

## Social Cohesion and Development

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# Social Cohesion and Development

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Spring 2023, volume 18, issue 1

# Κοινωνική Συνοχή και Ανάπτυξη

35 Εξαμηνιαία Επιστημονική Επιθεώρηση, Άνοιξη 2023, τόμος 18ος, τεύχος 1

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## SOCIAL COHESION AND DEVELOPMENT

Biannual Scientific Review

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## ΚΟΙΝΩΝΙΚΗ ΣΥΝΟΧΗ ΚΑΙ ΑΝΑΠΤΥΞΗ

Εξαμηνιαία Επιστημονική Επιθεώρηση

**ΣΚΟΠΟΣ.** Η Κοινωνική Συνοχή και Ανάπτυξη (ΚΣΑ) είναι μια εξαμηνιαία επιστημονική επιθεώρηση για την έρευνα και συζήτηση θεμάτων κοινωνικής πολιτικής, συνοχής και ανάπτυξης. Σκοπός της είναι η καλύτερη κατανόηση του ρόλου της κοινωνικής συνοχής στη σύγχρονη ανάπτυξη και προώθηση της κοινωνικής δικαιοσύνης στο εσωτερικό και μεταξύ των εθνών. Τα άρθρα που δημοσιεύονται καλύπτουν τα πεδία της ανάλυσης, του σχεδιασμού, της εφαρμογής των πολιτικών, της αξιολόγησης των αποτελεσμάτων τους, της συγκριτικής έρευνας, της ανάλυσης του ρόλου των διεθνών οργανισμών, των εθελοντικών, κοινωνικών, ιδιωτικών και τοπικών φορέων στην κοινωνική ανάπτυξη και πολιτική. Ειδικότερα, η Επιθεώρηση φιλοξενεί άρθρα που αντιπροσωπεύουν ευρύ φάσμα γνωστικών πεδίων, όπως εργασιακές σχέσεις και απασχόληση, φτώχεια και κοινωνικός αποκλεισμός, συντάξεις και κοινωνική ασφάλιση, υγεία και κοινωνική φροντίδα, εκπαίδευση και κατάρτιση, πολιτικές για το παιδί, την οικογένεια και τα φύλα, μετανάστευση, εγκληματικότητα, εταιρική κοινωνική ευθύνη, καθώς και δραστηριότητες του τρίτου τομέα και της κοινωνίας πολιτών. Η Επιθεώρηση φιλοξενεί επιστημονικά άρθρα, βιβλιοκριτικές και βιβλιοπαρουσιάσεις, σύντομες εκθέσεις ερευνητικών προγραμμάτων, είτε στα ελληνικά είτε στα αγγλικά. Ενθαρρύνει τη διεπιστημονική, συγκριτική και ιστορική προσέγγιση.

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ΧΡΗΣΤΟΣ ΠΑΠΑΘΕΟΔΩΡΟΥ – ΘΕΟΔΩΡΟΣ ΣΑΚΕΛΛΑΡΟΠΟΥΛΟΣ  
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## ΤΑ ΟΙΚΟΝΟΜΙΚΑ ΤΗΣ ΚΟΙΝΩΝΙΚΗΣ ΠΟΛΙΤΙΚΗΣ



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Σκοπός του τόμου είναι να εισαγάγει και να εξοικειώσει τους αναγνώστες στις θεωρίες και τις μεθόδους της επιστήμης της οικονομίας που σχετίζονται με την ανάλυση των κοινωνικών προβλημάτων και την Κοινωνική Πολιτική. Ιδιαίτερη έμφαση δίνεται στην παρουσίαση εναλλακτικών θεωρητικών «παραδειγμάτων», πέραν του κυρίαρχου νεοκλασικού παραδείγματος, ενθαρρύνοντας κατ' αυτόν τον τρόπο την κριτική σκέψη, διδασκαλία και έρευνα. Οι επιμέρους θεματικές του τόμου αποτελούν εξειδικευμένα τμήματα της οικονομικής ανάλυσης που συνή-θως διδάσκονται σε προχωρημένο επίπεδο με τη χρήση απαιτητικών τεχνικών. Το ανά χείρας βιβλίο αποφεύγει, όσο είναι δυνατόν, την χρησιμοποίηση υπερβολικά εξειδικευμένων τεχνικών και φορμαλισμών και δίνει έμφαση στην αξιωματική θεμελίωση των βασικών επιχειρημάτων και υποθέσεων. Τα επιμέρους κεφάλαια είναι εύκολα κατανοητά από κοινωνικούς επιστήμονες και φοιτητές που δεν είναι εξοικειωμένοι με τις μεθόδους και τα εργαλεία της επιστήμης της οικονομίας. Στόχος των συγγραφέων είναι η δημιουργία των κατάλληλων ερεθισμάτων στον αναγνώστη για μία κριτική πρόσληψη των πτυχών, προϋποθέσεων και συνεπειών που θέτει η επιστήμη της οικονομίας στην κατανόηση και ερμηνεία των διαφόρων κοινωνικών προβλημάτων αλλά και στον γενικότερο ρόλο της Κοινωνικής Πολιτικής στην προαγωγή της κοινωνικής ευημερίας.

# The interaction between pension schemes and economic activity: a «demand-based» theoretical approach

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## Η αλληλεπίδραση των συνταξιοδοτικών συστημάτων με την οικονομική δραστηριότητα: μία «demand-based» θεωρητική προσέγγιση

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### ABSTRACT

Motivated by the recent capitalization of the auxiliary pension and the demographic projections of ageing and population decline in the coming decades in Greece, we will identify and examine the determinants of the pensions of the two social security schemes (Pay-As-You-Go & Fully Funded), their relationship with the functional distribution of income, as well as their interaction with economic activity. The aim is to highlight the importance of examining pension systems in relation to the macroeconomic environment in order to clarify the impact of both demographic changes and fiscal policies to reduce the pension system dependency ratio, and the state contribution to pensions on economic activity and public debt.

**KEY WORDS:** Pension schemes, demographic projection, macroeconomic environment, functional income distribution..

### ΠΕΡΙΛΗΨΗ

Ορμώμενοι από την πρόσφατη κεφαλαιοποίησή της επικουρικής σύνταξης, αλλά και τις δημογραφικές προβλέψεις γήρανσης και μείωσης του πληθυσμού τις προσεχείς δεκαετίες στην Ελλάδα, θα εντοπίσουμε και θα εξετάσουμε τους προσδιοριστικούς παράγοντες των συντάξεων των δύο ασφαλιστικών συστημάτων (Pay-As-You-Go & Fully Funded), την σχέση αυτών με την λειτουργική διανομή εισοδήματος, καθώς και την αλληλεπίδραση τους με την εν γένει οικονομική δραστηριότητα. Στόχος είναι η ανάδειξη της σημασίας της από κοινού εξέτασης των συνταξιοδοτικών συστημάτων με το μακροοικονομικό περιβάλλον, ώστε να αποσαφηνιστεί η επίδραση τόσο των δημογραφικών αλλαγών όσο και των πολιτικών μείωσης του δείκτη εξάρτησης του συνταξιοδοτικού συστήματος και της κρατικής δαπάνης για συντάξεις στην εν γένει οικονομική δραστηριότητα και το δημόσιο χρέος.

**ΛΕΞΕΙΣ-ΚΛΕΙΔΙΑ:** Συνταξιοδοτικά συστήματα, δημογραφικές προβλέψεις, μακροοικονομικό περιβάλλον, λειτουργική διανομή εισοδήματος



## 1. Introduction

**P**ensioners are an integral and numerous group of every society. It strongly influences economic activity, mainly through consumption and savings. It does not participate in the production process, it influences and is influenced by the income of the other social groups through the social security contributions paid by the latter, and through the accumulated wealth transferred to them by pensioners. It has a direct relationship, unlike other social groups, with the state budget (Pay-As-You-Go), while it is linked, through the investment of social security contributions by the pension fund (Fully Funded), to the financial side of the economy. Furthermore, the main source of pensioners' income (pension) is not directly affected by the functional distribution of income, but indirectly, through the labor and capital income received by the insured. Compared to the incomes of other social groups, it is affected to a greater extent by economic activity (growth rate of economy, unemployment rate), by fiscal and monetary policies (social security contributions, replacement rates, retirement thresholds, interest rates) and by demographic changes (life expectancy, pension system dependency ratio<sup>1</sup>).

The above characteristics of pensioners and pensions make pension systems vital for the functioning of modern economies, as they are responsible for the link between: 1) the national income distributed to the factors of production (functional income distribution) and the disposable income of social groups that do not participate in the production process (pensioners), 2) the main source of income of pensioners (pension) and the state budget (state contribution, public debt), 3) demographic changes (dependency ratio, life expectancy) and economic activity, and 4) social security contributions and the financial side of the economy. The link between pay-as-you-go pension systems and the state budget, and in particular their sensitivity to demographic changes, has called into question their efficiency and, more importantly, their long-term sustainability in the face of the expected increase in population ageing. The latter has already led many governments to reform their pay-as-you-go pension system, either by changing the method of calculating pensions or by replacing, partially or fully, the entire pension system. The questioning of the efficiency and sustainability of the pay-as-you-go defined benefit pension system becomes more pronounced in the case of Greece, as in addition to projections of ageing and population decline, the pension system already manages high pension expenditures as a percentage of GDP and high state contributions compared to other EU countries. This led the Greek government, after the reduction of pensions due to the implementation of the Memorandum and the change in the method of calculating the auxiliary pension from defined benefits to notional defined contributions, to capitalize the auxiliary pension.

Many studies (Feldstein, 1997; Siebert, 1997; Attanasio et al., 2007; Whitehouse, 2012; De la Croix et al., 2013; Artige et al., 2014; Cipriani, 2014, 2018; Dedry et al., 2017; Alonso-Garcia et al., 2018; Morimoto et al., 2018, etc.) have examined the behavior of pay-as-you-go systems, focusing mainly on their sensitivity to demographic changes and, in several cases, the transfer of resources from the insured generation to the retired generation, which reduces savings and does not contribute to economic growth. However, as Robolis & Betsis (2021) point out, this approach does not consider that the transfer of resources from the insured to pensioners is a two-way process, as the latter "return" resources to the economy through consumption and demand for goods and services. In any case, the important role of social security systems in the functioning of the economy and their link both to the behavior of different economic sectors and to the fluctuation of many macroeconomic variables makes it necessary to place them in a complete macroeconomic environment in order to understand all the channels of their interaction with it.

## 2. Pay-as-you-go pension schemes & population ageing

In recent decades, the continuous decline in fertility and the simultaneous increase in longevity in developed countries have led to an outbreak of the phenomenon of population ageing. According to the "World Population Ageing Report" of the United Nations (2020), people tend to live longer, with the result that both the number of older people and their share of the total population are increasing rapidly. Projections show that by 2050, the share of older people in the total population will almost double, from 9.3% in 2020 to 16% in 2050. According to Bovenberg (2008), increasing longevity, from an economic perspective, can have a positive effect on the labor market because it implies an optimization of education and training and, therefore, an increased return on investment in human capital, as each individual lives, is educated and works longer.

On the other hand, the increase in population ageing and the high old-age dependency ratios<sup>2</sup>, call into question the efficiency and sustainability of pay-as-you-go pension schemes, as the latter become especially vulnerable to demographic changes. Pay-as-you-go pension schemes are based on "intergenerational solidarity" as the contributions of current workers finance the current pension expenditure and the pensions paid to future retirees will be financed by the contributions of future workers. Therefore, the continuous increase in retirees (increasing longevity) combined with a decrease in insured persons (decreasing fertility) may create a structural sustainability problem in redistributive systems. In order to avoid it, governments should either adopt reform policies, e.g., increasing social security contributions or retirement thresholds, or replace the existing pension system with a more efficient one, e.g., partially or fully funded (Cigno, 2007).

The Greek pension system is also facing these demographic changes, as projections for the next eighty years show that the country's population will continue to decline, while at the same time the ageing of the population will increase, due to both declining birth rates and increasing life expectancy. According to Eurostat's projections (Eurostat, 2019a), the total population of Greece, births, deaths, migration and life expectancy considered, will decrease from 10,696,535 people in 2020 to 8,142,699 people in 2100, while the old-age dependency ratio according to the European Union's "Ageing Working Group" (AWG, 2021) will increase from 37.9% in 2019 to 65.2% in 2070. In addition, life expectancy for a man at age 65 will increase from 18.8 years in 2019 to 23.9 years in 2070 and for a woman from 21.8 years in 2019 to 26.7 years in 2070. These imply a gradual increase in the pension system dependency ratio from 64% in 2019 to 75.9% in 2070. The latter also reveals the serious sustainability problem that the Greek social security sector and especially the pay-as-you-go pension system will face soon, because it seems that an ever decreasing number of insured persons will contribute to the pensions of an ever increasing number of pensioners.

Greece's pay-as-you-go pension system, which even today covers the bulk of public pension expenditure (national & contributory pensions), already puts a significant strain on the fiscal balance. This is mainly due to the large state contribution to pensions, which may intensify, according to demographic projections, in the coming years, as a decreasing number of insured persons contribute to the pensions of an increasing number of pensioners. In the case of Greece, pension expenditure increased rapidly from 1980 (5.5% of GDP) to 2010 (14.2% of GDP), mainly due to an increase in both pensions and pensioners (IOBE, 2019). In 2016, despite pension cuts and social security reforms imposed by the Memorandum, Greece provided the highest public pension expenditure (17.7% of GDP)<sup>3</sup> among the European Union countries, as the corresponding indicator of the latter ranging at 13.3% of GDP (Eurostat, 2019b). At the same time, Greece had one of the highest contribution rates for the pension branch in the European Union, ranging from 27% to over 30% (Symeonidis et al., 2021).

According to the latest publication of the European Union's "Ageing Working Group" (AWG, 2021) on the sustainability of countries' pension systems, Greece's performance seems to be improving over time, due to reforms. In particular, according to the projections, pension expenditure for Greece from 15.7% of GDP in 2019 seems to decline gradually over the coming decades, reaching 11.9% of GDP in 2070, while the corresponding survey of 2018 (AWG, 2018), using 2016 as a base year, predicted that pension expenditure for Greece in 2070 will reach 10.6% of GDP. Beyond the level of pension expenditure, the measure directly linked to public debt is the state subsidy required each year to finance pensions. According to the "Development Plan for Greek Economy" ("Pissarides Report") (Pissarides committee, 2020), in 2018 in Greece, the state contribution to the financing of pension expenditure amounted to 10.1% of GDP<sup>4</sup>, which is considered excessive compared to the eurozone average of just 3.1%. Moreover, according to the 2019 projections (AWG, 2021), state subsidies will decline over the coming decades, but will remain at high level, putting a strain on the fiscal balance and inflating public debt.

Therefore, in a pay-as-you-go pension system such as the Greek one, the continuous increase of pensioners may increase the state contribution to pensions and the fiscal deficit, thus calling into question the system itself. On the other hand, in order to avoid this and also to restore the sustainability of the pay-as-you-go pension system, governments are likely to implement policies such as reducing pensions, increasing social security contributions and retirement thresholds, which in the short run may reduce the state contribution to pensions, but in the long run may have adverse effects on public debt and economic activity.

### **3. Fiscal policies to reduce the dependency ratio and the state contribution**

Several studies (Fanti & Gori, 2012; De la Croix et al., 2013; Cipriani 2014, 2018; Cipriani & Pascucci, 2020, etc.) have focused on the impact of increasing life expectancy and/or declining fertility on redistributive pension systems and have also examined whether specific fiscal policies can restore the efficiency of the system. Despite the important findings of the studies, research is mainly limited to studying the impact of reforms and demographic changes on the pension system and much less or not at all on the impact of reforms, through the interaction between the pension system and the macroeconomic environment, on economic activity. Policies aimed at reducing pensions or increasing social security contributions not only contribute to reducing public pension expenditure or state subsidies to pensions, but also reshape the consumption or savings decisions of the group concerned (employees/employers/pensioners), which then reshape economic activity.

#### ***3.1 Reduction in pensions***

The reduction in the amount of the pension will lead to a decline in public pension expenditure, reducing in the short run the state contribution to pensions, the fiscal deficit as well as the public debt-to-GDP ratio. However, if the resources committed by the reform are not replenished by the government, the reduction in pensioners' income is likely to lead, due to the high propensity of pensioners to consume, to a decrease in consumption expenditure and aggregate demand, a slowdown in economic growth, an increase in the unemployment rate, and a further increase of the pension system dependency ratio through a reduction in the number of insured persons. Therefore, in the long run, the decrease in direct and indirect tax revenues, the increase in the expenditure on unemployment benefits, as well as the decrease in social security contributions

may lead to a higher state subsidy for pensions, and contribute to an increase in the public debt-to-GDP ratio, despite the reduction in pension expenditure.

Changes in the above-mentioned variables can in turn affect pensions. For example, a fall in aggregate demand may have a negative impact on the profits of firms and/or the bargaining power of workers, thereby reducing investment spending and wages. Lower wages imply lower social security contributions and hence higher state contribution to pensions. In addition, lower wages and fewer years of insurance (higher unemployment rates) will lead to lower future pensions, which in the long run will extend the interaction between the social security sector and the economic activity.

### ***3.2 Increase in social security contributions***

If social security contributions are increased in order to reduce the state contribution to pensions, resources are taken away from the real economy through both consumption and investment. Workers now decide on their consumption based on less disposable income, while firms decide on their investment taking into account the higher production cost resulting from the higher employers' social security contribution. Therefore, also in this case, if the resources absorbed by the real economy are not replaced (e.g. through an expansionary policy), they may alter economic activity, slow down economic growth and, in the long run, they may not contribute to reducing the public debt-to-GDP ratio. The impact of this policy on consumption and investment varies according to the social security and labor institutions in each case, as the latter largely determine the distribution of the increase in social security contributions between employees and employers.

In contrast to fiscal policies that directly reduce the state contribution to pensions, expansionary policies, such as increasing low pensions or reducing social security contributions, despite increasing pension expenditure and the fiscal deficit in the short run, are likely to contribute more effectively in the long run. This will occur through increasing consumption and investment and thus accelerating the growth rate of the economy and reducing the public debt-to-GDP ratio. Apart from the potential benefits for economic activity, expansionary policies do not violate the adequacy (i.e., the provision of sufficient income to pensioners during their retirement), and the fairness (i.e., the fair return of the contributions paid by pensioners during their working life) of the social security system, in contrast to the reduction of pensions and the increase of social security contributions.

### ***3.3 Increase in retirement thresholds***

Fiscal policies that aim at reducing the pension system dependency ratio, such as increasing the retirement thresholds, may contribute to reducing the state subsidy to pensions in the short run, but in the long run they are likely to have a negative impact on both economic growth and public debt. If a policy of raising retirement thresholds is not accompanied by an expansionary policy of stimulating economic activity and creating new jobs, it actually «shifts» people from retirement to unemployment. The latter, apart from increasing the unemployment rate, causes adverse effects on both the social security balance and the fiscal balance.

In particular, the increase in the unemployment rate does not lead to an increase in social security contributions, as the unemployed do not pay contributions, while at the same time the public expenditure on unemployment benefits increases. Moreover, since income from unemployment benefits is lower than income from pensions, it places further downward pressure, through consumption, on aggregate demand. Therefore, a policy of raising retirement thresholds, although it may reduce the dependency ratio and the state contribution to pensions in the

short run, is likely to increase the public debt-to-GDP ratio in the long run, both by increasing unemployment and by reducing consumption and aggregate demand. Certainly, the increase in unemployment from the imposition of the above reform can be avoided due to the reduction in fertility and thus in the labor force. However, policies that aim to reduce the dependency ratio by reducing unemployment, and thus increasing the number of insured persons rather than by reducing the number of pensioners, are likely to be more effective in the long run in reducing the state subsidy on pensions, as well as in bringing multiple benefits to economic activity.

#### **4. Different types of pension schemes and capitalization of auxiliary pension**

Depending on the pension calculation method, pay-as-you-go schemes are divided into defined benefit (DB), defined contribution (DC) or notional defined contribution (NDC) schemes. In defined benefit scheme, the amount of the pension depends on the pensionable earnings and the years of insurance during the pensioner's working life. Pensionable earnings are based on the pensioner's final salary or on the average salary earned during his or her insurance life. On the contrary, in defined contribution scheme, the amount of the pension depends on the social security contributions paid by the pensioner during his or her working life and on life expectancy at retirement. Finally, in the notional defined contribution scheme, each insured person's contributions continue to finance the current pension expenditure, while forming an individual account only for accounting purposes (notional). At retirement, accumulated contributions, life expectancy and an internal rate of return determine the amount of the pension. The three types of pay-as-you-go pension schemes differ both in their behavior towards the risk of population ageing and in the distribution of risk among the parties involved (pensioners/workers/pension funds). According to Whitehouse (2007), in defined contribution and notional defined contribution schemes, an unexpected increase in life expectancy imposes a greater burden on pensioners than on the pension fund, because at retirement the regular payments will be adjusted to the new life expectancy, and therefore pensions will be reduced. On the other hand, in defined benefit schemes, the risk of an increase in life expectancy is shifted to the pension fund (government) and therefore to taxpayers and insured persons rather than to pensioners, as the pension calculation does not take life expectancy into account.

The different behavior of pension schemes to the risk of population ageing has led several researchers to study their vulnerability to demographic changes (Artige et al., 2014; Dedry et al., 2017; Morimoto et al., 2018; Alonso-Garcia et al., 2018), while it has prompted several governments to replace them, especially defined benefit schemes, with schemes less sensitive to demographic risks, such as the defined contribution or the notional defined contribution schemes. The Greek government has also partially replaced the defined benefit method with the notional defined contribution method in the case of auxiliary pension. In particular, according to Article 42 of Law no. 4052/2012 as amended and replaced by Article 96 of Law no. 4387/2016, as replaced upon its entry into force by Article 44 of Law no. 4670/2020, the notional defined contribution system is applied for those insured from 1.1.2013, while both the defined benefit method, for the part of the pension up to 31.12.2014, and the notional defined contribution method, for the part of the pension from 1.1.2015, are applied for those insured before 1.1.2013.

Furthermore, due to the sensitivity of pay-as-you-go defined benefit schemes to demographic changes, several researchers have recommended not only their modification towards a less vul-

nerable pay-as-you-go scheme, such as the notional defined contribution scheme, but also their partial or fully replacement by funded pension schemes. In fully funded pension schemes, the contributions do not finance the current pension expenditure, instead they flow into individual accounts in a pension/investment fund and are invested in financial products. At retirement, the amount of the pension is determined by each pensioner's contributions, the returns on the investment of the contributions and life expectancy. In partially funded schemes, pensions are financed not only from the accumulated funds but also from the current social security contributions. According to various studies, funded pension systems may reduce the state contribution to pensions and the risks of demographic changes (IOBE, 2019), increase capital accumulation through the contributions collected by the pension fund, stimulate investment through the investment of contributions in capital markets (Bijlsma et al., 2014), provide incentives to increase employment (Pissarides committee, 2020), increase labor productivity and wages (Feldstein, 1997), increase per capita income through the high returns earned by pension fund (Siebert, 1997) and therefore contribute significantly to economic growth (Davis & Hu, 2008). Nevertheless, funded pension systems may reduce public savings by increasing private savings (Cesaratto, 2006), transfer domestic funds to foreign markets by investing contributions in financial products of foreign economies (Robolis & Betsis, 2021), reduce the amount of pensions by changing their calculation method (Makarski et al., 2017), expose themselves to financial market risks (Blake, 2006), shift the risk of demographic fluctuations mainly to pensioners (Whitehouse, 2007), and, therefore, fail to confirm the expected economic growth (Cavallini et al., 2013).

The benefits of transition to a funded pension system, as well as projections of population ageing that have called into question the efficiency and long-term sustainability of the pay-as-you-go pension system, have prompted several researchers to investigate more efficient and less vulnerable pension schemes also in the case of Greece (Nektarios et al., 2018; Daskalopoulos et al., 2018; Christodoulakis et al., 2018; Pissarides committee, 2020). The studies mostly recommend the capitalization of a part of the pay-as-you-go pension system, as this can contribute decisively to the long-term sustainability of the social security sector, manage demographic changes more effectively and promote economic growth through the savings and the investment of the contributions, as well as through incentives to increase employment. Finally, the debate on the efficiency and sustainability of the Greek redistributed pension system led, according to Articles 1, 2 and 3 of Law no. 4826/2021, to the recent establishment of the auxiliary pension fund and the implementation of the funded defined contribution pension scheme for the calculation of the auxiliary pension in order to replace the existing auxiliary pension<sup>5</sup>.

