



The Covid-19 economic, social and health impact on Cyprus and selected Euro Area economies

July 2020

The Covid-19 economic, social and health impact on Cyprus and selected Euro Area economies

by Elias Mallis¹ and Maria Matsi

Abstract

In early January 2020, the globe found itself in front of an unprecedented health crisis. The major difference of covid-19 compared with previous viruses of SARs and MERS was that it necessitated WHO to announce a “pandemic”.

The high uncertainty of the downward economic growth path of a pandemic makes economic forecasting more risky. As it is reasonable to assume, a pandemic implies a far larger hardship that has several consequences on various aspects of human life and consequently on economic activity.

This working paper develops a simple consensus forecasting tool by using the IMF and the European Commission’s projections made during the Covid-19 crisis. It analyses the effects of the Covid-19 pandemic on six Euro Area (EA) economies by examining 2020 and 2021 forecasts of the GDP and the unemployment rate. It reveals that mainly the southern Euro area economies will experience the heaviest burden, in both human lives and economic cost, making sustainable recovery more challenging.

The above findings reveal that Cyprus has managed to maintain a moderate profile in economic and epidemiological terms under the pandemic, which enabled the country to experience the least possible adverse economic effects.

JEL Classification E010, I18, J6.

Keywords: GDP, unemployment rate, health.

I. Introduction

Uncertainty due to the pandemic is the main “enemy” of economic activity because it causes financial insecurity and reduces consumer’s confidence while it makes economic decision making harder to take. That could lead to successive rounds of recessionary expectations, thus harming in turn all basic macroeconomic variables. The pandemic has deteriorated public finances of all EU member states due to the fact that during such crisis government spending replaces other usual drivers of economic growth. This development is forecasted to cause unemployment rate hikes and place public finances sustainability under serious pressure derailing economic targets.

The spring² 2020 Commission’s forecast projects that the euro area economy will contract by a record 7¾% in 2020 and grow by 6¼% in 2021. The aggregate government deficit of the euro area and the EU is expected to surge from just 0.6% of GDP in 2019 to around 8½% in 2020, before falling back to around 3½% in 2021.

Nonetheless, it is believed that the policy measures the EU have put in place will at some extent narrow the growth gap but it won’t be enough for a full scale recovery in 2021. Questions arising are, what is going to be the critical aspect of the pandemic and how much higher the unemployment rate will end up before starting to fall again? And what other socioeconomic side effects could the pandemic cause to member states?

¹ The views expressed herein are those of the authors and do not necessarily reflect the views of the Ministry of Finance of the Republic of Cyprus.

² European Commission Spring 2020 “Economic Forecast: A deep and uneven recession, an uncertain recovery”.

The situation in the labour market is the main channel through which the economic and social effects of the crisis will materialise. Undoubtedly, the health and the welfare systems of all EU countries will be under critical test due to this situation.

In Part II, the economic impact of the pandemic is approached by attempting to estimate the GDP and unemployment rate consensus forecasts. In Part III the health impact of the pandemic is approached and Part IV attempts to identify the social impact while Part V reaches some useful concluding remarks.

II. The economic impact

Foremost, the Covid-19 outbreak resulted in a profound supply shock and fall of the economic activity, mainly by reducing production by cutting the supply chain, like air transportation, mass public transportation like trains, underground trains, buses, shipping and the tourist industry. Inevitably, this development affected trade and commerce, reducing financial transactions due to lower money flows and many other business while it reduced the activity of the construction sector. Partial or total lockdown are definitely against the promotion of economic activity leading to economic paralysis and an inevitable demand shock which cannot be reversed swiftly.

The forecast GDP drop³ reflects the expected impact of a sudden and rapid economic slowdown that leads to lower GDP production, thus creating other severe effects that are not easy to predict and anticipate. The sudden pause of economic activity was spread very fast due to the globalization effect and the interdependence of all economies through the international trade. Public intervention and assistance became more necessary than ever and this has unavoidably largely enhanced the Euro Area fiscal burden.

Investigating the adverse effects of the pandemic on six Euro Area economies one could lead to specific inferences on the overall magnitude of Covid-19 crisis.

Table⁴ 1 below exhibits the economic growth rates⁵ of the six Euro Area economies reflecting the period 2018-2021 and showing the projected deep slump in 2020 and the relevant strong recovery in 2021 as the consensus⁶ forecasts.

