Athens Journal of Mediterranean Studies

Quarterly Academic Periodical, Volume 7, Issue 2, April 2021
URL: https://www.athensjournals.gr/ajms Email: journals@atiner.gr
e-ISSN: 2407-9480 DOI: 10.30958/ajms

Front Pages

ATHENS INSTITUTE FOR EDUCATION AND RESEARCH
A World Association of Academics and Researchers
8 Valaoritou Str., Kolonaki, 10671 Athens, Greece.
Tel.: 210-36.34.210 Fax: 210-36.34.209
URL: https://www.athensjournals.gr/ajms Email: journals@atiner.gr

Mission

ATINER is an Athens-based World Association of Academics and Researchers based in Athens. ATINER is an independent and non-profit Association with a Mission to become a forum where Academics and Researchers from all over the world can meet in Athens, exchange ideas on their research and discuss future developments in their disciplines, as well as engage with professionals from other fields. Athens was chosen because of its long history of academic gatherings, which go back thousands of years to Plato's Academy and Aristotle's Lyceum. Both these historic places are within walking distance from ATINER's downtown offices. Since antiquity, Athens was an open city. In the words of Pericles, Athens"…is open to the world, we never expel a foreigner from learning or seeing". ("Pericles' Funeral Oration", in Thucydides, The History of the Peloponnesian War). It is ATINER's mission to revive the glory of Ancient Athens by inviting the World Academic Community to the city, to learn from each other in an environment of freedom and respect for other people's opinions and beliefs. After all, the free expression of one's opinion formed the basis for the development of democracy, and Athens was its cradle. As it turned out, the Golden Age of Athens was in fact, the Golden Age of the Western Civilization. Education and (Re)searching for the 'truth' are the pillars of any free (democratic) society. This is the reason why Education and Research are the two core words in ATINER's name.

The Athens Journal of Mediterranean Studies
ISSN NUMBER: 2241-794X- DOI: 10.30958/ajms
Volume 7, Issue 2, April 2021
Download the entire issue (PDF)

Athens Journal of Mediterranean Studies
Editorial and Reviewers' Board

Sciences and Management, University of Sousse, Tunisia.

- Dr. Hiteshkumar Parmar, Academic Member, ATINER & Associate Professor, P. D. Malaviya College of Commerce, India.
- Dr. Donizete Rodrigues, Associate Professor, University of Beira Interior, Portugal.
- Dr. Lehte Roots, Associate Professor, Chair of The Public Law, Tallinn University of Technology, Estonia.
- Dr. Tatiana Smetanina, Associate Professor, Institute of Economics and Management, Udmurt State University, Russia.
- Dr. Anna Svirina, Associate Professor & Head, Economics and Management Department, Kazan National Research Technical University, Russia.
- Dr. Iman A. Hamdy Editor, Adjunct Assistant Professor, Political Science Department, The American University in Cairo, Egypt.
- Dr. Hakim Ajhar, Assistant Professor, Department of Humanities and Social Sciences, Khalifa University, United Arab Emirates.
- Dr. Zeynep Akture, Academic Member, ATINER & Assistant Professor, Department of Architecture, Izmir Institute of Technology, Turkey.
- Dr. Aijaz Ashraf Wani, Senior Assistant Professor, Department of Political Science, University of Kashmir, India.
- Dr. Methiye Gul Coteli, Assistant Professor, Department of City and Regional Planning, Erciyes University, Turkey.
- Dr. Fatma Gürses, Academic Member, ATINER & Associate Professor, Faculty of Art, Design and Architecture, Department of Radio Television and Cinema, Düzce University, Turkey.
- Dr. Jülide Karakoç, Associate Professor, Altinbas University, Istanbul, Turkey.
- Dr. Levent Kirval, Assistant Professor, Istanbul Technical University, Turkey.
- Dr. Ajeet Jaiswal, Assistant Professor, Pondicherry University, India.
- Dr. Sara Petroccia, Academic Member, ATINER & Assistant Professor, eCAMPUS University, Italy.
- Dr. Irena Rajchinovska Pandeva, Assistant Professor, Department of Political Science, University Ss. Cyril and Methodius, FYROM.
- Dr. Ilkay Sudas, Assistant Professor, Department of Geography, Ege University, Turkey.
- Dr. Josipa Visic, Assistant Professor, Faculty of Economics, University of Split, Croatia.
- Dr. Jonathan Needham, Associate Teaching Professor, Penn State University-Abington College, USA.
- Dr. Basil A. Akuegwu, Lecturer, Department of Educational Administration and Planning, University of Calabar, Nigeria.
- Dr. Adina Dudau, Academic Member, ATINER & Lecturer, University of Glasgow, U.K.
- Dr. Susan Stewart, Professor, Western Illinois University, USA.
- Dr. Ibrahim A. Onour, Academic Member, ATINER & Professor, School of Management Studies, University of Khartoum, Sudan.
- Dr. Dragos C. Mateescu, Lecturer, Faculty of Business, Izmir University of Economics, Turkey.
- Dr. Ercan Kacmaz, Lecturer, Nevsehir Hacı Bektas Veli University, Turkey.
- Dr. Doaa Sayed Abdel Azim, Lecturer of English Literature, October University for Modern Sciences and Arts, Egypt.
- Dr. Eleni Tracada, Academic Member, ATINER & Lecturer, College of Engineering and Technology, University of Derby, UK.
- Dr. Samodelkin Yakov Aleksandrovich, Lecturer, Urals State of Agrarian University, Russia.
- Dr. Nicholas Rossis, Academic Member, ATINER, Research Associate, Inter Alia & Institute of International Economic Relations, Greece & British Ministry of Defence, UK.
- Dr. Zoran Aralica, Senior Research Fellow, The Institute of Economics, University of Zagreb, Croatia.
- Dr. Sofia Gaspar, Postdoctoral Research Fellow, Lisbon University Institute, Portugal.
- Dr. Jonathan Hill, Reader in Postcolonialism and the Maghreb, King's College London, Associate Staff Member, Institute of Middle Eastern Studies, King's College London & Visiting Fellow, Middle East

President's Message

All ATINER's publications including its e-journals are open access without any costs (submission, processing, publishing, open access paid by authors, open access paid by readers etc.) and is independent of presentations at any of the many small events (conferences, symposiums, forums, colloquiums, courses, roundtable discussions) organized by ATINER throughout the year and entail significant costs of participating. The intellectual property rights of the submitting papers remain with the author. Before you submit, please make sure your paper meets the basic academic standards, which includes proper English. Some articles will be selected from the numerous papers that have been presented at the various annual international academic conferences organized by the different divisions and units of the Athens Institute for Education and Research. The plethora of papers presented every year will enable the editorial board of each journal to select the best, and in so doing produce a top-quality academic journal. In addition to papers presented, ATINER will encourage the independent submission of papers to be evaluated for publication.

The current issue is the second of the seventh volume of the *Athens Journal of Mediterranean Studies (AJMS)*, published by the Athens Institute for Education and Research.

Gregory T. Papanikos
President
ATINER

Athens Institute for Education and Research

A World Association of Academics and Researchers

14th Annual International Conference on Mediterranean Studies
29-31 March & 1April 2021, Athens, Greece

The **Center for European & Mediterranean Affairs** organizes the **14th Annual International Conference on Mediterranean Studies, 29-31 March & 1 April 2021, Athens, Greece** sponsored by the Athens Journal of Mediterranean Studies. The aim of the conference is to bring together academics and researchers from all areas of Mediterranean Studies, such as history, arts, archaeology, philosophy, culture, sociology, politics, international relations, economics, business, sports, environment and ecology, etc.You may participate as stream leader, presenter of one paper, chair a session or observer. Please submit a proposal using the form available (https://www.atiner.gr/2021/FORM-MDT.doc).

Academic Members Responsible for the Conference

- **Dr. Gregory T. Papanikos**, President, ATINER & Honorary Professor, University of Stirling, U.K.
- **Dr. Steven Oberhelman,** Professor of Classics, Holder of the George Sumey Jr Endowed Professorship of Liberal Arts, and Associate Dean, Texas A&M University, USA, Vice President of International Programs, ATINER and Editor of the Athens Journal of History.
- **Dr. Nicholas Pappas**, Vice President of Academic Membership, ATINER & Professor of History, Sam Houston University, USA.
- **Dr. David Philip Wick**, Director, Arts, Humanities and Education Division, ATINER & Professor of History, Gordon College, USA.
- **Dr. Yannis Stivachtis**, Director, Center for European & Mediterranean Affairs and Associate Professor, Jean Monnet Chair & Director of International Studies Program, Virginia Tech – Virginia Polytechnic Institute & State University, USA.

Important Dates

- Abstract Submission: **15 February 2021**
- Submission of Paper: **1 March 2021**

Social and Educational Program

The Social Program Emphasizes the Educational Aspect of the Academic Meetings of Atiner.

- Greek Night Entertainment (This is the official dinner of the conference)
- Athens Sightseeing: Old and New-An Educational Urban Walk
- Social Dinner
- Mycenae Visit
- Exploration of the Aegean Islands
- Delphi Visit
- Ancient Corinth and Cape Sounion

Conference Fees

Conference fees vary from 400€ to 2000€

Details can be found at: https://www.atiner.gr/2019fees

19th Annual International Conference on Politics
14-17 June 2021, Athens, Greece

The Politics & International Affairs Unit of the ATINER will hold its **19th Annual International Conference on Politics, 14-17 June 2021, Athens, Greece** sponsored by the Athens Journal of Social Sciences. The aim of the conference is to bring together academics, researchers and professionals in private and public organizations and governments of Politics and International Affairs and other related disciplines. You may participate as stream leader, presenter of one paper, chair of a session or observer. Please submit a proposal using the form available (https://www.atiner.gr/2021/FORM-POL.doc).

Important Dates

- Abstract Submission: **3 May 2021**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **17 May 2021**

Academic Member Responsible for the Conference

- **Dr. Yannis Stivachtis**, Director, Center for European & Mediterranean Affairs and Associate Professor, Jean Monnet Chair & Director of International Studies Program, Virginia Tech – Virginia Polytechnic Institute & State University, USA.

Social and Educational Program

The Social Program Emphasizes the Educational Aspect of the Academic Meetings of Atiner.

- Greek Night Entertainment (This is the official dinner of the conference)
- Athens Sightseeing: Old and New-An Educational Urban Walk
- Social Dinner
- Mycenae Visit
- Exploration of the Aegean Islands
- Delphi Visit
- Ancient Corinth and Cape Sounion

More information can be found here: https://www.atiner.gr/social-program

Conference Fees

Conference fees vary from 400€ to 2000€
Details can be found at: https://www.atiner.gr/2019fees

Athens Journal of Mediterranean Studies - Volume 7, Issue 2, April 2021 – Pages 85-102

The European Union's Recovery Plan: A Critical Evaluation

By Gregory T. Papanikos[*]

This article reviews the European Union's Recovery Plan to cope with COVID-19 by examining two of its main hypotheses. I primarily use Greece as a case study of those who benefit from receiving funds, and in some cases Germany, because it played, and still plays, an instrumental role in promoting this unfounded idea of transferring European taxpayers' money to the hands of national politicians. First, it was alleged that the health situation is improving. Second, the pandemic increases economic divergence between member states. The stylized facts so far do not seem to support either hypothesis. Since the July Summit of the European Council, the epidemiological situation has worsened as measured by deaths and cases. Data on per capita Gross Domestic Product released by the European Commission on 6 May 2020 show an unprecedented for peace years decline in economic growth rates for all 27 member states in 2020. The data estimations also assume a V-shaped recovery for 2021. However, the alleged hypothesis of economic divergence in 2020 and economic convergence in 2021 is not supported by the data themselves. The main conclusion of this study is that the economic impact cannot be fully ascertained if the pandemic is not permanently over and therefore the titanic EU spending of 750 billion euro cannot be based on the stylized economic and epidemiological facts.

Keywords: *European Union, pandemic, Covid-19, health, growth, public pending, recovery plan, Germany, Greece.*

Introduction

It took God six days to create the heavens and the Earth. This is one day more than the days it took the 27 European Union (EU) Heads of States to create a Recovery or Rescue Plan (RP) from 17 to 21 July 2020. The genesis of the RP is another of those EU (economic) miracles by which the incomes of the future generations of European citizens are taxed to serve the interests of current day politicians[1].

As a great supporter of representative democracy and the European Union project, I must declare from the outset that I consider these allocations (read misuse) of funds as the necessary cost to maintain (representative) democracy in

[*]President, Athens Institute for Education and Research, Greece.

[1]After writing this paper, I read a publication (Diamond 2020) which generalized this policy of using tax-payers money to serve the interest of politicians in power and made a persuasive argument that not only money is wasted but the democratic process itself is undermined by authoritarian regimes around the world not excluding the EU countries. These regimes which were elected by "democratic" processes but used the pandemic to suppress freedom of press and independence of the judicial.

Europe. It is obvious that I consider these a waste of money, but if their opportunity cost is to avoid another world war, then it makes perfect political rational sense. After all, whenever the EU leaders have difficulties in explaining the rationality of increasing their budget, they use the argument of all arguments: the EU was formed to avoid another world war. Who can oppose to that? Thus, the EU RP aimed, "…to prevent a north-south split" as *Financial Times* put it at the aftermath of the July EU decision[2]. Another "war" was successfully avoided; the President of the European Council himself was inspired in his youth years by this ideal as proudly posts it[3].

With this in mind, I must state that my criticism is not against the RP but to emphasize once again the glory of representative democracy. European people elect the leaders they really deserve who are a mirror-image of the people whom they represent. Thus, there is no surprise that their conclusion of sixty-eight pages of the RP is full of (economic) nonsense but full of rational political realism, i.e., political leaders of the EU member states increase their probability of being re-elected in the next national election[4]. Definitely their popularity is a nondecreasing function of the billions of euro allocated to their country. For example, in Greece the government and its political clientele are already bickering about how to "waste" these unexpected external funding which will increase the probability of the current government to be re-elected. Pandemic was an unexpected "dowry" for them because they do not have to apologize for their ridiculous economic plan that first was presented in 2016 by then leader of the Official Opposition Party and now Prime Minister. I have commented on that program revealing not only the lack of basic scientific support of their economic arguments but their inherent contradictions[5].

Similarly, the purpose of this article is to show the inexistence of any scientific support of the economic part of the RP. This did not come as a surprise to me because representing Greece in one of the five institutions of EU for fourteen years, I had a firsthand experience to test the economic theories that underline this paper. I primarily use Greece as a case study of those who benefit from receiving funds, and in some cases Germany, because it played, and still plays, an instrumental role in promoting this unfounded idea of transferring European taxpayers' money to the hands of national politicians. The other 25 countries are split between two

[2]See https://www.ft.com/content/1fd5785b-5f6f-4175-bae4-214b43a55804.

[3]In his biography (https://www.consilium.europa.eu/en/european-council/president/biography/) the second sentence -after his birthyear and birthplace mentioned which- states the following: "He grew up listening to the stories of his parents and grandparents, who had experienced the devastation of the Second World War and knew **how precious peace and reconciliation are**. Today he says: '**I have never taken these for granted**'" (bold in the original).

[4]A reviewer pointed out that this might not be the case with Germany. Of course, the current Chancellor of Germany may not run again for another term but her party will. Thus, the question is whether the RP will benefit her party. As I explain below there are more than COVID-19 in the RP.

[5]See Papanikos (2016). In that program they aimed to increase private investments to 100 billion euro in the next five years in one chapter of their program and in another that their target growth rate was about 4%. With an annual increase of 20 billion euro in private investment, simple national accounting arithmetic would have shown that the rate of growth would have been more than 10% per year.

groups: those who give and those which receive - and this makes perfect political sense. Public spending and a greater economic role of the state is not something to be condemned as I have explained in my early articles on the theory and practice of public expenditures (see Papanikos 1991, 1990). But public spending should be efficient, effective, democratic (transparent), and externally competitive. I use these terms as they are defined at the textbook level of analysis. I have yet to see an overall project by project multiplier analysis of all EU initiated mammoth public investments or private investments supported by EU using these criteria. A technical report published by the European Commission in 2016 simply recognizes this inability of evaluating investment projects using multiplier analyses.

This paper is organized into six sections including this brief introduction. The next section presents the Recovery Plan, or as sometimes called, the Rescue Plan. The latter represents better the current situation if the sentence is understood to mean that future generations will be taxed to rescue the current generations of politicians in EU. The following section discusses the health impacts of the pandemic as these are measured by the death rate and the number of people infected in EU as whole and per member states. The high variations between member states are ignored by the EU's conclusions of their July summit. In section four of this article evidence is presented to support the EU's hypothesis that the pandemic has led to economic divergence in 2020 using the data released by Economic Commission. The relationship between economic growth and the health impact is examined in section five. Conclusions are given in section six.

The Rescue Package

According to the conclusions of the European Council, the European Commission will borrow from the capital markets the amount of EUR 750 billion in 2018 prices to be allocated to member states as loans (360 billion) and grants (390 billion) to cope with the current pandemic[6]. The borrowing will end in 2026. Loans will be repaid by the end of 2058 at the latest. In addition, 1,074.3 billion euro will be spent as part of EU's budget, making the total spending 1,824.3 billion for the 2021-2027 period.

As is usual the case in the EU jargon, they invented new names for these two public expenditures: the first is called Next Generation EU (NGEU) and the latter Multiannual Financial Framework (MFF). The European Council's conclusions justify these expenditures as follows:

> The COVID-19 crisis presents Europe with a challenge of historic proportions. The EU and its Member States have had to adopt emergency measures to preserve the health of the citizens and prevent a collapse of the economy. We are slowly exiting the acute health crisis. While utmost vigilance is still required on the sanitary situation, the emphasis is now shifting to mitigating the socio-economic damage. This requires an unprecedented effort and an innovative approach, fostering convergence, resilience and transformation in the European Union. At the request of the Heads of State or

[6]See https://www.consilium.europa.eu/media/45109/210720-euco-final-conclusions-en.pdf.

> Government, the Commission presented at the end of May a very wide-ranging package combining the future Multiannual Financial Framework (MFF) and a specific Recovery effort under Next Generation EU (NGEU)" (European Council 2020).

The Heads of States took for granted two issues which in the scientific jargon can be called testable hypotheses. First, the EU countries, "… are slowly exiting the acute health crisis". Is this the case? What does the evidence show after the July EU meeting? Second, EU expenditures aim at preventing the collapse of the economy by "mitigating the socio-economic damage" which can be achieved by "fostering convergence."

It is not clear what is meant by "convergence" but for all intents and purposes in this paper I interpret it to mean that if the pandemic were left without any EU policy reaction it would have resulted to an unprecedented economic collapse (an obvious observation when the economy is locked down) which will cause an economic divergence between the economies of the member states. This is the causality assumed by the EU document. This assumes that the poor countries of the EU have been hit harder by COVID-19. Why would that be the case? Is this the case? The European Council (2020) document does not answer these two questions and takes for granted that the pandemic has caused an economic divergence.

The two hypotheses are examined here using the available data on the health and economic impact of the pandemic. Health data are available on a daily basis on the number of people infected and died from the disease by country. The number of deaths is arguably a more reliable indicator than cases (i.e., the number of people infected). However, the costs of cases may be different from the ones incurred by deaths, which as an issue is not discussed here. On the other hand, on the 6 of May 2020 the European Commission had estimated that the economic cost of the pandemic which is alleged to be close to one trillion in 2015 prices from EUR 13.3 trillion in 2019 to 12.3 trillion in 2020. The average decline of GDP was estimated to be 7.4%. Also, the estimates of the 2021 data show a V-shaped recovery.

I should make a comment here because many foolishly compare the economic impact of the pandemic in Europe to the economic impact of the Second World War. This is pure economic nonsense for at least two reasons. The Second World War was characterized by a huge destruction of the stock of capital. This is not the case of COVID-19. If nothing else, COVID-19 will increase the stock of capital, both private and public, because the EU spending will be allocated to huge public investment projects throughout the member states, and unless this funding does not crowd out private investments as is the most probable scenario, an overall increase in capital stock is expected. Second, during the Second World War a high proportion of the youth of Europe was killed in the battlefields, decreasing the number of productive workers who would have been available to be used after the war. It might sound cynical, but the COVID-19 economic impact might be positive because it affects disproportionally more the older age group who are no longer productive and they absorb a high amount of public social and health spending. This of course applies only to deaths and not to cases. In a recent study, Mallapaty (2020) concluded that "For every 1,000 people infected with the

coronavirus who are under the age of 50, almost none will die. For people in their fifties and early sixties, about five will die — more men than women. The risk then climbs steeply as the years accrue. For every 1,000 people in their mid-seventies or older who are infected, around 116 will die. These are the stark statistics obtained by some of the first detailed studies into the mortality risk for COVID-19." Why would someone who is under 50 pay the high price of a negative growth rate? Or as Reimers and Schleicher (2020) from OECD have pointed out emphasizing the effect of lock down on education and the effect of this on long run growth and youth unemployment, how do policy makers weight these losses? Some policy recommendations have been proposed by García and Weiss (2020).

The aggregate reduction of the growth rate in 2020 hardly constitutes an economic collapse[7]. The EU itself assumes that in 2021 the growth rate of EU will rebound, creating a V-shape type of recovery. This will be achieved with the help of the RP. Member states must prepare their own national plans for the period 2021-2023 which will be approved by the end of this year by the European Commission and then revaluated in 2022. This is the normal notorious bureaucratic procedure of the EU which results in delays and non-absorption. This way, the funding usually comes late and is less than what was originally planned. Both are detrimental to the economic targets adopted by the program but it serves well the goals of national politicians who always blame the Brussels bureaucracy if the absorption does not go relatively well and they want to get all the credit if the absorption goes as planned or even better. In Greece, all structural funds have been delayed and extension was given for increasing the rate of absorption. The alternative where the European Commission itself undertook the design of plans is anathema to national governments because it does not serve their political objectives of "buying votes" for their next national elections.

The European Council (2020) document does not make any reference to the efficient use of the 1.8 trillion euro. But if we assume that 1.8 trillion euro will be spent in the next seven years to make up for the one trillion loss during the pandemic then the multiplier effect of these large public investment projects is less than one, and I guess for some countries like Greece most probably will be negative, i.e., the bad EU public investment funds will crowd out disproportionally good private investments. Of course, these multiplier effects must be larger if one compares the loss not in terms of 2019, but with what would have been the GDP of 2020 if there was no pandemic. A positive growth rate was expected. Unfortunately, the European Council (2020) document does not provide a discussion of these important issues. It seems to me that the efficient and effective use of European taxpayers' money, especially those taxes which are to be paid by the future generations, was never of great concern and therefore an important priority of the EU leaders.

[7]This is true for the overall economy but some sectors like the tourism sector in Greece has experienced an almost total collapse as I have demonstrated in Papanikos (2020d).

The Asymmetry of the Health Impact

Plagues might have severe impacts on the death rate of population. The first well-known plague was the one which struck ancient Athens from 430 to 427 BCE. Thucydides provided an excellent depiction of the plague in his masterpiece of the history of the *Peloponnesian War* (see Papanikos 2021) which included health and social impact. It is really amazing the similarities of the ancient plague and the COVID-19. The striking conclusion when the two are compared is that contrary to Thucydides' wish and hope, the human race does not learn from its previous historical mistakes and keeps on repeating them. The current pandemic is not an exception as well as previous ones that we have information for and mentioned in the literature previously cited.