## 5. Determinants of pensions

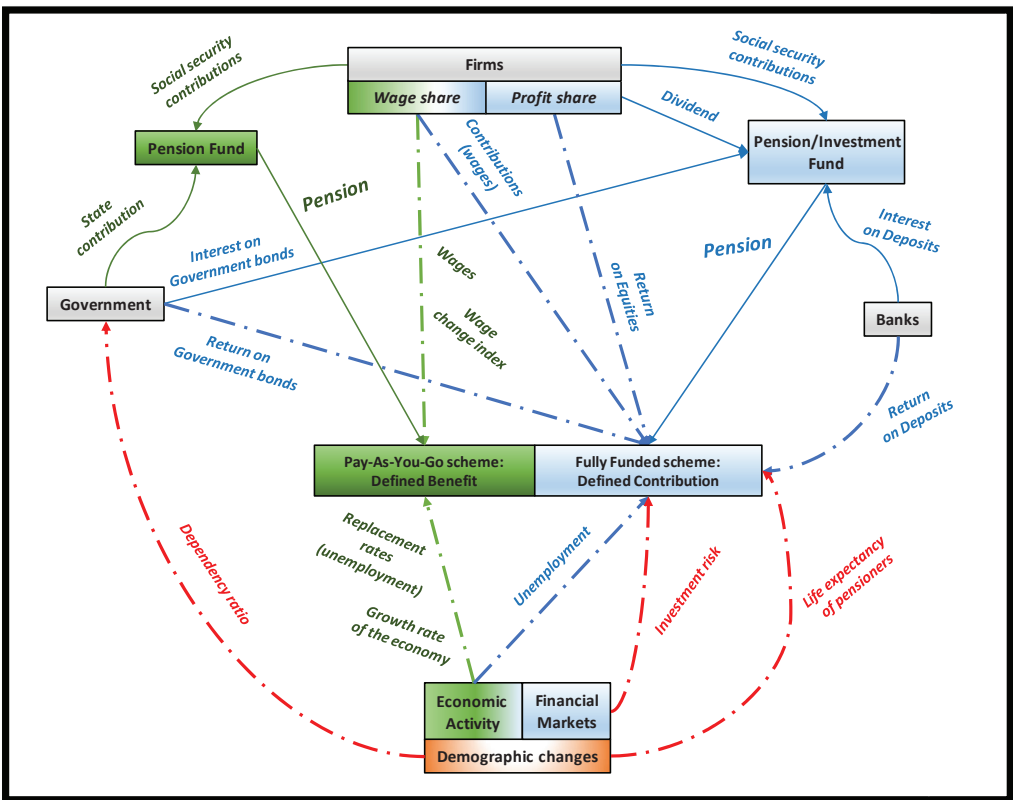
**I**n order to understand the interaction of the two pension systems (Pay-As-You-Go & Fully Funded) and the pension calculation methods (Defined Benefit & Defined Contribution) with economic activity, as well as their behavior to demographic changes, we will describe the different determinants of pensions of the two pension systems and will clarify their relationship with the rest of macroeconomic variables, based on the characteristics and functioning of the contributory pension and the funded part of the auxiliary pension of the Greek pension system.

The contributory pension, according to Article 8 of Law no. 4387/2016 and Articles 22 & 24 of Law no. 4670/2020, is part of the pay-as-you-go pension system, as the contributions of current employees finance the current pension expenditure, while pensions are calculated following

the defined benefit method, as the amount of the pension depends on the pensionable earnings<sup>6</sup> and the replacement rates<sup>7</sup>, which refer to each pensioner's insurance period. According to paragraph 4.a. of Article 24 of Law no. 4670/2020, for the period up to 2024, pensionable earnings are valorized by the change in the average annual general consumer price index (CPI), while from 2025 onwards pensionable earnings are annually adjusted based on the salary change index, both calculated by ELSTAT. Furthermore, according to Article 14 of Law no. 4387/2016 and its amendment by Law no. 4670/2020, the total amount of the pension increases annually from 1.1.2023 based on the coefficient resulting from the sum of the annual rate of change of GDP plus the rate of change of the annual general consumer price index of the previous year divided by two.

On the other hand, auxiliary pension contributions are not used to finance current pension expenditure, instead they are credited to individual accounts and invested by the pension fund in financial products, forming diversified portfolios of deposits, bonds and equities. At retirement, the accumulated capital, i.e., the sum of contributions and returns, is converted into a monthly auxiliary pension, which includes provision for fluctuations in the life expectancy of retirees. As a result, the two pension systems differ in the pension calculation method (Defined Benefit vs Defined Contribution), in the sector of pension administration (Pension Fund vs Investment Fund) and in their overall operation (Pay-As-You-Go vs Fully Funded). Figure (1) illustrates the determinants of pensions in the two systems, as well as the sectors of the economy that influence these determinants.

Figure 1: Determinants of pensions in social security schemes



The solid green and blue arrows show the flow of income converted into a pension in the cases of the pay-as-you-go and fully funded schemes respectively. In the case of the pay-as-you-go scheme, current pensions are financed by the current contributions of employees and employers, and if the latter do not cover the pension expenditure, the government subsidizes the difference between contributions and pensions. On the other hand, in the case of the fully funded scheme, pensions consist of the contributions of employees and employers and also of the returns earned by the fund from its investment in firms' equities, government bonds and bank deposits, while, because of the calculation method, there is no deficit between contributions and pensions. The green dotted arrows show the determinants of pensions in the pay-as-you-go scheme, while the blue dotted arrows show the determinants of pensions in the fully funded scheme. These arrows represent the positive relationship between pensions and determinants, e.g., an increase in wages (contributions) will benefit pensions in both schemes, while the red arrows represent the negative relationship between demographic changes and either public debt (pay-as-you-go scheme) or pensions (fully funded scheme), as well as the relationship between the fully funded scheme and investment risks. However, figure (1) does not include the two-way relationship between pension schemes and pensions, both with their determinants and with economic sectors. For example, an increase in pensions, due to an increase in either wages or contributions, directly or indirectly affects consumption, aggregate demand, unemployment and the shares of wages and profits in national income, with the result that these variables change and in turn change pensions again.

In the pay-as-you-go scheme, the main determinants of pensions are the amount of wages received by the pensioner during his working life, as these are used to calculate his future pension, the pensioner's years of insurance, which determine the replacement rates, and the growth rate of the economy, as pensions increase each period on this basis. In the case of the fully funded scheme, pensions are determined by the amount of social security contributions (wages), the returns on latter's investment and the life expectancy projections of pensioners. According to figure (1), the pay-as-you-go scheme is entirely influenced by fluctuations on the real side of the economy (wages, growth rate of the economy), while the funded scheme is linked to changes in both the real (wages) and the financial side (returns on financial products) of the economy. This follows from linking the two pension schemes to the shares of wages and profits in national income. Pensions, although not directly linked to the income shares of wages and profits (functional income distribution), as pensioners do not participate in the production process, are heavily influenced by them, with the result that functional income distribution is very likely to be their most important determinant.

Pensions in both schemes are largely affected by the wage share, as wages, either directly (pay-as-you-go) or indirectly through contributions (fully funded scheme), determine their amount. In the pay-as-you-go scheme, the effect of the wage share in pensions is more pronounced, because pensionable earnings are adjusted each period according to the wage change index. On the other hand, pensions in the funded scheme, in addition to the wage share, are also affected by the profit share, mainly through the dividends received by the pension fund from firms. In line with the previous, a rise in the wage share would in any case have a positive effect on pensions in the pay-as-you-go scheme, which is not always the case for pensions in the funded scheme, as a rise in wages creates countervailing forces in this scheme. On the one hand, a rise in wages, through higher contributions, will benefit the pensions of the funded scheme, but on the other hand, it is likely to reduce the return on equities held by the pension fund, due to the downward pressure that increased wage share places on distributed profits of firms. Moreover, pensions in the pay-as-you-go scheme



are affected both directly (growth rate of economy) and indirectly (unemployment) by fluctuations in economic activity, which takes place only indirectly (unemployment) in the funded scheme. The pensions of the pay-as-you-go scheme increase each period according to the rate of change of GDP, while the unemployment rate indirectly determines the replacement rates, which represent the years of insurance in the calculation of pensions. The unemployment rate also indirectly affects the pensions of the funded scheme, as a lower unemployment rate implies more years of insurance and therefore more accumulated contributions, which may result in higher future pensions.

The calculation method of pensions in the funded scheme includes the risks of demographic changes, as it considers the projected life expectancy of pensioners. In this way, the funded scheme shifts demographic risks to pensioners, as the latter will receive lower pensions if life expectancy increases. On the other hand, demographic risks are not considered by the pay-as-you-go scheme, with the result that a demographic change, such as an increase in the dependency ratio, is borne by the government (state budget) and not by pensioners. Therefore, the pay-as-you-go scheme seems more exposed to risks arising from demographic changes, in contrast to the funded scheme which is clearly less vulnerable to changes such as decreasing fertility or increasing longevity. However, by investing in financial products, the funded scheme is exposed to investment risks, such as the market risk or the interest rate risk. Finally, a very important difference between the two pension schemes is the transfer of resources from the real to the financial side of the economy. In particular, the funded scheme absorbs resources (contributions) from the real economy and invests them in financial products, which can have a positive effect on investment and therefore a significant impact on economic activity. For example, investing in firms' equities can increase the price of equities, increase the market value of firms, generate higher capital gains for shareholders and stimulate firms' investment.

## 6. Ageing & population decline

**A**ccording to the demographic projections for the coming decades for Greece, an increase of ageing and a simultaneous decrease in population is expected, through a decrease in fertility and an increase in longevity. The expected demographic changes are likely to have adverse effects on economic activity and raise serious sustainability issues for the social security system.

### 6.1 Pay-as-you-go pension scheme

Population decline may lead to a slowdown in the growth rates of consumption, demand and output, while the continuous increase in the pension system dependency ratio, both due to the decline in the labor force (fewer insured persons) and the increase in life expectancy (more retired persons), may significantly increase the state contribution to pensions. However, this demographic change can be not only sustainable for the pension system, but also efficient in the long run for the economy, if workers manage to increase their bargaining power and, consequently, their wages in the process of setting the latter. According to Screpanti (1996, 2000) and Cassetti (2003), workers' bargaining power is affected by fear of unemployment, which is best reflected in the rate of change in employment or the rate of change in the employment rate. Therefore, if we consider the rate of change in the employment rate of workers as an indicator of their bargaining power, an exogenous decline in the labor force (fertility decline) may increase their bargaining power, and thus both their wages and the wage share in national income, which could potentially offset the negative impact of ageing and population decline on economic activity.

Since the propensity to consume out of wages is higher than the propensity to consume out of profits (Kalecki, 1937, 1942), an increase in wages would place upward pressure on consumption, demand, and output and to some extent it would counterbalance the downward pressure of population decline to the aforementioned variables. Then, due to the limitation of the negative effect of population decline on economic activity, labor demand can be maintained at its initial level, with the result that the decline in the labor force and the ageing of the population, if jobs are not reduced, would turn into a "transfer" of unemployed people into retirement. The latter, as income from pensions exceeds income from unemployment benefits, may further stimulate consumption and maintain the growth rate of the economy at the initial level. In the short run, the increase in the number of pensioners and the gradual increase in pensions, due to both the increase in pensionable earnings and their adjustment to the growth rate of wages, increase pension expenditure. However, the rise of wages, through the higher social security contributions, can, despite the rise in the dependency ratio, maintain the state contribution to pensions at a level that does not inflate the public debt.

In the long run, pension expenditure will become even higher because pensions will continue to rise due to higher wages (higher pensionable earnings) and lower unemployment (more years of insurance/higher replacement rates) of previous periods. However, the continuous increase in the bargaining power of workers, due to the prolonged decline in the labor force, could lead to a continuous increase in wages and social security contributions, which, combined with lower expenditure on unemployment benefits and higher tax revenues, due to the decline in the unemployment rate and the acceleration of economic activity respectively, could finance the state contribution to pensions. Finally, if propensity to consume out of pensions, which now have a greater impact on consumption due to the higher share of pensioners in the total population, is relatively high, the aggregate demand could increase further, outweighing the negative effect of population decline, thus increasing the growth rate of the economy and possibly reducing the public debt-to-GDP ratio in the long run.

On the other hand, if workers fail to benefit from the reduction of the labor force by increasing their bargaining power and thus the growth rate of wages, the negative impact of population decline on demand will be difficult to avoid without the imposition of additional policies. The decline in consumption and output would probably lead to an increase in unemployment, which would have a further negative impact on demand and the fiscal balance. Furthermore, the continuous increase in pensioners and hence the increase in pension expenditure, as well as the simultaneous decrease in social security contributions, due to the decrease in the number of insured persons (decrease in births & increase in unemployment), will lead to a rapid increase in the state contribution to pensions, which, combined with the decrease in tax revenues due to the slowdown in economic growth, will place a significant burden on the public debt. Finally, the imposition of policies aimed at reducing the state contribution and the dependency ratio, such as reducing pensions or increasing the retirement thresholds, is likely to intensify the slowdown in the growth rate of the economy and increase the public debt-to-GDP ratio in the long run, by further reducing consumption and demand.

## ***6.2 Fully Funded pension scheme***

In the fully funded pension system, the reduction in the labor force will increase the bargaining power of workers and in the short term will stimulate consumption and demand, thus tending

to offset the negative effect of the population decline on economic activity. However, in the medium term, the increase in wages places countervailing forces on pensions, through the return earned by pension fund from holding firms' equities. Rising wages place upward pressure on consumption and provide higher social security contributions to the pension fund, thereby increasing the fund's demand for financial products. On the other hand, the increase in wages and thus the increase in production costs reduces, at least in the short term, the profits of firms, which in turn reduces the profits distributed to entrepreneurs and the pension fund. The latter reduces the return earned by the pension fund from holding equities and negatively affects the level of future pensions. The result of the above is that, despite the increase in the fund's portfolio due to the increase in contributions, the pension fund reduces the demand for equities as it starts to invest in more efficient financial products. The fall in equity demand and rising production costs are likely to lead firms to reduce their investment spending, which will place downward pressure on aggregate demand and offset the positive impact of wages on consumption.

In the long term, despite the increase in social security contributions due to a continuous rise in wages, the fund's assets will begin to decline as it pays pensions to more and more retirees, further reducing the demand for equities. Future pensions, because of their link to both wage share and profit share, on the one hand are positively affected by the increase in the contributions, but on the other hand are negatively affected by the lower returns earned by the fund from holding equities. Also, if we consider the increase in life expectancy of pensioners, which places further downward pressure on pensions, we realize that pensions in the fully funded system are significantly lower than pensions in the pay-as-you-go system, with the consequence that, as pensioners increase, pensions do not contribute effectively to stimulating consumption. Finally, the greater negative impact on investment and lower pensions relative to the pay-as-you-go system may lead the economy to lower demand and output and higher unemployment and dependency ratios, with the result that weaker growth rate may not be able to offset the impact of population decline on economic activity.

In the case of the fully funded system, the fiscal balance is not burdened by the increase in the dependency ratio, as no deficits are created between contributions and pensions, nevertheless, the negative impact of population decline and low pension expenditure on economic activity may lead in the long run to an increase in the public debt-to-GDP ratio. If workers do not benefit from the reduction of the labor force and do not increase their bargaining power, the negative effect of population decline on aggregate demand, as in the case of the pay-as-you-go system, would be difficult to overcome without the imposition of expansionary policies.

### ***6.3 Different characteristics of each economy***

In any case, the impact of demographic changes on social security schemes and economic activity varies depending on the specific characteristics of each economy, such as the demand regime, the propensities to consume out of income from different sources, the intensity of demographic changes, the share of consumption and investment in total output, the labor and social security institutions, the investment risks, the openness of each economy, etc. For example, in a "wage-led" economy (Blecker, 1989; Bhaduri & Marglin, 1990), a rise in the wage share would probably increase, at least in the long run, by stimulating consumption, demand and output, the profit rate of firms, which would generate higher returns to the pension fund of the fully funded system from holding equities and would lead to higher pensions in the long run. On the other hand, in

an economy like the one we have described in which a rise in wages accelerates aggregate demand by increasing consumption, but at the same time places downward pressure on the profit rate of firms and on investment ("conflictual stagnationist") (Marglin & Bhaduri, 1991), pensions of the fully funded system face countervailing forces because of their link to both the wage share and profit share.

Moreover, in an economy where the propensity to consume out of pensions is relatively high, any reduction in pensions would have a multiple negative impact on economic growth through consumption. It is important to note that the effect of the profit share on pensions of the funded scheme is proportional to the pension fund's investment in domestic financial products, because the more foreign financial products the pension fund holds in its portfolio, the less it is affected by the fluctuations in domestic economic activity. Similarly, the more equities of domestic firms the pension fund holds, the more the latter's decisions affect domestic investment.

## 7. Conclusions

**R**esearch into pension systems that are more efficient for the economy and less vulnerable to demographic risks has been a major concern of governments and researchers in recent decades, especially in view of the expected increase in population ageing. This issue becomes even more relevant in the case of Greece, as, in addition to ageing, a significant population decline is expected, resulting in fewer and fewer insured persons contributing to the pensions of more and more pensioners. The latter has already led to the transformation of the auxiliary pension from a pay-as-you-go to a fully funded scheme. According to most relevant studies, the fully funded scheme is less vulnerable to demographic risks and through savings and investment can stimulate economic growth and reduce the state contribution to pensions. Despite the important findings, most of these studies do not place pension systems in a fully macroeconomic environment in order to examine the interaction between pensions and other macroeconomic variables, and do not realize that the intergenerational transfer of resources is a two-way process and can stimulate economic activity through consumption and demand. Changes in economic activity can affect the determinants of pensions and alter the latter, which in turn can have a significant impact on macroeconomic environment, creating a two-way dynamic relationship between pension systems and economic activity. Therefore, despite the different demographic projections of each society and the different characteristics of each economy, it is crucial to explore the linkage between pension systems and economic activity, not only to clarify the determinants of pensions, but also to develop pension systems that provide fair returns and adequate income to pensioners and mitigate poverty and social exclusion of the elderly.

## Notes

1. Pension system dependency ratio (SDR) is the ratio of pensioners to contributors.
2. The old-age dependency ratio (OADR) is the ratio of the total population aged over 65 years to the total population aged between 15 and 65 years.
3. The increase in pension expenditure as a percentage of GDP is largely explained by the contraction of GDP (over 25%) during the same period.
4. The state contribution finances not only the difference between social security contributions and pensions, but also national pensions, which are directly and entirely financed by the state budget.

5. According to Article 6 of Law no. 4826/2021, the new system includes employees insured for the first time after 1.1.2022, while from 1.1.2023 to 31.12.2023, insured persons who have not reached the age of 35 may optionally be included.
6. Pensionable earnings are the average of the worker's annual earnings throughout his or her working life.
7. The replacement rate for each insurance year from 1.10.2019 is derived from the table of Article 24 of Law no. 4670/2020.

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# The asymmetric socioeconomic effects of global food crisis

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## Οι ασύμμετρες κοινωνικο-οικονομικές επιπτώσεις της παγκόσμιας επισιτιστικής κρίσης

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### ABSTRACT

The planet is experiencing a food crisis, the extent of which is unprecedented in the 21st century. The Covid-19 pandemic and the Russian invasion of Ukraine, combined with the extreme weather conditions of recent years, have been the most important determinants of this crisis. However, the food crisis has not affected all households and states equally but has been more severe for the economically vulnerable households and lower-income countries, where food takes up a large share of their consumption expenditure. The objective of this paper is to highlight the asymmetric and consequently redistributive socio-economic effects of the global food crisis.

**KEY WORDS:** Global Food Crisis, Harmonised Index of Consumer Prices, Income Inequality, War in Ukraine.

### ΠΕΡΙΛΗΨΗ

Ο πλανήτης βιώνει μια επισιτιστική κρίση, παρόμοια με την οποία δεν είχε γνωρίσει κατά τον 21ο αιώνα. Η πανδημία του Covid-19 και η Ρωσική εισβολή στην Ουκρανία, σε συνδυασμό με τα ακραία καιρικά φαινόμενα των τελευταίων ετών, ήταν οι σημαντικότεροι προσδιοριστικοί παράγοντες αυτής της κρίσης. Η επισιτιστική όμως κρίση δεν επηρέασε ισόρροπα όλα τα νοικοκυριά και τα κράτη. Επηρέασε περισσότερο τα πιο οικονομικά ευάλωτα νοικοκυριά και τις χώρες χαμηλότερου εισοδήματος, που μεγάλο μέρος της καταναλωτικής τους δαπάνης αφορά είδη διατροφής. Σκοπός της παρούσας εργασίας είναι η ανάδειξη των ασύμμετρων και κατά συνέπεια αναδιανεμητικών κοινωνικοοικονομικών επιπτώσεων της παγκόσμιας επισιτιστικής κρίσης.

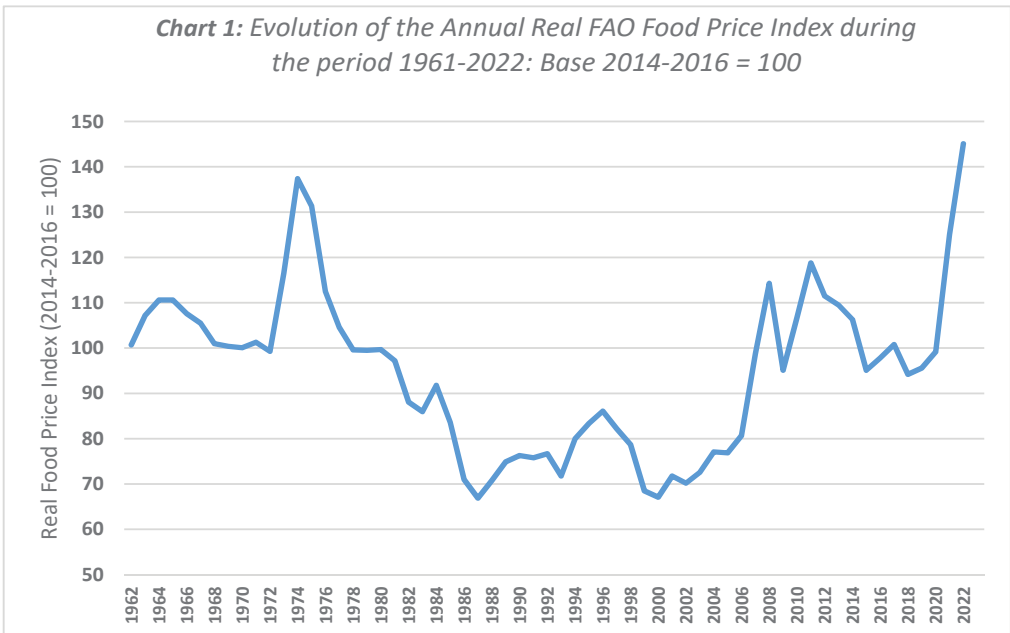
**ΛΕΞΕΙΣ ΚΛΕΙΔΙΑ:** Παγκόσμια Επισιτιστική Κρίση, Εναρμονισμένος Δείκτης Τιμών Καταναλωτή, Εισοδηματική Ανισότητα, Πόλεμος στην Ουκρανία.



## 1. Introduction

The world is experiencing the most serious food crisis in recent decades. Based on available data from the United Nations Food and Agriculture Organization (FAO) since the early 1960s, we realize that the current global food crisis has led to the highest real food prices on record. The situation is highlighted in Figure 1 where the evolution of the Real Food Price Index compiled by FAO is shown. The value of this index at the time of writing this paper for the year 2022 was 143.8. This value is much higher than all its previous highest values recorded in the past, namely the corresponding second highest peak of the year 1974 (137.4), as well as those of the years 2008 (114.3) and 2011 (118.8). Figure 1 also shows that the problem of rising food prices worldwide did not appear only because of the Russian invasion of Ukraine on February 24, 2022. Already in 2021, a sharp rise in food prices had begun. The Real Food Price Index in 2021 compared to 2020 increased from 99.2 to 125.1. That is, it increased by 25.9 percentage points. In 2022 compared to 2021, according to the data available at the time of writing, it appears to have increased further to 143.8. It marked therefore an increase of 18.7 percentage points.

We observe that the effects of the Covid-19 pandemic on global food prices were also significant. More specifically, global food prices in 2021 increased mainly due to the uneven recovery of economies from the Covid-19 pandemic and the widespread supply chain disruptions due to the pandemic. To some extent, the extreme weather conditions that prevailed in 2021 in many regions of the world, which were the worst in recent decades and caused serious crop and livestock losses, also contributed to the food crisis (Global Network Against Food Crises, 2022). However, in general, since the beginning of the 2000s, there has been a trend of increasing real food prices worldwide. This upward trend seems to have been interrupted only temporarily. More specifically it stopped during the years 2009, 2015, 2016 and 2018.



Data source: Food and Agriculture Organization of the United Nations (FAO), Food Price Index ([fao.org/worldfoodsituation/foodpricesindex/en/](http://fao.org/worldfoodsituation/foodpricesindex/en/)). For the year 2022, release date: 07/10/2022.

The recent global food crisis is a large-scale one. As noted by the United Nations, humanity has not known a similar food crisis in the 21st century (UN, 2022). The lingering effects of the Covid-19 pandemic combined with the Russian-Ukrainian war and the generally observed climate change, which is now accepted as having transformed into a climate crisis, do not apply symmetrically to all individuals of each society and all countries of the world. In other words, the recent global food crisis has large redistributive effects on the lowest incomes, ultimately increasing the ranks of the global poor.

Of course, all food crises have some redistributive character, given that households and states that have limited possibilities to react to them are more vulnerable and suffer the greatest effects because of them. There are generally three main transmission mechanisms of this crisis, namely increases in food prices, increases in energy prices and a tightening of financing conditions in the context of a contractionary monetary policy that is typically implemented to counter inflationary pressures. The third mechanism is of particular importance in emerging markets and developing economies (EMDEs) according to the World Bank (World Bank, 2022). These three mechanisms working in parallel cause a vicious circle that renders it extremely difficult to get out of this crisis (UN, 2022). It is noted that the restrictions on food and fertilizer exports, which have been inflated since the start of the war, are already much stricter than those implemented during the food price crisis of 2007/8 (UN, 2022). According to the estimates of the United Nations, about 94 states with a total population of about 1.6 to 1.7 billion inhabitants are already seriously exposed to at least one of the above three mechanisms and are unable to respond to it (UN, 2022), while about 1, 2 billion people live in countries exposed to all three transmission mechanisms of the food crisis, which are called the “perfect storm” (UN, 2022).