Table 1: GDP growth rate, 2018-2021

	2018	2019	2020 (f)	2021 (f)
Germany	1.5	0.6	-6.8	5.6
France	1.8	1.3	-7.7	6.0
Italy	0.8	0.3	-9.3	5.7
Spain	2.4	2.0	-8.7	5.7
Greece	1.9	1.9	-9.9	6.5
Cyprus	4.1	3.2	-7.0	5.9

Chart 1 that follows exhibits the net real GDP consensus forecasts in growth rates of the six selected Euro Area economies for the period 2020-2021. The net GDP consensus forecasts equals GDP₂₀₂₀ - GDP₂₀₂₁. It is clear from the Chart that the earliest possible full recovery from the pandemic can only be

³ IMF estimates the world economy to contract by 3% in 2020 and recover by 5.8% in 2021, IMF, April 2020.

⁴ Eurostat, National Accounts indicators, ESA, 2010, for 2018, 2019 data.

⁵ Data of 2018 and 2019 is actual.

⁶ Consensus forecasts take into account the European Commission forecasts May 2020 and IMF forecasts April 2020.

achieved by 2022. Countries such as Italy and Greece are forecasted to have the heaviest net growth burden, whereas Germany and Cyprus the least.

Primarily, Cyprus was hit due to the large impact of the nature of the pandemic, inter alia, on the health status of travellers, which in turn affects other economic sectors such as retail and wholesale trade, shipping, hotels and restaurants.

Chart 1: Consensus forecasts of net growth in 2020-21

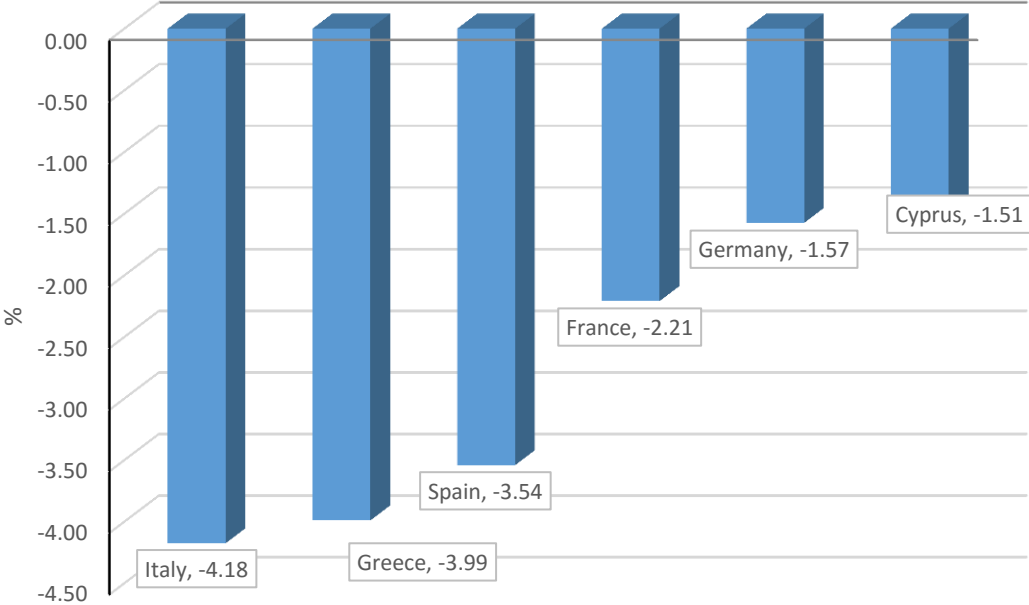
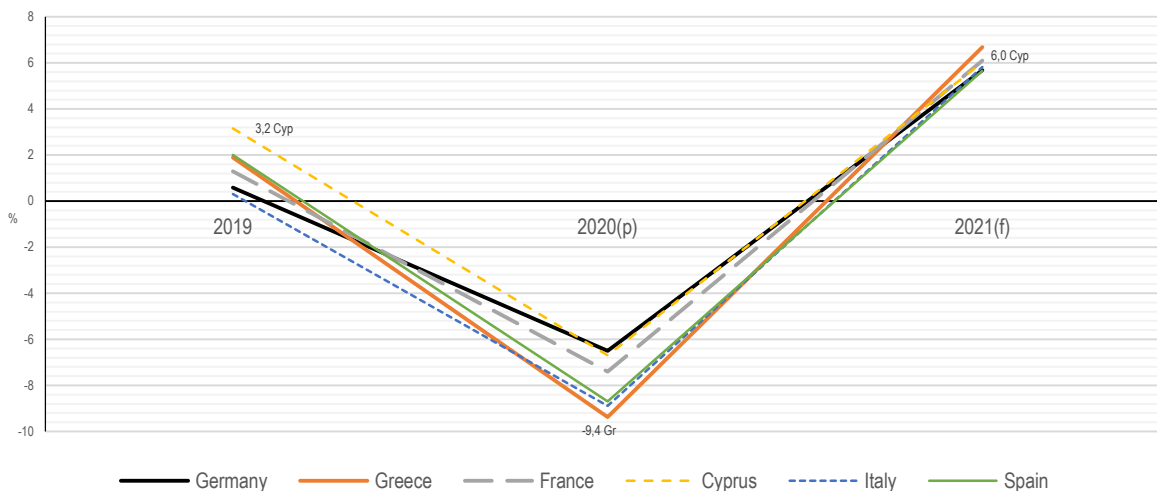