I have examined elsewhere the severity of COVID-19 in the 27 EU countries (Papanikos 2020a); not repeated here. This section updates the findings of that paper and adds overall daily data to examine the claim by the European Council's conclusions that EU is, "…exiting the health crisis." This was not examined in my previous study. I start with examining this claim first and then I proceed with the asymmetry hypothesis, i.e., the pandemic's health impact varies considerably between the EU member states.

Table 1 provides descriptive statistics of daily reported deaths and cases in EU countries until the end of August 2020. During this period the average daily death rate was 632 people and the average number of people infected was 8,295. The standard deviation was 932 for the death rate and 8,003 for the number of people infected. In total so far in the EU countries 139,679 people have died from COVID-19 (0.031% of EU population) and 1,833,125 people have contracted the virus (0.409% of total EU population).

Table 1. *Descriptive Statistics of Daily Deaths and Cases in EU, January-August 2020*

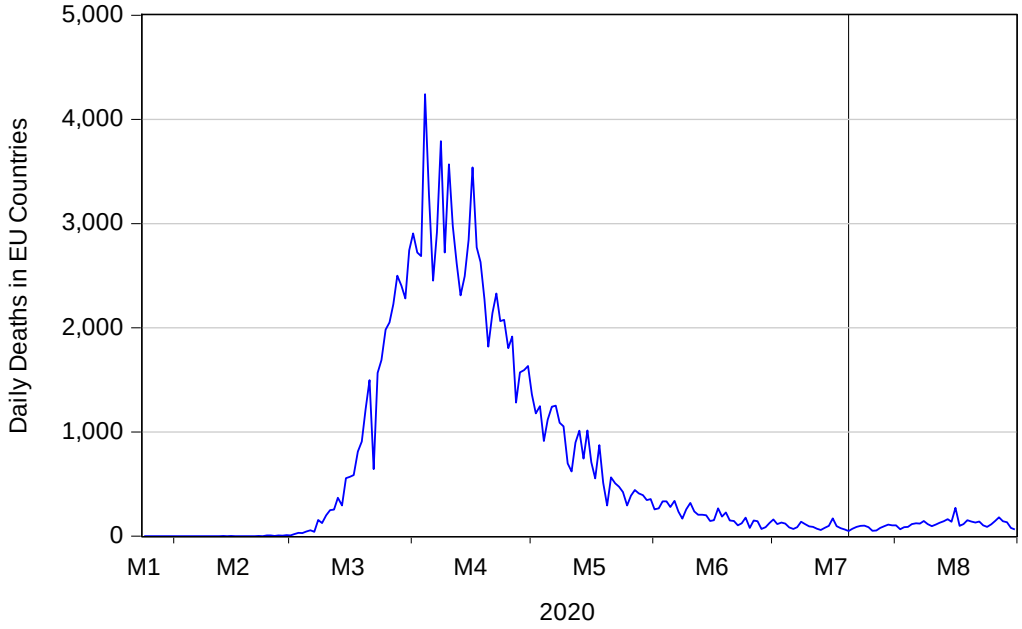
	Deaths	**Cases**
Mean	632	8295
Median	149	5252
Maximum	4242	32963
Minimum	0	0
Std. Dev.	932	8033
Skewness	1.73	1.16
Kurtosis	5.03	3.50
Jarque-Bera	148	52
Probability	0	0
Sum	139679	1833125
Observations	221	221

Source: World Health Organization. Retrieved from: https://COVID-19.who.int/?gclid=EAIaIQobChMItISnjIT76gIVGODtCh1XfQAsEAAYASABEgJK8_D_BwE.

The daily number of deaths is depicted in Figure 1. The first cases in EU arrived in February, it peaked in March, and started to decline since April and May until the EU Council Meeting of 17-20 July of 2020. Thus, the evidence that the

EU leaders had at hand justified their claim that the EU was exiting the health crisis. However, that was conditional of the economy being locked down. If there is a negative relation between the health impact and the degree to which the economic activity is restricted (locked down), then one may expect an increase in the number of deaths and the number of people infected once the restrictions on economic activities are lifted.

Figure 1. *Daily Deaths in EU Countries, January-August 2020*

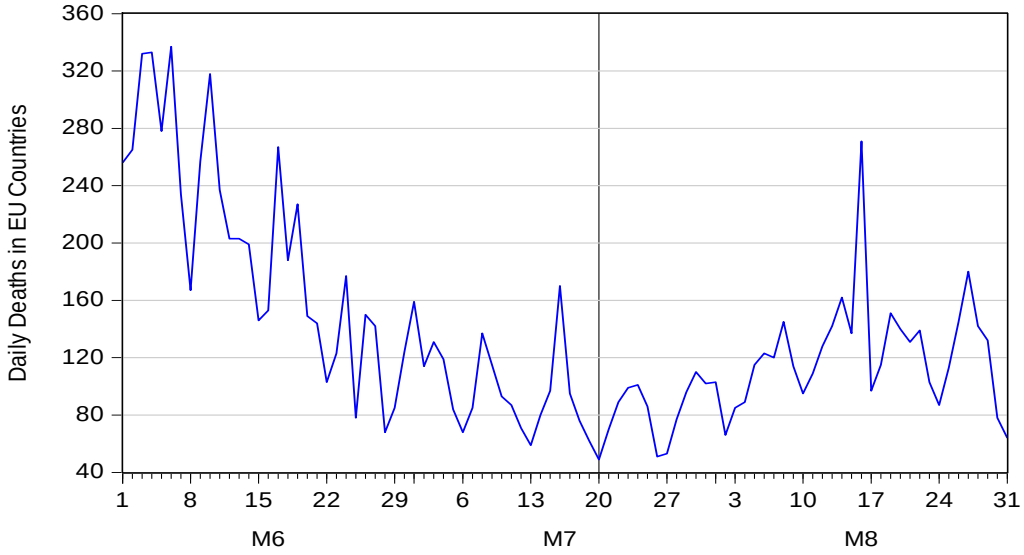


Once the first restrictive measures were lifted, the deaths (and cases which are not reported) started to increase again and this is worrisome for the economy. It implies that opening up the economy will occur at the cost of higher death and case rates. This is shown in Figure 2. The vertical line indicates the date 20 July 2020 which is the date that the summit of EU concluded. By coincidence, on that date the number of deaths was at its minimum after its peak in March-April 2020.

It seems that the pandemic tends to persist despite all of economic and social measures which all EU countries without exception have implemented. The fact that there is an increase in the number of deaths in August 2020 is not a good economic signal for the health impact because it might be related to the slow opening up of the national and international economies especially of the hospitality and travel industries.

I have examined elsewhere the demographics and the health expenditures aspects of the COVID-19 impact in EU countries (see Papanikos 2020b, 2020c). What emerges from these studies is that the health impact varies considerably between the EU member states. A scientific explanation is needed before an economic policy to cope with the pandemic is properly designed and implemented. Such economic policy is based on facts available is missing. Spending tax payer money will not scare away the pandemic; it will simply add to the public deficits and accumulated public debt.

Figure 2. *Daily Deaths in EU Countries, June-August 2020*



Another issue not mentioned in the conclusions of the EU summit is the large variations in the death rates between the EU countries. Updated data per EU member state to include the August 2020 figures are reported in Table 2. The average death rate (total deaths per million of population) was 194 people and the standard deviation 231 people. The lowest number was observed in Slovakia of six deaths per million people and the highest in Belgium of 857 per million people. What is also of importance is that these variations are independent of the (a) population, (b) geography, (c) size of the country, and (d) per capita GDP. How can one explain the huge difference between France and Germany? France's death rate was four times higher than the Germany's death rate. These variations are ignored by the EU document and my reading of it suggests that the health impact of the pandemic was symmetric.

Table 2. *Deaths per Million of Population, January-August 2020*

Country	**Deaths per Million**	**Country**	**Deaths per Million**
Belgium	857	Lithuania	31
Bulgaria	88	Luxembourg	196
Czechia	40	Hungary	63
Denmark	107	Malta	21
Germany	112	Netherlands	356
Estonia	48	Austria	82
Ireland	359	Poland	53
Greece	25	Portugal	177
Spain	615	Romania	185
France	453	Slovenia	61
Croatia	45	Slovakia	6
Italy	588	Finland	61
Cyprus	24	Sweden	561
Latvia	18		
Mean	194	Minimum	6
Standard Deviation	231	Maximum	857

This is an important issue; however, it is not analyzed in this paper. One may assume that this is due to policy differences and more specifically, to the timing and the extensiveness of lockdown measures. This might provide an explanation of the severity of the pandemic and the loss of GDP.

Restrictive economic measures such as, a complete lockdown (e.g., closing hotels and banning international travel) decreases the number of deaths and cases, but it also reduces considerably the GDP growth. At some point in the near future, and if the vaccine for COVID-19 is not found soon, then a political decision must be taken between the tradeoff of an open economy and deaths from COVID-19.

This tradeoff was completely ignored in the EU conclusions of the RP which is the focus of this article. Just food for thought: if the growth rate is also related to death rates both in the short and the long run, how then does a policy of locking down the economy completely affect the death rate due to negative economic growth? If these data were available, then policy makers could tradeoff these deaths with the deaths of the COVID-19 when the economy operates without restrictions. This might sound harsh but this is exactly what policy makers are doing. Realizing it or not is not important. It seems that in some countries of the EU the public (especially the youth) does not support anymore the lock down. As mentioned, the risk of coronavirus is zero for the age group under fifty.

Economic Convergence during the Pandemic

How does a pandemic affect the economy or a group of economies such the EU member states? There is no answer to this question. The economic literature on pandemics is relatively large but no consensus has been reached; studies include among many others the publications of Almond (2006), Bandiera et al. (2018), Barro et al. (2020), Burns et al. (2018), Correia et al. (2020), Eichenbaum et al. (2020), Fan et al. (2018), and Jonas (2013). This literature makes a distinction between short- and long-term effects finding both negative and positive economic effects. It also distinguishes between early and late reactions of governmental policy makers to cope with the pandemic. A brief discussion of this literature is given in my previous paper already mentioned (Papanikos 2020a).

However, I was not able to find anything in this literature which can justify the claim that a pandemic may cause an economic divergence between a group of countries, which for all intents and purposes, belong to a group of relatively affluent countries of the world. Thus, from a theoretical and empirical point of view, EU's claim that the COVID-19 has caused an economic divergence is unfounded. Thus, the justification of spending taxpayers' money, especially of the money of the future generations, is neither based on theory nor on empirical evidence. One may envisage that a relatively poor country may suffer more from a pandemic due to lack of health infrastructure and relatively less government spending on health-related services and infrastructure. Even though, Papanikos (2020c) has found a positive association between GDP and health-related public spending in the EU countries. Higher health spending was not related to COVID-19 impact. Overall public health expenditures are not associated with the death

rates of the member states. However, other factors may explain why this is the case such as the age structure of population.

Despite all the evidence, one of the aims of EU's RP is to mitigate the economic effect of the pandemic by promoting economic convergence. However, the document of the conclusions does not define what is meant by convergence. I assume here that what the leaders of the EU wanted to say is that the pandemic led to economic divergence which the EU extraordinarily expenditures aimed at mending. Thus, the question to be answered is whether the pandemic resulted to economic divergence. Is this the case? No evidence was provided in the document of the conclusions and this is what I want to emphasize in this study. In other words, the leaders of the EU decided to spend additional EUR 750 billion to solve a problem that they did not know existed. This huge amount of taxpayers' money will never solve a problem that most probably does not exit.

The problem is not fall of GDP which is expected with certainty when the EU countries locked down their economies -this says nothing about the economic divergence of the EU member states. However, the EU leaders did have in front of them all of the data to estimate whether in the year 2020 economic divergence occurred and with some heroic assumptions then they could claim that this was due to pandemic. For example, if the poorest countries of EU depend proportionally more on tourism and international travel is banned, then economic divergence is to be expected. However, in this case what is needed is opening up the borders so that tourists can travel. Spending more money will not do it. Finding a vaccine for COVID-19 will suffice.

The European Commission released estimates of the GDP on the 6 May 2020 for 2020 and 2021. These projections included the expected impact of the pandemic. Table 3 shows the rate of growth of real GDP in the current decade of 2010s. Overall the rate of growth of GDP in 2020 is expected to decrease by 7.4%; historically an unprecedented rate but it is also expected to bounce back in 2021 with an increase of 6.1%.

For the purposes of this article, what is of interest is the divergence of economic growth rates as these have been estimated by the official statistical agency of EU (Eurostat) and not the growth rates themselves. From the 27 countries, Greece is expected to be hit the hardest with a sharp GDP decrease of 9.7%. On the other hand, Poland will register the lowest drop in GDP of 4.3%. These huge differences are left unexplained in the EU document.

Table 3. *GDP Growth in EU Countries, 2011-2021*

Country	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**
European Union	0.061	-0.074	0.015	0.021	0.027	0.021	0.023	0.016	-0.001	-0.007	0.018
Belgium	0.067	-0.072	0.014	0.015	0.020	0.015	0.020	0.016	0.005	0.007	0.017
Bulgaria	0.060	-0.072	0.034	0.031	0.035	0.038	0.040	0.019	0.003	0.004	0.024
Czechia	0.050	-0.062	0.026	0.028	0.044	0.025	0.053	0.027	-0.005	-0.008	0.018
Denmark	0.051	-0.059	0.024	0.024	0.020	0.032	0.023	0.016	0.009	0.002	0.013
Germany	0.059	-0.065	0.006	0.015	0.025	0.022	0.017	0.022	0.004	0.004	0.039
Estonia	0.059	-0.069	0.043	0.048	0.057	0.026	0.018	0.030	0.013	0.031	0.074
Ireland	0.061	-0.079	0.055	0.082	0.081	0.037	0.252	0.086	0.014	0.002	0.003
Greece	0.079	-0.097	0.019	0.019	0.015	-0.002	-0.004	0.007	-0.032	-0.073	-0.091
Spain	0.070	-0.094	0.020	0.024	0.029	0.030	0.038	0.014	-0.014	-0.030	-0.008
France	0.074	-0.082	0.013	0.017	0.023	0.011	0.011	0.010	0.006	0.003	0.022
Croatia	0.075	-0.091	0.029	0.027	0.031	0.035	0.024	-0.001	-0.005	-0.022	-0.003
Italy	0.065	-0.095	0.003	0.008	0.017	0.013	0.008	0.000	-0.018	-0.030	0.007
Cyprus	0.061	-0.074	0.032	0.041	0.044	0.067	0.034	-0.019	-0.066	-0.034	0.004
Latvia	0.064	-0.070	0.022	0.043	0.038	0.018	0.033	0.019	0.023	0.041	0.063
Lithuania	0.074	-0.079	0.039	0.036	0.042	0.026	0.020	0.035	0.036	0.038	0.060
Luxembourg	0.057	-0.054	0.023	0.031	0.018	0.046	0.043	0.043	0.037	-0.004	0.025
Hungary	0.060	-0.070	0.049	0.051	0.043	0.022	0.038	0.042	0.020	-0.015	0.018
Malta	0.060	-0.058	0.044	0.073	0.065	0.058	0.109	0.088	0.048	0.028	0.014
Netherlands	0.050	-0.068	0.018	0.026	0.029	0.022	0.020	0.014	-0.001	-0.010	0.016
Austria	0.050	-0.055	0.016	0.024	0.025	0.021	0.010	0.007	0.000	0.007	0.029
Poland	0.041	-0.043	0.041	0.053	0.049	0.031	0.038	0.033	0.014	0.016	0.050
Portugal	0.058	-0.068	0.022	0.026	0.035	0.020	0.018	0.008	-0.009	-0.041	-0.017
Romania	0.042	-0.060	0.041	0.044	0.071	0.048	0.039	0.034	0.035	0.021	0.020
Slovenia	0.067	-0.070	0.024	0.041	0.048	0.031	0.022	0.028	-0.010	-0.026	0.009
Slovakia	0.066	-0.067	0.023	0.040	0.030	0.021	0.048	0.028	0.007	0.019	0.029
Finland	0.037	-0.063	0.010	0.016	0.031	0.027	0.005	-0.004	-0.009	-0.014	0.025
Sweden	0.043	-0.061	0.012	0.022	0.024	0.024	0.044	0.027	0.011	-0.006	0.031
Standard Deviation	**0.01316**	**0.01334**	**0.01706**	**0.01669**	**0.01420**	**0.04681**	**0.02289**	**0.02256**	**0.02554**	**0.02981**	**0.02724**

Source: European Commission (AMECO). [Accessed 22 August 2020], and author's calculations.

In this paper I only present some stylized facts. Further (econometric) analysis is required which goes beyond the scope of this paper. What is important is whether the pandemic led to a divergence in the rates of growths of the EU countries. The last row of Table 3 shows that this was not the case. The standard deviation of the GDP growth rates of the 27 EU members states is lower in 2020 than in 2019. It seems that as far as the rates of growth of GDP are concerned the EU countries are not expected to have an economic divergence. If anything, they are expected to have a convergence of the rates of growth of GDP.

Economic convergence is usually measured using per capita income, or alternatively a measure of labor productivity or total factor productivity. The purpose here is not to provide a detailed analysis of the issue of economic convergence, but to shed some light on the darkness of the EU conclusions of the RP which provided no evidence for the alleged problem which their policies are to supposedly mend. On the methodology of economic convergence applied to the Greek regional economic convergence see Michelis et al. (2004).

To keep it as simple as possible, I follow Lichtenberg (1994) and assume that the convergence hypothesis can be expressed as the ratio of the log of the variances of per capita GDP in 2019 and 2020:

$$\text{Convergence} = [\text{Var}(\text{LnGDPPOP}_{2019})] / [\text{Var}(\text{LnGDPPOP}_{2020})] > 1$$

An F-test of the above ratio will demonstrate whether economic convergence is statistically significant. Table 4 presents the per capita GDP of the 27 EU member states using the annual averages of exchange rates for the countries of the EU that are not members of the eurozone. There are large differences in per capita income as these are shown by the standard deviations of GDP per capita. However, what is of interest here is whether this standard deviation has increased or decreased due to the pandemic.

The last row of Table 4 reports the standard deviations of per capita GDP of the EU countries. Before the pandemic there was an upward trend in the standard deviation providing some evidence of non-convergence. In 2020 the standard deviation from 19,598 euro in 2019 decreased to 18,232 euro in 2020 and it is expected to increase to 18,934 in 2021. According to the numbers reported by the European Commission, the effect of the RP will increase the standard deviation of per capita GDP between the 27-Euro countries. If nothing else, the pandemic seems to promote convergence.

Testing for convergence is testing for differences in the variance of the logarithms of per capita income between two different time periods. Table 5 presents descriptive statistics of the logarithms of the per capita GDP for 2019, 2020 and 2021. The values of interest are the ratios of variances of 2019, 2020 and 2021. If this ratio is greater than one then the convergence hypothesis cannot be rejected. This ratio for the 2019-2020 period is 0.9859 and for the 2020-2021 years is 1.0168. An F-test shows that the ratio of the variances is not statistically different from one. Thus, the stylized facts show neither divergence nor convergence in 2020.

Table 4. *Per Capita GDP in the EU Countries, 2011-2021*

Country-GDPPOP	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**	**2011**
European Union	29033	27405	29642	29249	28684	27969	27465	26892	26513	26566	26812
Belgium	37876	35680	38625	38295	37917	37331	36961	36435	36029	36033	35992
Bulgaria	7472	6995	7480	7202	6936	6652	6363	6080	5933	5882	5827
Czechia	17575	16999	18923	18541	17625	16485	15980	15058	15559	16154	16674
Denmark	50804	48527	51756	50866	50008	49292	48050	47299	46774	46613	46640
Germany	38470	36400	38995	38869	38400	37616	37094	36776	36126	36070	35987
Estonia	18242	17270	18609	17913	17144	16209	15824	15508	15008	14753	14258
Ireland	65814	62509	68287	65582	61366	57381	55972	45136	41870	41515	41592
Greece	17144	15801	17409	17056	16698	16418	16381	16345	16117	16537	17743
Spain	24393	22917	25315	25021	24550	23902	23219	22340	21969	22207	22899
France	34228	31956	34921	34366	33890	33257	33019	32788	32635	32616	32674
Croatia	12165	11338	12693	12269	11762	11184	10603	10254	10296	10395	10716
Italy	27546	25840	28547	28422	28160	27657	27257	27021	27086	27734	28719
Cyprus	23275	22184	24231	23751	23105	22347	21031	20229	20387	21766	22889
Latvia	14353	13398	14371	13968	13291	12688	12353	11861	11553	11242	10528
Lithuania	15302	14186	15389	14762	14107	13345	12848	12474	11948	11421	10853
Luxembourg	90708	87469	94071	93876	92848	93211	91440	89403	87763	86872	89205
Hungary	11697	11128	12867	12503	12255	11631	11400	10998	10946	10988	11487
Malta	22808	22171	24246	23993	23156	22361	21620	19971	18737	18128	17796
Netherlands	42079	40399	43700	43205	42359	41405	40732	40127	39708	39876	40441
Austria	41491	39699	42217	41737	40948	40211	39894	39889	39939	40170	40078
Poland	12228	11880	12948	12530	11904	11066	11189	10766	10383	10263	10260
Portugal	19107	18057	19363	18940	18424	17756	17350	16974	16750	16814	17454
Romania	9191	8782	9438	9218	8936	8439	8087	7751	7510	7164	7351
Slovenia	21175	19891	21448	21106	20332	19406	18830	18437	17960	18171	18699
Slovakia	16254	15259	16376	16033	15433	14998	14709	14042	13680	13606	13373
Finland	40292	38907	41604	41241	40639	39509	38570	38488	38796	39330	40078
Sweden	39592	38481	42363	43637	45979	46304	46349	46116	47672	47274	46198
Standard Deviation	**18934**	**18232**	**19598**	**19474**	**19219**	**19145**	**18856**	**18154**	**17931**	**17820**	**18090**

Source: European Commission (AMECO). [Accessed 22 August 2020], and author's calculations.

Table 5. *Descriptive Statistics of the Logarithms of Per Capita GDP*

	LOG(GDPPOP19)	**LOG(GDPPOP20)**	**LOG(GDPPOP21)**
Mean	10.108	10.023	10.076
Median	10.095	10.007	10.035
Maximum	11.452	11.379	11.415
Minimum	8.920	8.853	8.919
Range	2.532	2.526	2.496
Std. Dev.	0.613	0.617	0.612
Variance	**0.376**	**0.381**	**0.375**
Skewness	0.178	0.194	0.184
Kurtosis	2.454	2.415	2.416
Jarque-Bera	0.478	0.555	0.536
Probability	0.787	0.758	0.765

Source: Author's calculations.

Thus, the conclusion which emerges from the above brief analysis of the statistical data provided by the European Commission is that the pandemic did not affect the convergence of the economies of the 27 EU member countries. The aim of the RP to mend a gap that was never opened makes no sense and the 2021 data show that the planned expenditures will not affect the convergence. However, according to the estimates of EU, these expenditures are expected to have a large effect on economic growth of EU's GDP as is shown in Table 3.