The basic objective of this paper is to highlight the asymmetric economic and social effects of the current global food crisis. The highlighting of this problem will possibly contribute to the formation of economic and social policies suitable for dealing with it.

## 2. Real Income Levels and Consumption Standards

As income rises the total consumption expenditure of individuals or households increases. The higher the income is, the higher are the levels of consumption expenditure. For example, in Greece in the year 2020, according to Eurostat estimates, the mean consumption expenditure at purchasing power standards (PPS) per adult equivalent of the total population was 13,510. However, the mean consumption expenditure of the first quintile (the relatively poor) was 10,113 while that of the fifth quintile (the relatively rich) was 18,3150.

At the same time, as income rises, the composition of consumption changes. In other words, the so-called “consumption standards” are changing. The bulk of consumption expenditure shifts from basic or subsistence goods to more luxurious goods. This situation is reflected in the change in the weighting of the goods and services included in the calculation of the Consumer Price Index (CPI). These weights reflect the relative importance of goods and services in the budget of the average household. For this reason, these weightings are revised to the extent that noticeable changes in consumption patterns are observed.

In particular, as income increases, the share of food items in total consumption expenditure of individuals or households tends to decrease and consequently their weightings. For example, in Greece during the period 1959-2009 the weighting of food in the total consumption expenditure of households decreased from 43.75% to 17.12% according to ELSTAT (former ESYE)

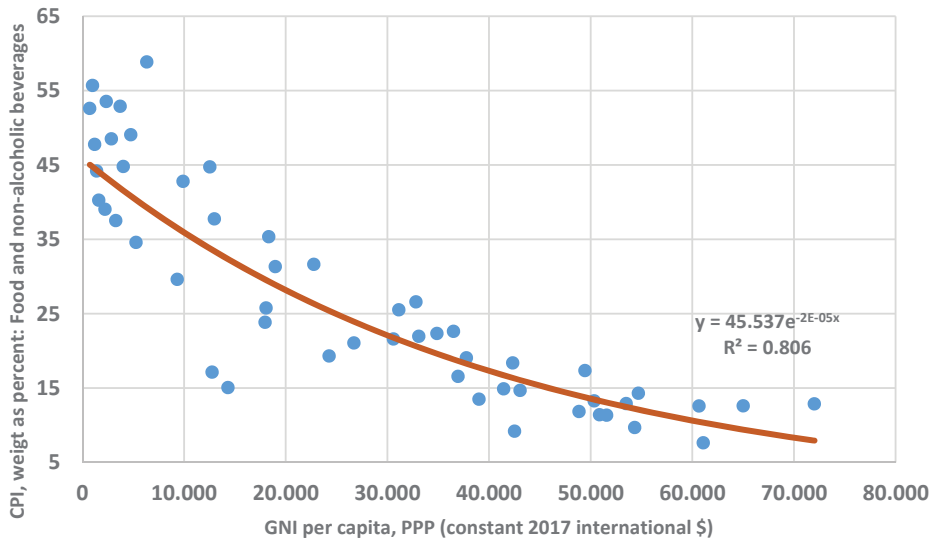
estimates. That is, in 2009 in Greece a typical household spent just 17% of its total consumption expenditure on food compared to 43.75% for the year 1959. At the same time, during the period 1960-2008 the average per capita Gross Domestic Product (GDP) in constant 2015 US dollars (\$) increased from \$5,030 to \$23,929. In other words, we observe that increases in GDP per capita significantly affect the consumption patterns of households. One of the major effects of this increase is the relative reduction of expenditure on food in total consumption expenditure. This relationship is also confirmed in the following years. The reduction of GDP per capita in the post-2009 period in Greece resulted in an increase in the share of food in total consumer expenditure to 23.26% in 2021.

Therefore, if we want to investigate the evolution over time in the relative importance of food in total consumption expenditure in a country in relation to the changes of its average real GDP per capita, we could follow the adjustments of the weights of the corresponding CPI of that country. At the same time, if we want to compare the differences in the importance of food in total consumption expenditure between different countries in a given period of time, we could resort to comparisons of their respective CPI weights. The comparison of CPI weights is therefore a reliable indicator for investigating the effects of the relative importance of food in total consumption expenditure, both in a country over time and in international comparisons of these effects.

This analysis is attempted with the help of Chart 2, where we compare the consumption patterns of 52 countries of the world with different per capita incomes. More specifically we examine various high, middle and low per capita income countries. The countries of Chart 2 are ranked by their respective Gross National Income (GNI) per capita in the year 2021 in purchasing power parities (PPP) or international dollars (I\$) to enable international comparisons of incomes based on their real purchasing power rather than their nominal monetary size. On the vertical axis of the chart, we depict the weight as percent of food and non-alcoholic beverages in the corresponding CPI of each country included in the sample.

From the Chart 2 we observe that the countries included in it and whose per capita income in 2021 was over I\$60,000, the weight of food and non-alcoholic beverages in total consumption expenditure was well below 15%. In countries associated with a per capita income between 40,000 and 60,000 I\$ the corresponding weight was well below 20%, while in countries with a per capita income below 10,000 I\$ the corresponding weight was higher than 30% and in many of them higher than 50%. In other words, in many low-income countries, expenditure on food approaches or even exceeds 50% of the total consumption expenditure of households. Chart 2 depicts clearly the inverse relationship existing between the level of income and the share of food in total consumption expenditure of households.

**Chart 2: The relationship between GNI per capita and weight of food and non-alcoholic beverages in CPI**



Data sources: 1) International Monetary Fund (IMF), Consumer Price Index (CPI), Cross-country weights as percent, weight of food and non-alcoholic beverages. 2) World bank, World Development Indicators (WDI), Gross National Income (GNI) per capita, PPP (constant 2017 international \$). Notes: 1) Data from the following 52 countries are included in the chart: Armenia, Australia, Austria, Bangladesh, Belarus, Belgium, Benin, Bhutan, Bulgaria, Burundi, Cambodia, Canada, Central African Republic, Chad, Chile, Colombia, Cyprus, Denmark, Dominican Republic, Estonia, Ethiopia, Finland, France, Germany, Greece, Haiti, Hungary, Iraq, Israel, Italy, Latvia, Mexico, Netherlands, New Zealand, Niger, Nigeria, Norway, Pakistan, Poland, Portugal, Rwanda, Serbia, Sierra Leone, Slovenia, South Africa, Spain, Sudan, Sweden, Switzerland, Ukraine, United Kingdom and United States. 2) Data on GNI and CPI weights refer to 2021 or to the most recent year available at the time of writing the paper.

### 3. The Distributional Effects of the Recent Global Food Crisis

According to the preceding analysis, the current global food crisis and the increase in food prices that necessarily accompanies it, does not affect all individuals and households in a society or all countries of the world in a symmetrical way, but, rather, it exerts unbalanced effects. This happens because it has a greater impact on the more economically vulnerable individuals and households that are net food consumers. In parallel, it affects lower income economies in which a very high proportion of consumer spending is on food items. We should note however at this point that those economically vulnerable individuals and households that are net food producers, i.e., they produce more food than they consume, could improve their welfare due to the global food crisis.

Although no evidence is yet available to systematically investigate the redistributive effects of the current global food crisis, there already exist empirical studies that have analyzed the re-

distributive effects of large increases in food prices in the previous periods. At the same time, in the context of the policy of economic development, the effects of the increases in the prices of food products have been the subject of empirical investigation in the past.

In principle, it could be argued that since about 75% of the world's poor population lives in rural areas where agriculture is their main economic activity, increases in food prices could raise their incomes. As a result, global food crises could improve the distribution of income in favor of these people and hence they could eradicate global poverty at least in the long term. This conclusion is reached by a number of researchers on the field, such as Headey, who find that increases in international food prices are associated with a decrease in national poverty rates in a large number of developing countries, which is mainly due to an increase in the demand for agricultural labor and increase in the supply of agricultural products, phenomena caused by the increases in international prices of agricultural products (Headey, 2018).

However, the opposite seems to be happening in reality. Reductions in the prices of agricultural products worsen the welfare of the rural population, given that most rural households are net food consumers rather than net food producers (Polaski, 2008). More specifically, a large part of the world's poor rural population does not produce enough food to meet its own consumption needs and is forced to supplement its income with income from dependent agricultural employment. This category of low-income individuals does not benefit from increases in food prices (Ravallion, 1990). It appears that increases in international prices of agricultural goods, when not coupled with labor productivity improvements, tend to increase poverty in developing countries or low-income economies rather than to reduce it (Ivanic and Martin, 2014). Only those individuals and households that have the necessary resources required to improve their productivity, such as for example adequate irrigated agricultural land, fertilizers and insecticides, can improve in fact their welfare when international food prices rise (Zezza et al., 2008).

Empirical research in the agricultural sector of various countries has shown that the gainers from world food price increases are the relatively wealthy individuals in the agricultural sector and the losers are the relatively poor (Ravallion, 1990). During the period 2007-2008, when there were large increases in food prices worldwide, the poorest households were hit hardest. This outcome resulted in increases in the "depth of poverty" or "poverty gap". The same problem manifested itself at the world regional level. The rural areas or regions of the world were most affected from the increases in world food prices during the above period (Compton et al., 2010).

According to the preceding analysis, the impact of food price increases due to the recent global food crisis are particularly significant in low-income economies that are net importers of food commodities. These countries are exposed to the phenomenon of the "perfect storm" to which we have already referred. That is, they are faced with all three transmission mechanisms of the global food crisis. Consequently, not all regions of the world are equally affected by the food crisis. For example, the region estimated to be most affected is Sub-Saharan Africa (UN, 2022). For the EU, supply chain disruptions due to the war in Ukraine and the impact of economic sanctions imposed on Russia by the international community is estimated that could push the European economy into a recession, while increases in food and energy prices are estimated to hit households, mainly the poorest ones, but not significantly (EIB, 2022). The effects will be of a greater importance in countries that are more sensitive to changes in energy and food prices and a relatively larger proportion of their population is at risk of poverty, i.e., in the countries of Central and South-Eastern Europe (EIB, 2022).

## 4. The War in Ukraine and the Food Crisis

The war in Ukraine has added another dimension to the already acute problem of the global food crisis. This war, as well as any war conflict in which countries of geostrategic importance and economic power are involved, has significant economic effects both at the regional (European) and at the global level. It has already affected global production, global employment, global financial flows and especially foreign direct investment, as well as world trade. Its effects are most severe in food and energy markets.

It must be noted that Russia and Ukraine account for a small percentage of world trade and world Gross Domestic Product (GDP). In 2021, the share of both countries in global merchandise trade was estimated to be 2.5%, while the share of both in global GDP was estimated to be only 1.9% (WTO, 2022). Moreover, in terms of exports of all commodities, Russia has a very low share on global commodity exports. According to the World Trade Organization (WTO), in 2021 Russia accounted for just 2.2% of global merchandise exports. In terms of merchandise imports, Russia has an even lower share. According to the WTO, in 2021 Russia held just 1.3% (WTO, 2021).

However, despite the limited participation of Russia and Ukraine in world trade, it should be clarified that in some commodities the two countries hold a very high percentage of world exports, such as wheat (25% in 2019), barley (15% in 2019) and sunflower oil (45% in 2019). Russia alone holds 9.4% of world trade in fuels, while in natural gas it holds 20% (WTO, 2022). At the same time, Ukraine alone accounts for 14% of global corn exports (Artuc et al., 2022).

After the Russian invasion of Ukraine, the global supply of the above goods was significantly disrupted, both because of the direct effects of the invasion, such as the blocking of Ukrainian grain exports through the Black Sea, and because of the international community's economic sanctions imposed on Russia. At the same time, we should not ignore the extreme weather phenomena that occurred in many parts of the planet, such as high temperatures in India, the USA and France, floods in China and drought in Africa. These problems combined with the increasing protectionism that prevailed in various countries due to the insecurity created in terms of securing the supply of food and raw materials, led to large increases in the prices of food products (McGuirk and Burke, 2022). That is, food price increases due to the Russian-Ukrainian war exacerbated the already existing global cost of living crisis that had also been worsened due to the Covid-19 pandemic.

The effects of war on individual countries are not symmetrical. Some countries are affected more and others less (Celi et al., 2022). This is determined by the degree of dependence or interdependence of the economy of each individual country on the economies of the countries involved in the conflict, but also by the extent of uncertainty and insecurity caused in each country by geopolitical tensions. In particular, the effects of the specific war on each economy basically depend on the extent of its dependence on imported energy, food and intermediate goods and raw materials from Russia and Ukraine, such as cereals (grain, corn, etc.), fertilizers, ores (palladium, nickel, aluminum, etc.), natural gas and oil. It should also be noted that the effects of the war in each individual country also depend on the percentage of its population that is at risk of poverty, given that the increases in food and energy prices affect more the most vulnerable households (EIB, 2022).

Focusing our analysis on the EU level where there is more reliable statistical evidence for international comparisons, it is confirmed that the recent food price developments exerted and continue to exert unbalanced effects on its individual member states. More specifically, by considering the monthly data - annual rate of change (percentage change on the same period of the

previous year), that is the twelve-month changes, of the Harmonised Indices of Consumer Prices (HICP) as they are estimated by the National Statistical Institutes (NSIs) and the Eurostat to measure consumer price inflation in the EU for international comparisons, we find the following as far as the food and non-alcoholic beverages inflation index (FHICP), code 01 of the international classification COICOP (Classification of Individual Consumption by Purpose) of the United Nations (UN) (Eurostat, 2022):

(a) Until August 2021, the European (27 member states) average annual rate of change of the FHICP was lower than 2%. From August 2021 till November 2021 it reached the 2.9%. Until February 2022 it reached the 5.5% (It is noted that on February 24, the Russian invasion of Ukraine began). In March 2022 it increased to 6.7%, while in April 2022 it reached the 8.6%. The increases of the FHICP continued during the following months. In August 2022, the average European FHICP index had risen to 14%. So, it is concluded that in the EU food prices started to rise before the Russian invasion of Ukraine, as a result of the bottlenecks caused by the Covid-19 pandemic. The Russian invasion accelerated their increase rates.

(b) Although in August 2022 the average European FHICP index was 14.0%, very large differences in FHICP rates are observed between the individual member states. In some member states the FHICP rate was close to 20%, namely in Bulgaria (24.1%), Czechia (19.9%), Estonia (21.8%) Romania (19.1%) and Slovakia (21.0%), while in some others it was higher than 25%, namely in Latvia (25.9%), Lithuania (29.8%) and Hungary (33.1%). At the same time, in some member states the corresponding FHICP was lower than 10%, namely in Ireland (8.7%), France (8.4%), Cyprus (5.0%) and Luxembourg (8.1%). We are therefore observing the large asymmetric effects of the global food crisis on food prices in the individual EU member states. These unbalanced or asymmetric effects of food price inflation on individual countries reveal the extent of their structural differences. Moreover, they highlight once again the problem that the EU is not an "optimum currency area" and make it extremely difficult to design and implement a single long-term European strategy against the global food crisis.

## 5. Conclusion

**T**he global food crisis, that got worse after the Russian invasion of Ukraine, does not have a balanced impact on all households and all countries of the planet. It has a strong redistributive character. It affects more seriously people and countries that have limited capacity to respond to it. This responsiveness to a large extent depends on income. People with low disposable income who are net consumers of food products and countries with low real per capita disposable income in which a high proportion of consumer spending is on food products tend to be hardest hit by the crisis. Based on existing experience we know that the global food crisis also affects the majority of rural households, who are net consumers of food products and not pure producers. Only those rural households that can access the necessary financial resources to raise their productivity levels can improve their welfare as a result of the food crisis.

The Russian invasion to Ukraine added another dimension to the problem of global food crisis. The food price increases it caused were largely unbalanced. The extent of its effects was determined by the degree of dependence or interdependence of the economy of each individual country on the economies of the countries involved in the conflict (Russia and Ukraine), but also by the extent of uncertainty and insecurity caused in each country by the geopolitical tensions that emerged. As for the EU as a whole, given the structural differences between its member states, it is extremely difficult to formulate a common strategy to respond to the global food crisis.

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## Biographical Notes

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# Addiction of teenagers to electronic - internet games. Research on students of primary education

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## Εθισμός ανηλίκων στα ηλεκτρονικά – διαδικτυακά παιχνίδια. Έρευνα σε μαθητές πρωτοβάθμιας εκπαίδευσης

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### ABSTRACT

The computer and the Internet are now an everyday and integral part of the lives of children and teenagers. An extension of these are electronic games, a basic type of entertainment and communication for young people with their peers. Their content is entertaining, however their unrestricted use can be a cause for the manifestation of addictive behaviors and have a negative effect on the sensitive personality of minors. This article, therefore, deals with the content of electronic- online games and investigates when their role becomes harmful for the physical, social and mental health of children.

**KEY WORDS:** Electronic Games, Internet, Addiction, Minors.

### ΠΕΡΙΛΗΨΗ

Ο ηλεκτρονικός υπολογιστής και το Διαδίκτυο αποτελούν πλέον καθημερινό και αναπόσπαστο πλαίσιο της ζωής των παιδιών και των εφήβων. Προέκταση αυτών είναι τα ηλεκτρονικά παιχνίδια, βασικό είδος ψυχαγωγίας και επικοινωνίας των νέων με τους συνομηλίκους τους. Το περιεχόμενό τους είναι διασκεδαστικό, ωστόσο η μη οριοθετημένη χρήση τους δύναται να αποτελέσει αιτία για την εκδήλωση εξαρτητικών συμπεριφορών και να επιδράσει αρνητικά στην ευαίσθητη προσωπικότητα των ανηλίκων. Το παρόν άρθρο, λοιπόν, πραγματεύεται το περιεχόμενο των ηλεκτρονικών - διαδικτυακών παιχνιδιών και ερευνά πότε ο ρόλος τους καθίσταται επιβλαβής για τη σωματική, κοινωνική και ψυχική υγεία των παιδιών.

**ΛΕΞΕΙΣ-ΚΛΕΙΔΙΑ:** Ηλεκτρονικά Παιχνίδια, Διαδίκτυο, Εξάρτηση, Ανήλικοι.

## 1. Introduction

A quite large part of the global population nowadays uses the Internet and the new technologies in the everyday life. Our relationship with other people has become to a great extent electronic, replacing the physical appearance for our interactions, and this fact has so far unknown results in our mental, social and physical health on the long term. Correspondence, social relations, transactions and entertainment are only a few domains that now almost exclusively happen electronically.

This means that of course the games, that are an ancient type of interaction and socialization of young –and not only- people, have evolved in electronic forms, with quite many possibilities for remote touch. This fact has both positive and negative sides, resulting during all these years in a long conversation between the political scientists about the boundaries that need to be set for the minors, due to the fact that they spend many hours in front of the screen.

The term electronic games includes all the games that are played in front of a screen with the help of the new technologies (console, television, computer, tablet, smartphones etc.), whilst the term internet electronic games includes the games for which except for the above, an Internet connection is required (online). According to clinical researches, the way that the brain responds to the excessive use of electronic games is the same as the one to addictive chemical substances, this leading the term “addiction” to obtain the proper sense of the word (Ko, 2009). The addiction to electronic games consists of spending an excessive amount of time using them, and this appears to have negative results on the mental and social health of the people.

The addiction to electronic/internet games is a problem that affects the overall health of the children and teenagers for at least three decades, and this is the main reason why the manual of the American Psychiatric Association DSM-5 has now recognized this addiction as a separate psychiatric disorder under the naming “Internet Gaming Disorder”. The minors that appear to have an addiction to electronic games, usually have an amount of problems in their everyday life as well as in their social mental health. This appears to have an adverse effect on their social function, their school performances, their relationships with the other gender, their peers and parents, as the game becomes their main occupation and the only thing that leads their behavior and thoughts (Bailey, West & Kuffel, 2013).

In the present research we are going to try to analyze all these issues that are associated with the adverse effects of the electronic and internet games on the social, mental and physical life of the minors, through a brief bibliographic literature review but mostly through a research that we conducted on students of the fifth and sixth grade of Primary School of the Kavala Regional Unit. Our sample (N= 223 students) is under no circumstances absolutely representative of the overall number of students in this category, but the findings of the research show results quite similar to the current bibliography on this significant issue.

## **2. Electronic games. E-games definitions and categories**

**T**he term “electronic game” has a wide range, from playing a simple game on an electronic game machine, on the television screen or on the computer, to connecting on the Internet and taking part in mass online games with a great number of players in virtual worlds, where the users can interact with one another for a particular purpose (Brian & Wiemer-Hastings, 2005).

The electronic games are played on desktop or portable computers, game consoles, telephones or/and tablets. Some of the games are bought and installed on the devices, others are downloaded from the Internet while some of them are played exclusively online. The connection of the user on the Internet in order to play a game, is the parameter that makes a game an internet game, whereas electronic games are all the games that are played using an electronic device (console, game machine, computer, smartphone, tablet etc.). This means that practically the term electronic game is more general and includes these games that are played using an Internet connection (King, Haagsma, Delfabbro, Gradisar & Griffiths, 2013).

The Internet has radically changed the way the children play and the future seems to hold even more changes. For the time being the games are characterized as “smart”, their use includes cameras and microphones and they are equipped with artificial intelligence. There are many ways for online games. The games or the applications for the cell phones can be downloaded through the Apple App Store, the Google Play or the BlackBerry App World. Some applications are available for free while some others need to be bought (King, Delfabbro & Griffiths, 2010).

The electronic games in the broad sense started to become popular during the decade of the 70s’, when games like the Pong were created. However, these games did not have the necessary features to catch the attention of the people for a long time (Gong, Zhang, Cheung, Chen & Lee, 2019). From the beginning of the decade of the 90s’ the most popular electronic games were Mario, Sonic, Zelda, Tetris, Final fantasy etc. These were games that featured detailed graphics that made their characters and the worlds that they interacted with, seem more realistic and alive (Hanson et al., 2019). At the same time, the games became more demanding, pushing many people to spend money and to proceed to purchases of more content, which provided them with “secrets” in order to win at the game. As the companies of electronic games discovered a raise on their earnings, they begun to search for more ways to obtain higher profits, creating in that way even more addictive games with more intense graphics and higher interactivity (Carrier et al., 2015).

Furthermore, alongside the rapid and broad use of the Internet over the last twenty years, many electronic internet games were created which can be used by many users at the same time. The result of these evolutions is the existence of a variety of games, in which the games of sighting first person like “Counterstrike” are included as well as the real-time strategy games like “Starcraft”. What seems to be quite interesting is the electronic games that have recently appeared whose function is based exclusively on the Internet like the “Unreal Tournament”. Also, the evolution of virtual worlds through an electronic game, like the “World of Warcraft” is a remarkable example (Hanson et al., 2019).

The above evolutions also affected the console games, like the Xbox 360, the Play Station (PS) and the Wii, as well as the hand games like the PSP and the DS, that have now the ability of connecting and accessing the Internet wirelessly. These features provide the use by multiple players simultaneously, the downloading of new content of the game or of whole games. However, for that purpose even cell phones have evolved to an extent that they function as game machines through extra programs or applications like we mentioned above (Van Rooij, Schoenmakers, Meerkerk & Van de Mheen, 2008).

Over the last thirty years the electronic games have evolved and become more realistic, commercial and three-dimensional. The children take part in online virtual communities and play games on a daily basis with people that is more likely they have never met in the “real” world. The online games provide a virtual environment, where they can entertain themselves, they can freely experiment, talk other languages and create new social relationships.

### 3. Addiction to electronic games

**S**inha (2018) suggests that inside the game environment, the users are able to create virtual selves, which they idealize, using different aspects of their personality and without any physical or moral restrictions. The positive effects of the electronic games have been discovered, that are associated with the development of many skills of the people, their intelligence, their perception as well as with the enhancement of the teamwork spirit and the cooperation skills, as the

users are trained to act as part of a greater player society, while all the players have the same targets. Nevertheless, the non-circumscribed use of the games and the failure to be restricted, often leads to antisocial behaviors, increase of aggressiveness, obsessions or monomania and other psychosocial problems. In addition to this, the social functionality is often decreased, the school performances worsen and the relationships with the parents become more and more problematic (Grüsser, Thalemann & Griffiths, 2007).

The addiction to the electronic games is a broad concept. Waldo (2014) underlines that there is no clear term for this specific disorder and that the use of the electronic games is rapidly increasing between children and teenagers. As a result, the need of a multifaceted examination of the reasons associated with this addiction, has become imperative.

The studies of the last decade have shown that the engagement of the children with electronic games is strong, when there are intense conflicting relationships within the family environment or/and domestic violence (Christou, 2007). The lack of meaningful communication between the members of the family and the neglect create a psychological background for this specific addictive behavior. Floros and Siomos (2013) support the suggestion above mentioning that when the basic psychological needs are satisfied and the parents have the best interest of the children in mind within the family environment, then addiction cases are not observed. The attached minor players seem to be young people who are characterized by lack of self-esteem, behavioral disorders, aggressiveness, anger and negative feelings (Young, 2009).