Chart 2 below incorporates the actual 2019 GDP growth rates of the selected Euro Area economies to the 2020-2021 consensus forecasts. The “V shape” type exhibits the steepness of the corresponding curves depicting the impact of the pandemic in the selected Euro Area economies. It is noteworthy that all 6 Euro Area economies are projected to pursue the same “V shape” pattern based upon their growth records.

Chart 2: GDP growth consensus forecasts in selected EA economies, 2019-2021



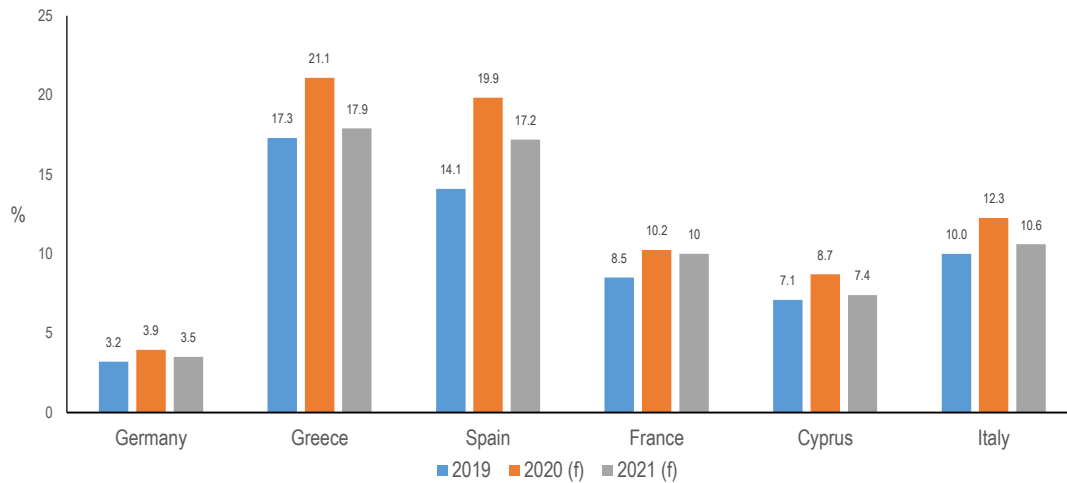
The impact on the southern Euro Area economies as depicted in Charts 1 and 2 above is immense especially, for Greece, which only recently achieved to overcome the consequences of the last financial turbulence and Italy, which was devastatingly hit by the covid-19 pandemic. The fact however, that Greece has been coping well with Covid-19 restricts the level of the adverse economic repercussions on the Greek economy as it is presented in the following section.

It is noteworthy to mention that during economic crises, the GDP downward fluctuation has a direct negative impact on the labour market through the increase of the unemployment rate, which in turn will affect other critical socioeconomic factors like social exclusion, material deprivation and the number of persons under the relative risk of poverty. These developments set each country's welfare system under financial stress as well as the degree of its public finances resilience.

The pandemic needs to be approached as a clear threat to the most valuable factor of production of any economy, which is human capital. Thus, the number of lives lost is the prime factor any country need to avoid. Loss of lives leads to lower population, which in turn may lead to lower labour force and working age population by reducing the potential output that could be produced if all other factors of production were at their full employment.

Chart 3 below represents diagrammatically the forecasted consensus unemployment rates of the six Euro Area countries for 2019-2021.

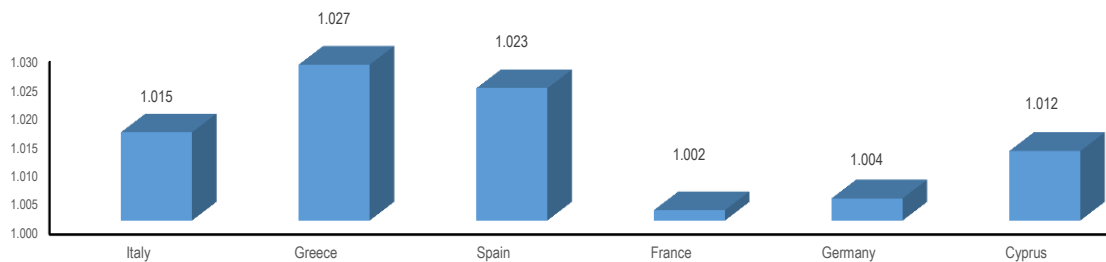
Chart 3: Consensus unemployment rate forecasts 2019-2021



The net unemployment rate consensus forecasts due to the Covid-19 outbreak is seen in Chart 4. It is estimated by $u\%_{2021} - u\%_{2020} = \text{unemployment rate consensus forecast}$.