The Economic and Health Impact of the Pandemic Compared

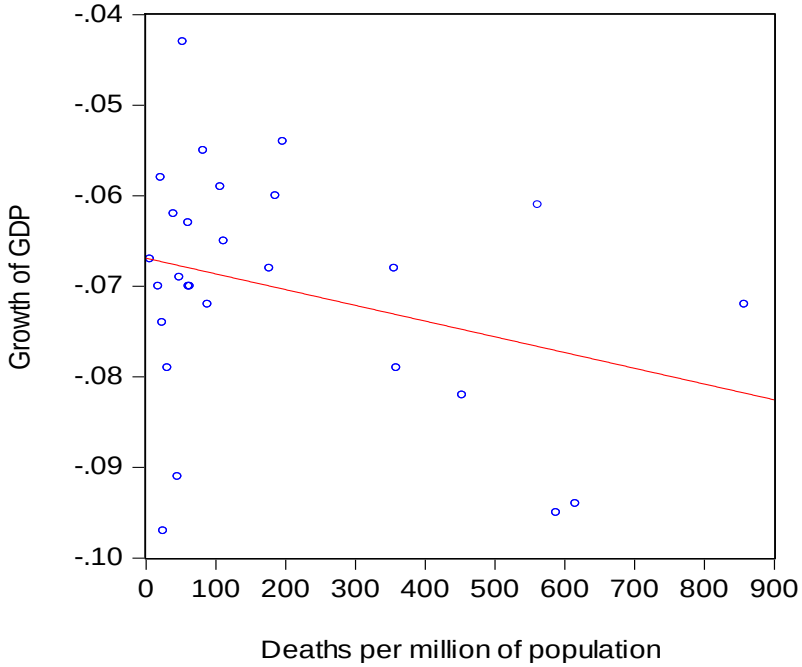
How can one explain the high variations in the growth rates of 2020 as these are reported by the European Commission?[8] One possible explanation is that the high variation of the COVID-19 impact on death rates and the number of people infected had a diverse impact on economic growth. It was shown above that COVID-19 had an asymmetric health effect in the EU countries.

The process is important here. Unfortunately, the EU idea of a common action to face a common problem did work out as one would have expected. On the contrary, COVID-19 revealed once again that there is no such thing as a common European policy. Each country of the EU implemented its own policies to cope with the COVID-19 impact at different time periods. This is not an argument in favor of a common policy but to emphasize the contradiction between the EU summit which aimed at coordinating a common policy and the practice of each country or each region within each country. In Germany, Italy and Greece policies were determined at subnational level as well. On the other hand, EU common policies to fight the pandemic may not be sufficient because this is a global phenomenon and should be dealt with international collaboration. Institutions such as the World Health Organization (WHO) and World Trade

[8]I have examined in Papanikos (2015) the growth rates differences between the EU member states. As argued there the reason was the misalignment of the real effective exchange rate which benefited Germany and harmed the Greek economy.

Organization (WTO) have failed to play a leading role either because their role have been undermined as suggested by Goldin (2020) but it might be the result of their own incapacity in dealing with world crises.

Figure 3. *Growth and Death Rates in the EU Compared*



The most important of all was the timing of shutting down economic activity - the argument goes as follows. Countries which locked down their economies earlier had lower death rates than countries which reacted late when the disease had already spread to society at large. The cost paid by those countries which locked down their economies earlier than others would have had a higher loss of output. On the other hand, those which locked their economies late would have gained in output growth but they would have lost in terms of death rates. One, then, should expect a positive relation between growth rates and death rates. Higher growth rates relative to other countries in the EU were obtained at the cost of higher death rates.

Figure 3 is a scatter diagram between the growth and death rates of the 27 EU member states. Contrary to what was stated above, the relationship is negative and is shown by the linear regression line. Higher growth rates are associated with lower death rates, but the dispersion is so high that no reliable conclusion can be drawn.

It seems that the process by which the COVID-19 affects the economies of EU countries is not the same. Great variations exist which need further study at the individual country or even regional level. If the process is different, then the policy design should be tailored to the needs of each country or region. This may require more than spending EU money.

Conclusions

This paper examined two claims made by the EU's summit in July 2020 to justify a spree of public spending to be financed by the future generations of Europe's taxpayers. These mass spending serves the needs of the current politicians of the governments of the member states which is supported by anecdotal evidence from Greece and Italy but a future research may look at this relationship more carefully. The first claim made in the document at the conclusion of the July meeting was that the EU is slowly exiting the pandemic. This was true at the time the decision was taken (20 July 2020). This was conditional on the severe measures taken to stop the spread of the disease which included a complete lockdown of the economies. Once these measures were lifted the number of deaths and cases started to rise again.

The second claim made by EU leaders is that the economic impact of the pandemic was not only a sharp decrease in the rate of growth of GDP but an increase in the economic divergence of the member states economies. Based on the estimates of GDP declines made by EU itself, the empirical evidence does not support their claim of economic divergence in 2020 and economic convergence of 2021.

The economic irrationality of EU spending in terms of the growth impacts can only be explained if the rationality of political decision making is taken into consideration. The COVID-19 health and economic impact is used as an excuse for the national governments to spend more to increase their probability of being re-elected in the next national elections. This is true for the countries which will receive the money (e.g., Greece) but even the donors (e.g., Germany) may benefit if what was at stake was the political integrity of EU itself.

From this point of view, the RP plan is a good excuse to rescue national politicians of the EU member states. This is a subject of future research as data on the probability of being reelected at the national level become available. Some public opinion polls do suggest this is definitely the case for Greece and Italy which are both great waste outlets of EU taxpayers' money.

It is true that in Germany the RP is not very popular and this is understandable. However, as explained by a *Policy Brief* of the European Council of Foreign Affairs prepared by Puglierin and Franke (2020), the RP might be a prelude to a wider geopolitical collaboration between Germany and France in fostering a common foreign and security policy. As they put it "On 1 July, Germany took on the presidency of the Council of the EU. Some observers have labelled it as the most important presidency in the EU's history, a make-or-break moment." And a few lines below "If there was a beauty contest for EU coalition-building, Germany would be its winner." Based on survey data of all 27 EU members, Germany is considered the most important and reliable member state which can be trusted to reach a consensus at the EU level. As Puglierin and Franke (2020) state, "The survey shows that, in almost all policy areas, German respondents have a strong preference for making decisions based on a consensus between all member states and are reluctant to embrace differentiated integration – to work with only some

EU members – as they fear that this could divide the union". Thus, from a political point of view, Germans are willing to pay the price of RP, lest the EU is divided.

References

Almond D (2006) Is the 1918 influenza pandemic over? Long-term effect of in utero influenza exposure in the post-1940 U.S. population. *Journal of Political Economy* 114(4): 672–712.

Bandiera O, Buehren N, Goldstein M, Rasul I, Smurra A (2018) *The economic lives of young women in the time of Ebola: lessons from an empowerment program*. Washington, DC: World Bank.

Barro R-J, Ursua J-F, Weng J (2020) *The coronavirus and the great influenza epidemic lessons from the "Spanish flu" for the coronavirus's potential effects on mortality and economic activity*. AEI Economic Policy Working Paper Series. American Enterprise Institute.

Brainerd E, Siegler M (2003) *The economic effects of the 1918 influenza epidemic*. Discussion Paper Series 3791. Centre for Economic Policy Research.

Burns A, Mensbrugghe D, Timmer H (2008) *Evaluating the economic consequences of avian influenza*. Working Paper 47417. Washington, DC: World Bank.

Correia S, Luck S, Verner E (2020) Pandemics depress the economy, public health interventions do not: evidence from the 1918 flu. *SSRN* (Jun).

Diamond L (2020) *Democracy versus the pandemic: the coronavirus is emboldening autocrats the world over*. Foreign Affairs, 13 June.

Eichenbaum M-S, Rebelo S, Trabandt M (2020) *The macroeconomics of epidemics*. NBER Working Paper 26882. National Bureau of Economic Research.

European Commission (2016) *Measuring the impact of structural and cohesion funds using regression discontinuity design in EU27 in the period 1994-2011*. European Commission.

European Council (2020) *Special meeting of the European Council (17, 18, 19, 20 and 21 July 2020) – Conclusions*. European Council.

Fan V-Y, Jamison DT, Summers L-H (2018) The loss from pandemic influenza risk. In *Disease Control Priorities: Improving Health and Reducing Poverty*, chapter 18, 347–358. World Bank.

García E, Weiss E (2020) *COVID-19 and student performance, equity, and U.S. education policy: lessons from pre-pandemic research to inform relief, recovery, and rebuilding*. Economic Policy Institute.

Goldin I (2020) *Rethinking global resilience*. International Monetary Fund.

Jonas O-B (2013) *Pandemic risk*. World Development Report Background Paper. Washington, DC: World Bank.

Lichtenberg F-R (1994) Testing the convergence hypothesis. *The Review of Economics and Statistics* 76(3): 576–579.

Mallapaty S (2020) *The coronavirus is most deadly if you are older and male — New data reveal the risks*. Nature, 28 August.

Michelis L, Papadopoulos AP, Papanikos GT (2004) Regional convergence in Greece in the 1980s: an econometric investigation. *Applied Economics* 36(8): 881–888.

Papanikos GT (1990) A macroeconomic theory of public production. *Public Enterprises* 10(3–4): 281–290.

Papanikos GT (1991) A small macroeconometric model with direct government intervention on the demand and the supply side: the Canadian experience in the 1970s and in the 1980s. *Economic Modelling* 8(2): 187–200.

Papanikos GT (2015) The real exchange rate of euro and Greek economic growth. *Journal of Economic Asymmetries* 12(2): 100–109.

Papanikos GT (2016) *Σχόλια επί των οικονομικών ανακοινώσεων του αξιότιμου αρχηγού της αξιωματικής αντιπολίτευσης στη Θεσσαλονίκη στις 17 Σεπτεμβρίου 2016*. (Comments on the economic announcements of the honorable leader of the official opposition). Mimeo.

Papanikos GT (2020a) *The Economic impact of the 2020 pandemic in the European Union*. Mimeo.

Papanikos GT (2020b) The demographics of COVID-19 in the European Union. *Athens Journal of Social Sciences* 7(4): 279–290.

Papanikos GT (2020c) *Do national health expenditures matter for the COVID-19? Evidence from the European Union*. Mimeo.

Papanikos GT (2020d) The impact of the COVID-19 pandemic on Greek tourism. *Athens Journal of Tourism* 7(2): 87–100.

Papanikos GT (2021) Thucydides and the synchronous pandemic. *Athens Journal of History* 7(1): 71–94.

Puglierin J, Franke UE (2020) *The big engine that might: how France and Germany can build a geopolitical Europe*. Policy Brief. European Council on Foreign Relations.

Reimers FM, Schleicher A (2020) *A framework to guide an education response to the COVID-19*. Paris: OECD.

Athens Journal of Mediterranean Studies - Volume 7, Issue 2, April 2021 – Pages 103 - 118

Global Impact of Digital Transformation on Entrepreneurship: Present Position in Spain

By Juan José Morillas Guerrero[*]

The application of new information and communication technologies (ICTs) is a daily element in our current reality. However, these technologies are producing impacts of great importance in society and companies. It is widely agreed that we are facing a process of digital transformation that moves the productive sectors and social groups towards what we might call a global technological order. But how this situation affects one of the levers of that same digital transformation, the entrepreneurial ecosystem? And how has all this been impacted by globalization? Spain, at present, seems to be in a privileged position in terms of the main dimensions of digital competitiveness, at least within the EU, and, mainly, concerning digital public services. However, entrepreneurship reality in our country does not quite take off despite the high rate of youth unemployment we suffer. We still do not have a high-standard entrepreneurial activity that mainly tends towards innovation and disruptive changes. We neither manage to arouse interest in the massive creation of high-tech startups that could create a complementary framework to medium and large companies. There were many steps towards a deep digital transformation in our country. Nevertheless, it remains to be seen if this circumstance transcends the mere quantitative indicators and manages to reach the situation of entrepreneurial ecosystem. This article aims to discover the relationships between digital transformation, the world of entrepreneurship and the creation of companies related to Spain, nowadays, in order to establish the possible effects that both perspectives would accumulate reciprocally and also to clear up if we are facing singularities that would identify the processes being produced, such as "startuprization", enabling companies to grow with the subsequent global economic development.

Keywords: *digital transformation, entrepreneurship, globalization, startups, entrepreneurial ecosystem*

Introduction

Nowadays, the new information and communication technologies (ICTs) are having an enormous overall influence at all levels: political, business, cultural or social. All processes are being affected by a global interconnection that is producing paradigmatic changes, coming to involve a whole digital transformation.

This transformative movement has also reached entrepreneurship that has traditionally been a driving force of the innovation and the business and economic

[*]Assistant Professor, Higher Technical School of Aeronautical and Space Engineering (ETSIAE), Universidad Politécnica de Madrid, Spain. ORCID 0000-0002-9949-2070.

growth. The new ideas of companies are being based on the disruptive advances that have allowed these ICTs.

However, the relationship between the two phenomena has not been studied: on the one hand, the transformative digital technologies of business and economic reality and, on the other, the entrepreneurial initiative within a peculiar ecosystem such as the creation of companies.

If we begin the analysis with the Spanish case, at first sight we find a situation that we could qualify, at least, as paradoxical. This is because the main dimensions that try to quantify the digital competitiveness of our country affirm a quite positive situation and, mostly, in relation to digital public services (see the basic results of the 2019 Country Report for Spain DESI, Digital Economy and Society Index, prepared by the European Commission and which is part of this work's analysis).

On the other hand, Spain does not have a high business activity that would allow the development of new companies (see the results on the entrepreneurial ecosystem of the GEM Report for Spain 2018–2019, prepared by Global Entrepreneurship Monitor and that will be the other great data source for this article), while we are going through a period of high youth unemployment along with some economic slowdown.

Therefore, we find an interesting issue that arouses research interest in the specific case of Spain as a country with high digitalization conditions, but with few entrepreneurial stimuli. Hence it becomes the need of discovering and analysing the situation to give a scientific explanation to this fact: Why the data in our country lead us to a profound digital transformation, while not accompanying the situation of entrepreneurship?

This paper has a clear purpose: establishing whether there are relationships between digital transformation, the world of entrepreneurship and business creation, and determining if these possible relationships explain the specific Spanish case and its economic behaviour.

In addition, it would venture out possible circumstances or processes that maybe occur in our territory. Among these phenomena, it will have special detail in the "startuprization": Spontaneous creation or birth of small but highly disruptive companies that could be the new nature of entrepreneurship in the digital revolutionary paradigm. These companies are subject to high disruptive innovations that would improve the business structure and could accelerate a consequent or deeper economic development compared with past times.

The present work consists of a review of the scientific doctrine expressed regarding the matter. An exposition and justification of the methodology used to present the research hypotheses with the variables examined from the two major international reports on the subject: DESI and GEM. Then, it continues with a detailed presentation of the results obtained with the corresponding explanatory graphs of these investigative findings. And finally, it ends with a discussion about these results and possible conclusions in this regard.

Literature Review

The research that relates digital innovation or the situation of digital transformation with entrepreneurship does not have much follow-up in scientific doctrine. So, we can say that we are facing a new field in terms of analysis and publication. However, it is not a negative situation; by contrast it is an opportunity to open new research lines of great interest for the part of academic world dedicated to digital issues and business creation.

In addition, we could say that we are facing a path of search for answers requested by the natural evolution of companies' digitalization, and of today's society in general. In this respect, we find one of the main references in the publications of some prestigious researchers (Nambisan et al. 2019), especially North Americans and British. These authors manifest, after the 2000s, that the first allusions would focus on taking advantage of the benefits that the digital could have for entrepreneurship (Hull et al. 2007).

As of this date, doctrinal contributions have endeavored to understand the implications that digital technologies, some disruptive, were producing in the company and its structures (Autio et al. 2018), also in other aspects of business, such as customer experiences, for example (De la Boutetière et al. 2018). We have to refer to recent research to understand what has happened in almost a decade of the emergence of technologies and the impact they have had on business models or the genesis of entrepreneurial ecosystems (Autio et al. 2018).

The turning point came from those who related entrepreneurship and the three classic factors: opportunities, risk taking and tenacity to implement business creation initiatives, but this was done in isolation without considering the interactions that could be established among them (Hitt et al. 2011). Subsequently, they continued with the relationship between innovation and opportunities from technologies (Nambisan 2017).

All this leads us to affirm that, until now, it was studied - and the doctrine is unanimous, in this matter - that innovative advances from ICTs produce a stimulus for trade, and this leads to economic growth by increasing consumer surplus. In addition to the traditional theory of value creation, it was key in economic development (Schumpeter 1934), attending one of the clearest relations between innovation and entrepreneurship.

On the one hand, we find the generation of benefits as a result of the digital transformation, through the so-called digital dividends (Galindo-Martín et al. 2019). But until the most recent publications in this regard, there had been no such a deep overlap between digital and entrepreneurship, even though the term "digital entrepreneurship" (DE) had already been taken into account in the scientific literature much earlier (Matlay and Westhead 2007, Walker 2006, Yen et al. 2002).

However, on the other hand, the clear relationship between innovation and digital transformation was discussed (Amit and Zott 2001, Gavron 1998) that would take us from digital to economic growth through entrepreneurship and its implications. And the welfare loop has even been unravelled precisely because of the interaction between a better digital situation and its translation to the creation

of innovative companies, and therefore to entrepreneurship in general (Zortea-Johnston et al. 2012) given the implementation of technologies in the private sphere as well as in public administrations (Giones and Brem 2017).

All this would take us to a new time in the investigation of business and its ecosystems when the two coincide: the digital and the entrepreneur (Sahut et al. 2019).

This is where this paper is inserted, trying to provide with empirical data, a perspective on Spain's current situation in terms of digital entrepreneurship, correlating the most recent parameters on the economy and digital society in this country against the point at which the entrepreneurial phenomenon is found quantitatively and qualitatively. We seek to unravel the hypotheses in this regard and clear up the unknowns about whether, today, our country creates the technological bases that will encourage entrepreneurship, and this, in turn, encouraging the appropriate economic and development growth.

Methodology

The 2019 Index of the Digital Economy and Society was consulted, and specifically, the Country Report for Spain (DESI, European Commission 2019) that determines the analysis of situation for the economy and digital society in each of the EU member countries through the corresponding country profiles grouped into five specific thematic chapters. These index dimensions are: 1. Connectivity; 2. Human capital; 3. Use of internet services; 4. Integration of digital technology; and 5. Digital public services. In addition, various aspects were incorporated into the report in order to keep in mind the latest technological advances, underlying data and new trends (e.g., digitalization of companies, 5G, women and ICTs, online voting, electronic medical prescriptions, etc.).

However, this report has never been proven in relation to digital transformation, the world of entrepreneurship and the creation of high-tech companies. To avoid this bias and abound in possible correlations - as the main objective of this paper - the GEM Spain 2018–2019 Report, Global Entrepreneurship Monitor (CISE 2019) will be consulted, which leads to a stable and rigorous methodology in monitoring the entrepreneurial ecosystem in Spain.

It is organized in the entrepreneurial phenomenon analysis in our country, valuing population, business, innovation, and internationalization variables; also, in the study of the entrepreneurial environment, through the conditions for the exercise of entrepreneurial activity in Spain by Autonomous Communities and cities.

With these two sources of information and data, the corresponding statistical treatment was carried out to discover the correlations that could be extracted for the purpose of possible connected variables that ratify or not the work hypotheses.

First, the fundamental indicator of the entrepreneurial process and its aspirations in terms of activity were put in relation to verify possible interactions. In order to do so, the following entrepreneurial parameters were chosen, as described in Table 1, from the point of view of the entrepreneurial ecosystem,

starting with TEA[1] (variable No. 1) as a pivot on which measuring entrepreneurial activity.

Table 1. *GEM Variable Selection*

Variable type	Description
1.	Total entrepreneurial activity rate (TEA), by age and by gender.
2.	Values and attitudes for entrepreneurship.
3.	Degree of novelty (innovation) of products and services.

Source: CISE 2019.

With the two remaining variables (No. 2 and 3) a qualitative analysis was carried out to determine the influence between these and the general digital situation described for Spain.

For the digital ecosystem of economic and social development, the following eleven most outstanding digital parameters were chosen, according to the analytical blocks into which the report is divided as described in Table 2.

Table 2. *DESI Variable Selection*

Variable type	Description
1.	Connectivity
1b1.	4G coverage (average operators)
1c1.	New generation broadband coverage (NGA)
1d2.	Implementation of ultrafast broadband
2.	Human capital
2b1.	ICT specialists
2b2.	Women ICT specialists
3.	Use of internet services
3c1.	Banking (users)
3c3.	Online sale (users)
4.	Digital technology integration
4a1.	Electronic exchange of information (companies)
4a2.	Social networks (companies)
4b2.	E-commerce turnover (SMEs)
5.	Digital public services
5a1.	Users of the electronic administration

Source: Own elaboration based on DESI variables and descriptions.

Thus, we have a complete mapping of the relationships between variables for each of the main blocks (see Table 3). From the analysis of Connectivity, the 4G coverage in Spain was studied in terms of the percentage of households that have this technology through the average of operators. New generation broadband coverage (NGA) by the percentage in households, as well as the implementation of ultra-fast broadband was also considered.

[1]TEA (Total Entrepreneurial Activity) or rate of entrepreneurs with early-stage companies (nascent and new) is calculated as the percentage of the adult population (between 18 and 64 years) in each country/region/city, owners or co-owners of newly created companies that have persisted in the market for a period between 0 and 42 months (3.5 years).

Table 3. *Correlations between DESI Variables and the Situation of Entrepreneurship in Spain*

Variables GEM/DESI
TEA/Connectivity
1 vs. 1b1
1 vs. 1c1
1 vs. 1d2
TEA/Human capital
1 vs. 2b1
1 vs. 2b2
TEA/Use of internet services
1 vs. 3c1
1 vs. 3c3
TEA/Digital technology integration
1 vs. 4a1
1 vs. 4a2
1 vs. 4b2
TEA/Digital public services
1 vs. 5a1

Source: Own elaboration based on GEM and DESI variables.

As regards Human capital, the use of ICT specialists was taken with respect to the total percentage of employment, as well as the ratio of ICT specialists' women within the percentage of female employment.

Two of the most interesting values were taken for the analysis of the Use of internet services: Internet banking services through the percentage of users of these services on the Internet, together with online sales also measured by the percentage of Internet users for this type of digital commerce.

Bellow, for the Integration of digital technology analysis, which is one of the most interesting situation's blocks for our work, electronic exchanges of information between companies were taken through their corresponding percentage. The use of social networks by companies expressed as a percentage was also measured and, as a third variable, the turnover of e-commerce was used with its percentage value.

Finally, it was treated the important block of Digital public services that gives a very interesting idea of the Spanish situation in its digital advance, standing in the fourth place among the EU countries. Here it was used the percentage of internet users who need to submit forms to the Administration. Nowadays, it is a fact that 76% of Spanish internet users actively participating in electronic administration services.