In addition, reasons for videogames abuse are the lack of proper handling with family situations as far as not only the adult members but also the minors of the family are concerned, like for example the loss or absence of a parent. Young (2009) underlines that the engagement with such games is a way of escaping from various psychological pressures that bear down on the minor players. Practically the players occupy their minds with these games in order not to be overwhelmed by unpleasant and negative feelings. At the same time, it happens to be an effortless and affordable solution, that is available 24 hours per day and offers company and emotional safety. As such, the players start to feel better about themselves, tending to play even more, in order to put other important issues that burden them aside.

Concurrent researches referring to the addiction to electronic games show the association between this addictive occupation and other psychiatric and emotional disorders, like depression, anxiety disorders, monomania, ambivalence, bipolar disorder etc. or some learning disorders like the Attention Deficit Hyperactivity Disorder (ADHD) in children (Farchakh et al., 2020).

#### **4. Reasons for attachment to electronic games**

**S**ince many years the electronic game have entered almost every home. Children find electronic games quite appealing, due to their interactivity, their full of vividness and colors graphics, the challenges they set but also due to the action and strategy they offer. However, the growing engagement of the children with electronic games has created a long conversation, as far as the short- and long-term results of this fact are concerned (Filippidis, 2020).

There are some reasons, as was stated in the previous paragraph, that make an electronic game very appealing and push children to play this game for many hours. There have been numerous researches that show the basic factors about what impels the minors to play these games that much and to become attached to them. Yee (2006) made the first steps for the building of a frame about the study of the reasons that keep minors occupied with electronic games and make them stay online for many hours, discovering three basic motives. Firstly, there is the component

of success, which includes the will of the players to move forward to the game, the interest in the rules and the system of the game and the will to compete with other players. Then, there is the social parameter, which is the willingness of creating a connection to the other players, to talk and get to know them and to become a part of a team effort. Finally, there is the component of the "plunging", which creates and adapts a character to play in the unique story of the game, as well as the will to get away from the real world.

Another reason that appeared in the last three years and has contributed to the children and teenagers' attachment to the electronic games, is the appearance of the Pandemic of the Covid-19 virus. The minors belong to the social groups that have been the most affected by this health crisis, because they were forced to remain at home, away from their classmates and their friends and away from every activity they used to take part in before the Pandemic. In this way, the electronic game became their only shelter for entertainment and relaxation during their stay-at-home time and an opportunity to communicate with their friends, but also with other teammates around the globe. The game has practically become a window for the outer world for a high percentage of the minors, following every positive and negative consequences that this fact has, as we previously described (Elsayed, 2021).

## 5. Research methodology

The study group of the present research are students of the Primary Education of the Kavala Regional Unit. The research was conducted in six (6) primary schools of the Kavala R.U., which were selected using the method of the random sampling. The information that was concentrated, using structured questionnaire, is derived from a sample of 223 students, on the 5th and 6th Grade of primary school and our research was conducted between March and April 2022. During the conduction of the research, the anonymous and voluntary participation of the students were underlined and the written consent of their parents was asked in advance. The statistic pack SPSS 23.0 was used for the description and analysis of the data and relevant factor analysis were conducted (Field, 2016).

### 5.1 Collecting data method

The questionnaire was handed in students of six Primary Schools of the Kavala Regional Unit, which were selected, as stated before, using the method of the random sampling. 51,1% of the sample consists of boys and 48,9% of girls, while the average age of the students was the 11 years old. 47,7% were students of the 5th Grade and 52,3% of the 6th Grady of Primary School. The students filled in the questionnaire during the "Skills Workshop" class as far as the "What am I doing in my free time?" unit is concerned. The questionnaire was distributed in a written form to every student personally by the researchers themselves. The physical presence of the researchers, including the teacher of each class, helped the students solve possible queries, feel safety about the filling of the questionnaire and has definitely contributed to the fact that all data is collected under the same circumstances for the whole sample, so that the results are as impartial, valid and credible as possible. The filling in of each questionnaire lasted about 20-25 minutes and the students did not encounter significant problems, as the questions were characterized as easy to answer and understandable. In addition, the sample of our research were minors, so a relevant email was sent to the parents in order to inform them about the participation of their children in this research process, and the distribution and filling in of the questionnaires were proceeded after the written consent of the parents.

## 5.2 Research restrictions

The present research was conducted in students of 5th and 6th Grade of six Primary Schools of the Kavala Regional Unit. As a result, the findings cannot be generalized for the whole student population, as our sample is restricted by the specific geographic region.

The students were able to express their personal experiences about the use of electronic games while answering the questionnaire. Their answers are definitely characterized by subjectivity, about the way they perceive some situations, as there is also always an issue about how much they are willing to reveal the truth through a questionnaire, even though it is anonymous. For instance, the students answered themselves about their own school performances. This data might not be adequate enough for the conduction of credible results on the subject. This means that the written grades of each student per trimester were not thoroughly examined by the researchers, so as the drop or not of their performance would be extensively checked, but on the other side only the answers of the students were documented.

In addition, the presence of the teacher of each class and the researchers during the filling in of the questionnaire, has probably affected some of the students with the answers they provided, even though there was anonymity and despite the fact that the presence of a familiar teacher creates a safety feeling to the primary education students.

Despite the restrictions that this specific research might has, it may be able to present, up to a point, an image about the relationship between children aged 10-12 years old and electronic games and the consequences they can have on their overall behavior. In addition, it might function as a precursor for further researches on students of primary education using bigger samples, as the majority of other researches about the addiction to electronic games focuses on older students of secondary education, whilst the phenomenon is now found in younger ages than Junior or Senior High School. Lastly, it is important that qualitative studies follow our process, with students that are detected with symptoms or precursor symptoms of addictive behaviors, in order a deep analysis of the reasons and the results of this phenomenon is conducted.

## 6. Data description- Research results

According to the above, 51,1% of our sample consists of male and 48,9% of female students, while the average age was the 11 years old. 47,7% are students of the 5th and 52,3% of the 6th Grade. The fact that 95,9% of the students own a computer or tablet or a game machine and only 4,1% own nothing of the above, is noteworthy, while 96,4% stated that play electronic games.

**Table 1. General Evidence**

Gender		Percentage %
	Male	51,1
	Female	48,9
		<b>100,0</b>
Siblings		
	Yes	78,9
	No	21,1
		<b>100,0</b>

<b>Grade</b>		
	5th	47,7
	6th	52,3
		<b>100,0</b>
<b>Computer Possession</b>		
	Yes	95,9
	No	4,1
		<b>100,0</b>
<b>Electronic Games</b>		
	Yes	96,4
	No	3,6
		<b>100,0</b>

As previously mentioned, 96,4% of the students play electronic games. More specifically, 97,3% of the male students play electronic games, while there is a small decline at the percentage of the female students which is around 95,4%, this small difference is, however, not considered statistically significant (Pearson Chi-Square=0,617 Sig.=0,336>0,05).

**Table 2. Gender \* Electronic Games**

		<b>Do you play electronic games?</b>		<b>Amount</b>	
		Yes	No		
Gender	Male	Count	110	3	113
		Gender Male	97,3%	2,7%	100,0%
		Do you play electronic games?	51,6%	37,5%	51,1%
		% of Total	49,8%	1,4%	51,1%
	Female	Count	103	5	108
		Gender Female	95,4%	4,6%	100,0%
		Do you play electronic games?	48,4%	62,5%	48,9%
		% of Total	46,4%	2,3%	48,9%
Total Amount		Count	213	8	221
		Gender (Male-Female)	96,4%	3,6%	100,0%



80,7% of the games that the players play, demand an Internet connection and only 19,3% play games that do not need this connection. 34,1% of the students play games on a daily basis, 30,4% during the weekend, 17,8% play games 3-4 times per week, 8,4% 1-2 times per week and 9,3% 4-5 times per week. There is no dependence between the frequency and the gender of the children, as the rate of the statistic Pearson Chi-Square=2,024 is statistically non-significant ( $\text{sig.}=0,731>0,05$ ).

**Table 3. Frequency of occupation with electronic games**

	<b>Frequency</b>	<b>Percentage %</b>
Occupation with Electronic Games	Every day	34,1
	4-5 times per week	9,3
	3-4 times per week	17,8
	1-2 times per week	8,4
	Weekend	30,4
	<b>Total Amount</b>	<b>100,0</b>

The students that participated in our research are engaged an average of 2,5 hours each time they play electronic games, while male students spend more time (2,72 hours) in comparison to the female students (2,23 hours), however no statistically significant difference is stated ( $F=3,295$  Sig.=0,071>0,05).

The majority of the children prefer to play team games (66,1%), 20,9% prefer individual games, while 13,0% choose both of them. The distribution of the children to male and female players does not show significant differences as far as the preference is considered and no preference dependence on the gender is stated (Pearson Chi-Square=1,853 Sig.=0,396>0,05).

**Table 4. Game Preference**

	<b>Percentage %</b>
Individual games	20,9
Team games	66,1
Both	13,0
<b>Total Amount</b>	<b>100,0</b>

There are plenty of electronic games that the students play, however the most beloved ones are currently Roblox (19,7%), Fortnite (15,6%), and Brawl stars (17,8%).

Children that prefer team games play on average with 65 other players, a number found mainly due to the quite few players that play with hundreds of other players from different geographic regions simultaneously, and as a fact is impossible to get to know in the real world.

40,4% of the children/users prefer team players of the same age, 7,6% elder than them, 4,5% younger than them, while 47,5% are not interested in their team players' age.

**Table 5. Team Players' Age**

	<b>Percentage %</b>
The same age	40,4
Older	7,6
Younger	4,5
All three options	47,5
<b>Total Amount</b>	<b>100,0</b>

82,5% of the children that play team electronic games have stated that it did not happen that some co-player asked them to meet in person, while 17,5% mentioned that this happened some times. 47,0% out of the percentage that were offered an invitation, agreed to meet out of the game, while 53,0% declined. The male children are those who more frequently accepted the invitation (56,5%) in comparison to the female children (33,3%).

The  $\chi^2$  independence compliance review shows that the variables are independent as the Pearson Chi-Square=1,958 is statistically non-significant (sig.0,143>0,05).

**Table 6.  $\chi^2$  independence compliance review (Gender\*Meeting)**

			<b>Did you meet outside of the game?</b>		<b>Total Amount</b>
			Yes	No	
Gender	Male students	Count	13	10	23
		% within: Gender	56,5%	43,5%	100,0%
		% within: Did you meet outside of the game?	72,2%	50,0%	60,5%
		% of Total	34,2%	26,3%	60,5%
	Female students	Count	5	10	15
		% within: Gender	33,3%	66,7%	100,0%
		% within: Did you meet outside of the game?	27,8%	50,0%	39,5%
		% of Total	13,2%	26,3%	39,5%
<b>Total Amount</b>		Count	18	20	38
		% within: Gender	47,4%	52,6%	100,0%

Despite the intensive occupation of the students with electronic games and the significant amount of time they spend on them, 75,2% of the children prefer games in the neighborhood, 13,8% electronic games with friends and 11,0% a combination of both of them.

Table 7. Preference

	Percentage %
Electronic games with friends	13,8
Outside in the neighborhood	75,2
Both	11,0
<b>Total Amount</b>	<b>100,0</b>

20% of the total number of the male students prefer to play electronic games with friends, while only 7% of the female students prefer the same. 72,7% of the male and 78% of the female students prefer to play outside in the neighborhood, while 7,3% of the male and a higher 15% of the female players prefer both options as a game. The variables gender and preference are dependent as the rate of the statistic Pearson Chi Square=9,460 is statistically significant (sig.=0,009<0,05).

Table 8.  $\chi^2$  independence compliance review (Gender\*Preference)

			Preference			Total Amount
			With their friends	Outside in the neighborhood	Both	
Gender	Male Students	Count	22	80	8	110
		% within: Gender	20,0%	72,7%	7,3%	100,0%
		% within: Preference	75,9%	50,6%	34,8%	52,4%
		% of Total	10,5%	38,1%	3,8%	52,4%
	Female Students	Count	7	78	15	100
		% within: Gender	7,0%	78,0%	15,0%	100,0%
		% within: Preference	24,1%	49,4%	65,2%	47,6%
		% of Total	3,3%	37,1%	7,1%	47,6%
<b>Total Amount</b>		Count	29	158	23	210
		% within: Gender	13,8%	75,2%	11,0%	100,0%
		% within: Preference	100,0%	100,0%	100,0%	100,0%
		% of Total	13,8%	75,2%	11,0%	100,0%

The fact that a significant percentage of the children (26,3%) admit to have neglected their homework in order to play electronic games is noteworthy, however 75% of these students neglect their homework almost rarely, 3,6% quite many times and a significant percentage (21,4%) stated that this happens from almost all the time to always.

The percentage of children that have stayed awake till very late at night so as to play a game (44,6%) can be characterized as worrying. Furthermore, 13,3% of these children stated that this happens from almost most of the time to always, 18,9% of them quite many times and 67,8% from very rarely to rarely.

23,8% of our sample are students that have forgotten to eat their meal when playing a game. This happens from almost all the time to always (12,8%), quite many times (17,0%) and from quite rarely to rarely (70,2%).

The students that refused to play outside in the neighborhood with their friends because they wanted to play an electronic game are 17,2% of our sample. 12,1% of them act so from almost always to always, 21,2% many times and 66,7% from quite rarely to rarely.

**Table 9. Consequences of the occupation with electronic games**

	Yes	No
Has it occurred, that you neglect your homework in order to play a game?	26,3%	73,7%
Has it occurred, that you sleep very late at night because you were playing a game?	44,6%	55,4%
Has it occurred, that you forget to eat while playing a game?	23,8%	76,2%
Has it occurred, that your friends invite you to play in the neighborhood and you do not want to join them because you want to play an electronic game?	17,2%	82,8%

An  $\chi^2$  independence compliance review was conducted, in order to ascertain whether the consequences of the occupation with electronic games are affected by the gender of the children.

As a result, the occupation or not with electronic games is not affected by the gender of the student, as the rate of the statistic Pearson Chi-Square=0,676 is statistically non-significant (sig.=0,397>0,05).

The children that happened to sleep very late at night because they were playing a game, were mostly male students. More specifically, 51,4% of the male and 37,5% of the female students stated that they have slept very late at night. It appears that the gender affects quite enough this action of the students, even though the rate of the statistic Pearson Chi-Square=4,147 is statistically non-significant (sig.0,053>0,05) at a 5% significance level. This rate is, however, borderline.

The children that usually forget to eat their meal when playing an electronic game are mostly male students. More specifically, 30,8% of the male and only 16,5% of the female students act in this way. The impact of the gender on the neglect of food is obvious and is substantiated by the rate of the statistic Pearson Chi-Square=5,946 which is statistically significant (sig.=0,016<0,05).

22,5% of the male and only 11,5% of the female population of our sample prefer to play an electronic game instead of playing outside in the neighborhood with their friends. In this way, this is another case that the gender affects the decision and the rate of the statistic Pearson Chi-Square=4,547 is statistically significant (sig.=0,046<0,05).

**Table 10.  $\chi^2$  independence compliance review (Gender\*Consequences)**

Consequences	Pearson Chi-Square	sig.
Has it occurred, that you neglect your homework in order to play a game?	0,676	0,397>0,05
Has it occurred, that you sleep very late at night because you were playing a game?	4,147	0,053>0,05
Has it occurred, that you forget to eat while playing a game?	5,946	0,016<0,05
Has it occurred, that your friends invite you to play in the neighborhood and you do not want to join them because you want to play an electronic game?	4,547	0,046<0,05

The most concerning finding of our research is probably the percentage of students (31,2%) that play electronic games with money. Male students (43,2%) also outnumber the females (18,3%). As a result, the gender is a determining factor for this action (Pearson Chi-Square=16,611 sig.=0,000<0,05).

However, the monetary amount spent weekly was not able to be determined, as the students' answers were incomplete or inconclusive.

30,9% of the children characterize themselves as an excellent student, 40,2% as very good, 23,8% as good and only 5,1% as weak.

**Table 11. Characterization as a Student**

Team players	Percentage %
Weak	5,1
Good	23,8
Very Good	40,2
Excellent	30,9
<b>Total Amount</b>	<b>100,0</b>

74,1% of the children play electronic games with their brother or sister, 58,5% with their cousins, 20,5% with their father, 9,3% with their uncle or aunt and 7,8% with their mother. Some of the students provided combined answers.

**Table 12. Relative Team Players at the electronic games**

Team players	Percentage %
Brother/Sister	74,1
Father	20,5
Mother	7,8
Uncle/Aunt	9,3
Cousins	58,5
<b>Total Amount</b>	<b>170,2</b>

According to the students' answers, around half of the parents' opinion (46,6%) about electronic games, is negative, 14,9% have a good opinion and a significant percentage (38,5%) do not have a clarified thinking about the issue.

**Table 13. Parents' Opinion on electronic games**

<b>Team players</b>	<b>Percentage %</b>
Good/Positive	14,9
Bad/Negative	46,6
Do not have an opinion	38,5
<b>Total Amount</b>	<b>100,0</b>

The students of our sample have answered that they are overwhelmed by various emotions, when their parents do not allow them to play their favorite electronic game. These feelings are usually negative, like sadness, anger, unfairness, nerves, disappointment. Among many answers these who gathered the higher percentages are: it is fine/okay (22,4%), sadness (20,2%), anger (13,9%) or feeling terrible (8,0%).

**Table 14. Feelings**

<b>Team players</b>	<b>Percentage %</b>
It is fine/okay	22,4
Sad	20,2
Angry	13,9
<b>Feeling terrible</b>	<b>8,0</b>

Despite the intensive occupation with the electronic games and their emerging addiction to them, a quite high percentage of the students of our sample (68,1%) affirm that they can imagine themselves without electronic games, while 31,0% declare that they are not able to do so. 0,9% stated that they do not know.

**Table 15. Feelings 2**

	<b>Percentage %</b>
Yes	68,1
No	31,0
I do not know	0,9
<b>Total Amount</b>	<b>100,0</b>

The students that state, at a higher percentage, that they cannot imagine themselves without playing electronic games, are those who play on a daily basis (47%) followed by the children that play on the weekend. In addition, those who cannot imagine themselves without electronic games are the male students (33,6%) in comparison to the female students (28,2%). However, no significant dependence between the variants of both cases is found, as the rate of the statistic Pearson Chi-Square is non-significant at a 5% significance level (sig.>0,05).

## 7. Quantitative research results analysis - conversation

There have been important findings from the analysis above, which concern the addiction to the electronic games and its repercussions on sociability, behavior and on the school performance of the students of primary education.

To begin with, it is now a fact that the overriding majority of the students own a computer or a tablet or a smartphone or some game machine, while at the same time they are constantly connected to the Internet, which is necessary for their occupation with most of the electronic games they play. Galloway (2006) mentions that the electronic games constitute a part of the current multimedia culture of the digital technology of the electronic computers and the Internet and form an integral part of the children's daily life. Furthermore, Come's opinion (2004) agrees with the above finding of our research, that the videogames have become one of the most fundamental means of entertainment and are targeted towards the minor consumers.

The processing of the questionnaires has showed that the gender and the age of the students are not usual reasons for differentiation of the occupation with the electronic games, as the percentage of the male and female students that engage themselves with these are almost the same, a fact that is opposed to quite many findings of other similar researches, according to which, there are significant differences as far as the gender is concerned, with male students being more occupied with the electronic games and female students mostly with the social media (Waldo, 2014). In addition, there is also the dominant opinion that the male players tend to present a higher susceptibility to growing an addictive behavior to the online games (Heemskerck et al., 2015). However, as we are about to see in the next paragraphs, even though there was no significant statistic difference found in our research, as far as the gender is concerned about the occupation with electronic games, it is obvious that at many rates the male students tend to misuse more than the females the electronic games, to play more violent and aggressive games and that their behavior is affected due to the long lasting occupation to the electronic games at a higher rate in comparison to the female students of our sample.

The data analysis showed that the male play more than the female students, but there is no significant difference due to the gender or the frequency of use of the electronic games or the time they spend on them. On the contrary, the literature review shows that the male teenagers play more frequently, appear to have more experience and familiarization, feel more confidence about their ability on this area in comparison to the females (Terlecki et al., 2010).

In addition, we concluded that there are numerous electronic games that children use and the most addictive of them are Roblox, Fortnite and Brawl stars. The first one is widely chosen by the female players while the other two by the male students of our sample. Roblox is an online platform game that allows users to design their own games and play a wide variety of different kinds of games that are created by other users, it is advertised as a "fantasy platform" that enables users to create or play millions of three-dimensional online games (SaferInternet4Kids, 2019). This result agrees with the scientific community's placement, that the young female players show a preference on creative games, where they can leave their imagination free and create, and they disapprove of violent or sports games (Egenfeldt-Nielsen et al., 2008).

On the other side, the male students choose Fortnite and Brawl stars, that belong to the shoot-ing games, and which the international literature has shown as the most addictive for the male audience over the last four years. In this category, the players are into battle, shooting with guns aiming to eliminate most of the enemies and to earn in this way many advantages in the game (Mallas, 2019). In this way, the theories of Bartholow and Anderson (2002) are confirmed, that the

industries promote the “masculine” ideal model by creating videogames that reproduce violence and presenting negative behavior patterns and scenes of violent and cruel content (Kondrat, 2015). At the same time, Colwell and Payne (2000) also add, that the boys show a bigger preference and chose more aggressive games in comparison to the girls. According to this finding and taking into consideration the world literature on this subject, we can assume that the users that are attached to violent content games are prone to present a more aggressive behavior and a less helpful one (Griffiths, 2004). In addition, the constant occupation with violent games tends to lead in a gradual desensitization of the young people and accustom them to violent and aggressive behavior.

In that way, minors might barely or not act at all in front of violent scenes in the real world, or in worst case scenario, might commit themselves violent actions having very few hesitation (Gentile et al., 2004).

Four out of ten students prefer people the same age as them at the games, while almost half of them do not mind if their team players are the same age, elder or younger than them. Quite many modern researches state that the addicted players invest in digital relationships and internet friendships with web teammates, as these games function as highly interactive social environments (Young, 2009) and satisfy their needs for social association (Colwell & Payne, 2000). The conclusion above can be confirmed in our present research, as two out of ten children were offered an invitation by an unknown teammate to meet in person and about half of them accepted the invitation. This fact shows that they appreciate internet acquaintances, although it is proved to be a very dangerous behavior. Boys are found to be more susceptible to accepting the invitation in comparison to the girls, who tend to be more reserved in meeting outside of the game environment with an unknown teammate (Egenfeidt- Nielsen et al., 2008).

Despite the fact that the occupation of the students with electronic games seems to be particularly usual, almost seven out of ten of them have a strong will to play with their friends outside in the neighborhood, something that is not quite easy in these days because of the pandemic, as the children belong to the most affected groups from the COVID-19 pandemic and their only shelter for entertainment during their stay-at-home time was to remain in front of the screens (television, computer, videogames, tablet, smartphone) and play electronic games for hours (Elsayed, 2021). The present research showed that the majority of the children choose the outdoor game in the neighborhood and this finding shows that the specific sample of children examined, although the fact that they widely play electronic games, has not reached high levels of addiction, as they do not choose to spend their entire free time playing instead of making social interactions (Galloway, 2006). In addition, Block’s statement (2008) is not confirmed in our research, that children usually make up fake excuses in order to avoid meeting in person with their friends, as they long for social isolation. The girls also seem to be more eager to play in the neighborhood in comparison to the boys, perhaps because they are more able to handle the electronic game (Waldo, 2014), while the boys present a higher tendency to an addictive behavior to internet games (Heemskerk et al., 2015). However, what needs to be taken into consideration in our research is the fact that it was conducted after an extended period of lockdown so the children missed playing outside in the neighborhood.

The students who neglect their homework, sleep late at night, forget to eat and avoid playing with friends in the neighborhood, constitute a quite significant percentage of the total number of students of our sample. Despite the fact that boys and girls do not behave in a different way as far as the neglect of sleep and homework are concerned, the boys and not the girls are those who mostly forget to eat or avoid to play with their friends in the neighborhood.



Moreover, three out of ten students stated that they play electronic games with money, while boys are those who outnumber girls in this matter. This finding is related to Christos's report (2007) that high risk internet behaviors are the digital games abuse and the extensive occupation with them, which are many times related to Internet addiction and web gambling, as when games demand money there are higher possibilities for addictive behaviors.

When children are asked to play electronic games with their relatives, they mainly choose their siblings, followed by their cousins and less by their father or mother. This is an anticipated result, as minor players prefer minor teammates with common interests. However, the literature shows that the jointly reproduction of videogames of the children with their parents is related to lower levels of internalization of negative feelings and aggressive behaviors, as well as the jointly processing of games is related to enhanced pre-social behavior as far as only the girls are concerned (Coyne et al., 2011). This means that if the children would play together with their parents or under their supervision, there would be the necessary control and many negative behaviors could be avoided, like meeting with strangers, sleep, food, homework and socializing neglect, as there is a strong bond between parenting and protection from addictive behaviors. At this point, Bailey et al (2013) add that the parental responsibility has an important role, as it could decrease the addiction levels of the children to internet games, so it is highly suggested that the parents supervise their children when they are in front of any screen and mainly, if possible, also play with them.