As it is depicted, France and Germany maintain the lowest net increases by approximately 0.2 and 0.4 percentage points respectively, whereas Greece and Spain the highest with 2.7 and 2.3 percentage points respectively.

Chart 4: Net consensus unemployment rate growth 2020-21



The overall adjustments due to the pandemic could also differentiate the way people purchase goods and services and therefore this could raise operational costs for keeping either a retail store, or a public place sterilized to avoid Covid-19 transmission. As a result, it is expected that all businesses and firms will unavoidably suffer higher operational cost to maintain their labour force and customers' safety from Covid-19 infection, which will certainly raise their expenses. Additionally, on a micro level, business firms should provide their personnel with enough flexibility in terms of working hours so that productivity and hours worked won't be adversely affected.

Economic susceptibilities in economies such as Italy, Spain, Greece and Cyprus could very easily imply extremely negative socioeconomic repercussions due to the pandemic. This is the reason why the EU⁷ should promote efficient and adequate policy measures in the context of the Reform and Resilience Facility into Next EU generation. High significance is attributed to the updated EU programme the European instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE), which supports short-time work schemes and similar measures, to help Member States protect jobs and thus employees. The SURE scheme targets to mitigate the unemployment risk⁸ to minimize the socioeconomic repercussions of the pandemic. It is not only an issue of just providing money but a more substantial one in terms of providing technical assistance through the Technical Support Instrument⁹ and through the new EU4Health initiative is supposed to enhance social and health resilience in member states following the impact of the pandemic. The new EU counter Covid-19 instruments are essential means for the southern economies to use them to mitigate their financial exposure and gain parallel necessary structural reforms implementation.

Cyprus, as revealed by the abovementioned data, has been at a very promising economic state after achieving a prudent employment driven growth before the of the Covid-19 outbreak. The fact that the crisis found Cyprus at a budgetary surplus¹⁰ stance, enabled Cyprus to have additional resources available to confront with the pandemic. It also maintains its small open economic model in the Euro area combined with essential flexibility in the labour market, necessary to combat unemployment rate hikes that presumably are expected to emerge after it conceded the upswing of the economic cycle during the Covid-19 pandemic outbreak.

Moreover, the efforts of the Cyprus government to maintain the Cyprus economy at a viable pace, necessitated the launching of 3 distinct supportive programmes of measures in order to safeguard jobs, mitigate unemployment hikes and protect the most vulnerable groups of society. The cost of the above mentioned programs is estimated to €1,2 bn or approximately 6% of GDP in 2020 and materialised through 3 complementary budgets.

The health impact

Covid-19 per se is a hazardous and contagious virus that has drastically altered our lives and the way people economize, socialize, work and even express their feelings. The death rate of the total confirmed cases globally reaches on average nearly 6% as it stood in the end of May 2020. Nonetheless, the Covid-19 strain is the way it spreads that is through air distance, air currents, and duration in air, humidity, and airborne transmission, duration on objects and surfaces and floors. The effects by which the virus is transmitted makes social contacts more risky.

The role of a sound and efficient health care system again enters into the discussion. Health systems that are capable to financially delivering coherent and patient friendly options and which take into consideration the needs of those being in greater risk without creating unnecessary fiscal gaps are plausible to have less difficulties during the pandemic. This is where the health system's tolerance and effectiveness becomes the major factor which determines its financial robustness and whether the health system's efficacy and solidarity¹¹ are served. It is clear that the role of the public sector in any health system should be catalytic

⁷ Proposal for a Regulation of the European Parliament and of the Council establishing a Recovery and Resilience Facility.

⁸ The International Labour Organization has announced that it foresees the potential loss of 12 million full-time jobs in Europe during 2020.

⁹ Proposal for a Regulation of the European Parliament and of the Council establishing a Technical Support Instrument.

¹⁰ Ministry of Finance "Draft budgetary Plan 2020" and "Strategic Framework of Fiscal Policy 2020-2022".