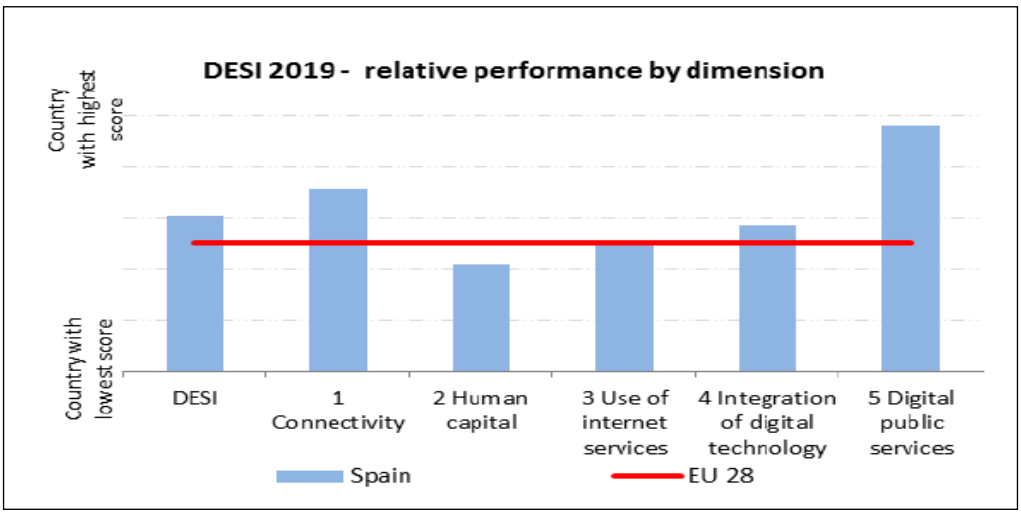
Results

In general terms, following the data available as a result of the DESI, it is observed that Spain's position in terms of the main dimensions of the report is

above the European average and, in general, it is a situation that we could define as a privilege facing the main digital challenges.

As can be seen in Figure 1, all dimensions are above the average (EU-28), except for human capital; especially highlighting the results in the fifth dimension referring to digital public services that double the standardized values for Europe.

Figure 1. *Results of Relative Performance by Dimension of the Index of the Digital Economy and Society in Spain and Europe*



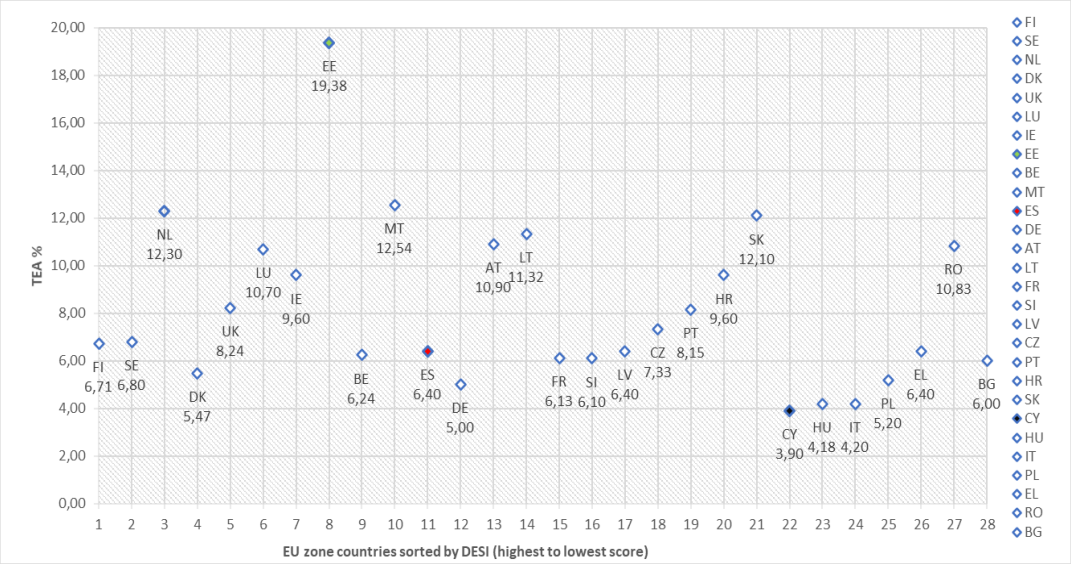
Source: DESI, European Commission 2019.

Although this situation is encouraging, however, when we cross the data with the entrepreneurial intention - as is the object of this paper - we appreciate that the clear advantage of Spain is significantly depreciated in the panorama of European countries (see Figure 2).

We observe in the right margin of this graph the list of European countries ordered from highest to lowest according to their index of economy and digital society while comparing with their entrepreneurship rate (TEA) for 2019; proving that the 11th position of Spain in digitalization does not correspond to the tendency of the large entrepreneurial countries, where Estonia stands out with the highest degree of European entrepreneurship (19.38%), and also the most advanced group in this aspect such as the Netherlands, Malta, Lithuania, Slovakia, Austria and Luxembourg do it.

While the best placed in digitalization are the Scandinavian countries, only four countries share positions in both ratios (Netherlands, Luxembourg, Estonia, and Malta), above the Spanish position on the DESI ranking (> 11th).

Figure 2. *Relationship between the TEA Entrepreneurship Indicator and the Digital Economy and Society Index in the EU Zone*



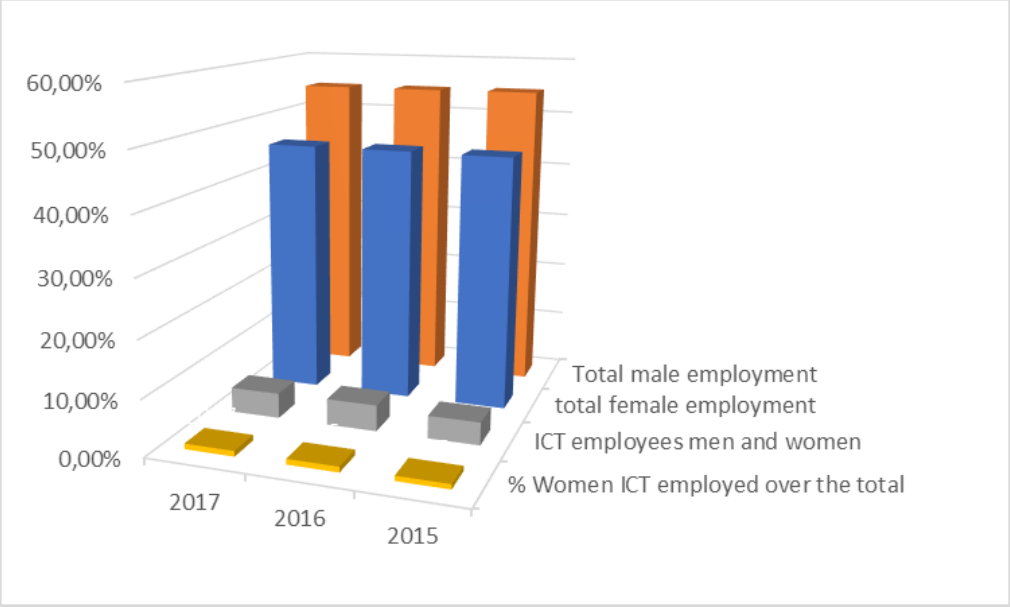
Source: Own elaboration based on Bosma et al. (2018) and DESI, European Commission (2019).

In our study we have discovered a curious fact, namely that both Spain and Germany are well placed in digitalization - and play economically main roles within the EU - but their entrepreneurship rates are relatively low (6.4% and 5%, respectively) which makes us reflect on the discrepancy between these two fields.

In its turn, the country with the worst TEA, Cyprus, also shares worse positions in digitalization and entrepreneurship, together with Hungary, Italy, and Poland. Special mention is required to the case of Romania with the placed second to last in digital society and, nevertheless, with one of the best entrepreneurship rates scoring 10.83%.

Another of the areas studied was the employment situation in new information technologies (ICTs), where the situation in Spain was the most inflationary. This can be easily seen in Figure 3 where the rates of employees specialized in ICTs, men, and women, were compared over the total number of employees in general, and it can be seen that Spain has a very low representation of women specialists, which turns out to be the biggest deficit in the "Human Capital" section of the digitalization situation for our country.

Figure 3. *ICT Employment Situation in Relation to the Total in Spain*



Source: Own elaboration based on DESI, European Commission (2019) and INE (2019).

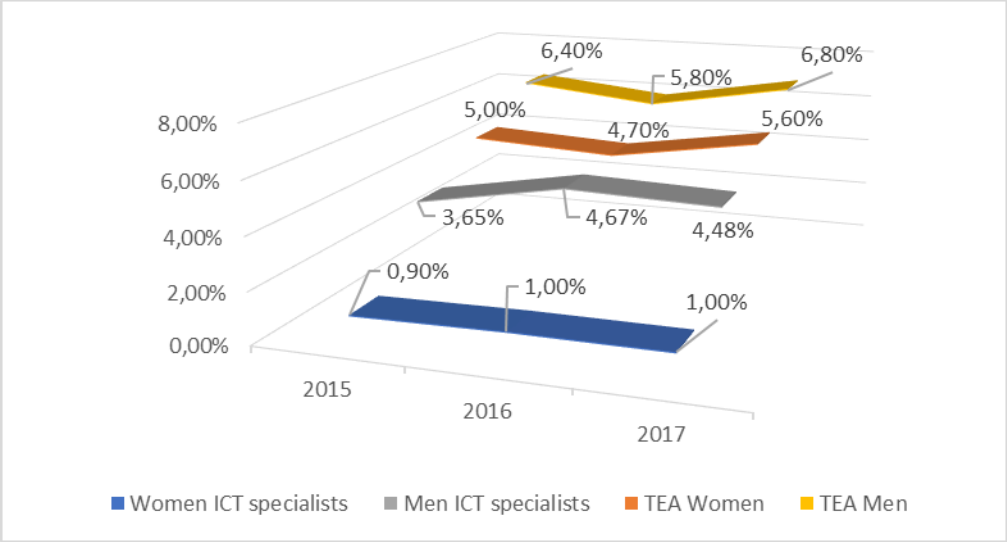
It is clear that this deficiency is very relevant for the economic and digital society improvement in relation to the rest of Europe and world situation. There is a great lack of ICT specialists regarding the active population (2.9% vs. 3.7%) in the EU. But the most significant thing is that women who specialize in ICTs do not reach 1% of total female employment in Spain.

Moreover, if we cross the European Commission data with the ones from the Spanish Statistics National Institute (INE) we obtain interesting results. To begin with, the total number of men employed in the Spanish labour market for 2017 was 54.54% while the percentage of women was 45.46%, almost ten points less. In addition, in the field of ICTs, the rates are low for both genders and very low for women employed in ICTs, taking the total share of female employment (0.45%).

In addition, the rate practically remains unchanged throughout the time series (2015–2017) where we can compare for the case of the digital society index. This means that we are facing a very delicate challenge since on one side there is a high digital potential for our country, but that can go unnoticed while this "gender gap" exists in ICT jobs.

In this analysis, the digitalization data comparison and its current level with the entrepreneurial situation was relevant. It can be seen in Figure 4 how the entrepreneurial rate in men and women has substantial differences (6.80% and 5.60% for the year 2017, respectively) despite the representation of women employed in ICTs is so low. This leads us to think that entrepreneurial initiatives in our country are far from ICTs, regardless of the correlations we have obtained in this study and will be discussed later.

Figure 4. *Relationship between the TEA Entrepreneurship Indicator and ICT Employment Situation in Spain*

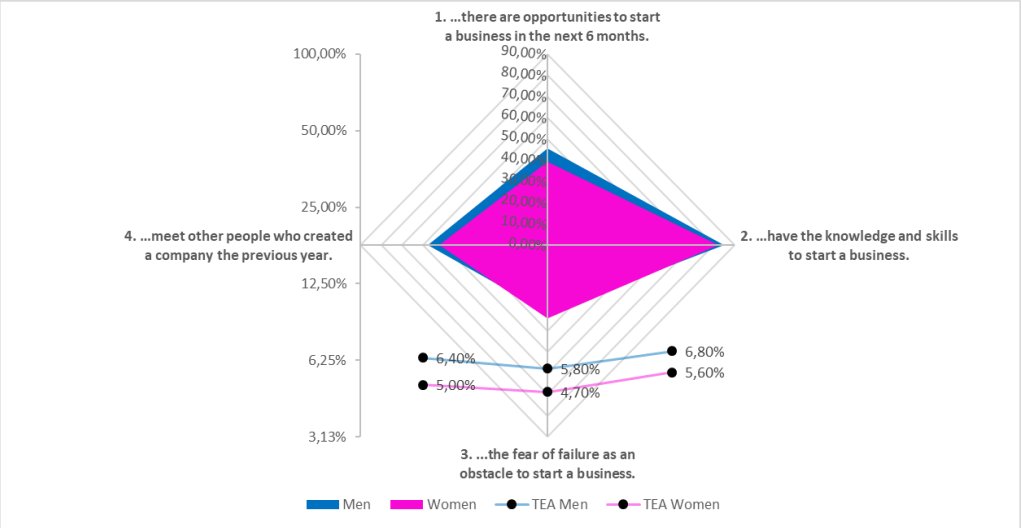


Source: Own elaboration based on DESI, European Commission (2019), CISE (2019) and INE (2019).

Going deeper into this aspect of entrepreneurship and gender, regarding the situation in our country according to the GEM data (CISE 2019), we have analyzed the values and attitudes of the Spanish population between 18 and 64 years involved in the entrepreneurial process, according to a series of Personal perceptions and then, comparing them with the entrepreneurship rate (TEA), we have reached the following results.

The first of the perceptions that was asked in the report was "... there are opportunities to undertake in the next 6 months" where the greater optimism of men over women was appreciated. In the second, it was asked about "… have the knowledge and skills to undertake", verifying that both men and women were quite sure of their knowledge, although the difference of opinion was only a little over two points. However, when the question was directed to the perception of "... fear of failure as an obstacle to entrepreneurship", here men did not reveal their insecurities unlike women (rates were almost three points less). Finally, in the perception of whether "... meet other people who have undertaken the previous year", the relationship was favourable to men in more than 5 points (see all this in Figure 5).

Figure 5. *Values and Attitudes of Entrepreneurship: Relationship between the % of the Spanish Population of 18–64 Years by Sex Involved in the Entrepreneurial Process "that perceives…" and the Entrepreneurship Indicator (TEA) by Sex in Spain.*



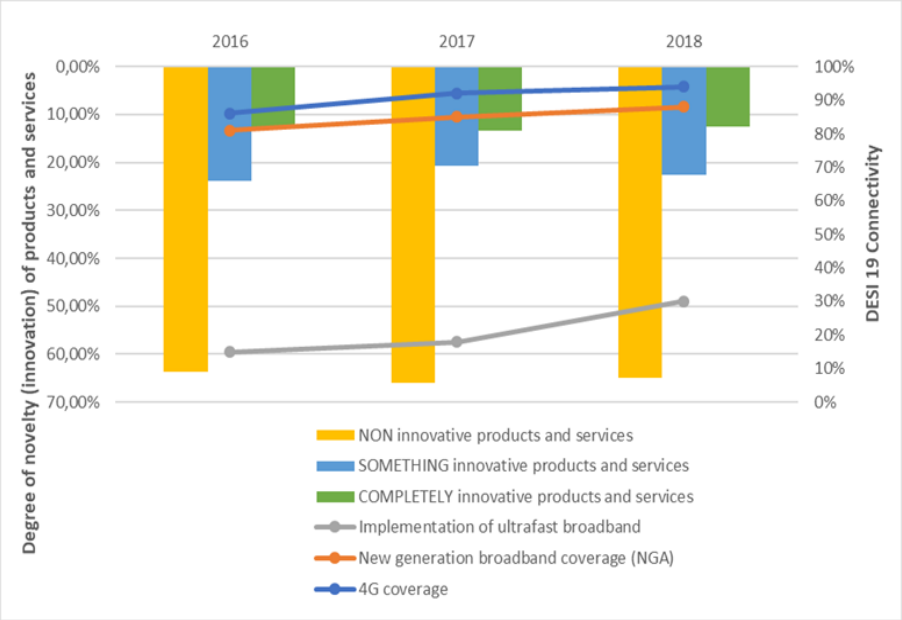
Source: Own elaboration based on DESI, European Commission (2019) and CISE (2019).

Following the methodology of our study, and before focusing on the correlations, we have analysed the relationship between connectivity indicators and the degree of novelty or innovation of products and services launched by the entrepreneurs.

With this we close the qualitative analysis considering the situation of technological advancement in connectivity on our country according to the economic and digital society index and if this is considering the innovative orientation. It could be thought about the technological development of new forms of connectivity, such as new generation broadband (NGA), ultra-fast broadband and 4G itself, and if entrepreneurs take advantage of these changes and digital transformations to find new products and services.

The three scales of innovation for products and services can be observed (see Figure 6): completely, something and nothing innovative. Although there are high percentages of entrepreneurs who confess not to be influenced by innovative technology, however, the rate has increased for cases where products and services were launched with some innovation, matching with the improvement of 4G and NGA connectivity, although very little for ultra-fast broadband.

Figure 6. *Relationship between the Connectivity Ratio and the Degree of Novelty of Products and Services between Entrepreneurs in the Initial Phase (TEA) in Spain in the Last Three Years*



Source: Own elaboration based on DESI, European Commission (2019) and Bosma et al. (2018).

To finish with the results, we will define those obtained in terms of the correlations between variables that were part of this article's methodology. Table 4 shows the correlations that had been raised based on the corresponding working hypothesis of whether there was or not a positive relationship that confirmed them, or on the other side, the hypotheses obtained could be ruled out.

Table 4. *Correlations between DESI Variables and the Situation of Entrepreneurship in Spain*

Variables GEM/DESI	**Pearson's linear correlation coefficient**	**R^2**	**Σ errors^2**
TEA/Connectivity			
1 vs. 1b1	0.996	0.996	0.277
1 vs. 1c1	0.990	0.995	0.340
1 vs. 1d2	0.764	0.923	5.743
TEA/Human capital			
1 vs. 2b1	-1.156	0.977	0.372
1 vs. 2b2	0.000	0.989	0.731
TEA/Use of internet services			
1 vs. 3c1	0.849	0.993	44.988
1 vs. 3c3	-0.629	0.973	11.885
TEA/Digital technology integration			
1 vs. 4a1	0.000	0.972	108.045
1 vs. 4a2	0.988	0.999	0.990
1 vs. 4b2	0.988	0.999	0.990
TEA/Digital public services			
1 vs. 5a1	0.697	58.480	0.994

Source: Own elaboration based on GEM and DESI variables and data analytic.

Well, from the calculations made we deduce that there is a correlation and, therefore, all the hypotheses for the "Connectivity" block in relation to the venture are confirmed. What implies that technological advances in connectivity, or its improvement, facilitating that individuals, homes and, above all, companies have more connectivity to networks, influences the promotion of greater entrepreneurship.

However, quite the opposite is true for the "Human Capital" block. There is no correlation between the two variables studied. In this way, we cannot affirm that the situation of the gender gap in spatialized ICT jobs imply that the entrepreneurship rate is affected. Thus, despite the dark panorama due to the lack of ICT specialists, and even more, of female representation, entrepreneurship in Spain remains at average values, although it is true that it also falls slightly in the case of women entrepreneurs.

When we have dealt with the hypothesis of the "Use of internet services" block, we can deduct from the data that, depending on what type of services we are assessing, there is a correlation or not. Thus, in the case of banking services, their development affects the entrepreneurship rate, and supposedly, the improvement of these will influence that. While in the case of online sales, the hypothesis has not been fulfilled, as Internet users (quite another thing will be the turnover of SMEs, e-commerce, which is included in the next block).

Next, within the "Integration of digital technology" block, there were confirmations on the variables of social networks and turnover of electronic commerce, for SMEs. Which would mean that a better situation of integration of digital technologies by companies - where Spain occupies a 10^{th} position regarding all EU countries - has a correlation in entrepreneurship, while the simple fact of electronic exchange of information, measured in percentage of companies that carry it out (variable 4a1), does not affect a higher entrepreneurship rate.

Lastly, focusing on the "Public Services" block, it is found that here the situation in Spain is very favourable, occupying the 4^{th} position among all EU countries. However, when we launch the possible relationship with the Spanish entrepreneurship rate, this hypothesis is ruled out. Whereby we can affirm that the existence of good electronic administration services, measured according to the percentage of internet users who need to submit forms, does not influence in the progress made on users who decides the creation of companies.

Conclusions

This work has used two of the most important reports that were made for Spain in terms of its index of economy and digital society and the one referring to the situation of entrepreneurship, both on its most updated versions, providing a methodology of complete results that has been able to give a quantitative and qualitative vision of great interest.

From the data obtained, the initial hypothesis is confirmed in the way that, although Spain occupies a certain privileged position in terms of its digital competitiveness, at least within the EU, and, above all, in relation to digital public

services, this does not mean that there is an exact translation in the entrepreneurial system, and its main indicators.

Thus, Spain has a high-level connectivity infrastructure that will undoubtedly help stimulate business creation, although these potentialities are not fully exploited, for example, in the case of ultra-fast broadband. It may happen that entrepreneurship in Spain is more linked to more traditional sectors and not as disruptive as the inertia of the global situation could mean.

Another main conclusion is that, although we have a significant gender gap in specialized ICT jobs, however, this handicap will not affect entrepreneurial initiatives, maintaining entrepreneurship rates not so different in both men and women. And despite the high youth unemployment rate[2] Spain supports, the digital transformation does not push this sector of the population towards the creation of companies.

Finally, there is a predisposition of digital improvement in terms of the use of social networks and internet business (e-commerce) that causes a relationship with entrepreneurship, while the fact of electronic information exchange by companies does not produce an increasing in business creation. This could be conditioned by bureaucratization in the company's creation process where perhaps there is a lot more still to be done[3] even in this country. New lines of research on digitalization and reasons for entrepreneurship or the role of disruptive innovation are now opened.

Acknowledgments

I would like to thank, first, the authors of the DESI and GEM reports, the European Commission and the Santander Entrepreneurship and Global Entrepreneurship Research Association (GERA) International Centre, for their contributions to the study and investigation of the situation in Europe and Spain in digital society and entrepreneurship, respectively. It is a work of high value for researchers who can verify data and make measurements that would otherwise be impossible. I would also like to thank ATINER and my University, the Universidad Politécnica de Madrid (https://www.upm.es/) and my School, the Higher Technical School of Aeronautical and Space Engineering (https://www.etsiae.upm.es/) for the reception of my work and research as well as for the support that was always given to me to attend congresses and to make my research results public.

2Spain has a national youth unemployment rate of 31.68% for both sexes, under 25 years, according to the data for the 3Q of 2019. (INE 2019)

[3]According to the most recent data, Doing Business database, the situation of Spain in the process for the creation of companies has led him to the 30th position with a score of 77.9 within the 190 main economies of the world (International Bank for Reconstruction and Development 2019).