As far as the school performances are concerned, seven out of ten students characterize them as very good to excellent and only a few of them as very low. The fact that the majority of the students declare good academic performances is very positive, while Skoric, Teo and Neo (2009) claim that the addiction tendencies are strongly associated with negative results at the school performances in children aged 8-12 years old. However, what should be noted is that the statements about the school performances are personal assessments of the students of our sample themselves, so the results show a subjective perception of the students and not an objective transcript of the teachers, so significant differences can be noted.

We also noticed that around five out of ten parents have a negative opinion about electronic games, four out of ten do not have any opinion on the subject and only one out of ten has a positive one, all these results according to the personal answers of the students which definitely are subjective up to some point. The fact that half of the parents have a negative opinion about videogames, as the students suggest, can contribute to the need to adopt means of prevention and intervention to this addictive phenomenon. As Dyregrov specifically mentions (2011) it is highly recommended that the situation is set under control, where children will be able to play in a safe environment, at a specific time, with the appropriate games and the parents will stay alert and be able to act in time. On the other hand, the side of the parents that have a positive or no opinion at all, as the students declare, agrees with Siomos's et al report (2012) that some parents tend to underestimate the level of involvement of the screen in comparison to the assessments of their own children, pointing out that the precautions of parental safety, during the Internet use, only have a small preventative role and cannot protect teenagers from the addiction to electronic games and other internet behaviors (Siomos et al., 2012).

Regarding the feelings that the sample of the students of our research expressed they have when the contact with the electronic game is interrupted, these are mostly negative and the most dominant are sadness, anger, unfairness, nerves and disappointment, when their parents do not allow them to play their favorite electronic game. In this way, it is confirmed that the video-

games are especially addictive, creating negative feelings to the minors when an effort of avoiding them is made (Haagsma et al., 2013). According to the literature, there are many outbursts of anger when the minors disconnect, especially in the case that the game machines or the Internet connection are violently removed. At the same time, they deeply feel monotony and wronged, when they do not have some electronic device in hand to play, as some minors exclusively seek for pleasure at these devices (Colwell & Payne, 2000).

Furthermore, young players are sunk deeply into the internet games, spend great amounts of time and become emotionally unavailable. The situation above has as a result the dominance of negative feelings, as those stated in our research, while it is also usual at some cases that depressive behavior and ambivalence are reported, especially when the access to the computer and the Internet is difficult or forbidden (Block, 2008).

However, despite their intensive occupation with electronic games and their appearing addiction to them, it is hopeful that seven out of ten students in our research state that they can imagine themselves without electronic games. The students that state they cannot imagine themselves not playing electronic games, are those who play every day, develop anti-social behaviors, neglect their personal needs, play games with money and are in this way more prone to become addicted at some point. The percentage of these students is of high significance and should seriously concern the scientific community in the future so that actual measures are taken for prevention and dealing with the addiction to electronic and internet games.

## 8. Conclusions - Suggestions

Undoubtedly, the use of new technologies in education as well as in the everyday social and personal life, has made technology a part of the children and teenagers' life. More and more minors are "hugging" tablets and smartphones for many hours per day. This has various consequences in their social and personal life. In a relevant qualitative research conducted by Ratini (2021), a 12 year old child answered that "if you take my phone away, you take away a part of myself". The concerning use of the new technologies is also a harmful and dangerous situation, as are the addiction to gambling and substances, the obsessive-compulsive disorder and control of impulse disorders.

As a result, the researchers continuously study the new and rapidly developing addiction to electronic games phenomenon and its relevance with the psychosocial development and the children and teenagers' behaviors. In spite of all the efforts made, the literature still lacks many researches on this subject, as it appears to be a quite new and constantly developing psychosocial phenomenon that will definitely concern the scientific community over the next few years (Farchakh et al., 2020).

The research on electronic games and their repercussions on the minors will have to be checked regularly, as it is a rapidly growing phenomenon that shows great changes from year to year. Avoiding electronic screens and their extensions, like the electronic games, is probably a non-realistic suggestion, because nowadays computers and the Internet are an integral part of the personal, social and educational life. The purpose of this research is not the demonization of the use of electronic screens (computers, tablets, smartphones, etc.) but their confined use mainly by the minors.

In Greece there are also very few researches until today that are based on addicted users cases, which could provide us with significant quality data and a deep analysis of this complex

phenomenon. Most researches have been conducted in order to find the addiction percentage to electronic games and not the deeper causes and the consequences of the addiction. The preferences of the minors on specific electronic games might have also been studied by some researches, however the reasons why these games become addictive have not been studied sufficiently.

Apart from the young people, the researchers should also study the role of the parents and the teachers and reach conclusions that could enable the restriction of this phenomenon. The parents are the first ones to set and also follow the limits about the use of electronic games and provide the children with the right information about the dangers that the long occupation with the electronic games has. The parents should also not forget that the limits should be flexible, realistic and achievable as the children grow up.

At the same time, the state should ensure that organized social services with social workers and psychologists are quickly established at the primary and secondary education schools, so there is the appropriate psychosocial support and advice available not only for the students but also for the family and educational part, on issues of addiction to electronic games and other dangerous internet behaviors.

Lastly, the effort at the current prevention of addictions centers is significant, and also at therapeutic treatment units, at services and support lines, where parents can always address to when they observe their children's problematic behavior that is related to the Internet and electronic games use. In addition, a good effort to deal with the problem would be the conduction of educational programs of training and education of the teachers by qualified scientists of the above units, aiming their information and sensitization on crucial issues of problematic use of electronic games and the Internet by minor students.

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## Biographical Notes

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ΚΩΝΣΤΑΝΤΙΝΟΣ Θ. ΠΑΠΑΔΗΜΗΤΡΙΟΥ

Ο ΜΙΚΡΑΣΙΑΤΙΚΟΣ  
(ελληνοτουρκικός)  
ΠΟΛΕΜΟΣ  
1919-1923

ΑΠΟ ΔΙΟΙΚΗΤΙΚΗ - ΣΤΡΑΤΙΩΤΙΚΗ ΣΚΟΠΙΑ



ΕΚΔΟΤΙΚΗ  
ΑΘΗΝΩΝ



ΚΩΝΣΤΑΝΤΙΝΟΣ Θ.  
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... εκτιμούμε πως όλα τα στοιχεία συγκλίνουν υπέρ της άποψης-πολιτικής Βενιζέλου, ότι δηλαδή, μέσα στην πολυπλοκότητα του διεθνούς περιβάλλοντος και τα ποικίλα συμφέροντα των Μεγάλων Δυνάμεων (κρατών και πολυεθνικών εταιριών που τα επηρέαζαν), η Ελλάδα κατά την περίοδο 1919-1920 πέτυχε την καλύτερη ευκαιρία της για να πραγματοποιήσει την απελευθέρωση των Ελλήνων της Ιωνίας και την επέκταση της ελληνικής επικράτειας, σύμφωνα με τα οράματα και την κυρίαρχη ιδεολογία της εποχής, σώζοντας ταυτόχρονα και τους ομογενείς από τον κίνδυνο γενοκτονίας που είχαν δρομολογήσει οι Τούρκοι εθνικιστές. Αυτήν την ευκαιρία άδραξε ο ίδιος και αυτό ήταν το καλύτερο που μπορούσε να πράξει ένας ηγέτης που το όραμα του για το Κράτος, περιελάμβανε την απελευθέρωση από τον ζυγό της σκλαβιάς των πολυάριθμων Ελλήνων, που διατηρώντας ένα υψηλό οικονομικό-κοινωνικό-πολιτιστικό επίπεδο, διαβιούσαν στην ανατολική πλευρά του Αιγαίου. Και εκείνη την εποχή της έντασης των εθνικισμών, η απελευθέρωσή τους και συνέφερε και μπορούσε να συμβεί με την επανάκτηση, στρατιωτική και πολιτική, των προαιώνιων ελληνικών πατρίδων όπου διαβιούσαν, δηλαδή των εδαφών της Ιωνίας. Η επιτυχής έκβαση αυτού του εγχειρήματος εκείνη την περίοδο που όλα φαίνονταν να είναι σε θετική τροχιά (συμμαχίες, στρατιωτική ισορροπία, οικονομικά μέσα), θα δημιουργούσε και τους όρους διαιώνισής του, δηλαδή την με τέτοιο τρόπο ανάπτυξη των ελληνικών περιοχών και των πληθυσμών τους που θα απελευθερώνονταν, ώστε να εξισοροπούν μακροχρόνια την ισχύ και τη ζηλοφθονία των γειτόνων τους, Τούρκων του εσωτερικού της Μικράς Ασίας...

# New governance and the rationalisation of Greek education in conditions of financial crisis. Analysis of reforms from a Weberian perspective affecting the rationality of organisational power relations

Vasiliki Kantzara, *Panteion University of Social and Political Science*

## Η νέα διακυβέρνηση και ο εξ ορθολογισμός της ελληνικής εκπαίδευσης σε συνθήκες χρηματο-οικονομικής κρίσης. Ανάλυση των μεταρρυθμίσεων ως προς τη λογική οργάνωσης των σχέσεων εξουσίας από βεμπεριανή οπτική γωνία

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### ABSTRACT

The present article aims to examine the reforms introduced by the governments in the education system in crisis conditions (2010-2015) from a Weberian perspective. To this end, firstly, we explore affinities between the notion of Weber's rationalisation to the 'new governance' approach to running institutions as it emerged after the Second World War in the West. Subsequently, we examine the relation of the 'new governance' approach to educational reforms in Greece during the period under study and its effects in organisational terms.

**KEY WORDS:** Greek education, financial crisis, reforms, Max Weber, new governance, educational reform, rationalisation.

### ΠΕΡΙΛΗΨΗ

Το άρθρο εξετάζει τις μεταρρυθμίσεις, που εισήγαγαν οι κυβερνήσεις στο εκπαιδευτικό σύστημα στην Ελλάδα σε συνθήκες χρηματο-οικονομικής κρίσης (2010-2015) από βεμπεριανή οπτική γωνία. Εκτός από τα μέτρα «λιτότητας», τα δημόσια ιδρύματα υποβλήθηκαν σε μεγάλο βαθμό σε δομικές «διαρθρωτικές προσαρμογές». Ακολουθώντας τις αρχές της Νέας Διακυβέρνησης, η έννοια της «προσαρμογής» υποδήλωνε την πρόθεση οι θεσμοί με τις μεταρρυθμίσεις «να μειώσουν το κόστος» λειτουργίας, να γίνουν «αποτελεσματικοί» ενώ θα βελτίωναν και το επίπεδο ποιότητας των παρεχόμενων υπηρεσιών.

**ΛΕΞΕΙΣ-ΚΛΕΙΔΙΑ:** Ελληνική εκπαίδευση, εκπαιδευτικές μεταρρυθμίσεις, χρηματο-πιστωτική κρίση, τυπική ορθολογικότητα, Μαξ Βέμπερ, απρωσωποποίηση θεσμικών σχέσεων, 'απο-σύνδεση' μέσων και σκοπών.



## 1. Introduction<sup>1</sup>

The present article aims to examine the reforms introduced by the governments in the education system in crisis conditions (2010-2015) from a Weberian perspective. To this end, firstly, we explore affinities between the notion of Weber's rationalisation to the 'new governance' approach to running institutions as it emerged after the Second World War in the West (Eagleton-Pierce, 2014). Subsequently, we examine the relation of the 'new governance' approach to educational reforms in Greece during the period under study and its effects in organisational terms.

After the so-called 'onset of the crisis' in 2009, Greece entered a phase of sustained disbelief in the country's potential to handle public finances by her partners in the European Union and the international financial markets. The 'bail out' Greece received during the period 2010-2015 was not help in the strict sense of the word but a loan (admittedly with low interest) that has to be paid back in due course. The public policy dictated and signed in three 'Memoranda of Understanding' with the 'troika', the three important agents in the bail out, namely European Council, European Central Bank and International Monetary Fund, did not leave education outside the deal (for detailed information of this section, see Kantzara 2016, 2018, 2020).

More specifically, in Greece during conditions of financial crisis extensive, except the 'austerity measures', a number of 'structural adjustments' were imposed by the 'troika' to combat the 'malfunctioning' of institutions and restore credibility of the country in the financial markets. The framework and justification for the 'structural adjustments' were provided by the 'new governance' approach, that promotes institutional reforms in order to increase 'effectivity' of institutions and improving the quality of service at a low cost. The legitimisation and justification of the imposed reforms in Greece were done by using the concept rationalisation ('*exorthologismos*'). This concept in Greece means making rational arrangements which persuades the public, as a dominant explanation of why institutions do not function 'properly' is that because they are 'irrational' ('*paraloga*').

However, that concept rationalisation in philosophy contrary to what many people think, means to design something carefully to function according to the idea we have about how it should be, that is, what form it should take, so that it can function and produce the results we aspire. Thus, rationalising means that the targets, the means, and the expected outcomes are designed carefully according to certain ideas and values. This notion of rationality was treated in Weber's work and this is how we shall employ it in this text. Furthermore, according to Weber the rationalisation prevalent in capitalism resulted in the 'disenchantment of the world' as the world loses its magic, because it becomes like a machine in which the individual occupies but an insignificant part. Thus, I became scientifically speaking curious as to what exactly the government meant by rationalisation and what were the consequences at first instance in education.

During the 'crisis', in the name of rationalisation, every social institution whose management is in the hands of the government was subject to reform, starting from local government institutions (the 'Callikrates' plan in 2010), the public health system, the education system, labour relations, insurance and pensions, taxation, and even changes in statistical data collection methods. Focusing on education, the reforms were a mixture of administrative, budgetary, and organisational measures, while relatively few changes were introduced at the level of learning and teaching. The 'Athena plan' in 2013 has been an example of 'restructuring' tertiary education focusing on merging university departments aiming at making the system more manageable but with ambivalent effects till today.

The ramifications of the reforms are complex and multiple to say the least. At first instance, the education reforms resulting in a 'shrinking' of the system as budgetary cuts went hand in hand with organisational changes, and layoffs of personnel, both administrative and teaching. At the same time, restructuring increased spending that were related to outsourcing of certain services, such as cleaning or security. This seemingly contradiction was the second reason to start digging further into the field of the institutional reforms. The results of extensive research on the subject were previously published, and the article at hand is based on them (see Kantzara, 2018, 2020).

An effect of the introduced changes was that relations of power within institutions were designed to change but also the relations of education to other public or private organisations were the subject of reform. In this, we observed that there created a room and a 'distance' between various positions and the same time these are depersonalised through by laws and other formal regulations that were institutionalised. This however influences the democratic running of institutions as relations of power are further devoid of persons and become impersonal. In this text we shall refer to the way relations between the various posts in an organisation, notably the tertiary education institutions are reformed.

The article includes seven sections. The next one, the second section, examines the notion of rationality in Weber's work. The third section examines the historical roots of the modern meaning of new governance and the way it was related to institutional reforms. The fourth section schematically refers to educational reforms in Greece and it focuses further on tertiary education. The analysis and interpretation of the reforms follows in the fifth section and the texts concludes in the sixth section.

## 2. The meaning of rationality in Max Weber's work

**R**ationalism', 'rationality' and 'rationalisation' are central concepts in Weber's work that define humans' capacity to reason and to undertake action accordingly (for an attempt to define the different concepts, see Swidler, 1973). These concepts guided his studies in ancient religions in order to understand how humans translate ideas into action in the world (rationalisation) in an attempt to shape the world according to a set of preconceived ideas about how the world should look like if these ideas (good ideas usually) governed its functioning (Kalberg, 1980). In doing so, humans modify their behaviour, and if this is done collectively, then they bring about changes first in the social world they live in and then they affect change at a larger scale in society (see Brubaker 1984). Rationality and rationalisation are concepts used by Weber to explain societal changes as well as social action undertaken by individuals as agents of praxis in order to achieve various ends – "utilities" in Weber's terminology, meaning 'goods' and 'services' (Weber 1978: 68).

It is generally understood that the exact meaning of rationality and rationalisation is difficult to pin down, according to scholars who studied Weber's work (Brubaker, 1984, Eisen, 1978, Kalberg 1980, 1990, Levine, 1981, Mueller, 1979, Swidler, 1973). In general, following Kalberg's work (1980), rationality is distinguished in different forms, such as practical, substantive, and formal. Practical refers to day to day considerations of individuals and the logical actions they undertake to fulfil a set of everyday needs. Substantive rationality refers to value orientated action undertaken by an individual while formal is related to adhering and following a set of rules. In substantive rationality, the decisive criterion of judging the course of an action is a social value,

and in Weber's terms usually this is related to religion. Formal rationality on the other hand, is characterised by a peculiar means-to end calculation that has as criterion the profit of an action (zweckrational), that is what one gains of an action perceived purely in these terms.

Furthermore, according to students of Weber's work the characteristics of formal rationality are the following: the *quantification of (qualitative) data*, a usually 'cool blooded' *calculation of best means to ends*, being *concerned with ensuring predictability*, trying to *attain control in uncertain conditions* (or eliminate uncertainty), and *having irrational consequences* (see Ritzer 2000: 242). One of the effects refers to the limitation of individual freedom (see also Levine 1981).

In a certain epoch in history, formal rationality prevailed in different spheres of social life, such as in the economy, in the Protestant religion and in the administration, most notably the bureaucracy. Rationalities that permeated these institutions converged at some point as an 'ironic turn of history' and gave capitalism the grounding it needed to grow and develop further (Brubaker 1984). More particularly, the seeking of profit dimension of this form of rationality, comes from the economy, the seeking for proof of having the grace from God in the worldly activities comes from Protestantism, while the formal dimension, that is adhering to rules, originates from bureaucracy.

Formal rationality, we could argue, is embodied, and embedded. It is embodied as employees may manifest an 'ethic of conviction' prevalent, for instance, in bureaucracy: the holder of an office is persuaded and confident of his accuracy and efficiency. It is embedded in institutions, in the way they function, as for example, in the economy, politics and religion. Thus, formal rationality, just as substantive rationality, functions 'from within' the individual, motivating him/her from inside his/herself. The prevalence of this form of rationality functions also 'from without', that is, pressure is exercised on individuals, for it (rationality) is prevalent in the way institutions operate. The combined effect of both – 'from within' and 'from without' – is that individual behaviour is forced to change. As a result, societal change may be accelerated, especially when the worldview that functions at the base of substantive rationality finds a social stratum as a 'carrier' that affects individual behaviour collectively (Brubaker 1984).

Modern bureaucracy and capitalism embody the formal type of rationality. In Weber's own words:

"... Bureaucratic rationalization, too, often has been a major revolutionary force with regard to tradition. But it revolutionizes with *technical means*, in principle, as does every economic reorganization, "from without": It first changes the material and social orders, and through them the people, by changing the conditions of adaptation, and perhaps the opportunities for adaptation, through a rational determination of means and ends." (Weber, 1978: 1116).

A central key point of Weber's work is that social change entails two different levels: 'from within' and 'from without'. The first term denotes those beliefs and rationalities an individual has that affect changes 'from within' him/herself. The second term denotes that change comes from altering social conditions that affect available opportunities to individuals, thus change may come 'from without'. This distinction helps us analyse the educational reforms and the changes these impose on institutions and on individuals working in them.

Moreover, the 'iron cage' (stahlhartes Gehäuse – literally the hard as steel building) metaphor is well known, and it is an effect of excessive rationalisation: both the bureaucrat and the worker feel trapped in 'cog' and no matter what they do the world goes endlessly on. In addition, creativity is 'smothered', and emotions are intentionally set aside because they are seen as

the unpredictable factor. The emphasis is thus only on reason and what is reasonable, seen from the perspective of gain and the best means to ends. Emotions reside however in values and the eradication or the attempt to abolish emotions as irrational has as an effect that even greater irrationality arises. In addition, formal rationality has no room for considerations of 'equality, democracy or caritas' for these distract a person from her/his goals and the actions necessary to achieve them (Brubaker 1984).

Furthermore, we could say that reason, logic and rationality signify processes of the intellect that involves a certain way of thinking which guides human action. Rationalism as a process of purposeful reasoning indicates the conception of goals and means to achieve a desired end that takes place in the imagination and in the intellect. Rationality then in its course unfolds a way of reasoning that is based on calculation of for instance other people's reactions or how certain situation will evolve when following a course. Thus, rationalism indicates a syllogism (that is reasoning) that includes a calculation of ends-means in a certain context. When the context is controlled, then it follows the undertaking of a task shall have a greater possibility to succeed. To my view, a central aspect of rationalisation is to put ideas into practice in order to modify and give form to the world according to one's idea about how things should be in order to have fruitful results. In Marxian terms, we could call such an activity as objectification, that is building the blocks of the world according to the idea one has about them. It is this aspect that it is important when we analyse and try to understand recent reforms proposed under the name 'new governance'.

For the present inquiry, we now turn to the issue of governance and examine how the embedding ideas into organisations started.

### **3. Concepts describing relations: the emergence of the contemporary notion of governance**

**T**he notion of governance with its current meanings emerged after the Second World War and gradually dominated globally as a solution to problems of steering institution both at the public and private sphere. The word governance comes from the Greek "kyvernan" (κυβερνάω) and the latin word "gubernare" (to steer) (Merriam-Webster, 2018).

The current understanding of governance as steering rather than as giving direct orders originates from the critique that arose against the malfunctioning of multinational corporations and governments. Large companies were criticised among other things for 'foul play' and a lack of social responsibility. Governments were criticised for excessive spending of public money, nepotism and for providing low quality of services. The movement that voiced the previous critique comes from different sources, it was ideologically diverse and focused on the practical application of ideas on the proper management of large organisations, whether in the public or in the private sphere. According to Eagleton Pierce (2014), emphasis was placed on "steering" through instructions and advice within business, rather than giving direct orders to employees. This approach to human resource management, therefore, emphasised internal incentives to mobilize employees, thereby adopting mild enforcement tools (see Pal 2007). The spectacular expansion of managerial positions is to be attributed to the 'management' revolution that took place and advocated similar changes in organisation structures to improve quality of services. The transfer and implantation of similar management structures somehow makes institutions seem alike though

they may be different. The extensive changes have been criticised as they led to an “institutional isomorphism” (DiMaggio & Powell, 1983).

The characteristics of the new era and the ‘new Governance’ were and continue to be: ‘competition’, the ‘evaluation of employees and services’, ‘transparency’, ‘accountability’ for decisions and actions, and the outsourcing of tasks, that are not directly related to the products or services provided by a company. The new governance aimed on the one hand at the quality, efficiency and cost reduction of the services provided and on the other hand at the promotion of ‘good’ or ‘correct administration’ (that is good governance). The reforms were been spreading in the western world since the 1970s. The emphasis on ‘efficiency’ together with ‘reducing costs’ gained more ground, as these were very appealing and were associated with the notion of a ‘modern’ governance. At the same time, emphasis was given to motivating employees through more participatory processes in their work. ‘Rigid’ hierarchies were questioned, and horizontal networking was facilitated. The ideological movement in question was proposing a model of ‘governing without government’ (Vrinioti 2017). This meant that a system, whether it was a company or a public organisation, could be self-governed and self-regulated without the direct interference of an authority – from above – but controlled ‘at a distance’ (Miller & Rose 1990, Raab 1994, Vrinioti 2017). This continuous movement reshuffles relations in the workplace in the name of providing for instance ‘better’ services. In the northern European countries, an encompassing name used for the reforms was ‘reorganisation’ while in Greece was ‘rationalisation’.

The success of the proposed model of ‘New Government’ according to a point of view was dependent on whether these reforms were continuous, that is, always ‘on the go’ (Pal, 2007). Part of these reforms that referred to management was subsumed under the name ‘New Public Management’ (NPM). The specific objectives of the reforms were formulated in such a way that seemed quite neutral, that is to ‘improve performance’ and ‘efficiency’ in companies, organisations, or governments; these were legitimised on the basis of ‘improving the level of the services’ provided to citizens by being more ‘client centered’ (Pal 2007). In the relevant vocabulary, slowly by slowly other concepts were incorporated such as ‘excellence’ and ‘innovation’ to further boost this reform movement. This development in turn has accelerated processes of privatization as it promoted the development of the ‘private’ initiative and accelerated the processes of private and public sector cooperation in financial terms. Participatory democracy, which was seen as a way of solving administrative problems, was translated as a reinforcement of the ‘private’ initiative. That is why we often hear today that the ‘cure’ of public problems will come from the ‘private sector’ or the ‘private initiative’.

Moreover, Pal (2007), who examined the role of the Organisation for Economic Co-operation and Development (OECD) in promoting a certain form of governance, argues that privatisation has been part of a wider reform movement, part of which was also the manager’s movement. This movement, which led to a spectacular increase in managers’ positions (called ‘managerial revolution’) in all businesses and services, whether in the private or public sector, has relied on famous at the time managers and their work, around the 1960s (Rizvi 2016).

These ideas were translated into public policy, and the new governance necessitated ‘structural reforms’ or ‘adjustments’. These reforms use a framework that includes concepts such ‘transparency’, ‘efficiency’, ‘accountability’, ‘improved level of service quality’. The reform movement started more than thirty years ago, and the aforementioned ideas were embedded and implanted as it were in all public institutions. Though application of these ideas varies according to context, the literature on this subject is very critical as to the societal effects.

The connection of the new public management with the doctrine of neoliberalism goes through the World Bank. The financing of developing countries was associated with terms of “good governance”, that is, democracy, transparency and accountability as procedures for the administration of a state. An aspect of this policy worth noting was the fight against corruption in the administration and nepotism. Later, the financing of the states of the developed world was linked to the conditions of good administration. This policy was also adopted by other international organizations. In particular, the Organization for Economic Co-operation and Development (OECD) has been adopting a similar policy in education since the 1990s (OECD, 1995).