¹¹ Apart from equity issues the way the health system is financed can also promote intergenerational solidarity through that healthier young generations' contributions could finance future health needs of older generations under a universal health financing setup.

by organizing public hospitals and by contributing a significant share in health expenditures. The pandemic is a real test for all public and private hospitals.

What seems to be essential for any country to combat a pandemic is whether its health care system maintains the necessary financial and organizational capabilities to restrict its spread and transmission in conjunction with preserving social cohesion. It is reasonable enough that health care systems that are based upon universality, solidarity and intergenerational distribution of health care and financial resources are more likely to achieve better results.

As it happens in health crises those with a larger health load on their shoulders should adjust to an increasing burden in both financial and health terms. In these groups many vulnerable persons like disabled, disabled with intellectual disability, chronic patents like cancer patient, heart problem patients, or those with respiratory problems and so many others, find themselves in front of a terribly stressed situation.

As shown in Table 2 below, eight different countries are presented by exhibiting some data related to the Covid-19 health impact. Of course, it is not so easy to interpret these results, once it depends at a great extent on many factors. One is whether each country followed the advices of epidemiologists and WHO. Another is whether a country has engaged its resources (financial and other) well in advance to face a pandemic and how fast its political system reacted. Other factors are fast political decision making, the degree of willingness of its citizens to adjust to a partial or to a total lock down and its fiscal resilience.

TABLE 2¹²

	Total confirmed Covid-19 cases/1M	Total recovered/1M	Deaths from Covid-19/1M	Number of tests / 1M	Total deaths
Usa	5,626	1,861	323	54,898	106,990
Uk	4,072	N/A	575	63,158	39,045
France	2,899	1,049	442	21,216	28,883
Germany	2,195	1,987	103	47,192	8,624
Italy	3,857	2,619	554	64,664	33,475
Spain	6,133	N/A	580	89,921	27,127
Greece	280	132	17	17,496	179
Cyprus ¹³	952	801	17	120,298	17

Thus, the results presented above are valid as from 2/6/2020. However, it is important to understand that these values exhibit relevant trends of the disease. The results clearly display that the USA, the UK, France, Spain and Italy experienced a significant health load due to Covid-19 replicated in the number of citizens passed away. On the other hand, data exhibit that Germany, Greece and Cyprus have coped relatively well with the fight against Covid-19 as they have a low number of deaths.

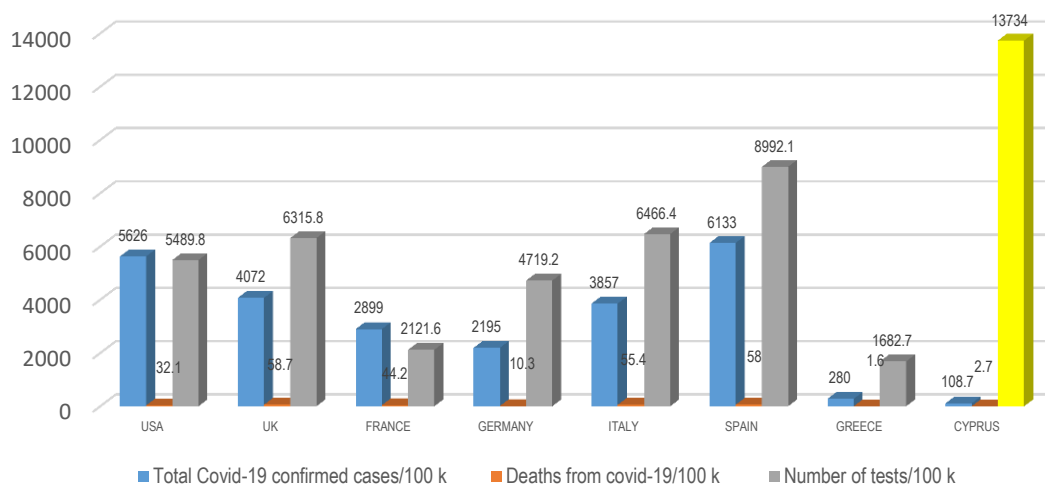
Chart 5 below illustrates the results from the Covid-19 pandemic by comparing total confirmed Covid-19 cases, Covid-19 incidences that have led to death and the number of tests made, all adjusted as a fraction of 100 thousand persons per country under investigation (ECDC, 2020). The results provide a relatively overall profile of each country under consideration leading to specific conclusions with regard to the

¹² Data as of June 2nd 2020.

¹³ Data for Cyprus are actual numbers to nearly 900k population.

severity the pandemic hit each country and how well each country's health care system reacted. From Table 2 and Chart 5 we can see that Greece, Cyprus and Germany¹⁴ indeed reacted correctly in combating the coronavirus pandemic. The use of extensive and systematic testing in conjunction with early track and trace contributed to successfully fight the spread of coronavirus.