References

Amit R, Zott C (2001) Value creation in e-business. *Strategic Management Journal* 22(6–7): 493–520.

Autio E, Nambisan S, Thomas LDW, Wright M (2018) Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal* 12(1): 72–95.

Bosma N, Kelley D, Global Entrepreneurship Research Association – GERA (2018) *Global entrepreneurship monitor 2018/2019 global report*. Chile.

Centro Internacional Santander Emprendimiento – CISE (2019) *GEM, global entrepreneurship monitor*. Informe España 2019. Santander.

De la Boutetière H, Montagner A, Reich A (2018) *Unlocking success in digital transformations*. In McKinsey & Company.

DESI, Comisión Europea (2019) *Índice de la Economía y la Sociedad Digitales (DESI) Informe de país 2019 España*. (Digital Economy and Society Index (DESI) country report 2019 Spain). UE.

Galindo-Martín MÁ, Castaño-Martínez MS, Méndez-Picazo MT (2019) Digital transformation, digital dividends, and entrepreneurship: a quantitative analysis. *Journal of Business Research* 101(Aug): 522–527.

Gavron R (1998) *The entrepreneurial society*. Institute for Public Policy Research.

Giones F, Brem A (2017) Digital technology entrepreneurship: a definition and research agenda. *Technology Innovation Management Review* 7(5): 44–51.

Hitt MA, Ireland RD, Sirmon DG, C. A. T. (2011) Strategic entrepreneurship: creating value for individuals, organizations, and society. *Academy of Management Perspectives* 25(2): 127–135.

Hull CE, Hung YTC, Hair N, Perotti V, Demartino R (2007) Taking advantage of digital opportunities: A typology of digital entrepreneurship. *International Journal of Networking and Virtual Organisations* 4(3): 290–303.

Instituto Nacional de Estadística – INE (2019) *Encuesta de Población Activa – EPA*. (Labor force survey). Spain: INE.

International Bank for Reconstruction and Development (2019) *Doing business 2020. comparing business regulation in 190 economies*. The World Bank.

Matlay H, Westhead P (2007) Innovation and collaboration in virtual teams of e-entrepreneurs: case evidence from the European tourism industry. The International *Journal of Entrepreneurship and Innovation* 8(1): 29–36.

Nambisan S (2017) Digital entrepreneurship: toward a digital technology perspective of entrepreneurship. *Entrepreneurship: Theory and Practice* 41(6): 1029–1055.

Nambisan S, Wright M, Feldman M (2019) The digital transformation of innovation and entrepreneurship: progress, challenges, and key themes. *Research Policy* 48(8): 1–9.

Sahut J-M, Iandoli L, Teulon F (2019) The age of digital entrepreneurship. *Small Business Economics* (Sep).

Schumpeter J (1934) *Teoría del desarrollo económico*. (Theory of economic development). Inglaterra: Universidad de Harvard.

Walker H (2006) The virtual organisation: a new organisational form? *International Journal of Networking and Virtual Organisations* 3(1): 25–41.

Yen D, Chou DC, Chen T, Chen H-G (2002) Becoming a virtual organisation: a strategic approach. *International Journal of Networking and Virtual Organisations* 1(2): 184–198.

Zortea-Johnston E, Darroch J, Matear S (2012) Business orientations and innovation in small and medium sized enterprises. *International Entrepreneurship and Management Journal* 8(2): 145–164.

Athens Journal of Mediterranean Studies - Volume 7, Issue 2, April 2021 – Pages 119 - 142

European Officers and the Mainland Irregular Forces on the Ionian Islands, 1798–1814: A Comparison of Command and Tactics

By Nicholas Pappas[*]

In the era of the Napoleonic wars, the Ionian Islands off the western coasts of Greece and southern Albania became a base of operations and an area of conflict in the Mediterranean in the years 1797–1814. In that period, Republican French, Russian, Imperial French, and British forces successively occupied these Greek-populated islands, formerly Venetian possessions. Each of these powers attempted to establish a nominally independent "Septinsular Republic" under their protectorate. There were efforts by all of these powers to organize native armed forces, some raised from among refugees from the mainland-bandits (klephtes), former Ottoman irregulars (armatoloi), and clansmen from the autonomous regions of Himara, Souli, and Mani. Although these refugee warriors were skilled in the use of weapons-flintlock firearms, sabres and yataghans-they fought and were organized according to traditions and methods that were different and considered "obsolete" in early nineteenth century Europe. This study will look into the organization, training and command of these troops by Russian, French, and British officers. It will study the successes and failures of these officers in forming these native warriors into regular or semi-regular forces. It will also examine how the attitudes and activities of these officers helped to develop the armed forces of the Greek War of Independence, 1821–1830.

Keywords: Napoleonic wars, Ionian Islands, armatoloi and klephtes, military forces

Introduction

In the generation prior to the Greek Revolution, upwards of four thousand mainland irregulars soldiered on the Ionian Islands. While many of these men were attracted to service by the pay, most were fugitives from Ottoman authorities in mainland Greek and Albanian areas, especially from Ali Pasha of Ioannina, and took on service to survive their exile. These refugees were already experienced in the use of arms. Some were wanted by Ottoman authorities for brigandage (the *klephtes*), while others had served as auxiliaries for Ottoman authorities (the *armatoloi*) and Christian notables (the *kapoi* of the Peloponnesus). Many of these exiles were members of autonomous warrior communities within the Ottoman Empire (the Himariotes, the Souliotes, and the Maniates). Men who had seen

[*]Professor, Department of History, Sam Houston State University, USA.

previous service in the armies of Naples and Venice likewise played an important role in the forces organized on the Ionian Islands between 1798 and 1807[1].

These troops armed themselves and fought in what contemporary observers knew as the Albanian manner, that is, in the mode prevalent among Muslim Albanians throughout the Near East. Their chief firearm was a long musket known as a *toupheki* or *karyophyli*. They also carried a set of pistols and a large sword, either a traditional long-knife known as a yataghan or a curved oriental sabre known as a *pala*. They trained and fought in a type of light infantry warfare that entailed swift movements, surprise attacks, sharpshooting and hand-to-hand fighting. Drilled movements and open engagements were not customary; ambushes and skirmishes were the rule. They often engaged in prolonged shooting matches with their opponents, taking advantage of the terrain for cover. Since musket fire was far from accurate, forays with pistols and swords were frequent. These troops, whether Muslim of Christian, Albanian, Greek or South Slavic, carried the same arms and fought in the same style (Pappas 1991, pp. 25–26). Small units of light infantry, such as jaegers, had seen increased service in the armies of European states in the 18th century. In the early eighteenth century, the Habsburgs began deploying South Slavic *grenzer* troops from their military frontier to campaigns in the west. Other European powers responded by forming their own light infantry units. The British, for example, began recruiting Scottish highlanders as light infantry as well as organizing light infantry units in the American colonies (Rothenberg 1978, p. 20, Rothenberg 1966, pp. 18–21). Venice and Naples also formed light infantry units consisting of troops recruited from the Balkans. In the eighteenth century both Venice and Naples organized regiments from among Greeks and Orthodox Albanians, the *Reggimento Real Macedone* and the *Battaglione dei Caccitori Albanese* of the Kingdom of the Two Sicilies and the *Reggimento Cimarrioto* of the Serene Republic (Pappas 1981, pp. 35–59).

The armed forces on the Ionian Islands during the twilight years of the Venetian Republic prior to 1797 also included mainland irregulars. Aside from regular Venetian army units, Ionian Greek militia known as *cernidi*, the Venetians also employed companies of the *Reggimento Cimarrioto* and other Greco-Albanian troops. On the eve of the first French occupation (1797–1799), the Venetian government hired more mainland Christian irregulars to offset weaknesses in the regular and reserve forces in its insular possessions. These forces included a battalion of Himariotes on Corfu, companies of *armatoloi* from Xeromero and Agrapha, and clansman from Souli, Lamari, Parga and Preveza (Grasset de Saint-Sauveur 1800, p. 109, Lungi 1856, pp. 253–254, Mertzios 1971, pp.310–313, Rodocanachi 1899, pp. 17, 103, Zotos-Molossos 1897, p. 67).

In the wake of Napoleon's 1797 campaign in Italy and by the treaty of Campo Formio, the French occupied the Ionian Islands and fully integrated them into the

[1]On these military formations, see: Pappas (1991, pp. 21–59). Since the publication of my study there has been an interesting and profusely illustrated study by Leonidas Kallivretakis of the National Hellenic Research Foundation, entitled "Enopla Hellenika Somata ste dine ton Napoleonton Polemon (1798-1815)", a chapter in the *Historia tou neou Hellenismou, volume 1- He Othomanike Kyriarchia, 1770-1821: Politike pragmatikoteta-organose kai thesmou ton hypodoulolon*. Athens: Hellenika Grammata, 2003, pp. 185–200. Unfortunately, he seems neither to have known of my study nor to have cited it.

Republic, administering them as three departments. In Napoleon's view, the Ionian Islands, in the hand of a strong military and naval power, could become a key to the conquest or to the support of the Ottoman Empire. Despite these strategic advantages, the French initially did not concentrate significant military and naval forces on the islands and the mainland appendages. Security and defence of the new possessions remained the duty of the small French and Italian landing forces and former Venetian troops who had entered French service. The French established a successor to the *cernide* militia known as the *Gardes Nationales*, and at the same time, they transformed old Venetian units into *Companies Grecque Franche*. Both formations attracted Ionian Greeks who had served in the regular Venetian army and the *cernidi*, as well as young men who were impressed by the ideas of the French Revolution. In addition to Ionian Islanders, a number of mainland *armatoloi* and other irregulars employed by the Venetians before the French occupation took service with the French (Pappas 1991, pp. 97–98).

Within two years of their occupation, a combined Russo-Turkish naval expedition expelled the French from the islands by as part of the second coalition against France[2]. After consolidating their occupation, the Russian and Turkish fleets left the Ionian Islands to engage the French off the Italian Coast and in the western Mediterranean. At the same time, the Russian-sponsored government of the islands, known as the Septinsular Republic, undertook to build a local military force, the so-called Septinsular army. A lack of funds and a dearth of recruits made it difficult to build an effective armed force. Soon after the fledgling army's inception, the new republic broke apart with civil strife on most of the islands. The Septinsular army could neither control nor remain aloof from the uprisings and secessionist movements that arose on the various islands. The disparate nature of the army's components facilitated the politicization of the armed forces during the period of disturbances in 1799–1800, which included officers and men who had served under different regimes-Venetian, French and Russian. In addition, since the local governments paid the provisional armed forces on outlying islands, the troops were prone to follow the lead of their immediate employers (Pappas 1991, 122–132).

Russian Forces

Between 1799 and 1802, Russian forces intervened both officially and unofficially on two occasions to bring order to the islands. In the summer and fall of 1802, Russian naval and land forces, 2 frigates and 600 infantrymen, brought about a permanent restoration of order. Aiding these limited Russian forces were the few loyal Septinsular troops on Corfu and by mainland irregulars, many of whom had served in the Russian Turkish naval expedition of 1798–1799 and had later functioned as auxiliaries on the islands in the intervening three years. During this period of troubles, the Greco-Albanian troops had been a neutral yet stabilizing factor. The soldiers of the mainland units took no sides in the internal conflicts and merely served the governments that employed them. Upon the return

[2]On the expedition, see Tarle (1959).

of Russian forces, these troops joined in the pacification of the unruly islands. The mainland units, known under several appellations, became such a vital part of the military of the Ionian Islands that they comprised about one/half of the permanent infantry forces of the Septinsular Republic. Between 1799 and 1803, the number of mainland irregulars rose on the Ionian Islands from 300 to 700 troops (Pappas 1991, 137–150).

In the face of perceived or real threats of a French military expansion in Italy, Russian forces reappeared in the Mediterranean in a major way between 1803 and 1805. The government of Alexander I followed closely the advance of the French Army toward southern Italy and the activities of French agents in the Balkans and saw them as threats to the Septinsular Republic and the Ottoman Empire. The Russian strategists felt that the small Russian forces on the Ionian Islands were inadequate to meet any French challenge. Moving toward an alliance with the England in 1804, the Russians began expansion of their armed forces on the islands. In late 1803, Russian forces in the Septinsular Republic and its waters amounted to 1,200 troops and 2 warships. By the end of 1805, these forces grew to over 12,000 men and 39 naval vessels. These land and naval units transferred to the islands via the Turkish straits by treaty with the Ottoman Empire (Pappas 1991, 152–154).

Aside from building their own military on the Ionian Islands, the Russians attempted to increase the number of native forces allied to them in the area. In 1803, the Russian Plenipotentiary, Georgios Mocenigos, tried to induce the Septinsular Republic to increase its army to 2,000 men and its navy to 14 vessels. In 1804, the Septinsular Republic gave command of its regular forces to Colonel Emmanouel Papadopoulos, a Russian officer of Greek origin who had arrived at the head of the first Russian reinforcements in March of that year. Colonel Papadopoulos and many of the Russian officers involved in the organization and training of the Septinsular Republic and the mainland troops were products of Greco-Russian military ties going back over thirty years (Pappas 1991, 158–162).

Greeks, Albanians and other Balkan peoples began entering Russian military and naval service in large numbers because of their participation in the Russo-Turkish Wars of 1769–1774 and 1787–1791. Their recruitment followed the same pattern in both conflicts. They first became involved in insurrections in their homelands instigated by Russian agents, often of Greek origin, who emphasized common religious and cultural ties. When these uprisings failed, fugitives from these abortive movements took on service as auxiliary marines and sailors in the regular or privateer naval forces of Russia operating in the Mediterranean. With the coming of peace in both wars, many of these marines and sailors immigrated to Russia's newly annexed territories along the Black Sea. There they either joined regular forces or formed military colonies in the Crimea and Odessa. Light Infantry units (*Grecheskii Polk*, *Balaklavskii Grecheskii Pekhotnyi Battalion*, and *Odesskii Grecheskii Divizion*) units were organized from these colonies and served as territorial guards in peacetime and as marines in wartime (Pappas 1991, 61–94)[3].

[3]Works appearing on Greek units in Russia since the appearance of my study include Avgitidis (1993).

Besides these formations, Russia established a school and later a cadet corps for the training of regular officers from among Greek and other foreign Orthodox refugee youths. This school, known as the *Kadetskii Korpus chuzhestrannykh edinovertsev* (Cadet Corps of Foreign Coreligionists), was founded originally in 1774 as a gymnasium for refugee Greek boys of the Russo-Turkish War. In April 1775, the School became a cadet corps and its name changed to reflect the addition of students of Bulgarian, Serbian, Arab and other backgrounds. The cadets were educated for future training and commissioned service in army and naval forces. The curriculum included instruction in French, German, Greek, Italian, Russian and Turkish, as well as arithmetic, geometry, geography, drafting and dance for the lower grades. Upon completion of these general courses, cadets were obliged to continue training for their branches of service. The School started with a complement of 46 cadets and later maintained a student body of about one hundred cadets. Although the student body was composed of boys of various origins, most Russian sources indicate that a majority of the corps' graduates were Greeks. During the twenty-three years of its existence, the school produced hundreds of graduates, most of whom served as army and navy officers. In addition to military activities, some of the corps graduates took on diplomatic, consular and intelligence duties, serving in embassies and consulates in the Near East and the Mediterranean. Many of the Russian organizers and trainers of the regular Ionian and irregular mainland units came from this cadet corps and the other institutions mentioned above, including Colonel Papadopoulos (Beskrovnyi 1958, p. 452, Korguev 1897, pp. 155–164, Korguev 1913, pp. 197–198).

Papadopoulos immigrated to Russia as a youth following the Russo Turkish War of 1769–1774. He attended the Greek Gymnasium and the Cadet Corps of Foreign Co-religionists, commissioned an officer of engineers in 1781. He later transferred to the infantry, in which he distinguished himself at the siege of Ochakov against the Turks in 1788. He then joined the general staff and served as a liaison officer in the Russian embassy in Constantinople in 1793–1794. Later he commanded the Ladozhskii Musketeer Regiment until 1803, in which he organized a garrison battalion and artillery command at Kamenets for eventual duty on the Ionian Islands ("Emmanuil Grigor'evich Papandopulo" 1846, pp. 287–288, Klochakev 1902, p. 302, Zerlentes 1887, pp. 201–207).

In his role as commander of the Septinsular army, he restructured the regulars and based their organization on a Russian model. He composed a military manual that revised regulations and practices away from the Venetian model. This manual, written in Greek, appeared with a parallel Italian translation by order of the Septinsular government in 1804. In the next year, Papadopoulos also took command of the mainland Greek forces in Russian service, attaining the rank of Major General (Papadopoulos 1805a).

Since the finances and eligible manpower of the Island Republic could not sustain a larger armed force, Russian authorities planned and worked in 1804 for the formation of a large corps of Greco-Albanian troops similar to the forces they had developed in the Russo-Turkish war of 1769–1774. Toward this end and toward countering French activities, the Russians established new consulates on the mainland (at Arta, Preveza and Patras), employed recruiting agents, and re-

established ties with *armatoloi*, *klephtes*, *kapoi* and clansmen of Souli, Mani and Himara. The impetus for entry of these martial elements into Russian service was not only propaganda and active recruitment, but also the growth and intensification of the refugee problem on the Ionian Islands (Pappas 1991, pp. 162–176).

Legion of Light Riflemen

The first refugees organized into Russian service were the Souliotes, who settled on Corfu after the fall of their homeland and the failure of their aborted attempt to resume war against Ali Pasha with Russian aid in June 1804. After an exhaustive war with Ali Pasha and the loss of their homeland, the remnants of the Souliote people sought asylum at Parga and then on Corfu, where most able-bodied men entered Russian service. They formed a unit known as the Souliote Legion, numbering to about 600 troops by March 1805. They would eventually number over 1,300 by the end of 1805 and formed into two sections of the new Russian sponsored unit. Known as the Legion of Light Riflemen or hunters (*Legion Legkikh Strelkov* in Russian, *Legion Elaphron Kynegon* in Greek) (Pappas 1991, pp. 180–191)[4]. The Russians also organized a third section on Corfu, composed of Himariotes. Having likewise suffered at the hands of Ali Pasha and his lieutenants, the Himariotes cemented relations with Russian authorities on Corfu to assure their autonomy in the wake of the fall of Souli. These troops, many with experience in the Venetian *Reggimento Cimarrioto* or the Neapolitan *Reggimento Real Macedone*, immediately mustered on Corfu in a section of about 400 men known as the Himariote Legion by mid-1805 (Pappas 1991, pp. 191–195). One the island of Cephalonia, the Russians recruited Souliotes, as well as refugee *klephtes* and *Armatoloi,* into the Epirote legion, consisting of two sections. They also organized a section on Zakynthos from among Morean fugitive *kapoi* and *klephtes* called the Peloponnesian Legion. The Russians formed a second section on Zakynthos, made up of Maniates, known as the Spartan Legion, although it was not originally part of the planned Legion of Light Riflemen. The sections neither on Cephalonia, nor on Zakynthos reached full compliments until later in 1806 (Pappas 1991, pp. 195–211).

The growth of the Legion of Light Riflemen, as seen above, varied from section to section. In May 1805, Russian authorities projected that the larger Legion of Light Riflemen would have an overall strength of 2,080 officers and men. By the end of 1805, the number of troops in the Legion amounted to 1964 men, of which 1,354 were Souliotes, Roumeliotes and Epirotes, 359 were Himariotes, and 251 were Peloponnesians and Maniates. The Legion eventually reached the height of its manpower in 1807 with 2,340 legionnaires in service (Pappas 1991, pp. 213–214).

The first sections organized on Corfu initially had regular Russian officers, mostly of Greek origin, as section commanders and adjutants. Native leaders with brevet commissions commanded the sections on Cephalonia and Zakynthos.

[4]Since the appearance of my study, a very thorough investigation of the Souliotes as appeared as a dissertation and subsequently as a book in two editions. This work is Psimouli (1995, 1998, 2005).

These section leaders were responsible to the Russian commanders of their respective island garrison as well as to the commander of the Legion, Major General Papadopoulos.

The initial commander of the Corfu units was Colonel Alexander Benkendorf, an aide-de-camp of the Tsar who arrived on Corfu in September 1803. Under Benkendorf, the Souliote companies rose in strength to about 600 men and collectively named the Souliote Legion. Colonel Benkendorf developed a good rapport with the Souliotes, as is evidenced by the testimony of Christophoros Perraivos (Perraivos 1815):

> ... appointed commander over all of them was an affable young man by the name of Benkendorf, of Russian race, who admired them greatly and treated them with sincerity. He often arranged mock battles and war games, defraying the expenses in most cases from his own resources. He remained their commander but a few months and later left for Russia.

Benkendorf remained in overall command of both the Souliote companies and the four Himariote companies. Russian sources also indicate that he played an important role in the initial organization of these units on Corfu. He held command of the Souliote Legion until March 1805, when he was recalled to Russia. Benkendorf's *cursus publicus* culminated with his serving Tsar Nicholas I as commander of his political police, the Third Section, and as one of his principal advisors between 1825 and 1844 (Stanislavskaja 1976)[5].

In the over 20 years since my initial study, I often wondered Benkendorf, the head of notorious secret police had any influence in the more active role of Russia in the Greek revolution under Nicholas I. Benkendorf's recently published memoirs indicate that he had nostalgia for his old command in Corfu, although he probably could not reveal it because of his position in the years 1826 to 1847. In his memoirs, he wrote[6]:

> These brave Souliotes, whose antique costume resembles that of the ancient Spartans, told me that one day they would express their devotion to me had by raising me with their own hands on the walls of Constantinople. The Greek still remains what he was in the heydays of Athens, mere word inspires him; and the enthusiasm to which he is most susceptible than all the nations of Europe, is to exalt to the highest level of power, he who will be able to fire this enthusiasm and return this nation to its former independence.

[5]Bogoliubov to Kurakin (7 March 1805) in *Pis'ma V. F. Bogoliubova*, p. 237; "Graf Aleksander Khristoforovich Benkendorf", pp. 695–698.

[6]*Mémoires du comte Alexandre Benkendorf Général cavalerie, Aide de Camp Général de S.M.E. l'Empereur de Russie. PN Griunberg* (ed.). Moscow: Iazyky skavianskoi kultury, 2001. From the Russian translation Aleksandr Khristoforovich Benkendorf, *Vospominaniiia, 1802-1837*. OV Marinina (tr.). Moscow: Rossiiskii Fond Kul'tury, 2012, pp. 106, 111. Benkendorf's memoires reads like a picaresque novel, at least in the Corfiote section, in which he moves from one romantic conquest to another. It reads much like Casanova's reminiscences of his encounters with the *Reggimento Cimarrioto* in Venice. See Casanova (1924, pp. 133–135).

Upon reaching St. Petersburg and meeting with the Tsar to report on Corfu, Benkendorf told the Tsar that he wanted return to Corfu and his Souliote legion, but was denied his wish by the Tsar. While Benkendorf's philhellenism became stifled by his duty to the Tsar, it seems that a member of his family held philhellenic views and acted upon them. Scholars have discovered that Benkendorf's sister, Darya (Dorothea) Lieven, wife of the Russian ambassador to London, used her social contacts and feminine wiles as an agent for Greek independence, serving both the Tsar and the Greek cause, whole consorting with such opponents of Greek Independence as Klemens Von Metternich and Richard Castlereagh. Some of these scholars believe that she was influential in the formation of English-French-Russian detente, which aided in Greek independence by its intervention at Navarino on 1827 (St. Claire 1972, pp. 314–315)[7].