Governance, in short, has been the notion as a vehicle for promoting changes with the term ‘structural adjustments’ in the institutions of the state. In education similar efforts have been established and promoted through the Bologna Declaration (1999) and the Lisbon Treaty (2001). Many of the changes introduced in Greek education are dictated by the above conditions and by the so-called “White Paper” of the European Union (Prokou, 2013, 2014).

Ball (2009) claims that the ongoing transformation of the state constitutes ‘de-regulation’ and ‘recalibration’ of the state. These processes have so far questionable consequences for the management of public goods in terms of equity and justice, the reasons for which the state as an institutional entity was established in the first place.

Parallel to this, it is worth mentioning here the growing literature on the effects of applying the current conception of governance in education. The concern expressed by social scientists refers to the growing privatisation of education, called also ‘academic capitalism’ (see e.g., Ball 2009, Burch 2006, Busch 2017, Jessop 2017, Wilkins 2022).

#### **4. Education changes, formal relations of power and rationalisation in Greece (2009-2014)<sup>2</sup>**

**I**n education, the policy followed was characterised by a mixture of measures on budget, personnel, study programmes, and management. In relation to our inquiry in this text, I shall refer only schematically to the changes and focus a little more on the management changes in tertiary education. The changes introduced started with the famous by now Law 4009 (in 2011) followed by a number of laws and ministerial decrees (for detailed info, see Kantzara 2020). The law 4009 foresaw several new measures in administration and management level and followed by other legislation.

The research material used includes education policy texts and legislation (2009-2014), reports of international organizations and statistics, relevant literature, discussions with colleagues, and auto-ethnography from my workplace as I experience the changes from within. The research questions posed were: *What kind of changes as part of the education reform were introduced in education? And what do these institutional reforms change in relation to the organisation in terms of rationalisation?*

Taken as a whole, educational reforms are based on ‘austerity measures’ but include management changes as well as changes that influence learning and the possibility to study.

In this text, indicatively, we mention the following changes (for extensive references and data, see Kantzara, 2020):

### *Changes of a financial nature:*

- Increasing costs for outsourcing of services and institutionalising of new measures (e.g., evaluation, but also cleaning and security services).
- Budget cuts across the whole education system, and in tertiary education between 50% -70%) (Effect: infrastructure deterioration, and lack of necessities, as for example no heating oil in schools)
- Cost reduction due to digitization of services (e.g., The 'Evdoxos' platform to manage the free distribution of textbooks to students, and the 'Apella' platform for managing new appointments and promotions of academic personnel)
- Establishment of a Company for the 'exploitation' of the property of university institutions
- Depriving higher education institutions from their cash reserves, in the context of 'debt restructuring', known as 'haircut' that was meant for the private, the Private Sector Involvement (PSI) in 2012, but it took place in the public sector.
- Salary cuts and allowances up to 30%-40% depending on category of teachers and administrative personnel
- Cuts in spending on educational material students were receiving for free. (Effect: transfer of state responsibility on individual students).

### *Changes in labour relations:*

- Increase of working hours and tasks
- Layoffs of personnel (administrative and teaching) (e.g., up to 20.000 secondary education teachers out of 170.000).
- Longer service years to pension
- Instituting the analogy of 1/10 for new personnel: for every 10 employees leaving service only 1 new is appointed. After 2015-16, it was reduced to 1/5.
- New appointment and promotion procedures for academic personnel, presumably better as the department's involvement was reduced.

### *Changes in school management, especially in tertiary education*

- Merging of schools and new rules for administration
- Establishing by laws and other regulations that institutions had to set up
- Introduction of vocabulary from business administration: 'transparency', 'accountability', and 'effectivity' to run institutions in tertiary education
- Introduction of management structures from business management: In 2011, the Council of Institution and Secretary of Institution were established as two new organisational posts at the top of the management positions (see below Fig. 1).
- Ramification of institutional power relations: Establishment of Schools or Faculties (union of departments), Provost and Provost Council, while there was a reduction of student participation and representation in the decision-making committees and institutions of the university.
- Autonomy of Institutions: it was promoted by making them gradually responsible for finding funds for their function
- Introducing the measure of 'evaluation' as a means of governance. The quality of education acquires quantitative indicators of analysis, thus converting qualitative data into quantitative.
- Revamping the Hellenic Quality Assurance and Accreditation Agency (HQA) to carry out the tertiary education evaluations (it was founded in 2006).<sup>3</sup>

In relation to the new posts, and to make clear what I mean, a figure follows:

**Figure 1: Management changes in tertiary education**

Management structure before the reform	Management structure after the reform
Senate-Rector-Rectors' Council	Council of Institution
	Senate and Rector – Adjunct Rectors
	Secretary of Institution
	Provost – Provost Council
Department	Department (or Study programme)
Section (of Dept.)	Section (of Dept.)

**Note:** The management structure before the import of the changes was simple and linear. Following the changes, the structure of the institution as an organisation became more complex, and hierarchical. Communication takes place in writing and therefore there is an increase in bureaucracy, while the administrative personnel was paradoxically reduced.

It is worth noting that the government in 2015 brought about changes in administration, and the Council of the Institution was abolished. This however is restored again, with a new conservative government in power that passed a law in 2022 that foresees again the 'Council of Institution' as the highest position in the management structure of tertiary education institutions.

Returning to the reform: the formal positions created should now function according to the distinction of competencies and responsibilities that would be based on the Internal Regulation of the Institutions. At each level of administration, the adoption of a regulation was to be drafted that would provide the basis for the relationships of students, teachers and administration. It took almost 10 years to effectuate these regulations. At Panteion University, for example, the Internal Regulation was passed by the Senate at the beginning of 2021. The regulation, however, for postgraduate studies seemed easier to establish and it was applied soon after the legislation imposed it.

The reasons, according to the official discourse on the reforms were similar to those in other countries, namely the 'structural adjustments' were 'rationalising' the education system, in order to 'improve education', 'aligning' it with other European countries education systems', promoting 'excellence', and 'innovation' gearing it towards employment serving the 'needs of the labour market'. At the same time, education policy is geared at making tertiary education responsible for its own funding.

The discourse on the necessity of reforms is expressed in the Governor of the Bank of Greece speech when presenting the annual report (2015):

"The road to growth entails knowledge, research, innovation and lifelong learning. The exit of Greek society from the crisis can only be achieved through its transformation into a society of creative citizens, capable of preserving and expanding its human capital stock. In this context, the education reform currently being debated, which forms an integral part of the national growth strategy, must be based on five pillars: (a) evaluation of the Greek education system at all levels with a view to enhancing innovation and entrepreneurship; (b) rationalisation of curricula across all educational levels, as well as of the functioning and governance of higher education institutions, while enhancing the efficiency and autonomy of public educational units; (c) break-



ing the hold of corporatist interests on the education system; (d) increasing funding, which still remains low; and (e) transparency at all levels" (Bank of Greece 2015: 26-27).

The proposed reforms in this excerpt are organised around the notions of 'efficiency', 'autonomy' or 'transparency' that seem neutral enough and are self-explanatory. The notions are presented furthermore as instruments and results of desired change. Except the low funding there is no reference to social conditions, or to the world of education from inside and to the multiple functions it performs. Education becomes abstracted from its particularities and its diverse aims; it is presented only as a medium to acquire employment as though nothing else matters. The proposed reforms conform to the new governance approach to education as it is expressed by international and supranational organisations, most notably financial organisations. And this is very problematic, but the space does not suffice to articulate in more detail our criticisms as to why financial institutions speak on matters best approached from a pedagogic, political, and social aspect.

**A note on impact:** some of the effects of the measures to respond to the crisis combined with the education policy during the period under discussion were the following: first of all conditions of work have deteriorated adding to a feeling of precariousness due to layoffs and severe salary cuts. Gradually, things start lacking, from stationary material to heating oil. Infrastructure maintenance was left to itself. In addition, tasks have multiplied, and work has been intensified, due to new regulations, evaluations, combined with layoffs of personnel and increased bureaucratic work. The functioning of committees, new councils, and new procedures required more time to digest the regulations and more written documents were produced than ever before.

On the whole, one could argue that public education is being gradually privatised as education costs are rolled over to families who have to spend more for their offsprings and to teachers as they have to find other means to support themselves because of their diminished income. Teachers at all levels of education have to spend more money of their own in order to do their work and in this way, they contribute directly to funding of the education system by covering up expenses.

There were many more changes as well as effects than sketched above. For the purpose of this paper, I would like to focus on three: the new posts created in the administration, the reduced budget, and the evaluation of work performance.

## 5. Analysis and comments on changes in tertiary education

**T**he education system in Greece underwent changes that affected the structures of administration and the managing of education, especially tertiary education. The changed affected the way formal institutional relations of power (within institutions) are organised. At the same time, the way institutions relate to other institutions also underwent changes.

Within institutions, we notice that new posts are created. This structure of steering denotes a distinction in competences and the same time decision making is ramified between different institutional organs. There is a certain ramification of formal positions and communication is multiplied, that is the 'paperwork' is increased while the personnel, both administrative as well as teachers, is reduced. The institutionalisation and the communication via written document between the different posts makes them more *distant* on the one hand and on the other, more necessary to each other. Formal relations become more *distant* and more *depersonalised*, while

the reference to each other for decision constitute each other indispensable. Institutions are required to introduce formal procedures at every step of their functioning by introducing bylaws and statutes. The new arrangements make personal contact in vivo less important for decision making, minimising perhaps the possibility of conflict or deals 'under the table'. In a certain way new 'check and balances' in the management structure were introduced by creating new posts and by instituting the following of certain bylaws at every level of the administration. In my view, these measures also facilitate control of decision making within institutions by the government, that is, 'from a distance'.

However, institutionalising various bodies, adding posts to an organisation, distinguish competences, to my view, create a network of relations through which governance is carried out. In the literature this process is called 'coupling' and 'decoupling' strategies or processes to steering organisations according to new institutional theory (Hasse & Krücken 2014). In Greece, *the introduced changes make the system of governing opaque instead of more transparent, because among other things the lines of command become longer*. A side effect of this network of decision making is that the responsibility of decisions is thus diffused: no one is personally responsible, though everyone as part of an institution is accountable.

The organisational changes were imposed not only by legislative but also by introducing evaluation as a policy instrument that has been associated with budgeting. Authors named this phenomenon 'decentralised centralism' (Karlson 2000). In a few words, though the state gradually withdraws from direct steering of education it is still prevalent through regulations and laws that institutions have to conform to, in order to secure their public funding. These new organisational structures change the ways domination is exercised, it becomes *more impersonal, more formal, and more distant* than before but also closer in a way to institutions and individuals though evaluating their work-related activities.

These changes are 'from without', part of the system of governing, the question is what makes individuals to abide, follow or accept on the whole the introduced changes. The means to eradicate resistance has been a combination of the threat of discipline measures and internal motivation. The latter was succeeded through the measure of evaluation of work performance. In the relevant discussions with colleagues in and out of the university I am employed, I noticed that some academics perceived evaluation of their work as 'recognition of their value as scientists', which to their view was not adequately done by their colleagues or departments. Others saw evaluation as liberating them of the pressure and influence of the department on their promotion opportunities. And some others in high administrative position saw it as a means to enforce control and compliance to colleagues. In a few words, the compliance of employees and institutions was facilitated by external control and the threat of disciplinary measures and internally by the meanings evaluation carries as recognition of one's value.

At the same time, because of severely reduced funding and salaries, institutions and teachers were asked to become more 'opportunistic' in their behaviour and seek actively to find the funds needed, either by applying for funded projects or 'exploit' the assets they have at their disposal.

From the above it becomes apparent that formal rationality found its way to be imported in the education system in Greece. However, the changes introduced clashed with pre-existing forms of how relations were organised based more on a traditional, and pro-capitalist form of rationality, that were based more on personal rather than impersonal contact.

The rationalisation of action and of the relations in education introduced by the public policy including education had by no means the desired effects. The education system did not turn overnight into an 'easier' to steer institution, and traditional relations of power retained their character albeit having now a more 'neutral' and objectified status based on formal rules. It is worth examining how the application of ideas borrowed from international policies receive a meaning, and how when applied these get different connotations by the actors whom the changes refer to.

## 6. Concluding remarks

**T**hough there are certainly good intentions behind policies in education, it seems this does not suffice to have the desired effects. A reason lies in the fact that policies of any kind disregard that they are conceived through ideas that are rational in their own special way, for they are influenced by ideology, cultural origins, religion, and interests and they do not constitute a 'neutral' instrument.

The application of even good ideas does not necessarily mean that they would produce good results. There are many steps between conception and application, and both are mediated by numerous social processes.

The way policies in education are applied have as an effect that formal relations of power become more *distant and more complex*, creating a governing structure without a governor; that is *a structure of domination and a hegemony without a hegemon*, or a master to whom one can directly oppose, resist, or cooperate with. Relations of power become more distant, for new posts are created and added in the existing hierarchy. They become also misleadingly more transparent, for the following of rules does not necessarily mean the absence of various deals 'under the table'.

The network of relations that support this new form of impersonal (or personless) hegemony means that no person is really responsible in an institution, but everybody somehow becomes accountable. The point of responsibility and who is rendered more or less responsible is important, but the space does not permit me to elaborate (see Peeters, 2013).

It is worth noting that the 'area' of higher education, as it is called, constitutes a network of relations that become more complex at every turn of educational policy. The 'iron cage' turns into a glass tower not accessible to outsiders and not being able to leave when insiders wish to. The institutional control is expanded and expanded so that it can be exercised by "distance". At the same time, it is observed that institutions are beginning to look like each other, a development that analysts called "Institutional Isomorphism" (DiMaggio & Powell, 1983).

In addition, analysts say that the state is "recalibrate" (Ball & Youdell, 2008), as its functions are assigned to civil society organizations, which also falls within the concept of privatization. At the same time, the tendency of impersonal forces of money and power to interfere with more and more dominating the private sphere falls within what Habermas (1989) called "colonization of the lifeworld".

Education has been subject of rationalisation according to ideas and worldviews that turn it into an institution geared to opportunism rather than to serving ideals that promote the collectivity and contribute to human emancipation. In my view, we need to study these developments to uncover mechanisms, regimes, resistances but also unintended consequences and or hidden empowerments.

Perhaps as a positive note, policy does not always turn into practice according to the letter of the law. Implementation of laws and regulations are mediated by different understandings and vested or not interests. Thus, the new governance approach has been to a great extent interpreted in certain ways, not initially perhaps planned, or meant. Thus, it is more fruitful to recognise the complexity of the institutions and their functioning. In this, Weber's work provides a starting point for designing an inclusive framework in order to study and analyse the recent changes at a global scale.

## Notes

1. The article is based on work previously presented in conferences and published texts (see Kantzara, 2018 2020). It contains new ideas not presented or discussed before in relations to the concepts of 'new governance' and 'rationalisation'.
2. All data in this section are accounted in the following publications (Kantzara 2016, 2020).
3. On data see footnote 2.

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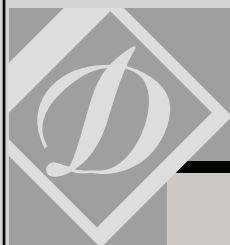
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## Biographical Note

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ΕΚΔΟΣΕΙΣ  
ΔΙΟΝΙΚΟΣ

## ΝΕΕΣ ΚΥΚΛΟΦΟΡΙΕΣ ΠΑΝΕΠΙΣΤΗΜΙΑΚΑ ΣΥΓΓΡΑΜΜΑΤΑ 2021-2022



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*Σοσιαλισμός και πολιτική  
εξουσία σήμερα*

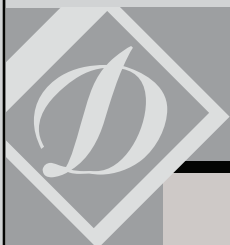
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## ΝΕΕΣ ΚΥΚΛΟΦΟΡΙΕΣ ΠΑΝΕΠΙΣΤΗΜΙΑΚΑ ΣΥΓΓΡΑΜΜΑΤΑ 2021-2022



ΑΝΤΩΝΗΣ ΚΑΡΒΟΥΝΗΣ

*Κλασικός Φιλελευθερισμός  
και Δημοκρατία  
Τα Κείμενα του Λαϊκού  
Κινήματος των Ισοπεδωτών*

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Τα κείμενα που απαρτίζουν το ανα κείρας πόνημα αναδεικνύουν το πρόγραμμα του πολιτικού φιλελευθερισμού του λαϊκού κινήματος των Ισοπεδωτών που χαρακτήρισε τις βασικές διαμάχες του αγγλικού εμφυλίου (1642-1648), οι οποίες οδήγησαν στην πρώτη βασιλοκτονία της σύγχρονης εποχής. Η αρχή της λαϊκής κυριαρχίας, τα ατομικά και πολιτικά δικαιώματα, τα θεσμικά αντίβαρα του πολιτεύματος, το ζήτημα της ανεξίθρησκείας, η σχέση δημόσιου και ιδιωτικού χώρου και η σχέση πολιτικής και στρατού είναι μερικά από τα διαχρονικά ζητήματα που θίγονται στα εν λόγω κείμενα.



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# Social and political change in post-war Greece. Demographic transformations in the in the 1970s<sup>1</sup>

Stavros Pantazopoulos, *University of Peloponnese*

## Κοινωνικές και πολιτικές αλλαγές στη μεταπολεμική Ελλάδα. Δημογραφικοί μετασχηματισμοί στη δεκαετία του 1970

Σταύρος Πανταζόπουλος, *Πανεπιστήμιο Πελοποννήσου*

### ABSTRACT

This post-doctoral research endeavors to elucidate the phenomenon of internal migration (astyphilia) that occurred within Greek society during the post-war era. Specifically, the period of scrutiny spans from 1971 to 1981, during which a substantial number of Greek citizens embarked on a massive exodus from rural areas to urban centers. The reasons behind these relocations exhibit variability contingent upon the temporal context and geographical disparities across regions. Illustrative factors contributing to the urbanization of this decade include inadequate agricultural wages, labor scarcity, limited arable land, attempts to industrialize rural areas, and disparities between agricultural and industrial remuneration. The objective of this article is not only to outline the causes of the extensive urbanization observed during this period but also to demonstrate the ensuing consequences for Greek society.

**KEY WORDS:** Internal migration, demographics, social change, Greece, 1971-1981, urbanization, astyphilia.

### ΠΕΡΙΛΗΨΗ

Η παρούσα μεταδιδακτορική έρευνα επιχειρεί να αποσαφηνίσει το φαινόμενο της εσωτερικής μετανάστευσης (αστυφιλία) που εκδηλώθηκε στην ελληνική κοινωνία κατά τη μεταπολεμική εποχή. Συγκεκριμένα, η υπό εξέταση περίοδος εκτείνεται από το 1971 έως το 1981, κατά την οποία ένας σημαντικός αριθμός Ελλήνων πολιτών ξεκίνησε μια μαζική έξοδο από τις αγροτικές περιοχές προς τα αστικά κέντρα. Οι λόγοι πίσω από αυτές τις μεταγκαταστάσεις παρουσιάζουν μεταβλητότητα που εξαρτάται από το χρονικό πλαίσιο και τις γεωγραφικές ανισότητες μεταξύ των περιφερειών. Ενδεικτικοί παράγοντες που συμβάλλουν στην αστικοποίηση αυτής της δεκαετίας περιλαμβάνουν ανεπαρκή γεωργικά ημερομίσθια, έλλειψη εργατικού δυναμικού, περιορισμένη καλλιεργήσιμη γη, προσπάθειες εκβιομηχάνισης των αγροτικών περιοχών και ανισότητες μεταξύ γεωργικών και βιομηχανικών αμοιβών. Ο στόχος αυτού του άρθρου δεν είναι μόνο να σκιαγραφήσει τα αίτια της εκτεταμένης αστικοποίησης που παρατηρήθηκε κατά τη διάρκεια αυτής της περιόδου, αλλά και να καταδείξει τις επακόλουθες συνέπειες για την ελληνική κοινωνία.

**ΛΕΞΕΙΣ-ΚΛΕΙΔΙΑ:** Εσωτερική μετανάστευση, δημογραφία, κοινωνική αλλαγή, Ελλάδα, 1971-1981, αστικοποίηση, αστυφιλία.



## 1. Introduction

The present study endeavors to portray the causes and consequences of population movements within Greece during the period of 1971-1981. This research sheds light on the factors that prompted individuals to relocate, particularly to the major urban centers, with a specific focus on the capital city, Athens and endeavors to shed light on the interrelationship between socioeconomic transitions and human migration patterns, using Greece's post-war internal migration as a pivotal example.

To achieve this objective, several key questions arise, primarily concerning the population's composition, size, and patterns of movement. Additionally, an exploration of the underlying reasons driving this migration is essential. Building upon previous research conducted during the first two decades following the end of World War II, this study aims to determine whether the migratory flow observed in earlier years persisted during the period under investigation. Furthermore, it seeks to uncover the causes propelling populations to migrate and evaluate the ensuing effects of these movements.

The hypothesis in this article proposes that the marked increase in internal migration (*astyphilia*) within Greek society during the post-war era of 1971-1981 can be attributed to a complex interplay of socioeconomic factors, including a shift from agrarian to industrial employment, increased urbanization, and policy reforms. Specifically, we hypothesize that these systemic shifts catalyzed a significant demographic transition from rural to urban areas, thereby causing substantial internal migration. To test this hypothesis, we analyze primary and secondary data.

The primary and secondary data for this study were predominantly sourced from the Hellenic Statistical Authority, which provided the necessary sources, as well as from population censuses conducted in 1961, 1971, and 1981. The collected data underwent meticulous processing to ensure its relevance and suitability for analysis. Notably, the present research exclusively focuses on internal migration and does not encompass the examination of external population movements.

By examining existing literature and analyzing the acquired data, this research accurately and comprehensively reflects the changes in both the composition and structure of the population. The findings reveal that internal migration impacted the entire territory of Greece, with some areas experiencing population losses while others witnessed population gains. The most significant population decline was observed in rural regions, which incurred substantial losses. Conversely, large urban centers, particularly Attica (with Athens as its core) and to a lesser extent, Thessaloniki, emerged as the primary recipients and beneficiaries of this migration. The redistribution of the population is intrinsically linked to internal migration, resulting in a transformative shift from predominantly rural to predominantly urban settlements. This shift in settlement patterns also influenced changes in occupations and professions, with a notable transition from the primary sector to the secondary and tertiary sectors.

As we delve deeper into the intricacies of internal migration within post-war Greek society, our research explores the political and social historical contexts of the era that had significant implications on the Greek populace. We scrutinize how these elements may have instigated and influenced mass population movements within the Greek territory between 1971 and 1981. Subsequently, we probe into the demographic metamorphosis that unfolded during this decade, leading to compelling findings. To ensure the rigor and credibility of our research, we employ comprehensive data provided by the Hellenic Statistical Authority. These quantitative insights offer a robust foundation for our investigation, enabling us to elucidate the multifaceted dynamics of internal migration during this transformative period in Greece's history.

## 2. The historical context

The decade from 1971 to 1981 in Greece was characterized by profound political changes, shaped predominantly by the fall of the seven-year military junta and the transition to democracy. The military dictatorship that began in 1967 was brought to an end in 1974 following a failed coup attempt and the subsequent Turkish invasion of Cyprus. The transition to a democratic government in 1974, known as the *Metapolitefsi*, marked a significant turning point in Greek history. During this period, political instability was rife, as the country grappled with the remnants of authoritarian rule and navigated its way toward a functioning democratic system. The period also saw the rise of Konstantinos Karamanlis, who led the charge towards Greece's reintegration into the European community, culminating in its admission to the European Economic Community in 1981.

As the main scholars of the period report, the transition in Greece from 1971 to 1981 was marked by considerable political, economic, and social shifts that played a decisive role in the patterns of internal migration within the country (Tsoukalas, K., 1987, Dertilis, G., 2016, Vergopoulos, K., 1975 and Sakellaropoulos, T., 2011). Economically and socially, this was a period of both growth and upheaval. The earlier trend of rapid industrialization and urbanization continued into this decade, drawing more and more people into the cities, most notably Athens. These changes were accompanied by significant socioeconomic shifts, such as the movement from agrarian to more diversified livelihoods and the increase in wage labor. The urban influx exacerbated social issues in major cities, such as overcrowding, inadequate housing, and infrastructure challenges. Concurrently, rural areas suffered from depopulation and economic decline, further fueling the cycle of internal migration. Overall, these trends catalyzed a period of dynamic social transformation that echoed across the Greek society and economy, paving the way for the phenomena that we seek to understand in this study.

During the period from 1970 to 1974, an established coup d'état endeavor sought to implement a liberal economic policy that aimed to attract domestic investment. The coup administration introduced a range of measures aimed at bolstering the economy and promoting internal financial circulation (Sotiropoulos, D., 2019, p. 138).