Chart 5: Covid-19 results in selected countries



In its Spring 2020 European Semester report the European Commission considers that Cyprus under the Covid-19 crisis demonstrates the need to channel investments to improve and modernize public health care, restore capacity and implement the healthcare reform.

Cyprus is successfully implementing a new healthcare reform initiated in 2019 that offers better access to primary health care services, appropriate guidance and treatments based on clinical protocols. It also provides for universal entitlement to affordable health services in the context of the Covid-19 outbreak. The country has been fortunate to have in place the family doctor system, which was critical during the covid-19 outbreak, especially for vulnerable groups of patients such as the elderly, patients with chronic and rare diseases. In the medium-term, Cyprus needs to steer investments towards increasing the health system's effectiveness, accessibility and overall resilience. Additional resources for the health system shall prevent:

- a) Future shortages of medical staff
- b) Critical medical supplies and infrastructure and
- c) Integration with the long-term care and primary and community care as crucial in the light of demographic change, and to support the most vulnerable, including people with disabilities.

Cyprus epidemiological image under the Covid-19 pandemic has been revealed to be more than satisfactory in terms of the confirmed Covid-19 cases, the number of persons who lost their lives due to Covid-19 and the number of tests made. The overall policy pursued during the pandemic is found to be valid and this is considered to be key in limiting the virus transmission, as repeatedly stated by the Epidemiologic surveillance unit of the Ministry of Health¹⁵. Cyprus as depicted in Chart 5 managed to put under control the pandemic after it used systematically testing, tracking and tracing as the front line to combat the coronavirus pandemic (MoH, 2020).

¹⁴ Guy Ghazan, "How Germany got coronavirus right", FT weekend Berlin Bureau, 6-7 June, 2020.

¹⁵ Epidemiological Surveillance Unit of the Ministry of Health, Cyprus. National Situation Report. Coronavirus Disease 2019 (COVID-19), 4 June 2020.

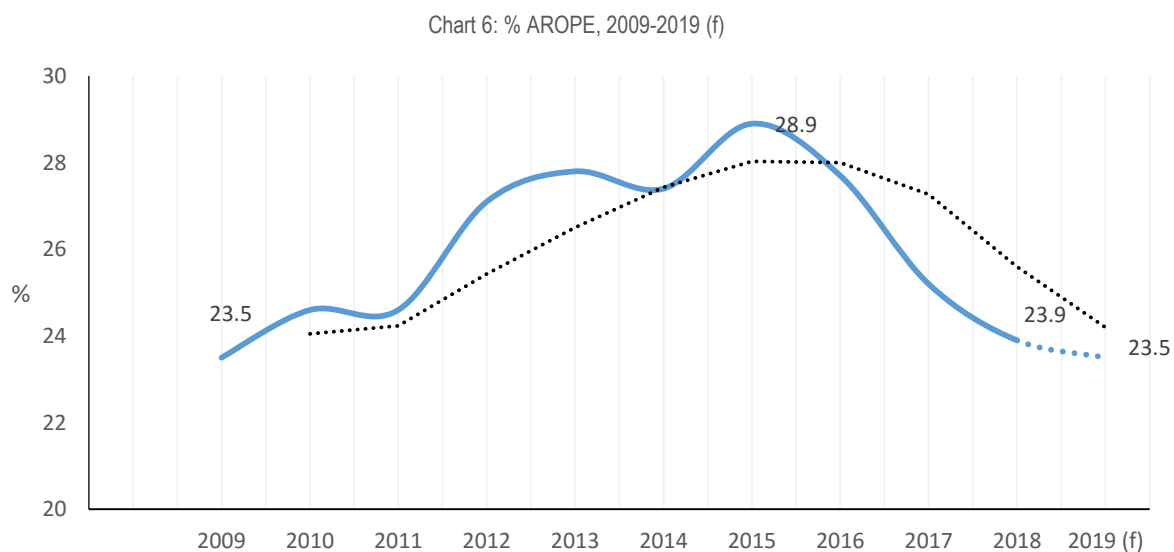
III. The social impact

Economics is all about human behavior and social interaction. Therefore, the inevitable social distancing as a necessary measure to reduce the virus transmission is expected to lessen social contacts and create other psycho-social detrimental effects. The necessary reduction in social contacts could only be replaced effectively if social networking supported by other solutions can restrict this newly observed situation. The negative social impact will probably be replicated in terms of higher unemployment rates in the medium term. Therefore, policies to retain viable jobs are significant as priority number one for each country in association with maintaining sustainable public finances.