With Benkendorf's departure, Emmanouel Papadopoulos assumed command of all sections of the legion and continued its formation on solid foundations, developing a general organization and conditions of service. He did so by formulating a convention of service for the troops of the legion for General D'Anrep in May 1805 (Convention of the Epeirotosouliotes and Peloponnesians with General D'Anrep 1805, Goudas 1876, pp. 254–255).

The convention's conditions of service were similar yet in some ways different from those of the irregular units in Septinsular service. Pay for the officers and men of the Legion was the same as that of the Septinsular Macedonian Corps, that is 60 *grosia* per month for captains, 40 *grosia* for lieutenants, 25 *grosia* for sergeants and musicians, and 18 *grosia*, 30 *para* for soldiers. They, like the *albanesi* in Septinsular service, supplied their own arms and attire "according to the customs of their nation" (Convention of the Epeirotosouliotes and Peloponnesians with General D'Anrep 1805)[8].

Differing from the mainland troops of the Septinsular Republic, the legionnaires were obliged to campaign outside of the Ionian Islands. According to their oath of entry (Convention of the Epeirotosouliotes and Peloponnesians with General D'Anrep 1805):

> We the Epiroto-Souliotes and Peloponnesians and Himarriotes, promise by oath that we shall serve our most powerful emperor faithfully and shall go against any enemy which the commanding general of Imperial forces orders us to ... vowing to protect, on the part of us all, the good order and discipline with faithful service, zeal, and courage, having the certain hope that we shall receive our allotted pay and board, without any difficulty and shortcoming from any quarter.

Regulations for leave and discharge from the Legion were liberal and generous. When not on campaign, legionnaires could take leaves of up to two

[7]Journalist/Historian Panagiotes Paspaliares, has asserted that she was a double agent for Capodistria, see "Diarroe sto "agio diskopoterio" tes Ieres Symmachias", (Greek) at *Capodistria-Spinelli-Europe* (April 2012) http://main.cse-initiative.eu/?cat=20 and "Greece's Secret Spy in Metternich's Bedroom", (English) at *Capodistria-Spinelli-Europe* (April 2012)- http://cse-initiative.eu/spip.php?article49.

[8]A *grosi* was an Ottoman *piastre* or *kuruş*. The smaller denomination was the *para*, forty of which made one *grosi.*

months with pay for settling personal affairs. Furthermore, legionnaires could receive ·a discharge· from service upon giving three months' notice to their captain to give time to find suitable replacements. If legionnaires received disabling wounds while in service, they would receive a discharge and a pension of half pay as compensation. Upon conclusion of hostilities and if the Legion of Light Riflemen was no longer needed for imperial service, its complement would be discharged and returned to their areas at Imperial expense. Even though the men of the Legion were irregulars, this condition of service seems unusual, since many of the legionnaires could not return to their homelands, being refugees. The future of the troops of the Legion of Light Riflemen after Russian service was to be a problem after the treaty of Tilsit in 1807 (Convention of the Epeirotosouliotes and Peloponnesians with General D'Anrep 1805).

In spite of the fact that the ranks of the Legion came from different areas, entered Russian service under different circumstances, and garrisoned different islands, they nonetheless came under a single command with the same conditions of service. Major General Papadopoulos maintained correspondence and met periodically with section commanders and other officers of the Legion. Papadopoulos also composed a military manual in Greek, which he printed and distributed for the use of the officers and sergeants of the Legion; and dispatched least 20 copies of the manual to each section by August 1805. The manual defined the organization of the Legion and the obligations and duties of every rank of the corps. Thus, Papadopoulos provided the military manuals for both the regular Septinsular army and the Legion of Light Riflemen, and followed in the footsteps of Georgios Papazoles, the Russian military agent who composed the first Modern Greek military manual prior to the Russo-Turkish war of 1769–1774. Papadopoulos' manual for the Legion of Light Riflemen was an original composition rather than a translation or paraphrase of existing Russian manuals[9]. It took into account both the origins of its members and the different military ethos. In the Manual, he attempted to cement the disparate elements of the legion by emphasizing Greek national consciousness (Rados 1916, p. 50, Jochalas 1975, pp. 18–19, 21–22, 72–74, Kasomoules 1939, p. 2, Kolokotrones 1971, p. 58)[10]:

> Remember and engrave in your hearts that you are the descendents of the renowned Greeks, of the most martial and most tactical Pyrrhus, and of the most brave and courageous Skenderbeg of more recent times. You have the bravery of your ancestors. You need only to have concord among yourselves; love, fraternity, obedience to commanders, good military order, eagerness and zeal, and surely you will glorify the Greek name.

[9]Papadopoulos (1805b) as quoted in Rados (1916, p. 48). This very rare book has remained unavailable to this writer. However, Rados, above, quotes it extensively. Papazoles' manual is available in PDF form from the University of Crete, I used a copy of Papadopoulos' Septinsular manual at the National Library of Athens. This author hopes that the legion's manual will be similarly available. Pappas (1991, p. 103, n. 21, 545).

[10]Greeks of that time, as well as Orthodox Albanians, considered the Albanian national hero to be their own.

Each section or legion consisted of four *hekatonarchies* (centuries or companies). In 1805, each company was to have a complement of one *hekatonarchos (sotnik,* centurion or captain), two *pentekontarchoi (piatdesidtniki* or lieutenants), ten *dekarchoi* (*desiatniki* or sergeants) and ninety *stratiotes (riadovi* or privates), amounting to 103 officers and men. Later, each company also had an ensign or standard-bearer *(semaiophoros* or *znamenik).* Outside the complements of the companies, each section had a commander (*chastnyl nachal'nik)* with the rank of major *(maior, maggioros* or *taxiarchos),* as well as an adjutant and four musicians. The Legion also had Greek Orthodox chaplains, either serving in the ranks or holding chaplain's rank (Convention of the Epeirotosouliotes and Peloponnesians with General D'Anrep 1805, Pappas 1991, pp. 212–213).

The manual called for each section to have its own standard. The basic emblem for all the sections' standards was the double-headed eagle with laurel branches and a crown. Each standard also had the saying "God is with us" and "Know, ye nations and submit" on opposite sides of the flag. The first and second Souliote sections had standards with white and blue fields respectively, while the third and fourth Epirote sections had ones with red and yellow fields. The fifth Himariote section's· standard was orange, while that of the sixth Peloponnesian section was a checked white. The colour of the Spartan Legion's· flag is unknown (Rados 1916, p. 47).

Although the basic units for recruitment and organization for the Legion were the companies and the battalion-sized sections, the basic unit for drill training and combat was the squad of ten men known as the *dekarchia.* The *dekarchoi (desiadtniki),* commander of the squad, was the equivilant of a sergeant. For example, for the duties of enlisted men in preparing for action, Papadopoulos wrote (Rados 1916, p. 48):

> At the command of the sergeant, he [the soldier] musters at the place designated; when the sergeant gives the signal, the soldiers will disperse and will take their covered positions ... All these movements must be done by the soldiers without shouts or disturbances and they must show every obedience to the commands of the sergeant.

The emphasis on small unit actions in the Legion manual resembled the tactics of modern armies, rather than those of the eighteenth century. The manual also conformed to the type of combat familiar to the men of the Legion, as Papadopoulos noted (Rados 1916, pp. 47–48):

> Observing the natural ways and habits of the Epiroto-Souliotes, Cheimarriotes and Peloponnesians, who always fought with a simple, natural order, with little need for drill, since they are aided greatly by nature and covered positions, it is difficult and unbeneficial to have them drill in the order of European forces, and for this they are designated semi-regulars (*aploutaktikoi*) and will be called light hunters (*elaphron kinegon*).

For the most part, the Legion of Light Riflemen performed well, both in the Russian offensive operations in the Mediterranean, as well as in the defence of the

Ionian Islands. These campaigns began with the Anglo-Russian expedition to Naples in the fall and winter of 1805–1806. The whole complement of the Legion, as part of a Russian contingent of over 11,000 men, landed to Italy in the occupation and defence of the Kingdom of the Two Sicilies, against the French. Within two months, however, Napoleon's victory at Austerlitz and the vacillation of Neapolitan court made the expedition's position untenable. The British and Russian corps were obliged to withdraw, the former to Sicily and the latter to the Ionian Islands (Pappas 1991, pp. 221–225). Nevertheless, some of the legionnaires made an impression on a British officer (Bunbury 1854, p. 219):

> Their very gait told their tale: it was the noiseless creeping of a cat in search of prey: their long steps gave forth no sound; their eyes, though lighted by no passion, were incessantly moving, and marking all things before and behind and on every side. A sort of coarse shirt belted around their waist, with a capote of the skins of sheep or goats formed their dress: and a long gun and a stout knife their arms. They could have done very little harm to the French, but they would have been deadly protectors to the Italians.

The Legion of Light Riflemen suffered mostly from malaria on campaign in Italy, which plagued the unit for months. For the duration of 1806, most of the troops remained garrisoned on the Ionian Islands, although some claim that elements of the Legion served with Russian naval forces in southern Dalmatia in the summer and autumn 1806 (Pappas 1991, pp. 225–238).

The outbreak of a new Russo-Turkish war in late 1806 brought about new duties for the Legion and related units. Two hundred sixty legionnaires served as marines with Admiral Seniavin's naval force in the northern Aegean in 1807. In this capacity, they participated in the capture and later defence of the island of Tenedos near the Dardanelles (Pappas 1991, pp. 225–238).

The rest of the legion, together with the Septinsular Macedonian Corps, the newly formed Special Greek Corps, and other levies of refugee *klephtes* and *armatoloi,* played an important part in the defence of the Ionian Islands, especially Lefkas. In the spring and summer of 1807, the forces of Ali Pasha of Ioannina, abetted by French advisors, attempted to capture Lefkas from the adjacent mainland. A mixed force of Russian regulars, Septinsular militia and continental auxiliaries successfully defended the island, together with the town of Parga, from the assaults of Ali's troops. Besides these defensive measures, mainland irregulars served in offensive operations against the Ottomans on land and at sea. They made forays on the mainland and privateer raids, amounting to insurrectionary movements, led by chieftains bearing Russian or Septinsular brevet commissions (Pappas 1991, pp. 238–245). These movements, sponsored by the Russians, were active as far afield Macedonia, Thessaly and the northern Aegean Island, including the activities of Nikotsaras, Papathymios Vlachavas (Pappas 1991, pp. 246–253)[11].

[11]These and other operations included shore attacks and raids on Ottoman shipping and by Hydriotes, Ionians, Macedonians, Maniates, Peloponnesians, Thessalians, and others who either bore letters of Marque or held brevet commissions from the Russian and Septinsular governments, including officers in the Legion of Light Riflemen.

With the cession of the Ionian Islands to France because of the Treaty of Tilsit in the summer of 1807, Russia was obliged to withdraw its forces from the islands and the Mediterranean. In spite of this withdrawal and the temporary Russo-Turkish armistice of Slobozia, aftershocks of the hostilities continued in Greek Lands. For example, the rebellion of Efthymios Vlachavas broke out in early 1808, *after* the French had taken possession of the Ionian Islands. Similarly, the privateer activity in the Aegean by Macedonian, Thessalian and other corsairs continued into 1812, four years after the withdrawal of the Russian fleet. Unlike previous Russian engagements and withdrawals from the Mediterranean, such as during the Russo-Turkish wars of the late eighteenth century, those native troops who had served with the Russians did not have the option of resettling in Russia. Instead, the men of the Legion of Light Riflemen and related units took the opportunity to transfer to French service, which they did with the proviso that they would never fight against Russia. These troops did not leave with the Russian forces since there was no danger of Turkish reprisals against them, since the French were neutral over the Russo-Turkish war. Russia was not able to resettle them in Russia, since they were still at war with the Ottomans and could pass through the straits to the Black Sea. Furthermore, there had been changes in the Russian policy on foreign settlers in Russia, which mitigated against the formation of another Greek military colony in the Russian Empire. Thus, the formations of refugee warriors founded under Russian tutelage were to continue under new patrons (Boppe 1914, pp. 221–223, Boppe 1901, pp. 161–162).

French Regiment

After the Russian withdrawal from the Ionian Islands, the troops of the Legion of Light Riflemen and various other military formations in which Greeks served transferred to French service. After an abortive attempt to integrate each company of the former legion into a regular French battalion, the French organized the troops of the auxiliary units that had served the Russians into *Le Regiment Albanaise* (the Albanian Regiment) and *Les Chasseurs a Pied Grecques* (The Greek Infantry Skirmishers). The former unit had a strength of over 2,000 men, while the latter amounted to nearly 1,000 troops. Eventually the Greek Skirmishers merged with the Albanian Regiment, forming a single Albanian Regiment of over 3,000 men, organized into six battalions of six companies each. This structure resembled that of the Russian Legion of Light Riflemen in 1805, with the difference that each battalion had six companies, rather than the four in each section of the Legion (Pappas 1991, pp. 261–266).

Unlike the Legion of Light Riflemen, the Albanian Regiment for the most part did not operate as an auxiliary force in campaigns, but rather served as a garrison unit. With the exception of Corfu, a minimum of regular French troops deployed on outlying islands. Instead, chiefly mainland irregulars, Italian regulars and local militia garrisoned the islands. By confining the irregulars of the Albanian regiment to garrison duty, the French overlooked their main asset as skirmishers, and brought out their weaknesses as regular troops (Pappas 1991, pp. 266–268). The

French had difficulty submitting the mainlanders to fortress duty and settling the disputes among the officers and men of the Albanian Regiment. One factor in these problems was that the French did not employ regular officers of Greek origin in command positions in the Albanian Regiment to the extent that the Russians employed them in the Legion of Light Riflemen. Initially they tried to "regularize" the mainlanders, them with little success. They also promoted to native commander a man who had ritually repudiated the Tsar by stepping on a Russian metal he had earlier received. The troops nearly mutinied because they considered his action *babesiko* or *atimo*, that is, perfidious. The bulk of the officers and men of the former legion, because of their patriarchal code of personal honour *(philotimo* in Greek, *besa* in Albanian), took their oaths of allegiance to the Tsar seriously. When the French command ordered the troops of the Legion and Corps to take an oath of allegiance, they refused to accept an oath that would call on them to act against Russia. Despite threats, they swore only that they would fight all of the French Empire's present and potential enemies with the exception of Russia (Boppe 1901, pp. 163–164, Pappas 1991, pp. 262–264)[12].

The French commander of the Regiment, Colonel Minot tried assiduously to organize and lead his charges, but ended up despising his regiment, in 1812 he wrote (Boppe 1914, pp. 256, 261, Boppe 1901, pp. 207, 210):

> I have languished on Corfu for nearly five years. . . .Up to now I have commanded the Albanians with resignation, though this was the most distasteful command a colonel could have.

Minot by then wanted to command a regular French regiment and seemed to have been frustrated in his attempts to mould his disagreeable charges into the image he preferred. For example in one order, he confined soldiers to the barracks and allowed leave to only those with large families. He forbade the troops to bear arms outside their compounds and posted guards to enforce this. Minot took measures to ensure the total mustering of companies for inspections. So much emphasis did he place on this, in fact, that he even jailed one captain, Markos Botsares, for eight days for having displayed "sloth" in the mustering of his men. This penchant for discipline contrasted with the concept of restrained discipline practiced by General Papadopoulos in the Legion of Light Riflemen (Boppe 1914, pp. 256, 261, Boppe 1901, pp. 207, 210, Pappas 1991, pp. 276–277).

The French could have minimized the problems of they allowed Greek officers from their regular forces, such as Colonel Nikolaos Papazoglu-Tsesmeles, to serve as commanders and advisors for the irregular units, as, in fact, the Russians had done. Familiar with the European forms of military discipline as well as the language and customs of their charges, Greek officers would have been better able to negotiate such minor crises and prevent them from becoming major problems. Unfortunately, the pool of regular Greek officers available to the French was smaller than that of the Russians, which had grown as due to the ties and institutions dating back to the Russo-Turkish wars of the eighteenth century (Pappas 1991, pp. 270–271).

[12]Proclamation to the Albanians, 14 October 1807, in Boppe (1914, pp. 224–225).

British Regiment

The development of the Albanian Regiment became further impaired by the British seizure of Cephalonia, Cerigo (Kythera), Ithaca and Zakynthos in the fall of 1809, within two years of the French occupation. Most of the captured troops of the Albanian Regiment garrisoned on these islands soon entered British service and began serving into a rival unit, the Greek Light Infantry Corps. This English-sponsored formation rose to a numerical strength of 500 men by early 1810 and participated in the capture of Lefkas in March of that year. By 1813, the Greek Light Infantry Corps, officially named the Duke of York's Greek Light Infantry Regiment, amounted to over 800 officers and men. While this regiment was serving in Sicily in 1813 and 1814, the British raised a second regiment on the Ionian Islands. This new unit reached a complement of 600 troops in late 1813 and was commissioned the Second (or the Duke of York's) Greek Light Infantry Regiment. Elements of this second regiment took part in the capture of Paxos and Parga in 1814 (Pappas 1991, pp. 279–291).

The rise of the British-sponsored regiments saw a corresponding decline in the manpower and activity of the French-sponsored Albanian Regiment. Each success in Britain's island-hopping campaign brought a loss in the number of troops in the Albanian Regiment and a concomitant rise in the number of troops of the Greek Light Infantry Regiments. By 1814, the Albanian Regiment was limited to about 1,500 officers and men, 1,200 on Corfu and about 300 on Paxos and in Parga. Disappointed by the performance of the Regiment's components against the British on the other islands, Minot and other French officers wished to deactivate the remnants of the unit. General Donzelot, the commander of French forces on Corfu, nevertheless maintained the Regiment intact until the surrender of Corfu in May 1814 (Pappas 1991, p. 278).

The situation of those Greeks who served in the British forces presents a different picture from that of the French sponsored troops. The initial ·English commander, Richard Church, recognized their martial qualities and the benefit of doing further recruitment. He went so far as to return to England in 1812 to petition for the organization of a second Greek regiment. The native officers likewise had great respect for him. In a memorandum that they gave to him upon his departure for England, they said (Boppe 1914, pp. 259–264, Boppe 1901, pp. 209–213):

> ...we cannot do otherwise than testify publicly that you are the cause and the promoter of such merits, as we possess at present and that you have nobly demonstrated the error of those European nations whose rooted prejudices will not allow them to believe that modern Greeks are amenable to discipline and instruction…

Church even bore with him to England another letter by the men under his command asking for aid in freeing their land, which he supported. His good reputation among Greeks was such that even those who served in the rival French

unit thought highly of him, as attested by Christophoros Perraivos, who commented that, "I became acquainted with the man only for a few hours, but his fame had preceded him sometime before my small experience; when I conversed with him. I could see the qualities of an Epaminondas, a Themistocles, reigning in him"[13]. In comparing Colonels Minot and Church, Perraivos (1815, pp. 81–81, 85 wrote:

> At the head of the Greek Corps was the aforementioned Colonel Minot. He used the Corps more for his own gain, and not toward glory and justice. He recognized no distinction between officer and soldier. Good and bad were the same to him and it can truly be said that virtue went unrewarded and vice went unpunished. He was skilful to the extreme at hiding his internal and external feelings about the men, and, in order to have his schemes secured, he promoted many from the Corps to ranks that they did not merit at all, made by the exchange of silver. ...As unlucky as we were under the command of Colonel Minot, the ones who served under a Colonel by the name of Richard Church were most fortunate.

Another factor for the success of the British in their organization and command of the Greek Light Infantry Regiments was that Church and his fellow officers spoke Greek. According to a report of Ioannes Kapodistrias, then in the Russian Foreign Service[14]:

> The English in most recent times have with them some regiments in their service. They have been organized on Zante (Zakynthos) and Cephalonia. The captains and majors in them are Greeks, while the highest-ranking officers are English who are dressed in Greek costume and speak perfect Greek. A number are found in French service on the island of Corfu and are limited to four companies. This is the remnant of those, who in their time, were in Russian service.

One can attribute the relative success of the British in employing to the enthusiasm and organizational skills of Major, later Colonel, Richard Church. He had acquired a reputation as an expert trainer and commander of foreign troops. In 1805, he had made a study of the military employment of Calabrian brigands in southern Italy, and from 1806 to 1808, he had commanded a unit of Corsican Rangers, Napoleon's own compatriots, on reconnaissance missions in French-occupied Italy (Lane-Poole 1890, pp. 3–21). While serving as quartermaster general on the British expedition against the islands in October 1809, he had encountered the troops of the Albanian Regiment and had proposed to the expedition's commander, Brigadier General James Oswald, that they recruit the Greco-Albanian troops. Oswald gave him his unqualified support. On Church's enthusiasm, Brigadier Oswald reportedly said (Lane-Poole 1890, pp. 27–28):

> The first embodiment of the Greeks in our service was one of those delicate experiments demanding a rare and unusual combination of conciliation and firmness,

[13]Captains Kolokotrones, Stratos, Vlacbopoulos, Vilaetes et al. to R. Church, 24 July 1812, as quoted in Dakin (1955, p. 16).

[14]I Kapodistrias to Count Stackelberg, Note on the present state of the Greeks, 25 November 1811. French original published in Arsh (1976, p. 266); Russian translation in Arsh (1972, pp. 374–375).

> and indeed of that enthusiasm by which great difficulties alone can be overcome. No one was so capable of embodying and disciplining people whose love and respect you had by the most valid titles acquired….For my own part, I am convinced that our corps is but the commencement of a great plan for engaging numbers of Greeks in our service.

General Oswald displays another reason behind the British success. He was a Scot educated at a French military academy before the Revolution. He served as an officer in the West Indies, Netherlands, Egypt, Sicily, and Calabria. Being Scottish, Oswald probably had experience with highlanders, as well as an appreciation of efforts to train warriors into soldiers. Like the Russian commander, Emmanouel Papadopoulos, it seems that both Church and Oswald understood that discipline needed to be balanced with a respect for the troops' love of honour. Nevertheless, Church and the English could not fully identify with their charges, as is indicated in Church's letter to his mother (Lane-Poole 1890, p. 27):

> Far different has been my task, and through the Almighty's assistance I have been enabled to reduce to obedience and military discipline men whom English, Russians, or French, could never in any way discipline or civilise. To you, mother, I do not boast; but I have now, thank God, divested those men of prejudices rooted by ages, and converted them from the most lawless of mankind, not only into good soldiers, but also into praiseworthy members or civilised society. These men, who once knew no law but their sword, are now the admiration of the inhabitants for their correct, quiet, and obedient conduct. My maxim has been to treat them with mildness and humanity, and by that means I have succeeded in gaining the love or these people beyond what can be imagined. The number of recruits that flock to me from all parts or Greece is really extraordinary…

Part of this attitude may have stemmed from an experience probably well known to Church. He mentioned how not only the Russians and French, but also the British, had difficulties "regularizing" these troops. This is not the first time the English attempted to form a Balkan unit. The earlier attempt on Malta in 1807 had dire consequences. There, the Greek, Albanian, and South Slav recruits were subject to the brutal discipline then common in the British Army. These auxiliaries, whose customary feeling for personal honour (Greek *philotimo*, Albanian *besa* and Slavic *obraz)* was not used to such treatment, did not long endure the abuse of English officers and mutinied in April 1807. The mutineers took over a strategic fortress overlooking the town of Malta and threatened to turn the fort's guns upon the town if their demands were not met. They demanded release from their service and that Russian or Septinsular ships return them to their homelands. While in control of the fortress, the rebel troops struck the Union Jack: and hoisted a makeshift Russian flag. The British, after an abortive assault on the fortress, blockaded the mutineers to starve them into submission. In time, most of the rebels surrendered and opened the gates, but a small contingent held out against the British and eventually blew up the fort's powder magazine, taking most of their own lives, along with those of a number of British troops. Summary executions of

many of the mutineers occurred after the incident (Bunbury 1854, pp. 309–310, Fortesque 1912, pp. 30–32, Vlachogiannes 1965, pp. 1, 4)[15].