One of the notable measures implemented by the dictatorial governments involved facilitating the construction sector by reducing bureaucratic interventions and easing regulations. These changes streamlined the process of building construction, while also revising loan conditions favorably for builders seeking financial assistance for housing projects. Consequently, a «para-industry» emerged, centered around the construction sector and particularly the construction of buildings. This development acted as a catalyst, attracting various related sectors such as cement industries and others, thereby stimulating economic activity and growth (Patronis, V. & Liargovas, P., 2017, pp. 114-115). This factor served as a crucial catalyst that motivated numerous rural inhabitants to invest in constructing houses within the capital city and other major urban centers of the country. Consequently, it led to the proliferation of unregulated construction practices that are evident in the present era.

The exploitation of the European tourism stream was equally significant. Prior to the dictatorial governments, a broader tourism movement had already been established in the southeastern regions of Europe, and this fact was fully capitalized upon. The governments implemented favorable measures to encourage the creation and development of tourist units and hotels. This factor played a vital role, as it prompted many rural residents to transition to alternative professions and engage in the provision of tourist services. Furthermore, the exchange rate between

the dollar and the drachma proved highly advantageous, making it exceptionally convenient for American citizens, including Greek-Americans, to visit Greece as tourists. The favorable exchange rate meant that the drachma had a lower value compared to the dollar, making Greece an affordable and attractive destination for tourists from the United States (Kazakos, P., 2001, pp. 270-279), as the drachma was equivalently inferior to the dollar.

**Table 1. Growth rate, inflation, unemployment, current account balance and GDP per capita (%), 1970-1981**

Year	Growth	Inflation	Unemployment	Current Account Balance	GDP per capita
1971	7,8	3,0	3,1	-0,9	1.426
1972	10,2	4,3	2,1	-0,7	1.627
1973	8,1	15,5	2,0	-2,1	2.146
1974	-6,4	26,9	2,1	-0,5	2.419
1975	6,4	13,4	2,3	-0,5	2.703
1976	6,9	13,3	1,9	-0,5	2.909
1977	2,9	12,2	1,7	-0,4	3.327
1978	7,2	12,5	1,9	-0,2	4.019
1979	3,3	19,0	1,9	0,8	4.881
1980	0,7	24,9	2,7	0,6	5.030
1981	-1,6	24,5	4,0	1,7	4.575

Source: Hellenic Statistical Authority, Statistical Yearbooks of Greece of the years 1967-1984.

In addition to the aforementioned measures, the dictatorial regime introduced a comprehensive five-year economic development plan spanning from 1968 to 1972, following a similar approach to the first post-war governments. This program emphasized the promotion of a free-market economy and private entrepreneurship, particularly in the financial sector (Koniordos, S., 2015, p. 40). Furthermore, the plan included provisions for supporting the rural population and the manufacturing sector. Notably, those engaged in the primary sector, such as agriculture, benefitted from the dictators' agricultural policies. These policies involved redistributing arable land, as well as canceling outstanding debts and loans (Sakellaropoulos, T., 1992, pp. 221-222), thereby providing significant relief and support to individuals involved in agriculture.

The implementation of these measures resulted in considerable growth rates, albeit lower compared to the early post-war years. Particularly noteworthy is the high level of economic growth experienced during the initial years of the dictatorial regime. However, it is important to highlight that inflation rates also rose during this period. A significant turning point occurred during the two-year period of 1973-1974, marking a notable shift in economic dynamics, when the growth rate fell to -6.4% from 4.3% in 1972. The pronounced consequences of this economic downturn included the expansion of both external and internal migration. As economic conditions worsened, individuals sought opportunities elsewhere, leading to increased emigration from the coun-

try. Simultaneously, internal migration also surged as people moved from economically distressed regions to more prosperous areas within the country. During this challenging period, financial assistance and market revitalization were primarily sustained through remittances sent by those who had previously emigrated abroad. These remittances played a crucial role in providing support and injecting much-needed funds into the struggling economy, helping to alleviate financial difficulties and foster some degree of market renewal (Glytsos, N., P., 1994, p. 116).

Another significant factor was Greece's gradual isolation from the European Economic Community (EEC) due to the undemocratic nature of its regime. This led to the failure to meet the requirements for harmonization with the economic institutions of the community, strained relations, and the suspension of the interconnection agreement signed with the EEC since 1961. As a result, Greece experienced a gradual deterioration in its relationship with the EEC, leading to a decrease in economic cooperation and missed opportunities for integration with European economic institutions (Manou-Pantazopoulou, E., 1999, p. 27). The culmination of the crisis was the withdrawal of Greece from the Council of Europe in 1969 (Poimenidou, A., D., 2018, p. 110), which resulted in the revival of relations with the USA (Grigoriadis, S., 2011, pp. 181-182) and the expression of a state of anti-Europeanism (Tzortzis, I., 2020, pp. 146-153).

The primary objective of the first post-dictatorial government was to initiate a comprehensive reorganization of the state. As part of this endeavor, there were significant changes made to the administrations of public utilities, banks, and state-owned enterprises. Additionally, efforts were made to redress state employees, which involved various measures aimed at addressing and rectifying the issues that had arisen during the preceding dictatorial regime. The overarching goal was to establish a more efficient and transparent administrative apparatus within the state (Rizospastis Newspaper, 1974, p. 12 and Sotiropoulos, D., 2016, pp. 15-68) and the finances of the dictatorship were subjected to a comprehensive reassessment to determine if there had been poor financial management during that period. This examination aimed to identify any irregularities, mismanagement, or instances of corruption within the financial operations of the dictatorship. Regarding the security forces, efforts were made to remove individuals who had supported the junta regime. However, this purge was conducted gradually and selectively rather than through a complete and immediate expulsion of all junta supporters. The objective was likely to strike a balance between the need for reform and the preservation of stability within the security forces (Tahydromos of Egypt Newspaper, 28/2/1975, p. 1).

When the first post-dictatorial government took over the reins of the country, the finances were in a very bad state. Apart from the immediate restoration of the Democracy, the economic base of the state had to be restored as well. The country's external borrowing was increasing as the current expenses had to be paid while the balance of income and expenditure was around 1 to 1, and inflation stood at 26.9%, double that of European industrial economies (Economou, C., Sabethai, I., Simigiannis, G., 2010, p. 98).

The economic remittances of immigrants of the previous period had been greatly reduced, mainly due to the fact that the number of external immigrants had also been greatly reduced after the fall of the dictatorship. Data collected from the Hellenic Statistical Authority, reveal that in 1973, 27,525 people emigrated, in 1974, 24,448, in 1975, 20,330 and in 1976, 20,374 (Hellenic Statistical Authority, 1980, p. 98). During the same period, repatriates equaled about the same number of migrants (Petropoulos, N., 1994, Table 1, p. 249). Becomes apparent that an additional problem of integration and absorption of repatriates into the Greek economy, of that period, was created. Moreover, the construction sector, that during the dictatorship was the driving force of the economy, was showing an awful decline.

**Table 2. Budgetary figures, as % of GDP 1971-1981**

Year	Net Government Borrowing	Government Revenues	Total Government Expenditure
1971	0,1	26,9	26,9
1972	0,0	26,5	26,5
1973	-0,1	24,8	24,8
1974	-1,4	28,4	28,4
1975	-3,0	30,2	30,2
1976	-1,7	30,7	20,7
1977	-2,5	31,6	31,6
1978	-2,9	32,0	32,0
1979	-2,4	31,7	31,7
1980	-2,6	31,8	31,8
1981	-9,1	38,0	38,0

Source: Greek Statistical Authority, Statistical Yearbooks of Greece of the years 1967-1984.

For this very reason, a five-year economic program for the period 1976-1980 was re-established, such as the first post-war governments did. This defined the framework in which the state will operate, something between fiscal liberalism, combined with a basic state intervention. Indeed, private initiatives took place during this period, but the State also proceeded to the nationalization of many private companies of particular strategic importance (e.g., Olympic Aviation), in order to improve the financial indicators (Sakellaropoulos, T., 2011, pp. 98-99). In addition, the need for convergence with the policies of the EEC, mainly on agricultural products, was established. However, Greek farmers, although they had been greatly modernized compared to the pre-dictatorship period, were unable to harmonize with the requirements of the European community (Maravegias, N., 2011, pp. 236-244).

The period between 1977 and 1981 is a landmark period as the economic crisis of oil is raging worldwide and the Greek Government is struggling with a series of infrastructure projects, in order to create a first embankment. Moreover, tries to give incentives to the primary sector, because understands that Greece's foremost export weapon is agricultural products, despite the multiple problems faced by Greek agriculture (Macedonia, Newspaper 15/2/1978, p. 9). In combination with some subsidies from the European Community, Greek farmers, trying to cope with the ever-increasing European competition, are getting modernized as much as possible. In this context, an increase in agricultural tractors is enormous. It is estimated that the number of tractors in 1981 was 221,919, while on a percentage basis, this figure was 218% greater than it was in 1971 (Moisidis, A., 1986, p. 333).

The economic crisis forced the Government to revise the program announced and tried to incorporate these current conditions into these changes. This was necessarily done due to the generalization of the oil crisis in 1979, where it necessitated the restructuring of the country's economic policy (Liargovas, P. & Patronis, B., 2011, 539). This, however, was quite a difficult undertaking because of the huge number of civil servants that the state apparatus numbered at

the time. For this very reason, the political leaders took advantage of the tactics of nationalization and took further ownership of many financial and banking institutions (Moisisidis A., 1986, p. 322), indirectly acquiring control over all the utility companies.

Finally, undoubtedly the most important event of this period was the signing of the Treaty of Accession of Greece to the European Economic Community; it was an extraordinary achievement that promoted Greece to a new era. In fact, the country's efforts to restore both the economy and democracy were rewarded, while it was a guarantee of its subsequent economic improvement (Macedonia Newspaper, 29/5/1979, p. 1).

### **3. The Demographic transformations**

#### ***3.1. General demographics of the population***

Already, since 1947, the extent of the country remains the same, as there was no annexation or removal of territories. What is interesting in the following data is the change of the inhabitants' population in absolute numbers. Between the censuses of 1961 and 1971, there is a population increase of 380,088 people or 4.53%. In the following decade, 1971–1981, the population of the country increased by 971,776 inhabitants or 11.08%.

Although the balance between births and deaths is negative, this population growth observed over the decade, is under review. This fact is explained by the significant turnout of repatriated Greeks and repatriated Pontians, which is happening simultaneously during this period (Kotzamanis, V., 2000, p. 33). The difference between these two censuses in terms of residents per km<sup>2</sup> is also significant. This increase is also attributed to the influx of economic migrants and repatriates into the country.

From the comparison between the censuses of previous years, it is also observed that in the 1971 census, it seems for the first time that the urban population is larger, in solid terms, if in contrast to all the previous censuses, where the rural population was significantly superior. To this day, the urban population is the most populous while the rural population is decreasing per census. Thus, it is observed that the urban population in 1971 constituted 53.2% of the total population of the country while the rural population constituted 35.2%. Respectively, in the next decade, the gap opens even more, being the urban population at 58.1% and the rural population at 30.3%. Noteworthy is the stability of the semi-urban space, which remains in both censuses at 11.6%.

It is also observed, in all geographical regions of the country, that the urban population constitutes about 30% to 35% while the rural population constitutes 40% to 50%. An important exception is Attica and central and western Macedonia. In Attica, the urban area constitutes 80% and the rural area 10% while in Macedonia, these percentages change to about 60% and 30%. This also explains why, while in all other areas the rural population far outweighs the urban population, in overall, the urban population is superior. In Attica, central and western Macedonia reside about half the population of the country. Proportionally, therefore, the urban population is more than the rural population although in the majority of the Greek prefectures the rural population is more, numerically. And the increase of the urban population during the decade 1970 – 1980 resulted in the conversion of 5 semi-urban settlements in cities (Kos, Koropi, Nafplio, Alexandria and Kalymnos). This means that gradually, the population that lived in semi-urban settlements, with the continuous population growth, was transformed into urban settlements (Papadakis, M., 1994, p. 204).

Subsequently, the gradual reduction of the rural population in the country as a whole is small but not negligible. The rural populations of Attica and the islands decreased by about 20,000 inhabitants, Macedonia by 30,000, the Peloponnese and Central Greece by 70,000, Central Greece by 25,000 and Crete by about 3,000. Epirus alone, showed an increase in population of about 5,500 inhabitants. We, therefore observe a movement of the rural population to urban centers.

Thus, in absolute terms, in 1971 the rural population constituted 35.2% of the total population of the country and in 1981 30.3%. The difference in this decade translates to 126,389 people. However, the difference is clearly much greater. If we assume that in the decade examined, 620,000 people moved to the urban centres of Greece (Glytsos, N., 1994, p. 300), then we will have to look elsewhere for such a widening of the gap between rural and urban populations. An important contribution to the widening of this difference is due to the influx of Repatriates, who settle mainly in Macedonia and the capital (Petropoulos N., 1994, p. 244).

**Table 3. Population of the Capital Region compared to the population of Greece**

	Population 1971	Population 1981
Capital Area	2.548.065	3.038.245
Total country	8.768.625	9.740.422
%	29,1	31,2

Source: Hellenic Statistical Authority, own processing of Population Census data 1971 and 1981.

Although the population growth rate of the capital decreased from 37.1% to 19.2% in this decade, we observe that in absolute numbers it increased by 490,180 inhabitants. This leads us to the conclusion that the migratory traffic to the capital decreased greatly but in general, the tendency to move to the major urban centers remained largely (Emke – Pouloupoulou, I., 1998, p. 33).

The 490,180 inhabitants, combined with the external emigration (Tsachouridis, P. 1988, p. 215, Table 1) that is still thriving on Greek territory and the wave of repatriated Pontians, who, as mentioned above, settled mostly in the capital region, are the increase of this area. However, it is clear that apart from the Urban Complex of Athens, a large population increase is observed in the region of the rest of Attica prefecture, where within this decade there is an increase of 57,357 inhabitants (Chouliarakis, M., 1988, p. 16). Becomes apparent that the gradual expansion of the capital's population to the outskirts begins, creating new suburbs, mainly due to lack of space (Emke – Pouloupoulou, (1998), p. 39).

It is glaringly striking that the population difference between the two censuses is 993,000 inhabitants. It is clear that not only has the increase in the number of cities from 56 to 61 contributed to this, but it is a more general phenomenon affecting all urban centers. However, we note that the rate of change of urban dwellers is falling sharply. From 2.6% in 1971 to 2% in 1981. Clearly, we cannot assume that this decline existed throughout the decade, nor can we prove the opposite, namely that this reduction took place in the last years of the decade.

For what we are sure, however, is that the difference in the average annual rate of change is not dramatically large and that the urbanization of previous years continues to occur but at a lower rate. If we also consider the fact that a fairly large percentage of the immigrants outside

Greece, consists of people who come from rural areas, then we understand that the external migration of this period had a catalytic role in still increasing their population, the urban centers (Tsachouridis, 1988, p. 216).

This is confirmed by the size of urban centers in proportion to the rest of Greece. In 1971 it was 53.2% compared to 58.1% in 1981. This happens because, without the explanation that it is the rural residents migrating outside the Greek borders, it would cause an oxymoron, since although the growth rate of urban centers is decreasing, their size is increasing more and more.

It is noteworthy that the population of the mountainous areas decreased within a decade by 107,416 people, at the same time that the inhabitants who lived in the semi-mountainous areas, increased by 774,778 inhabitants. This means that populations that lived in inaccessible areas and who probably had poor transportation to the nearby towns were forced to move to more lowland areas.

In fact, in over a decade, the population living in mountain areas fell by 2.3 points (from 12.0% to 9.7% in 1981). This percentage was distributed approximately equally in semi-mountainous and lowland areas (1.1 units went to semi-mountainous areas and 1.2 to lowlands). In other words, we observe a tendency to move towards the lowlands.

Apart from the purely quantitative redistribution of the population, which was shown above, with the internal movements of the populations, there have also been qualitative restructurings. The change of residence and living space of the citizens, led to a change of practice of profession. The majority of those who lived and worked in rural areas were engaged in agriculture and animal husbandry. When they emigrated to another region, they were forced to change their professional occupations, moving from the primary production sector to the secondary and tertiary ones.

As the data of the Hellenic Statistical Authority highlight, the number of people involved in the primary sector (agriculture and livestock farming) from 1951 onwards was constantly decreasing. This resulted in 42.1% of the total workforce being employed in agriculture in 1971, or 1,334,700 people, while in 1981 we had a reduction of this percentage to 31.1% or 1,102,700 people.

The direct result of this is the automatic increase of employees in the secondary and tertiary production sector. This, of course, also worked both ways, as the increasing involvement in the services sector and the secondary sector has helped to over-centralize the population in urban centres, and on the other hand, to depopulate the countryside (Katochianou, D., 1994, p. 197).

**Table 4. Distribution of employment by categories of economic activity**

Category of Economic Activity	1971	%	1981	%
Primary	1.334,7	42,1	1.102,7	31,1
Secondary	835,6	26,3	1.003,7	28,5
Services	1.001,3	31,6	1.422,9	40,4
Total	3.171,6	100	3.529,3	100

Source: Robolis, S., (1988). *Economic structure and migratory movements in post-war Greece*, at EKKE (1988). *The rural world in the Mediterranean area*, Athens, p. 245.

The secondary and tertiary sectors of production may have been an important factor in attracting population to cities, but the primary sector suffered exceptionally large losses during this period. It is worth noted that in all regions of Greece, the other two sectors outperform the



primary in productivity, even in predominantly rural areas. Based on this, we can conclude that the primary sector is lagging behind both in the number of people involved in it and in terms of supply in production (Katochianou, D., 1994, p. 200).

In addition, always exist the dangers of natural disasters, which can destroy production. On top of that, the low wages of farmers, combined with the expenses they have in their work (fertilizers, sowing, irrigation of crops / animal feed, etc.) and the wide inequality between agricultural and industrial wages, tend to less and less occupation within the primary sector.

It should also not go unnoticed that there is a very high preference of the inhabitants of urban areas in the secondary sector and more specifically in the construction sector. This also explains the fact of the excessively large construction traffic, both in this decade examined and in the previous one.

The number of people occupied in the tertiary sector during this period is also noteworthy. Particularly high percentages of employees share the hotel and restaurant sectors, which is also an 'exploitation' of the tourism stream that had begun to appear as early as the previous decade.

Finally, in order to better understand the excessive increase in the number of workers in the secondary and tertiary sectors, explanatory data concerning them should be noted. In 1971, there were 413,000 of those involved in banking, commerce and insurance and in 1982, 652,000. Those working in industry and crafts, in 1971 were 554,000 and in 1982 681,000. In 1971, municipal and private services employed amounted to 409,000 employees and in 1982 to 571,500. Finally, 255,020 people were employed in public services and infrastructure, while in 1982 294,000 were employed. These figures are actually very large, especially when compared to those of the primary ones (Robolis, S., 1988, 3rd note, p. 247).

#### **4. The postbellum urbanization (Astyphilia)**

**S**ince the early 1920s, there has been a gradual and increasing strengthening of urban centers, mainly due to the settlement in the cities of part of the refugees of the Asia Minor Catastrophe (Anogiatis-Pele, D., Dimopoulos, D. and Mavreas, K., 2014, p. 11), but also before that, due to the raisin crisis (Patronis, B., 2015, p. 90). The 1940s, due to the World War II and the subsequent Greek civil war, are considered largely unexplored, yet it remains undeniable that a large part of the rural population residing until then in the Greek countryside, was forced into internal and external migration (Kotzamanis, V., 1990). From 1950, when the country returned to normality, until 1974, the areas that experienced this phenomenon were essentially the rural areas and the large urban centers (in particular Attica and Thessaloniki). The rural areas due to the fact that they lost a large amount of population, and the cities, because of the reception of the aforementioned population (Kanellopoulos, K.N., 1995, p. 9).

Particular emphasis is given to the comparison of urban and rural areas, while it is important to present the balance of incoming and outgoing in the two major urban complexes of the country, Athens and Thessaloniki.

Examining the first post-war years, it is shown that in the period 1956 – 1960, 644,800 people were forced to move from their place of residence and relocate to other areas in search of a better fate. The largest percentage of those who moved, went to urban areas (408,400), 265,000 of them, moved purely to Athens and Thessaloniki. The rural area suffered great losses through internal migrations, which amounted to 222,800. Correspondingly, in the period 1966 – 1970, the rural population decreased by an additional 248,500 amount of people.

A total of 862,900 inhabitants moved to urban centers, while Athens and Thessaloniki recorded a net population change of 252,200 people. Specifically, 19.2% (or 42,800 people) aged from 0 to 14, 48.9% from 15 to 29 (108,900), 17.5% (38,900) belonged to the group 30 – 44, 45-64 belonged the 10.5% (23,500) and 65 and above 3.9% or 8,700 people. What is striking is the large number of people in the 15-29 age group. This age group, along with 30 - 44 and 45 - 64, constitute the active population of Greece.

The total number of emigrants between 1966 and 1970 was about the same, reaching 263,700, about 40,000 more commuters. While between 1951 and 1960, a total of 360,000 people moved from rural areas, 474,000 emigrated in the next decade. The semi-urban areas also had sufficient losses, where in the first decade they lost 22,000 people, while in the second 28,000 in total, in the rural and semi-urban areas. Thus, in the period '51 - '60 we have 308,000 who move to the Athens urban complex and 54,000 to Thessaloniki urban complex, while in the period '61 - '70, 376,000 in Athens and 103,000 in Thessaloniki. Becomes evident that, in the second decade, we have an increase of about 85,000 people commuted from rural areas, while the number of people commuted to Athens and Thessaloniki reaches 117,000 more than in the previous decade (Kotzamanis, V. & Maratou, L., 1994, p. 82).

During the same period, the two largest urban complexes in the country, Athens and Thessaloniki, taken together, showed a positive balance of people. In particular, those who settled in both urban complexes were 341,000 in 1971, while those who left, 88,800, creating a positive balance of 263,600 in their favor. In the rest of the urban areas, 521,900 people settled, 258,300 left, a total of 252,200 were the positive balance. A big wound seems to be the Greek countryside, as in the 1971 census its balance was negative. 144,300 people moved to the countryside, but there were many more people who left it (392,800), so there is a population decline of 248,500 people (Reppas, P., 1997, p. 31, tab. 3).

+Moving on to the purely migratory issues, statistical data on the number of commuters, their 'choices' in terms of where they go and, finally, their stratification, should be mentioned. The method used is the median intervals every five years of the decade being investigated. The data come from the Hellenic Statistical Authority, after processing.

From the study of the above table, we can see that for the five-year period 1966 - 1970, the urban complexes of Athens and Thessaloniki are presented with an enhanced population. Of the total 764,500 immigrants of this period, 341,100 people or 45% moved to these two centers, while 180,800 or 24% moved to the rest of the urban centers. i.e., 521,900 people.

Of all those who moved to urban centers in the five-year period '66 – '71, 179,100 come from other cities (34%), 87,000 from semi-urban (17%) and 255,700 i.e., 49% from rural ones. So, we are talking about a bleeding of the rural area.

It is noteworthy that there is also migration to the countryside of the country and the rural areas. More specifically, 144,300 people emigrated to rural areas, i.e., about 18% of the total number over the period; of these people, 83,800 (more than half) came from other rural areas, 15,300 from semi-urban areas and 45,200 from urban centers, which allows us to assume that there is a small flow of decentralization.

In addition, it would be particularly interesting to observe those who choose to leave the Athens and Thessaloniki urban complexes, 47,500 people move to other urban areas. 18,700 in semi-urban and 22,600 in rural. A total of 88,800 people moved from these two cities. Compared to the 341,100 who accepted, we understand that there is a difference of 252,300 people, a very large number.

**Table 5. Internal population movement by region\***

	Urban	P. S. Athens – Thessaloniki	Suburban	Rural	Total
<b>1966 - 1970</b>					
Installed	521,9	341,0	98,3	144,3	764,5
Departed	258,3	88,8	113,4	392,8	764,5
Net change	263,6	252,2	-15,1	-248,5	-
<b>1976 – 1980</b>					
Installed	557,0	294,2	111,6	165,8	834,4
Departed	406,2	194,5	107,1	321,0	843,3
Net change	150,7	99,8	4,5	-155,2	-

Source: Kanellopoulos, K. N., *Internal migration*, KEPE, Exhibitions 21, Athens 1995, p.21, own edited. \*Thousands of people.

And for the next five years ('76-'81), the total number of commuters shows an increase and amounts to 834,400 people. Of these, 557,000 emigrated to urban areas (294,200 to the Athens and Thessaloniki Urban Block-U.B.), 111,600 to semi-urban and 165,800 to rural ones. At first glance, we note that there is a decline in the growth rate of Athens and Thessaloniki. At the same time, there is an increase in the migration to urban areas in general (including those in urban areas in general (including those of the urban areas in general (including those of the urban areas). Athens and Thessaloniki) so we conclude that this increase is reaped by the rest of the urban centers (Kyriazi-Allison, E., 1998, p. 283).

In rural areas we see that the number of entrants is increasing and at the same time it is decreasing and the number of those who leave, so there is a shift in movement (from -248,500 which was the balance of settlers – departed in the period '66-'71, in the five-year period '76-'81 it decreases to -155,200). Significant stability presents the semi-urban space.

What is also observed is the large movement of populations at the productive ages. In both periods, it is the 20-44 age group that 'gives' the largest number of people. It is followed by the 0-19 group and then the 45-64 years old. Here, we can make the assumption that at the end of compulsory schooling, one could move voluntarily (e.g., to find a job). Understandably, from about 0 to 15 it is practically impossible to leave on their own, so we are talking about family migration.