Social contacts have always been essential for people who have a long ago decided to live in societies to resolve problems that otherwise wouldn't be feasible to resolve. Thus, the inevitable measures targeting to enforce social distancing (Hartigan, 2020) to reduce the new virus transmission are a priori against human nature. However, their duration until an effective vaccine is discovered or an effective medication is revealed and used could change the way people all over the world live.

The socio-economic consequences of the pandemic are likely to be unevenly distributed across Cyprus (E.C, 2020) due to different specialization patterns, in particular in areas markedly relying on tourism and more generally on face-to-face business to consumers. This entails a risk of widening territorial disparities within Cyprus.

Nonetheless, as depicted in Chart 6 hereunder, from preliminary estimations At Risk of Poverty and Social Exclusion rate for Cyprus is forecasted in 2019 to return to 2009 level. The decline of this indicator is based upon better preliminary results in 2019 associated with the lowering of material deprivation, the improvement in the labour market performance leading to higher work density and at least constant at risk of relative poverty rate. The AROPE indicator is projected to deteriorate in 2021 due to the huge decline of GDP in 2020, which it will be taken into account in the Social, Income and Living Conditions (SILC) study in statistical terms in 2021 due to time lag effect.



This development reveals the need for more targeted socioeconomic measures to mitigate the projected increase in the number of persons at risk of relative poverty and social exclusion by 2021.

In this respect, the continuing upgrade of Active Labour Market Schemes in association with GMI provisions essential, are in retaining viable jobs and maintaining the necessary contact of unemployed with the labour market. These are essential components for a sustainable labour and welfare system. This will facilitate the re-entry of inactive population to search for a job as well as for women who spend a significant share of their time in caring responsibilities. Equipping people with the right skills is even more important in times where increased numbers might lose their jobs and need to be ready for job transitions thereafter. Since the elderly and people with chronic diseases have increased risks of severe illness due to the virus, investing in quality long-term care services is of high importance to ensure their continued provision and efficiency in the short and medium term. Improving also the quality, efficiency and labour market relevance of education and training is crucial in this crisis context and ensure a fast labour market recovery (E.C, 2020).

Moreover, the use of technology is one way out to lessen the above mentioned challenges and reduce costs. Additionally, the role of a more participatory and integrating economy associated with a sound social welfare system could act as a long standing and efficient safety net, overriding for the future of the EU economy in total and the member states. These drivers in conjunction with an efficient and caring health care system could reduce the major challenges that the EU is predicted to face. Economic resilience at this point becomes critical for the public finances sustainability, which is the backbone of any efficient health and welfare system in the long run.

Ways to mitigate covid-19 socioeconomic effects are:

- a) Provide adequate income equivalent to avoid Covid-19 impairments
- b) Access to social protection via government schemes for all persons
- c) Strengthen public employment services to combat the increasing unemployment flows
- d) Promote flexible working arrangements to provide people with alternative job setups
- e) Improve labour market relevance of education and training
- f) Continue Active Labour Market Schemes on specific vulnerable groups to enhancing employment prospects and maintain viable jobs
- g) Adjust income replacement schemes to more targeted to ease burden on public finances
- h) The above adjustment should take into consideration both socioeconomic and health aspects so as to retain social cohesion and economic growth prospects.

The above mentioned is based upon fiscal resilience in the medium term and needs efficient structures through which each country with supportive EU grants could sustain the labour market in a sustainable path.

IV. **Concluding remarks**

If the whole issue is seen from a positive angle in the near future, someone would hope for a quick “V shape” recovery that could lead to a gradual “U shape” recovery, which under the current conditions is the best case scenario. For Cyprus, the levels of 2019 will not be reached before 2022, while production losses compared to pre-corona scenario is substantial and likely to exceed €1,2 bln (Charalambous, 2020).

Moreover, countries that have heavily invested in the health sector with an efficient manner have more possibilities to have coped relatively well with the corona virus crisis. Some conclusions drawn by the forgone analysis are the following:

- ✓ Everybody needs to learn to live with the virus and how to protect themselves from getting infected. Thus, the role of a good health system becomes even more vital and thus, valid

investments in the health sector could equip better the authorities to react under similar situations in the future.