Perhaps memories of this incident played a role in the eventual disbandment of the mainland units on the Ionian Islands. The British occupation of Corfu and the subsequent defeat of Napoleon greatly changed the situation of Greeks in both French and British service. In full possession of the Ionian Islands, the British began to disband the Greek formations. In July 1814, most of the Greeks in French service had their service and stipends ended, while in 1815 and 1816 the soldiers of the Greek Light Infantry Regiments lost their employment from service. In breaking up the Greek units, the British consolidated their control of the Ionian Islands by leaving defence solely in the hands of the protecting power, by removing an important vestige of previous regimes, and by placating the Porte, which saw the presence of these formations on the islands as a threat to the Ottoman Empire's security. Furthermore, the coming of peace in Europe obviated the maintaining of foreign troops in the British army (Pappas 1991, pp. 281–285.

This deactivation, however, proved to be a hardship for the mainland troops and their families, many of whom were still refugees. Those who could return to their homelands did so, while others found employment elsewhere. Some veterans took on service with the new Neapolitan formation, the *Battaglione dei Cacciatori Macedoni* between 1817 and 1820, while others found positions in the *arnauţi* guards of the Phanariote *hospodars* of Moldavia and Wallachia. Ali Pasha also employed a number of refugee veterans in his forces, some of whom had been his former enemies. However, the situation of most of the unemployed military exiles led many into revolutionary activities as members of the secret society for the liberation of Greek lands, the *Philike Hetaireia,* and subsequently as participants and leaders in the Greek War of Independence, 1821–1830 (Pappas 1991, pp. 288–291).

Conclusions

What was the experience of British, French and Russian officers organizing, training and commanding Greco-Albanian troops on the Ionian Islands and their affect the development of the armed forces of Greece from 1821 on? There has been a divergence of views among scholars on the nature of this impact. Konstantinos Rados, in his pioneering study on the Souliotes and *armatoloi* on the Ionian Islands held that, "The corps of Greeks organized under the Russians, French and English were among the most important schools of the infantry force of the Revolution" (Rados 1916, pp. 31–33). In a similar vein, Giannes Vlachogiannes wrote that, "The Greek corps that served in the Ionian Republic were schools of military training for whole phalanxes of men, including Kolokotrones first, Niketaras, the Petimezas clan, as well as most of the Roumeliotes and Epirotes" (Makrygiannes 1947, p. 2). Commenting on these views held by Rados and Vlachogiannes, the American historian Dennis Skiotis

[15]Gieben Griechen im Bulberturm. Soldatenerhebung auf Malta aus einer alten Leipziger Chronik. *Wochenausgabe* no. 14 (Vienna, 4 April 1936): 9–10.

wrote that, "... the argument is not convincing, since the European commanders tried to convert these Greeks into regular infantrymen, a hopeless task in view of the klephts' abhorrence for the "Frankish way of doing battle". Indeed when they did return to fight on the mainland it was not European squares and bayonet charges to which they resorted but the familiar and trusted tactics of the klephtopolemos" (Skiotis 1975, p. 319).

Nevertheless, I would have to qualify Skiotis' view. Under the Russians, at least, the veterans of the Legion of Light Riflemen did not receive training to fight in the "Frankish ways". As General Papadopoulos wrote in his manual for the Legion, ".... it would be difficult and unbeneficial to have them drill in the order of European forces and for this they are designated as semi-regulars *[aploutaktikoi]* and will be called light hunters *[elaphroi kinegoi]*" (Rados 1916, p. 48). Under the French and Colonel Minot, the auxiliaries had to submit to the European tactical norms with little success. The French made a mistake by not having command positions held by Greek regular officers already in their service, such as those in the *Chasseurs D'Orient*[16]. Under the British and Colonel Church, there seems to be an attempt to modify their training and organization to take into account their penchant for skirmishing and *klephtopolemos*, although not to the extent that Papadopoulos advocated. Perhaps the British learned their lesson from the debacle on Malta. Even Church displayed some condescension in describing his charges as "the most lawless of mankind…who knew no law but their sword".

Indeed, most English and French observers, such as Pouqueville[17], and Holland[18], usually had been critical of the auxiliaries, including their style of fighting and performance. For example, Thomas Hughes described members of the 1st Greek Light Infantry Regiment he saw in Messina, Sicily in this manner (Hughes 1820, pp. 141–142):

> . . . there was something of savage cunning and treacherous ferocity in their sparkling eye and red curling mustachios from which one naturally recoiled. It was found extremely difficult to subject these wild and lawless mountaineers, most of whom

[16]The only attempt to do this was when the French appointed Konstantinos Androutses as a Lieutenant Colonel of the regiment. Androutses was a member of a powerful Himariote clan, and had served in the *Reggimento Real Macedone* of Naples as a cadet from the age of ten. He was appointed a captain in the Neapolitan Bourbon Regiment twenty years later in 1797, and followed this with French service as a commander of a Neapolitan civil guard regiment in 1799, where he attained the rank of colonel-instructor. His position ended in 1799 by the restoration of King Ferdinand, after which he returned clandestinely to his homeland via the Ionian Islands, remaining in Himara as a representative of French interests until 1806. With the cession of the Ionian Islands to the French, he obtained the command of one battalion in the *Regiment Albanaise*. He was promoted to Lieutenant Colonel and was set to become virtual commander of the Regiment when he was captured in a small-scale raid on the Himara coast, one of the only offensive operations conducted by the Regiment. He languished in prison until 1812 and died under suspicious circumstances just before his negotiated release. Upon his death.

[17]Pouqueville displayed his prejudices describing some of his hosts in Himara: "I noticed that that our escorts watched the Himariotes' movements with care, and I divined that were amidst a den of bandits". (Pouqueville 1820, pp. 61–62).

[18]Holland describes the Greek Light Regiment in this manner: "The discipline of the men, when I saw them, was little advanced, and there seemed a singular inaptitude to acquire it; their appearance and movements were in all respects curiously rude and uncouth". (Holland 1815, p. 32).

> had exercised the profession of a robber, to the strict rules of European discipline, neither could they endure that kind of warfare which is in use amongst, civilized nations: accustomed to ambuscade and treachery, to occupy the passes and defiles of a mountainous country, and to fire upon an enemy from the protection of rocks, they could never be brought to stand and make a charge, or to remain steady under a fire of musketry; for at the first volley they generally fell flat upon their faces.

The one British traveller with an understanding of the character of the mainland irregulars was the Scot John Galt, who encountered troops of the 1st Greek Light Infantry Regiment, compared them to the Scottish highlanders:

> It is called the Greek light infantry. The dress is the Albanian, except in one company, which, being entirely composed of Mainotes, is clothed in what may be called the Spartan uniform. I dined at the officers' mess on the occasion of General Oswald's first visit .to them, and was not a little amused ·We had several Albanian songs-odes I should call them, as were [in] the language of the ·Greeks. The style of the airs resembled the Highland *pibrochs.* Indeed, in their manners these mountaineers are not unlike our highland countrymen. They have the same skinless sense of honour, and between them and their followers the same kind of attachment, and in many cases the same relationship exists, which constituted the peculiar cement of the Scotish [sic] clans. One of the· Greek officers sung an old set of *the blue hells of Scotland,* not the least extraordinary incident in the entertainment I think you must allow.

In spite of this fascinating metaphor, Galt felt that the British government should not recruit these men without the permission of the Ottoman. He seemed not to have any understanding of the status of the mainland troops as refugees.

In contrast, most Russian observers, including Benkendorf[19], Bronevskii,[20] and Svi'nin[21], had favourable impressions of the mainland troops, praising their loyalty and skill at arms. Take for example, Pavel Panafidin's description of legionnaires' fighting methods (Panafidin 1916, pp. 18–19):

---

[19]Benkendorf said this about them, "For 17 years, the unbelievable tenacity and ferocity of these brave mountaineers protected them against all attempts of Ali Pasha. . . . . I was entrusted with the command of the Souliote Legion; I cannot say that I organized it, because it seemed to me that 17 years of a deadly war was its military organization".

[20]Vladimir Bronevskii recounted a remarkable incident which occurred during the Turkish siege of Tenedos in June. It was then that an envoy from the Turkish camp, met his own brother by chance serving in the Legion. This envoy, under a flag of truce, attempted to sow discord among the troops and his own brother forcibly expelled him. Before evicting his brother, the legionnaire reportedly said (Bronevskii 1837, pp. 122–124):

> ... I serve the Orthodox ruler, the only hope with which it is possible to resurrect humiliated Greece; you serve our tyrant, the enemy of God and the Church; I defend the fatherland, you oppress it. Now we are enemies; it could happen that your hand takes my life or I bring about your death.

[21]Pavel Svinin described the legionnaires quartered on his ship, including their dancing, songs and costumes. He also gave an account of the Souliote wars to tell the troops' origin. Commenting on their qualities as soldiers, Svinin (1815, pp. 6–10) wrote:

> Every activity, every glance expresses the warlike spirit of this peop1e, reminiscent of the wars of Alexander the Great, of Pyrrhus, and of Skenderbeg, preserving after the fall of the [Byzantine?] empire an independent character and a thirst for armed exploits: they become animated by the firing and the clashing of weapons.

> They are excellent *jaegers*. When one of them shoots his long musket from behind a rock and does not have time to reload his musket; he pulls out a pistol, fires it, then another, and at the same time, his sabre is already in his other hand protecting his head. He transfers the sabre to his right hand, ready to enter hand-to-hand combat; but in the meantime the musket and two pistols, which are on fuses, are ready to be loaded again. Having repulsed the enemy, he again loads his weapons, again gives off three shots and draws his sabre, which hangs [from a scabbard] at a near horizontal position.

Three factors may account for this difference in attitude toward these troops. First, the legionnaires may have performed better under the Russians because together they fought against a familiar foe, the Ottoman Empire. Second, the bond of their common Orthodox faith may have made for good relations between the Russians and their auxiliaries. Finally, the use of irregular forces, such as the Cossacks, may have made the Russian military more tolerant of forms of combat and military customs different from the European practice.

These Russian memoirists mirrored the respect and confidence that Emmanouel Papadopoulos had for his legionaires. He commanded the mainland refugee warriors after the brief stint of Alexander Benkendorf and I consider him one of the founders of the Modern Greek military. He melded the disparate group of Souliotes, Himarriotes, Maniates, klephtes, armatoloi, kapoi, and others, scattered over several islands into a 3000-man force. He composed a constitution and guide for this unit in the forms of it convention and manual. In these documents, he has an appreciation for the mainlanders' qualities as soldiers and well as a toleration of their shortcomings, using careful training and discipline to bring out their assets and to minimize their debits. The French and the British only followed what Papadopoulos had pioneered in the organization and deployment of the precursor of their later *Regiment Albanaise* and the Greek Light Infantry Regiment. Whether they succeeded failed depended on how far they strayed from Papadopoulos' balanced approach to training, organization, and command. Subsequently, western and westernizing officers in the Greek revolutionary forces and the army of the early Modern Greek state would have to deal with the same problems in reconciling "irregular" martial traditions with European "regular" military norms (Pappas 2018, pp. 179–183).

A young scholar would do well to research and write a biography and study of Emmanouel Papadopoulos. His career, from his youth and training in Russia to his untimely death at the battle of Shumla in Moldavia in 1810 would go far to in understanding the origins of the modern Greek military. A fitting epitaph was composed by Metropolitan Ignatios, Papacomrade in arms.

References

Arsh GL (1972) Zapiska o nyneshicm sostoianii grckov (1811 g.) I. Kapodistrii. (Note on the current state of the grchkov (1811) I. Kapodistrias). *Slaviano-Balkanskie issledovaniia istoriografiia i istochnikovedenie*. Volume 3. Moscow: Nauka.

Arsh GL (1976) *I. Kapodistriia i grecheskoe natsional'no- osvoboditel'noe dvizhenie, 1809-1822 gg.* (I. Kapodistria and the Greek National Liberation Movement, 1809-1822). Moscow: Nauka.

Avgitidis K (1993) Εθελοντικά στρατιωτικά τμήματα από Έλληνες της Ρωσίας κατά της Οθωμανικής Αυτοκρατορίας πριν και μετά το 1821. (Voluntary military units by Greeks of Russia against the Ottoman Empire before and after 1821). Athens.

Boppe A (1901) Le regiment Albanaise. (The Albanian regiment). *Carnet de la Sabretache* 9(99): 161–162.

Boppe A (1914) Le regiment Albanaise (1807-1814). (The Albanian regiment (1807-1814)). Appendix in *L'Albanie et Napoleon 1807-1814.* Paris: Berger-Levrault.

Bronevskii V (1837) *Zapiski morskago ofitsera, v prodolzhenii kampanii na Sredizemnom more pod nachalstvom. Admirala D. N. Seniavin ot 1805 do 1810 god.* (Notes of a naval officer, in the continuation of the campaign in the Mediterranean under command. Admiral D. N. Senyavin from 1805 to 1810). Volume 3. St. Petersburg.

Bunbury H (1854) *Narrative of some passages in the great war with France from 1799 to 1810*. London: Richard Bentley.

Beskrovnyi LG (1958) *Russkaia armiia i flot v XVIII*. (Russian army and navy in the XVIII). Moscow: Nauka.

Casanova J (1924) *Memoires.* Volume 1. Paris: Editions de la Sirène.

Convention of the Epeirotosouliotes and Peloponnesians with General D'Anrep (1805) *Historical and ethnological society of Greece, collection of documents (1686-1831).* No. 16966.

Dakin D (1955) *British and American philhellenes during the war of Greek independence*. Thessalonike: Εταιρεία Μακεδονικών Σπουδών.

"Emmanuil Grigor'evich Papandopulo" (1846) *Voennyi entsiklopedicheskii leksikon*. (Military encyclopedic lexicon). Volume 10. St. Petersburg.

Fortesque JW (1912) *History of the British army*. Volume 5. London.

Grasset de Saint-Sauveur A (1800) *Voyage historique, litteraire et pittoresque dans les isles et les possessions ci-devant venitiennes du Levant*. (Historical, literary and picturesque journey in the formerly Venetian islands and possessions of the Levant). Volume 2. Paris.

Holland H (1815) *Travels in the Ionian Islands, Albania, Thessaly, Macedonia, etc. during the years 1812 and 1813*. London.

Hughes TS (1820) *Travels in Sicily, Greece and Albania.* Volume 1. London: J Mawman.

Jochalas (Giochalas) TP (1975) Γεώργιος Καστριώτης, ο Σκεντερμπέης. (George Kastriotis, the Skenterbeis). Thessalonike.

Kasomoules N (1939) *Ενθυμήματα στρατιωτικά της επαναστάσεως των Ελλήνων 1821-1833*. (Military memoirs of the Greek revolution 1821-1833). G. Vlachogiannes (ed.), volume 1. Athens.

Klochakev T (1902) "Emmanuil Grigor'evich Papandopulo". *Russkii Biograficheskii Slovar* 13. St. Petersburg.

Kolokotrones T (1971) *Διήγησις συμβάντων της ελληνικής φυλής από τα 1770 έως τα 1836*. (Narration of events of the Greek race from 1770 to 1836). Athens: Papyros.

Korguev N (1897) Korpus chuzhestrannykh edinovertsev. (Corps of outlander aliens). *Morskoi Sbornik* (7): 155–164.

Korguev N (1913) Korpus Chuzhestrannykh Edinovertsev. (Corps of outlander aliens). *Voiennaia Entsiklopeniia* 8: 197–198.

Lane-Poole S (1890) *Sir Richard Church, C.B., G.C.H. commander-in Chi4 of the Greeks in the war of independence.* London: Longman's.

Lunzi E (1856) *Περί της πολιτικής καταστάσεως της Επτανήσου επί Ενετών*. (On the political situation of the Ionian Islands during the Venetians). Athens: Τύποις Χ. Νικολαίδου Φιλαδελφέως.

Makrygiannes G (1947) *Απομνημονεύματα*. (Memoirs). G Vlachogiannes (ed.), volume 1. Athens.

Mertzios DK (1971) Οι Σουλιώτες και οι Ενετοί. (Souliotes and Ventians). *Μνήμες Σουλίου* 1: 310–313.

Panafidin PI (1916) Pis'ma morskago ofitsera. (Naval office letters). *Morskoi Sbornik* 343(4): 18–19.

Papadopoulos E (1805a) *Διδασκαλίαι στρατιωτικαί, συντεθείσαι παρά του γενναίου χιλιάρχου Εμμανουήλ Παπαδοπούλου, οργανιστού* [οργανωτή] *των τακτικών στρατευμάτων της Επτανήσου Πολιτείας.* (Military instruction, composed despite the brave thousand Emmanuel Papadopoulou, organizer of the regular troops of the Ionian State). Corfu.

Papadopoulos E (1805b) *Ερμηνεία της συνισταμένης λεγεώνος των Ηπειρωτοσουλιωτών και Χιμαροπελοποννησίων εις την δούλευσιν της Αυτοκρατορικής Αυτού Μεγαλειότητος Αλεξάνδρου Α΄, Αυτοκράτορος απασσών των Ρωσσιών.* (Interpretation of the constituent legion of the people of Epirus and the Himalayas in the work of His Eminence Alexander I, Emperor of the Russians). Corfu.

Pappas N (1981) Balkan foreign legions in eighteenth century Italy: the reggimento real Macedone and its successors. In I Banac, J Ackerman, R Szporluk (eds.), *Nation and Ideology: Essays in Honor of Wayne S. Vucinich*, 35–59. East European Monographs and Columbia University Press.

Pappas N (1991) *Greeks in Russian military service in the late eighteenth and early nineteenth centuries*. Thessaloniki: Institute for Balkan Studies.

Pappas N (2018) Brigands and brigadiers: the problem of banditry and the military in nineteenth century Greece. *Athens Journal of History* 4(3): 179–183.

Perraivos C (1815) *Ιστορία Σουλίου και Πάργας*. (History of Souli and Parga). Volume 2. Venice.

Pouqueville FCHL (1820) *Voyage dans la Grèce*. (Travel to Greece). Volume 1. Paris.

Psimouli V (1955) *Σούλι και Σουλιώτες: οικονομικά, κοινωνικά και δημογραφικά δεδομένα.* (Souli and Souliotes: economic, social and demographic data). Doctoral Dissertation. Athens: Ionian University.

Psimouli V (1998) *Σούλι και Σουλιώτες.* (Souli and Souliotes). Athens: National Hellenic Research Foundation.

Psimouli V (2005) *Σούλι και Σουλιώτες.* (Souli and Souliotes). 2nd Edition. Athens: Estia.

Rados K (1916) Οι Σουλιώται και οι αρματωλοί εν Επτανήσω. (Souliotes and Armatoloi in the Ionian Islands). *Epeteris Philologikou Syllogou Parnassou*. Volume 12.

Rodocanachi E (1899) *Bonaparte et les iles Ioniennes*. (Bonaparte and the Ionian Islands). Paris.

Rothenberg G (1966) *The military border of Croatia,* 1740-1881. Chicago: University of Chicago Press.

Rothenberg G (1978) *The art of warfare in the age of Napoleon*. Bloomington: Indiana University Press.

Skiotis D (1975) Greek mountain warriors and the Greek revolution. In VJ Perry, ME Yapp (eds.), *War. Techology and Society in the Middle East*. London.

St. Claire W (1972) *That Greece might still be free: the philhellenes in the war of independence.* Oxford: Oxford University Press.

Stanislavskaja AM (1976) *Rossija i Grecija v konce XVlII-nalale XIX veka. Politika Rossii v loniieskoj Respublike 1798-1807gg*. (Russia and Greece during the late XVIIIth and

early XIXth centuries. Russia's policy in the Ionian Republic between 1798-1807). Moscow: Nauka.

Svinin P (1815) *Vospominanie na flote*. (Remembrance in the navy). St. Petersburg.

Tarle E (1959) Admiral Ushakov na Sredizemnomore (1798-1800). (Admiral Ushakov in the Mediterranean (1798-1800)). In *Sochinenie* 10. Moscow.

Vlachogiannes G (1965) *Μια άγνωστος ελληνική εποποιία εις την Μάλταν*. (An unknown Greek epic in Malta). Αθήνα: Άπαντα Γιάννη Βλαχογιάννη.

Zerlentes PG (1887) Ιγνατίου πρώην μεν Άρτης, είτα δε Ουγγροβλαχίας μητροπολίτου, Λόγος επιτάφιος εις τον στρατηγόν Εμμανουήλ Παπαδόπουλον. (Ignatius, formerly Artis, or metropolitan of Hungary, Speech epitaph to General Emmanuel Papadopoulos). *Parnassos* 11: 201–207.

Zotos-Molossos V (1897) *Ιστορία της Ηπείρου 1683-1886.* (History of Epirus 1683-1886). Athens: Vasileios Zotos-Molossos Archive, General State Archives, folio K97.

Athens Journal of Mediterranean Studies - Volume 7, Issue 2, April 2021 – Pages 143 - 154

Examining the Trends of Educational Variables in the Past Affecting Egypt's Ability to Becoming Future-Proof in Facing Unemployment

By Mohamed El Khouli[*]

This study aims to investigate the relationship between some educational variables and unemployment in Egypt, thus determining the most important educational variables influencing the high rates of unemployment during the period (2002–2012). According to the data that were available from each source for the synthesis of time series, it could be sufficient to examine the trends in the past as a suitable retrieval case. By excluding any fluctuations such as epidemics or revolutions affecting the systems of government, the findings may be utilized in shaping the future by decision makers in Egypt in optimal manner. Thus, it can determine the priorities of the Egyptian government when dealing seriously in order to solve the unemployment problem appropriately, with regard to the reduction of unemployment rates in the near future. More importantly, the results have shown that the number of graduates of theoretical facilities has a significant impact on increasing the number of unemployed in Egypt, according to the target period by the current study.