At the gender level, we observe that in both, the movement of the 20-44 age group is equally shared. More specifically, we see that in both five-year periods and in both sexes, about half of those who emigrate to other urban areas belong to this age group. In particular, we should dwell on the fact that there is a small but noticeable numerical predominance of women over men in this age group.

The second most populous age group is that of 0 to 19 years. As mentioned above, it is a fairly peculiar group, because it gathers disparate elements. We therefore conclude that it consists of young people, who to a large extent follow their parents in this migratory movement.

The third group is the one that brings together people from 45 to 64 years old. And this group possesses productive ages. From the study of the data, it becomes clear that this is where men predominate. Women lag behind men quantitatively and numerically. They are the only category in which men excel.

As it becomes clear, the people who move are young and belong to the productive class. This means that the areas that have lost these populations have lost both a useful (and even redundant) workforce. If we now look at the previous tables, we will see that the areas that bleed the most are the rural ones. So, we can certainly talk about the loss of rural labor with an immediate ageing of its population. At the same time, we understand that this has an impact not only on the economy of these regions but also on society (depopulation, school closures).

The more thorough observation and examination of the data requires us to look at the sectors where the commuters were employed. What we are seeing is that, for the most part, both sexes of those who moved have been engaged in the secondary and tertiary sectors of production.

On a specific basis, men who emigrated were mainly absorbed in the tertiary sector (banks – services) at a rate of 27.8%, while the second sector in absorption comes that of industry, with 24.7%. The percentages of men are distributed equally in the other sectors, but they do not exceed 15%.

In women there is an unequal distribution, as we see that there is a super-absorption in three sectors (services, hotels / commerce, and industry) while in the remaining four the percentage is in the single digits. Also, we observe a parallel absorption in the repatriates of the same period. Characteristic, however, is the fact that repatriates have a high occupation with agriculture and animal husbandry, and at very high levels. We can say that this is due to the fact that when they came to our country, they settled in areas that had experienced great external and internal migration in the previous period, namely the rural areas (Mavreas, K., 1998, pp. 189 and 198).

Next, we will look at the conurbations. Observing the difference between the two inventories is a precarious way of drawing conclusions concerning internal immigration, but in the absence of other clear elements relating to it, we can make a certain assessment of them.

As is obvious, the conclusion we had made from the data of the middle years that we had seen above is supported. More specifically, there is a large increase in those of Athens and Thessaloniki, at the same time there is quite a large increase in the rest of the urban centers. Moreover, we see that even in areas with already a large urban center, another is developing in parallel (e.g., Patras U.B., Aigio U.B. and Kalamata U.B.) displaying a general increasing trend. However, it would be interesting to study both the proportionality of the Urban Complexes and their distance.

What we are also interested in looking at is, on the one hand, which is the age group most affected by movements and, on the other hand, whether these movements lead to an ageing of population at the place of departure. In reply to the first question, we note in the table that in the whole region and regardless of geographical location, the age group most affected is that of 20 to 44 and in second place the 0-19 years. ages have the highest percentage in contrast to the age group 65 and older which is the opposite of movements. Finally, through what we said before, we understand that those who are left behind are the people of the aforementioned 65+ group, thus creating a society with a fairly high average age.

With regard to net travel by region (the figure indicating the balance between departures and installations), it can be observed that in both five-year periods, the two regions showing a positive balance are Attica and Central Macedonia (I say Thessaloniki). It is really excellent that none of the eleven remaining regions manages in either of the two five-year periods to show more settlements than departed. In addition, we must stress that, in addition to the balance, we must also look at the population of each region and compare it on the basis of the proportionality of their populations.

**Table 6. Members of households established in urban, semi-urban and rural areas and departing from these areas after 1965, by age and gender**

Settled and departed by region	Total
Total commuters	764.480
Settled in urban areas	521.880
Departing from urban areas	258.260
Settled in semi-urban areas	98.300
Installed from semi-urban areas	113.380
Established in rural areas	144.300
Departing from rural areas	392.840

Source: Hellenic Statistical Authority, *censuses for the years 1971, 1981*.

Data from the Hellenic Statistical Authority show that the total number of people who emigrated at the beginning of the decade is 764,480. The vast majority comes from rural areas (392,840 people) while a high number of immigrants is also present in urban areas (258,260). The majority of the migration wave is reaped by urban areas, where about 5/7 of the total population moves. Finally, what is worthy of attention is the fairly high number of people who settle in rural areas. If we compare the same percentages in the previous two decades, we will see that the number of those leaving is greater then, while the number of those who go to settle in rural areas is higher in this decade (Hellenic Statistical Authority, Censuses 1951 and 1961).

**Table 7. Settled in urban, semi-urban and rural areas and departing from these areas, 1981**

Settled and departed by region	Total
Total commuters	1.090.910
Settled in urban areas	813.490
Departing from urban areas	662.800
Settled in semi-urban areas	111.650
Installed from semi-urban areas	107.120
Established in rural areas	165.770
Departing from rural areas	320.990

Source: Hellenic Statistical Authority, censuses for the years 1971, 1981.

The last table shows the immigrant populations in the last five years of the period we examined. Overall, we can say that by summing up 1,090,910 of Table 7 to the 764,480 in Table 6, we have a total migration of about 1,700,000, giving a possibility of divergence. These figures are not entirely safe either. However, they are a guide to being able to have an overview of this phenomenon that has changed the population structure of the country.

## 5. Conclusions

The issue examined in the present research was the emergence of the phenomenon of the movement of large population groups within Greece during the 1970s. At the same time, Greece is experiencing a second major exodus, the one abroad (external migration), which drains the country and decimates it, while at the same time we have the influx of repatriates in Greece, thus changing the demographic profile of the country.

From the study of the existing literature and the data of the Hellenic Statistical Authority, we can make some observations about the phenomenon.

The entire territory of the Greek state experienced internal migration, other areas negatively and others positively. The exodus of population from rural areas continues, but to a lesser extent than has been the case up to then. There is also an increased but small installation traffic towards them. The biggest recipient of this migration continues to be the large urban centers and in particular Attica and, to a lesser extent, Thessaloniki.

A direct result of internal migration is the change in the distribution of the country's population. The nature of the population is changing. From rural, the population is transformed into urban. For the first time in a census in Greece, the urban population is superior to the rural (1971 census). The above change led to the change of occupation and profession. There is a shift from the primary sector to the secondary and tertiary sectors.

As far as ages are concerned, there is a nationwide, and regardless of the region's, decline in the young population (the population that mostly moves is the group from 20 to 44 years old and to a lesser extent from 0 to 19). Finally, rural areas are losing young labor. 392,800 immigrants from rural areas between 1966 and 1970. During the same period, a total of 764,480 people migrated nationwide. 1,090,910 are the immigrants in the five-year period 1976 - 1981.

We should not forget that the phenomenon of internal migration includes students who went to large urban centers to study, joining the current of internal migration informally.

At the same time, Greece is experiencing a second major exodus, the one abroad (external migration), which drains the country and decimates it. Any import of people into the Greek territory (repatriates) will be organized after 1971, when we have a population and demographic change in the country's profile.

During the twenty years of '50 - '70, the rate of change of the country's population was very high, in favor of the urban population (2.2% on average) in contrast to the rural population (- 0.6% on average). In the decade 1961 - 1971, 605,654 farmers stopped working in agriculture. This represents 16.5% of the rural population. In total, the 1961 census shows 370,000 immigrants from rural areas, while 644,800 were the total number of commuters. In the period 1951 - 1961 we had a total population growth of 9.9%. However, 16 of the 52 prefectures of Greece had a population decline. In the period 1961 - 1971 the population growth amounted to 4.5%, while population growth was presented by only 8 prefectures.

## 6. Final considerations and discussion

By reviewing the existing literature and reading the available data, the main causes that led the populations of the period under examination to move from the areas where they lived to urban areas, can be captured.

A very important cause of migration during this period is the rural clergy, which has a dual texture; on the one hand, it is too small, and on the other hand it is unevenly distributed in the geographical area of Greece. This problem is constant and has existed since the establishment of the new Greek state (1830).

Another major cause is the rural overpopulation that exists in the countryside, and the combination of this cause with the previous one has seriously exacerbated the phenomenon of internal migration.

Equally important is the industrialization of rural areas. A systematic effort was made by all post-war governments to industrialize the countryside in order to strengthen it. However, this was directed against the farmers, who, on the one hand could not assimilate these changes, and on the other hand, industrialization locked many jobs and exacerbated underemployment.

Another essential cause was the low wages received by land workers, while the difference between agricultural wages and labor wages exacerbated emigration. An equally important aspect is the over-concentration of the basic axes of the state in the large cities and especially in the capital, and in addition to the central administration, the large urban centers are home to large financial institutions and large enterprises.

Of great importance is also the fact that the educational institutions were located in Athens (in the '60s, the existing educational institutions located in other cities, were the Aristotle University of Thessaloniki, the University of Patras and the University of Ioannina, which functioned as a branch of the Aristotle University of Thessaloniki). Characteristically, during the period '71 – '72, 49,189 students studied in the Capital, out of a total of 74,348.

An important parameter was also the health network, which at that time was not fully developed, forcing rural populations to be deprived of access to the provision of health care. The government's policy followed was also of great importance. In addition to the rural development effort, several other measures taken by governments, led to massive urbanization. The series of measures taken by governments can be described as important. The dictatorial governments, with regard to tourism, have been given incentives for the development of tourism and also for the secondary sector, with the result that the rural population has, albeit slightly, turned to this outlet for work.

Finally, other reasons can be mentioned, such as the social life in cities and opportunities for advancement, while cases where, friendly or family ties force many to move to large urban centers, should not be excluded.

The effects created by this migratory phenomenon are significant. These consequences consist of the fact that large population groups have moved en masse and in a very short period of time, radically changing the structure and image of the country. The most important of all the consequences is the depopulation of rural areas. With the movements of these two decades, the rural population has decreased significantly compared to the past and from the rural overpopulation of the pre-war years we have reached desolation and rural ageing.

Equally important was the impact of this migratory phenomenon on the rural clergy. Before the war, the place faced a problem of small arable land while, after the war, many areas remain uncultivated.

As far as the agricultural sector is concerned, the impact on crops has also been significant. With the flight of the large part of the population, farmers turned to individual crops of products, unable to practice the polycultural system of the past.

There was a big problem for the cities that received this migratory flow, especially the capital, Athens. A large city with a huge density was created, with the rest of the population spread throughout the rest of Greece. Thus, we have a hydrocephalus state, with a very large capital and an unequal distribution of the other population regions.

Very important is the over-concentration of the activities of the state apparatus, which are distributed in the capital, thus not leaving the development of the rest of the country. The impact of the current of urbanization is the unregulated construction of the large urban centers. Numerous buildings, anarchically located, compose the map of modern large cities. The change in social stratification is also important. By moving from the countryside to the cities, these people were forced to change professions in order to survive. This change could be in any sector (e.g., it may have dealt with tourism and services), moving horizontally but also often vertically in the social space. Finally, an accessory to urbanization can be considered as the problem of air pollution that we face. The unregulated construction, the over-accumulation of cars and motorbikes, led to the great ecological problem of our days.

## Notes

1. The article is part of the writer's post-doctoral research, under the title "Institutional, economic, social and demographic transformations in Greece during the post-dictatorship era (1974-1996)".

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## Multiplier event for project “Continugee”: A comprehensive overview and reflection

On March 10th, 2023, an integral Multiplier Event occurred within the framework of the Erasmus+ Strategic Partnership project “Ensuring Continuity in Education for Refugees” or “Continugee”. Hosted by the National and Kapodistrian University of Athens, the event was an emblematic testament to the impact and vital significance of the project.

The event opened with a profound greeting from Napoleon Maravegias, the Scientific Manager of the project. Dr. Maravegias, an Emeritus Professor at the National and Kapodistrian University of Athens, emphasized the crucial role of such initiatives in enhancing the quality of education for refugees. His lifelong commitment to educational advancement for marginalized communities was reflected in his words and in his work on the project.

Theodoros Sakellaropoulos, Emeritus Professor at Panteion University and President of the Scientific Society for Social Cohesion and Development, followed Professor Maravegias's greeting. Sakellaropoulos drew from his extensive background in social cohesion studies to stress the crucial role of education in fostering integration and overall societal development.

The event then transitioned into analysis of good practices across various countries. Associate Professor Yannis Roussakis of the National and Kapodistrian University of Athens focused on Greece's experience. Dr. Roussakis, recognized for his incisive understanding of Greek educational system dynamics, presented comprehensive findings not only about the effective strategies utilized within Greece, but also about the inexpediencies of the education system.

As part of the distinguished panel, Associate Professor Yannis Roussakis presented a thorough analysis of Greece's experience with respect to educational practices for refugees. Drawing from his extensive research and deep understanding of Greece's unique socio-cultural context, Roussakis presented an incisive account of the strategies that have proven most effective in the Greek education system.

Dr. Roussakis highlighted several key programs, policies, and initiatives implemented within Greece, demonstrating their real-world impacts on refugee education. His presentation included case studies on specific educational models and pedagogical approaches tailored to the needs of refugee students. Further, he shed light on how Greek schools have adapted to integrate these learners effectively, covering aspects such as language acquisition, cultural understanding, and trauma-informed education.

Roussakis's contribution was a robust testament to the power of localized strategies in addressing global issues. His insights served as a guiding beacon for other countries in the development and adaptation of educational practices tailored to the needs of their own refugee populations.

Dr. Roussakis' research highlighted the main shortcomings of the Greek education system, which are often an insurmountable obstacle for refugee students. With compulsory education starting at primary school, pre-school education provided to refugees is entirely voluntary. As a result the entry of refugees into primary school, many times comes without the necessary cognitive resources. Moreover, the fact that teachers are substitutes and change school environments at the beginning of each school year is a thorny problem. Consequently, the work of teachers becomes more difficult, while the climate of uncertainty

for the refugees themselves intensifies. Roussakis' case studies, lead to the conclusion that refugee parents refuse to send their children to school, either because of distrust in the education system, or because of a different cultural background. His remarks are of major importance for a deeper understanding of the factors that work as a deterrent in ensuring educational continuity for refugees. It is crucial to highlight the inexpediences of the educational system, so that the education provided will be improved and taken forward.

Christos Zisis, a PhD(c) at Fachhochschule Kiel, contributed an in-depth examination of Germany's best practices. Mr. Zisis, through his research, has become a leading voice on Germany's educational strategies for refugee integration.

Mr. Zisis' research is grounded in his extensive knowledge of the German educational system and its initiatives towards refugee education. During the Multiplier Event, Zisis detailed the practical measures Germany has implemented in its school systems, focusing on both pedagogical approaches and policy decisions. He drew upon specific case studies, underlining how these methods have effectively facilitated the academic progress of refugee students. He also discussed the challenges faced and how they were overcome or are being addressed, providing a holistic overview of Germany's approach.

Moreover, Mr. Zisis' participation was not limited to presenting his findings; he also actively engaged with his peers during the event, offering valuable insights during the discussions. His ability to contextualize Germany's experiences within the broader European and global landscape was a valuable addition to the discourse. Zisis' analysis offered a foundation upon which other nations might build, innovate, and modify according to their unique circumstances, driving the Continugee project's goal of global collaboration and mutual learning.

Providing insights from Italy was Dr. Gül Ince-Beqo, a respected researcher at the University of Urbino. Dr. Ince-Beqo, with her broad knowledge and practical experience in Italy's educational system, offered an invaluable perspective on the successful educational strategies deployed within Italy, while highlighting those frames that limit the further development of effective strategies.

Dr. Ince-Beqo's analysis was characterized by a unique blend of academic rigor and practicality, based on her extensive research and direct experiences within Italy's educational system. Her insights were anchored in a robust understanding of Italy's policy landscape, sociocultural dynamics, and pedagogical methods used in the context of refugee education.

Her segment of the event started with a critical assessment of the current state of education for refugees in Italy, shedding light on both the strengths and areas of improvement within the system. Dr. Ince-Beqo then moved on to present concrete examples of good practices observed in Italy, providing a comprehensive overview of the initiatives, projects, and policies that have demonstrated positive results in ensuring educational continuity for refugees.

She specifically highlighted collaborative and integrative educational models that foster social cohesion, multicultural understanding, and promote the psychosocial wellbeing of refugee students. Dr. Ince-Beqo's deep exploration of the subject also drew attention to the importance of teacher training and the use of technology in facilitating learning for refugees, aspects that Italy has invested in considerably.

Dr. Ince-Beqo pointed out the main difficulties that the Italian education system faces. The biggest issue occurs between the ages of 16 and 18. Refugee children who arrive in Italy at this age, without any knowledge of the language, are called upon in a short period of time to cover the cognitive gap to be able to attend High School. Another critical issue indicated

from her research is the ineffectiveness of mixed classes. A measure that appears to promote the integration of refugees, due to interaction with the native students. However, in the long run the gap widens as different learning speeds prevail. She also noted that opportunities for education vary geographically. It appears to be more in Northern Italy rather than Central and Southern Italy. Moreover, the following adversity was found, despite the fact that the funding in the North is greater, in the South better utilization is taking place for the educational process. Critical challenges regarding the education of refugee children emerge from her analysis. Her contribution was instrumental in bringing to light invisible issues, including time and space, that is age and geography, that must be taken seriously into account.

Contributing to the discussions around the Good Practices Guide was Dr. Christoforos Skamnakis, a researcher at the Scientific Society for Social Cohesion and Development, and Associate Professor at Panteion University. Skamnakis, with his rigorous research and academic acumen, provided a comprehensive analysis for the guide, further highlighting its importance in the project's context.

In the context of the Multiplier Event, Dr. Skamnakis made significant contributions to the Good Practices Guide, a fundamental resource developed within the Continugee project. The guide aims to outline successful strategies and tactics for integrating refugees into education systems, drawn from international case studies and expert insights.

With his extensive knowledge and expertise, Dr. Skamnakis was able to provide a comprehensive and incisive analysis of the guide. He emphasized its essential role as a tool for educators, policymakers, and stakeholders in better understanding the challenges faced by refugee students and identifying the most effective ways to support them. His analysis also addressed how the guide's implementation could foster greater social cohesion and integration.

Dr. Skamnakis' contribution went beyond mere analysis; he also proposed practical steps for further improving and expanding the guide. Drawing on his wealth of experience and research, he suggested innovative ways to further refine the guidelines to ensure they remain relevant and effective in the ever-evolving landscape of refugee education. His input will undoubtedly play a crucial role in shaping the project's future direction and its capacity to make a lasting positive impact on refugee education.

His input is remarkable because it integrates the guide into the Greek reality. He presents the three pillars that affect the education of refugees, the education system, social policy and immigration policy and points out their weaknesses, formulating proposals to overcome them. Then, he analyses in depth the issue of refugee school dropout. It was found that the family environment plays an important role, in addition to the teachers and school environment. Dr. Skamnakis' observations are more than essential for ensuring the educational continuity of refugee students.

Representing the Greek state, Dr. Gelly Aroni, Head of the Unit for Integration in the Special Secretariat for the Protection of Unaccompanied Minors at the Ministry of Migration and Asylum, reported on the state's perspectives and commitments. Dr. Aroni's insights, gathered from her frontline work in policy making and implementation, underscored the crucial role of government support in ensuring continuity in refugee education.

The Multiplier Event illuminated the importance of the Continugee project and highlighted the value of international cooperation and exchange of best practices in addressing the educational needs of refugees. The event marked a significant step forward in the ongoing pursuit of ensuring quality and inclusive education for all, regardless of their backgrounds. The Event also

proved to be a profound platform for dialogue, exchange of ideas, and collaboration among the participants. As an outcome of the event, there was a deeper, shared understanding of the challenges and opportunities in providing quality education for refugees.

Insights from Greece, Germany, and Italy provided a comprehensive understanding of the varied approaches and experiences across Europe. The discussions sparked new ideas and reinforced the importance of tailoring educational practices to each country's unique socio-cultural context.

The event also highlighted the importance of multi-sectoral collaboration, with inputs from academia, research institutions, and government representatives. The presentation by Dr. Gelly Aroni from the Ministry of Migration and Asylum underscored the critical role of policy and state support in realizing the goals of projects like Continugee.

The Multiplier Event has significantly contributed to enhancing the Good Practices Guide's content, making it a more valuable tool for educators, policy makers, and practitioners. This guide is set to influence strategies and practices, which will hopefully result in improved educational outcomes for refugees across Europe.

Furthermore, the event strengthened the network of stakeholders engaged in the project, fostering a stronger sense of community and shared purpose. It is anticipated that this will lead to more robust cooperation and coordination in the future, catalyzing further progress in ensuring continuity in education for refugees.

Eftychia Zarahoviti,  
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## ΟΔΗΓΙΕΣ ΠΡΟΣ ΤΟΥΣ ΣΥΓΓΡΑΦΕΙΣ

Τα κείμενα υποβάλλονται στα ελληνικά ή στα αγγλικά. Οι συγγραφείς δεσμεύονται ότι δεν έχουν δημοσιεύσει ή υποβάλει προς κρίση τα άρθρα τους σε άλλο έντυπο. Σε περίπτωση δημοσίευσης παρόμοιου άρθρου, αυτό δηλώνεται από τον συγγραφέα. Υποβάλλονται τέσσερα ταυτόσημα κείμενα και ένα σε ηλεκτρονική μορφή στην επόμενη διεύθυνση του εκδότη.

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Τα άρθρα αξιολογούνται από δύο τουλάχιστον ανώνυμους κριτές. Το όνομα και τα άλλα στοιχεία του συγγραφέα, καθώς και ο τίτλος του άρθρου πρέπει να υποβάλλονται σε ξεχωριστή σελίδα από το κυρίως σώμα (τίτλος, κείμενο, βιβλιογραφικές αναφορές). Τα υποβαλλόμενα άρθρα πρέπει να συνοδεύονται από δύο περιλήψεις, όχι μεγαλύτερες των 100 λέξεων, και πέντε λέξεις-κλειδιά στα ελληνικά και τα αγγλικά. Η έκταση των άρθρων πρέπει να κυμαίνεται μεταξύ 6-8.000 λέξεων, συμπεριλαμβανομένων των περιλήψεων και αναφορών. Τα χειρόγραφα των άρθρων που απορρίπτονται δεν επιστρέφονται.

Για τις αναφορές χρησιμοποιείται το σύστημα Harvard. Οι αναφορές στο κείμενο περιλαμβάνουν το επώνυμο του συγγραφέα και το έτος έκδοσης της δημοσίευσης, π.χ. (Esping-Andersen, 1990, Kleinman and Piachaud, 1993). Οι άμεσες αναφορές πρέπει να δίνουν και τον αριθμό της σελίδας ή των σελίδων, π.χ. Ferrera et al., 2002: 230. Σε περίπτωση περισσότερων αναφορών του ίδιου συγγραφέα για το ίδιο έτος, πρέπει να χρησιμοποιείται η διάκριση με α, β, γ κ.λπ. για το έτος. Οι βιβλιογραφικές αναφορές (όχι βιβλιογραφία) καταχωρούνται αλφαβητικά στο τέλος του κειμένου. Παρακαλούνται οι συγγραφείς να επιμελούνται την ακριβή αντιστοίχιση των αναφορών του κειμένου με τον αλφαβητικό κατάλογο των βιβλιογραφικών αναφορών στο τέλος του κειμένου και το αντίστροφο. Η αναφορά σε βιβλία πρέπει να δίνει το όνομα του συγγραφέα, το έτος έκδοσης, τον τίτλο του βιβλίου, τον τόπο έκδοσης και την επωνυμία του εκδοτικού οίκου. Π.χ. Scharpf F., (1999), *Governing in Europe: Effective and Democratic?* Oxford: Oxford University Press. Η αναφορά άρθρων σε περιοδικά πρέπει να δίνει τόμο, τεύχος, σελίδες, καθώς και τον τίτλο του άρθρου σε απλά εισαγωγικά. Για παράδειγμα: Atkinson A.B., Marlier E. and Nolan B., (2004), "Indicators and Targets for Social Inclusion in the European Union", *Journal of Common Market Studies* 42: 47-75. Αναφορές σε κεφάλαια συλλογικών τόμων καταχωρούνται με τον τίτλο του κεφαλαίου σε απλά εισαγωγικά, ακολουθούμενο από τον συγγραφέα και τον τίτλο του συλλογικού τόμου. Π.χ. Leibfried, S. and Pierson, P. (1995) "Semisovereign Welfare States: Social Policy in a multitiered Europe", in: Leibfried S. and Pierson P., (eds), *European Social Policy: Between Fragmentation and Integration*, p.p. 43-77, Washington D.C.: The Brookings Institution. Οι τίτλοι των βιβλίων και περιοδικών γράφονται με πλάγια γράμματα. Συνιστάται οι επεξηγηματικές σημειώσεις να είναι οι ελάχιστες δυνατές. Εάν κρίνονται απαραίτητες, τότε πρέπει να αριθμούνται στο κείμενο και να παρατίθενται στο τέλος του άρθρου. Επίσης, στο τέλος παρατίθενται και οι τυχόν ευχαριστίες. Άρθρα που δεν συμβιβάζονται με τις παραπάνω οδηγίες επιστρέφονται στον συγγραφέα για την ανάλογη προσαρμογή.

Τα **προς κρίση-παρουσίαση βιβλία** αποστέλλονται στην Μαρίνα Αγγελάκη, στη διεύθυνση του εκδοτικού οίκου.

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