- ✓ Southern Euro Area economies examined in this working paper are projected to experience a huge economic burden due to the pandemic and their overall fragile economic state of affairs.
- ✓ Cyprus is proved to have coped well with the Covid-19 pandemic and this is leading the country to a lesser health and socioeconomic burden.
- ✓ In this framework, public hospitals financial and organizational viability is essential as well as the fully equipped ICU and the necessary skilled medical and paramedical personnel.
- ✓ This crisis should be considered as a good lesson for EU countries to design a new strategy on how to face similar pandemic situations in economic, health and social terms. Each country should have in place a well-designed plan to face similar situations in the future.
- ✓ Moreover, the technological advancement related to the incorporation of digital economy and digital banking (Assiotis, 2020) can be a remedy in doing business in the future in a way to avoid similar conditions leading to partial or total lockdown.
- ✓ The role of technology enters into the discussion urgently and countries that step back will have difficulties to adjust to the new era. New technology in terms of a more digitalized economy can facilitate any country to resolve long standing distortions that they have been maintained for years.
- ✓ Efficient and caring health and welfare systems become the major priorities of the Euro Area economies in their road to retaining fiscal sustainability.

Indicative References

- 1) Assiotis A. "The Impact of Covid-19 and its Aftermath", May 2020, CES.
- 2) Bernoth K.& Geraldine Dany-Knedlik & Anna Gibert, 2020,"ECB and Fed Monetary Policy Measures against the Economic Effects of the Coronavirus Pandemic Have Little Effect," DIW Berlin, German Institute for Economic Research.
- 3) Charalambous A. "The long road to new normality; The corona virus and its impact on the Cyprus economy", May, 2020, CES.
- 4) Cho-Hung Chiang, Cho-Hsien Chiang, Cho-Han Chiang "Maintaining stockpiles of mask in the COVID-19 pandemic: Taiwan as a learning model", Journal: Infection Control & Hospital Epidemiology, Published online by Cambridge University Press: 11 May 2020, pp. 1, Mental Health & COVID-19: is the virus racist?" DOI: <https://doi.org/10.1192/bjp.2020.93>, Published online by Cambridge University Press: 05 May 2020.
- 5) Cyprus Ministry of Finance "Draft budgetary Plan 2020".
- 6) Cyprus Ministry of Finance "Strategic Framework of Fiscal Policy 2020-2022".
- 7) Cyprus Ministry of Finance web site www.mof.gov.cy.
- 8) Cyprus Ministry of Health web site: www.moh.gov.cy.
- 9) Cyprus Ministry of Labour, Welfare and Social Insurance: <http://www.mlsi.gov.cy/mlsi/mlsi.nsf>
- 10) ECDC: <https://www.ecdc.europa.eu/en/publications-data/download-todays-data-geographic-distribution-covid-19-cases-worldwide> <https://www.finddx.org/covid19/test-tracker>
- 11) Epidemiological Surveillance Unit of the Ministry of Health, Cyprus, National Situation Report, Coronavirus Disease 2019 (COVID-19),4 June, 2020.
- 12) Ethington Andreas Philip J. "The Intellectual Construction of "Social Distance": Toward a Recovery of Georg Simmel's Social Geometry"1997.
- 13) European Commission "Spring 2020 Economic Forecast: A deep and uneven recession, an uncertain recovery".
- 14) European Commission, European Semester, CSRs for Cyprus, May 2020.
- 15) Grossi U. MD, PhD student & MD Carla Felice, MD, PhD.1 " Coronavirus Disease 2019 in Italy: The Veneto Model", Centre for Neuroscience, Surgery and Trauma, Barts and the London School of Medicine & Dentistry, Queen Mary University of London.
- 16) Guy Gh. "How Germany got coronavirus right", FT weekend, Berlin Bureau, 6-7 June, 2020.
- 17) Hartigan J. Jr. "Social Distancing: A Multispecies Perspective", April, 2020.
- 18) IMF World Economic Outlook, April 2020: The Great Lockdown, April 2020.
- 19) Li, Krista J. and Li, Xi , "COVID-19 Pandemic: Social Distancing, Public Policy, and Market Response", May 2020.
- 20) Livingston E, Bucher K. Coronavirus Disease 2019 (COVID-19) in Italy. JAMA, 2020
- 21) Palomino Juan C. et al, "Wage inequality and poverty effects of lockdown and social distancing in Europe", June 1, 2020.
- 22) Mitze T. et al. "Face Masks Considerably Reduce Covid-19 Cases in Germany: A synthetic control method approach", Covid Economics, June, 2020.
- 23) Pollinger St. "Optimal case detection and social distancing policies to suppress Covid-19", April, 2020.
- 24) Statistical Service of the Republic of Cyprus: <https://www.mof.gov.cy/mof/cystat/statistics.nsf>
- 25) Syrichas G. "THE IMPACT OF COVID19 AND ITS AFTERMATH", Economic Research Centre, University of Cyprus, May 2020.