge resources are being allocated for their fulfilment. In UK, US, Finland and Norway similar surveys are undertaken exploring the labour market situation of doctoral graduates. All these initiatives achieve a response rate from doctoral graduates ranging from 49% in the UK longitudinal survey 'Destinations of Leavers from Higher Education' (DLHE) to 60-70% with US Survey of Doctoral Recipients (SDR) having reached 79% approximately (in the 2003 survey).

It is encouraging that when surveys are addressed to all graduate levels, PhD graduates are more eager to fill in questionnaires than other graduates (UK- DLHE on winter 2006/07). More specifically, the questionnaire has been designed in an online form with the prospect to achieve a higher response rate since findings from surveys (such as the DLHE longitudinal survey in the UK and the survey of doctoral

recipients in US) show that there is a strong preference towards filling in online or postal questionnaires among doctoral graduates.

There is no information on the Greek doctoral graduates and their preferences. However, since the online questionnaire is currently piloted, other types of data collection are explored as complementary to the online form.

In the US, the survey of doctoral recipients (SDR) undertaken by the National Science Foundation (NSF) gathers information on individuals that have obtained a doctorate in a science, engineering or health field. It is mentioned here as an example of best practice since it is very well established but a very costly one from which interesting suggestions can be drawn out. The SDR is conducted every two years and it is a longitudinal survey that follows doctoral graduates from US institutions until the age of 76. It also includes various types of data collection: self administered paper questionnaire sent by post, web questionnaire and computer assisted telephone interviewing (CATI). Similarly to DLHE, online and paper questionnaire were the most popular means. While the SDR is a well established survey of doctoral graduates, it distinguishes from other surveys in terms of motivating its participants to reply. Apart from a series of frequent reminders and the status of the NSF as the 'premier' federal agency, there is also a financial compensation strategy which is often addressed to well established professionals. Thus, a cheque of either 30 or 50 dollars is being sent as a token of appreciation and understanding of their valuable time which can be cashed out if they agree to fill in the questionnaire over the phone.

Using reminders has been found to have a positive effect on the response rate (Kaplowitz et al., 2004), so 2 or 3 reminders will be employed for this survey. However, when reminders are used in web surveys where pre-mail notification about the survey has been sent, then the role of the former does not influence the response rate (ibid). Thus, a pre-mail notification will be sent to the respondents before the e-mail with the link to the survey. If the response rate remains low, then reminders can also be used.

Other suggested ways for increasing response rate have been to provide monetary incentives. Bryman (2001) mentions that when money comes with the questionnaire rather than if it is promised once the questionnaire has been returned has proved to be more effective. However this seems a rather expensive approach for a research project such as a doctoral thesis.

The abovementioned challenges are significant to ensure that the research outcomes will be reliable and representative of the targeted population thus they are crucial for the continuation of this research project. It is opted since the audience of this symposium is very close to the proposed research, the researcher will be able to discuss and take into consideration feedback and suggestions to deal with research challenges.

These are the issues I will welcome the opportunities to discuss with fellow PhD students:

- Identifying Greek doctoral graduates in S&E who have graduated from UK Universities and getting access to their contact information
- Increasing response rate (reminders, pre-notification mail)

- Preferred type of data collection (online, paper, telephone interview)
- Reward scheme for respondents

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