Keywords: *education, unemployment, Higher Education Systems (HES), Egypt*

Introduction

Theoretical and empirical explanations of the relationship between the unemployment and educational systems have been studied widely by researchers in many countries. Further comparative studies to unemployment differ based on educational attainment, which was different from one country to another according to the circumstances of each state. However, among these studies, only a few incorporate the effect of educational status into the set of explanatory variables on the unemployment issue based on the in-depth statistical perspective, specifically in Egypt. As well as, ongoing International Labour Organization (ILO) research shows that after a number of years of improvement, youth unemployment is set to rise in 2016 and young people are disproportionately affected by working poverty. Although not set to rise this year, the youth unemployment rate in the Arab States will remain the highest globally, with persistently large gender gaps and high working poverty rates.[1]

The present study is seeking to address this research gap by analyzing the role of the most important educational variables on unemployment. In particular, unemployment among Arab youth reached 25%. This statistic is according to the results of a survey of 3,000 young people from six Arab countries (the countries of

[*]Associate Professor, Sadat Academy for Management Science, Egypt.

[1]https://www.ilo.org.

Gulf Cooperation Council: UAE, Oman, Saudi Arabia, Qatar, Bahrain, Kuwait) that was conducted by Booz Company Consulting. These findings were presented in Abu Dhabi at a media summit in 2013 that showed that many of the Arab youth do not trust the quality of education available, and subsequently its ability to solve the problem of unemployment (Al-Ittihad Newspaper 2013). Several previous studies report associations between education and the incidence and duration of unemployment. Some of them pointed out that each year of schooling, up to 12 years, reduces the expected duration of unemployment by over 4%, and that the acquisition of qualifications required at ordinary levels or above reduces the expected unemployment duration by 12% (Mincer 1991).

Concerning the educational status in Egypt, educational attainment is rising (1998–2002), i.e., primary enrollment rate has increased from 73%–96% for Egypt, and secondary enrollment rates have increased from 50% to 85%. Substantial progress has been made regarding gender disparities at both primary and preparatory levels, and there were even greater numbers of enrollment primary schools. Moreover, the total population in Egypt amounted to 57,434,884 inhabitants according to the most recent formal census in 2006 issued by the Central Agency for Public Mobilization and Statistics (CAPMAS 2013). The percentage of illiterates was reported at nearly 30% of the total population, while those who have university education or over constitutes only 9.6% of the total population. The remainders are those whose education ranges between intermediate or under-intermediate, or otherwise simply knowing to read and write. Consequently, the percentage of illiterates was the highest compared to other educational classifications, where the illiteracy rate among females was 37%, while 22% among males. On the contrary, the percentage of males that had tertiary education or higher was 11%, while that of females amounted to 7.8%.

As a result of the above, this current study focuses on the link between educational status and unemployment rates. In 2008 the World Bank announced that there was a need to reform the education system to meet the increasingly competitive markets, especially in connection with Egypt's growing youth population. Males' unemployment rate in Egypt was highest among technical secondary graduates in urban areas at the governorates during 1998–2006, whereas females' unemployment rate was highest among university graduates, who are the only group to have experienced an increase in unemployment during the same period. Hence, this paper is directed to an audience of global policymakers and those whom are interested and involved in studying the link between educational variables and unemployment issues. This study will address the aspects of the defect or imbalance with respect to those issues in Egypt as one of the developing countries that needs international cooperation and efforts of all relevant international organizational holders concerning these important issues.

Statement of the Problem

Developing the education system is crucial in addressing the unemployment problem and for developing plans and strategies target to this matter. However, this link is often ignored, especially in Egypt. As indicated by the World Bank in

2008 that the education levels of the burgeoning labour force in Arab Mediterranean Countries, including Egypt, were not suited to meet the growing labour demand, especially for workers with medium-level skills. Furthermore, the United Nations Economic and Social Commission for West Asia (ESCWA) in 2005 had pointed out that the rise in unemployment among Arab youth reflects the existence of problems associated with the management of educational outcomes that do not fit in with the actual needs of the labor market. As the Ministry of Manpower in Egypt declared in 2010, the education and training system was unable to give young people the skills required to be successful for the job market. This challenge is not solely a need to create jobs for those youth only, but how also to provide them with the best quality of educational opportunities.

Therefore, this study will attempt to review major trends of some educational variables available for the period of 2002–2012 by using the advanced statistical methods, e.g., number of graduates and drop-out rates of education, etc. In this context, it will put particular emphasis on determining the most important of these variables that have the highest influence on increasing the number of the unemployed in Egypt during this target period in this study.

Objective of the Study

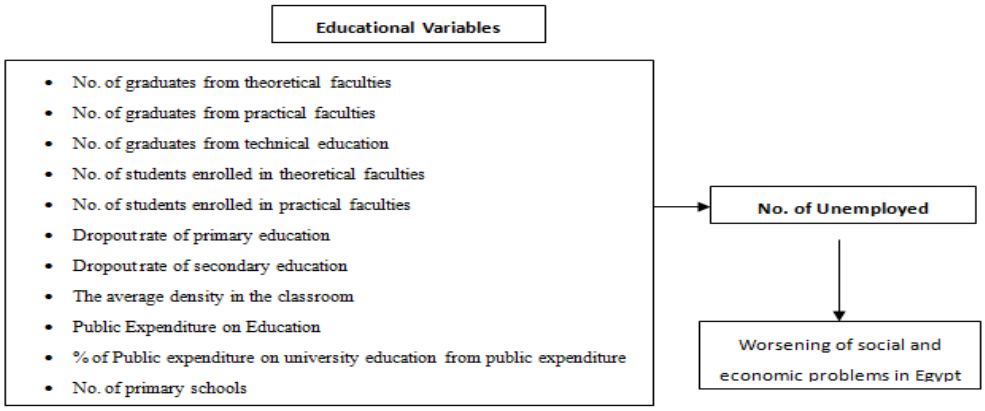
The main objective of the study is to identify which educational variables have the greatest effect of decreasing the unemployment rate for Arab youth in Egypt.

In order to address the stated objective, the following hypotheses were tested:

1. There was no relationship between educational factors and unemployment in Egypt.
2. The educational factors did not affect the unemployed in Egypt during 2002–2012.

The conceptual framework shows the proposed educational factors that are associated with unemployment. The study focused on the educational factors (number of graduates, number of students, drop-out rate) that were viewed as influential in increasing the number of unemployed in Egypt during 2002–2012. This, in turn, is one of the main factors affecting negatively on further exacerbating the social and economic problems in Egypt, as a direct result of the unemployment issue that is associated by the deteriorating the educational systems. This requires quick action towards the reform and development of education systems, especially higher education. The following rational relationship will reflect this link as follows (Figure 1).

Figure 1. *Conceptual Framework Illustrating the Educational Factors Affecting the Unemployment Rate in Egypt*



Literature Review

Previous research has shown that educational opportunities, or lack thereof, has substantial impacts on labour market outcomes such as earnings and employment, as well as non-market outcomes such as health, longevity, civic participation and criminal activity. One of these studies analyzed the effects of demographic and education changes on unemployment rates in Europe using a panel of European countries for the 1980–2000 period, and its results have shown that adult workers and more educated individuals, in general, experience lower unemployment rates (Biagi and Lucifora 2005). In addition, a strong relationship between unemployment and education has been found in a number of studies, pointing to the probability of unemployment is unequally distributed among various groups in societies with considerable differences depending on their educational status and number or array of qualifications (Wolbers 2000).

One study confirmed that a major benefit of education is the lower risk of unemployment at higher educational levels (Mincer 1991). There have been many studies that have studied the relationship between the education and unemployment; for example, one study analyzed the link between educational attainment and unemployment risk in a French-German comparison (Charlotte 2013). Another study investigated the relationship between education and long-term unemployment, and showed that an individual whom experiences long-term unemployment decreases with his educational level, and unemployment rates are negatively correlated with educational levels (Garrouste et al. 2010). Additional studies investigated the causal effects of education on individuals' transitions between employment and unemployment, and showed that education significantly increases re-employment rates of the unemployed (Riddell 2011).

But the matter was different for the relationship between education and unemployment in Egypt. For example, there was a study which pointed out that Egypt is facing a marked "youth bulge" and therefore has a high rate of youth unemployment, particularly among the highly educated (Murata 2014). In this study, we try to examine the negative role played by some educational variables

on increasing the unemployed in Egypt. However, many studies in developed countries have confirmed the positive role of the education in labour market adjustment to change, and that additional education improves the ability of the labour force to adjust to economic shocks.

In this context, it is noted that these previous studies have reflected the extent of the existence of an implicit reference to the role of educational variables in reducing the worsening problem of unemployment towards higher rates. This is considered as motivation for the current study to signal clearly to monitor the core role of education in Egypt for addressing unemployment. This issue is witnessing increasing demand through prospective students enrolling in various grades, in addition to increasing in the number of graduates with higher education. This has constituted a negative impact on the high rates of unemployment unless there is the availability of potential for investment in these human capacities well. Therefore, this study will shed light on the most important educational variables which may be used by the decision makers to include these variables within the policies and plans addressing of the unemployment at the national level.

Methods

This study will depend on descriptive and explanatory methods simultaneously to achieve its objectives, besides the quantitative approach. This study is a longitudinal study that depends on time series design which measurements of some variables are taken at different points in time, i.e. during the period 2002–2012, in particular the Central Agency for Public Mobilization and Statistics (CAPMAS 2013) through Egypt's Information Portal (2014). The period for this study is due to the official data in Egypt for this period which is available in a consistent and adequate shape. The total area of the Arab Republic of Egypt reaches nearly 1,010,000 km^2, while the populated area reaches 78,990 km^2, representing 7.8% of the total area,[2] which is located in the northeast corner of Africa and the southwest corner of Asia. Moreover, appropriate statistical methods will be used to realize the aims of the study, such as the percentages and frequencies. In addition, the use of the multi-regression analysis to determine the most important variables that has impact on increasing the number of unemployed in Egypt through the target period will also be used. The present study will reflect the relationships between unemployment and some educational variables by following the trends of unemployment across this period that are associated with these variables.

[2]Egypt State Information – SIS. http://www.sis.gov.eg.

Results

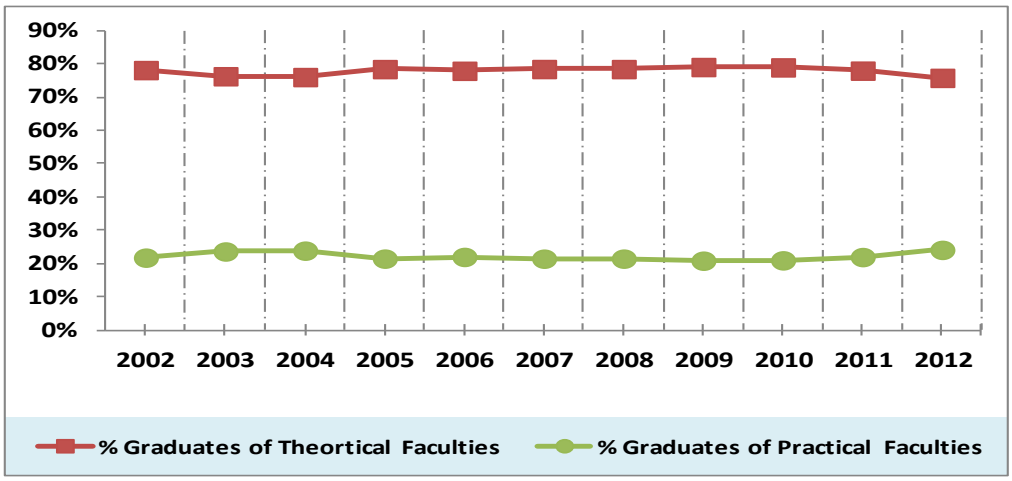
In this context of the current study, the unemployment percentage and the general characteristics of some educational variables in Egypt will be reviewed during the period 2002–2012, according to the statistics that have been issued by the Central Bureau of Statistics and the general mobilization of the Arab Republic of Egypt, as be shown in Table 1. The results in Table 1 have shown the trends of unemployment rates in conjunction with reviewing the most important of educational indicators proposed that may be have an impact on the unemployment rate in Egypt during the target period. These results also remarkably show the presence of a rising unemployment rate in Egypt in 2012, compared to the others years, which stood at 12.7%. This is considered the highest unemployment rate that had occurred during the target period, and perhaps to many influences, one of the implications of the Egyptian Revolution on January 25 in 2011, leading to the deterioration of the economic and security situation in Egypt.

Table 1. *Some Educational Characteristics in Egypt during 2002–2012*

Variables	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unemployment (%)	10.17	11.01	10.32	11.2	10.6	8.9	8.7	9.4	9	11.99	12.7
No. of Graduates	251,220	260,410	270,762	304,228	311,701	318,727	324,284	332,444	326,298	343,937	334,203
% Theoretical Faculties	78.2	76.3	76.1	78.5	78.0	78.5	78.5	79.1	79.0	78.0	75.8
% Practical Faculties	21.8	23.7	23.9	21.5	22.0	21.5	21.5	20.9	21.0	22.0	24.2
No. of University Students	1,552,622	1,623,685	1,761,376	1,874,752	1,869,848	1,862,734	1,912,132	1,942,518	1,649,986	1,627,339	1,767,699
% Theoretical Faculties	78.2	79.4	80.6	81.7	80.2	79.6	80.1	80.4	79.7	77.7	79.8
% Practical Faculties	21.8	20.6	19.4	18.3	19.8	20.4	19.9	19.6	20.3	22.3	20.2
No. of Students at Technical Education	2,149,408	2,214,152	2,199,480	2,090,008	1,981,162	1,793,609	1,361,629	1,252,431	1,260,793	1,607,125	1,628,168
% males	53.8	53.9	54.2	54.1	53.1	52.1	53.2	54	55.5	54.7	55.6
% females	46.2	46.1	45.8	45.9	46.9	47.9	46.8	46.0	44.5	45.3	44.4
Dropout in Primary (%)	0.87	0.84	0.9	0.49	1.23	1.23	0.7	0.39	0.16	0.39	0.34
Dropout in Preparatory (%)	3.13	3.02	3.54	3.33	2.9	2.06	6.5	6.42	5.44	5.11	6

The results showed that there was a large number of graduates from theoretical faculties in Egypt compared to their counterparts from practical faculties across all the years targeted by the current study. The number of graduates from theoretical faculties actually amounted to three times the number of practical faculties graduates. This fact will be reflected in Figure 2 with respect to the number of graduates from Egyptian universities, according to their specialties, whether theoretical or practical. .

Figure 2. *The Percentage of Graduates from Universities in Egypt during 2002–2012*



As well as this case is identical also for the number of students currently enrolled in theoretical disciplines at Egyptian universities compared to the number of students enrolled in practical disciplines, their total amounted for about three times as well. This may constitute clearly one aspect of a defect in the application of education systems efficiently and effectively and trying to link them to the needs of the labor market that are escalating continuously. This result may be considered as a key factor in creating the inability to meet the requirements of the labor market of some practical disciplines, and the sufficiency of theoretical disciplines at the same time until reach the saturation degree. Thus, this contributes to the growing problem of unemployment in Egypt through the effort of shaping the future periods for the planning purpose of the current or next generations. Therefore, the need arises to create a balance between the disciplines that fill the needs of the labor market, and the number of graduates required for that matter. There is the necessity of providing students all the knowledge and modern skills that correspond to the international standards in these disciplines to increase the open employment opportunities, thus reinforcing the ability of these graduates for labor market competition both domestically and internationally.

While the results in Table 2 show the values of the Pearson correlation coefficient(s) between the number of unemployed in Egypt on the one hand, and between some educational variables that were proposed by the study on the other hand. It has shown that the highest significant correlation was between the number of graduates of theoretical faculties and the number of unemployed, which reflects a strong relationship in direct correlation between the two variables. There was evidence that they are influenced by each other, whereas the hypotheses of the current study suggest the existence of the effect of some educational variables on increasing the number of unemployed, i.e., like number of graduates from certain disciplines. Furthermore, there is an inverse association between the increasing the number of unemployed in Egypt, and decreasing both the number of graduates and students who have theoretical training, the level of public expenditure on education, and the number of graduates of technical schools.

Table 2. *The Correlation Matrix between Number of Unemployed in Egypt, and Some Educational Variables Proposed in the Regression Analysis, According to the Period 2002–2012*

Variables	No. of unemployed	No. of primary schools	Public expenditure on education	Average density in classroom	Dropout rate of secondary education	Dropout rate of primary education	No. of students enrolled in practical faculties
No. of graduates of practical faculties	-0.511	0.737**	0.698*	0.445	0.570	0.422	0.590
No. of graduates of theoretical faculties	0.726**	0.715**	0.737**	0.407	0.595	0.455	0.642*
No. of graduates of technical education	-0.260	0.798**	0.755**	0.136	0.721**	0.595	0.509
No. of students enrolled in theoretical faculties	0.163	0.302	0.157	0.636*	0.182	0.146	0.650*
No. of students enrolled in practical faculties	-0.105	0.507	0.529	0.730**	0.306	0.246	1
Dropout rate of primary education	0.518	0.604*	0.329	0.205	0.758**	1	
Dropout rate of secondary education	0.422	0.704*	0.624*	0.172	1		
Average density in classroom	0.308	0.298	0.295	1			
Public expenditure on education	-0.448	0.780**	1				
No. of primary schools	-0.620*	1					

(**) Significant at the lever less than 0.01. (*) Significant at the level less than 0.05.

This study used a regression analysis technique for determining which of these variables were included in the previous correlation matrix that have the highest impact on increasing number of the unemployed in Egypt during the target period. The results will be clear by Table 3. The findings of the regression analysis using the stepwise method revealed that the value of R-Square is equal to 0.654, meaning 65%, i.e., the ability or the proportion of these independent demographic variables to contribute in the interpretation of contrast and predict by the dependent variable (number of unemployed). This indicates that this model is fits to the target purpose for using regression relationship, and the test of variance analysis (ANOVA) has confirmed on the significance of this relationship, where the F value amounted to 7.462, which is significant at a level less than 0.05, and thus, this indicates a significant of regression relationship, i.e., there is a relation

existed between the dependent variable and the independent variable in the model. Accordingly, Table 3 lists the results of the regression analysis.

Table 3. *The Coefficients of Regression Model Equation Using Stepwise Method for Educational Variables Affecting the Number of Unemployed in Egypt, During the Period 2002–2012*

Variables	B	Std. Error	Beta	t	Sig.
(Constant)	-364572.5	996576.6		-0.366	0.724
No. of graduates of theoretical facilities	40.65	14.88	0.694	2.732	0.026*

(*) Significant at the level less than 0.05.
Source: Outputs of SPSS Program.

The data in Table 3 showed that increasing the number of graduates from theoretical faculties affects the standard unit amounted 0.694 on increasing the number of unemployed in Egypt, according to the target period by the study from 2002 to 2012. This variable only of the others variables proposed in the model has the greatest influence on the dependent variable, which reflects the necessity to reform or improve the higher education systems in Egypt to address this problem across the coming years.

Conclusion and Recommendation

This paper examines the relationship between educational variables and unemployment, and determines which of these variables has a significant probability to increase the unemployment in Egypt during the period 2002–2012. Considering the full data that are available from the CAPMAS during the target period, the results seem to confirm our initial hypothesis that the higher the educational level obtained, the higher the probability for falling into unemployment issue, especially in light of the failure of the higher education systems to meet the needs of the labor markets of scientific disciplines required. The results from the current study emphasized that rising graduates of theoretical faculties in Egypt contribute to the increased number of unemployed. Notably, the results indicated that graduates of theoretical faculties constitute the 75% of the total graduates in Egypt. This result contrasts with what referred by some modern studies for European countries.

The conclusions of many previous studies in developed countries concluded that the development of education systems can be a key factor in addressing the unemployment problem. Although educational attainment plays a significant role throughout reducing the unemployment rates, there is an increase in these rates among those whom have obtained a higher education in Egypt. This confirms the assumption that lacking graduates with the skills that meet the needs of modern labour market, due to the weakness of education systems and its possibilities, there will be a shortage of available resources as well. Moreover, the ability of these systems was lower to emulate modern universities' systems and the marketing for its graduates on a global level, and is still weak. This result is due to the monopoly

of many western institutions and the culture of quality and accreditation systems without any other.

Furthermore, this study urges the targeting of the other educational variables as determinants of long-term unemployment after breaking down the data by level of governorates and other classifications that will be important for decision-makers. Also, as an extension of the work presented in this study, we recommend more efforts in studying the impact of the educational status by comparing the unemployment rate among many countries that have the same conditions. We aim at exploring further background concerning the link between education reform and addressing unemployment in Egypt and Arabic countries compared to developed countries, and other educational aspects which may affect the motivation to exit unemployment, or improving its rates in Egypt especially.

This study encourages finding effective educational policy options by the officials within this field in Egypt whom can support the development of more attractive jobs in Egypt's private sector that will lead to the creation of jobs and overall inclusive growth. The findings of this study can contribute to building a foundation for designing youth employment policies in Egypt by higher education systems that are based on open rehabilitation centers and professional recruitment fairs. There is a demonstrated need to develop initiatives to attract different sectors and reviewing the jobs that are more distinctive for their graduates. These steps could significantly contribute to an increase in the rates of a private sector employment among new graduates and Egyptian job seekers, as well as the possibility to establish good relations between the graduates and the labor markets generally.

References

Al-Ittihad Newspaper (2013) Issue No. 13987, the Forty-fifth year. 10/ 23/2013. Abu Dhabi.

Biagi F, Lucifora C (2005) *Demographic and education effects on unemployment in Europe: economic factors and labour market institutions*. No. 1806. Bonn, Germany: IZA Bonn.

Charlotte L (2013) *Education and unemployment: a French-German comparison*. Paris: Center for European Economic Research, No. 03–34.

Egypt's Information Portal (2014) *Statistics & databases.* The Egyptian Cabinet, Information & Decision Support Center (IDSC). Retrieved from: http://www.eip.gov.eg. [Accessed 19 January 2014]

Garrouste C, Kozovska K, Perez EA (2010) *Education and long-term unemployment, the workshop (geographical localisation, intersectoral reallocation of labour and unemployment differentials)*. JRC 59305, EUR 24450 EN, Joint Research Centre. Luxembourg: European Union.

Mincer J (1991) *Education and unemployment.* NBER Working Papers Series, No. 3838. New York, USA: National Bureau of Economic Research. Columbia University.

Murata A (2014) *Designing youth employment policies in Egypt.* Tokyo, Japan: Global Economy and Development, International Cooperation Agency Research Institute.

Riddell WC (2011) *The impact of education on unemployment incidence and re-employment success: evidence from the U.S. labour market.* British Columbia,

Canada: Institute for the Study of Labor, IZA DP No. 5572, University of British Columbia.

The Central Agency for Public Mobilization and Statistics – CAPMAS (2013) *Bulletin of labour force (July–Sep)*. Cairo, Egypt: CAPMAS

Wolbers M (2000) The effects of level of education on mobility between employment and unemployment in the Netherlands. *European Sociological Review* 16(2): 185–200.

World Bank Washington DC (2008) *Youth unemployment, existing policies and way forward: evidence from Egypt and Tunisia*. Washington DC, USA: World Bank Washington DC.

Appendix

Chart 1. *The Number of Unemployed in Egypt and its Relation with the Percentage of Male Graduates from Theoretical Faculties from the Total Graduates during 2002–2012*