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Inspire Policy Making with Territorial Evidence

CASE STUDIES REPORT //

Territorial impacts of COVID-19 and policy answers in European regions and cities

Athens / Attica region (Greece)

Case Study Report // September 2022

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The final version of the report will be published as soon as approved.

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Introduction

This case study report examines the policy response to Covid-19 within the Attica region. The report explores which 'proactive' policies have been introduced in response to the pandemic and assesses whether the crisis presented a 'window of opportunity' for regional and local authorities to promote specific spatial planning and territorial targeted policy agendas. The case report is structured around the following core sections:

1. **Regional Characteristics:** Outlines the key socio-economic and governance characteristics of the region.
2. **Impact of Covid-19:** Highlights the socio-economic impacts of the pandemic on the region.
3. **Covid Policy Response:** provides an overview of the regional policy response in relation to three core policy thematic areas - the just transition (social policies), green transition (climate policies) and smart transition (innovation policies).
4. **Covid Policy Impacts:** assesses the main socio-economic, governance and financial impacts of the policy measures introduced.
5. **Future Policy Directions:** examines the medium and long-term direction of policy in the region and analyses whether the policies identified can be upscaled to other EU regions.
6. **Policy Recommendations:** provides policymakers and practitioners with policy, governance, territorial and financial recommendations.

Research Methods

The present case study has been conducted following a two-step approach. In the first step, extensive desk research was conducted with the aim of 1) documenting the main characteristics of the area, 2) assessing the impact of the pandemic on the local society and economy according to various national and local statistical sources, and 3) documenting the policy responses, as reflected in policy documents and reports available online. In the second step, semi-structured online and in-person interviews have been conducted with representatives of the most important local institutions, non-governmental organizations and the private sector. The purpose of the interviews was to further document the impact of the pandemic, the policy responses, the impact of the policy responses, as well as the future of local and regional policies.

Table 1 lists the stakeholders who have been interviewed as part of the current research. The stakeholders who are representatives of the public administration are executives of the Region of Attica, the Athens Chamber of Commerce and Industry (EBEA), as well as the National Emergency Center (EKAB). Moreover, the list includes two institutes, the Institute of the Association of Greek Tourism Enterprises (INSETE), an industry that was hard hit during the pandemic, and the Institute of Commerce and Services of the Hellenic Confederation of Commerce and Entrepreneurship (INEMY-ESEE), since many small businesses faced considerable effects. The list also includes the civil society organisations ActionAid Hellas and The Smile of the Child.

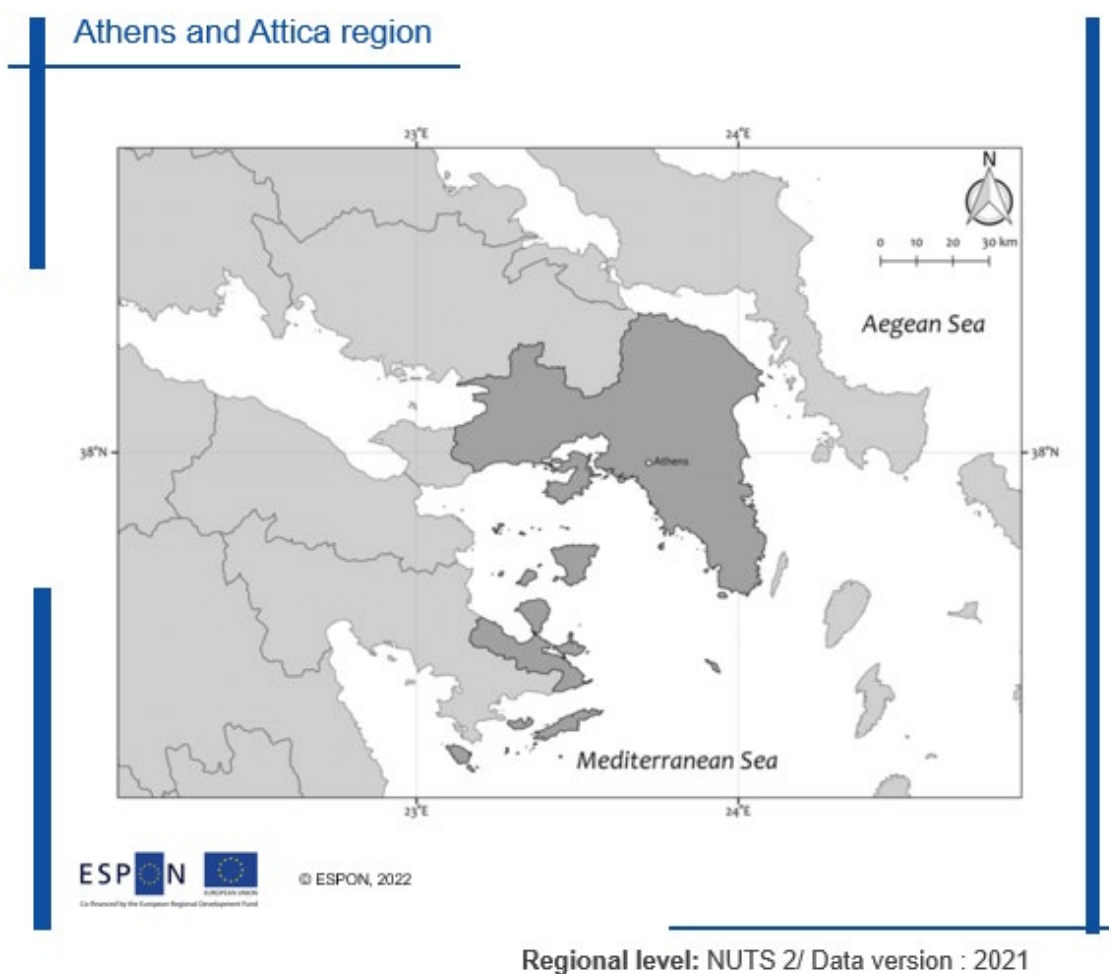
Table 1 List of interviews conducted

	Sector	Stakeholder	Date
1	Public Administration	Region of Attica	May 2022
2	Public Administration	Athens Chamber of Commerce and Industry (EBEA)	May 2022
3	Public Administration	National Emergency Center (EKAB)	May 2022
4	Private Sector	Institute of the Association of Greek Tourism Enterprises (INSETE)	Apr 2022
5	Civil Society	Institute of Commerce and Services of the Hellenic Confederation of Commerce and Entrepreneurship (INEMY-ESEE)	May 2022
6	Civil Society	"ActionAid Hellas" NGO	Apr 2022
7	Civil Society	"The Smile of the Child" NGO	May 2022

1 Characteristics of the case study area

The Attica Region is located in the heart of the Greek territory, in the southeast of the continental mainland and northeast of Peloponnese (Map 1). It is characterised by a densely populated area, with a population of 3,738,901 in 2020, which spreads over 3,808 km² (982 inhabitants per km²). Attica includes the metropolitan area of Athens, the largest urban agglomeration of the country, with almost one-third of the national population (34.9%). Athens is the main economic, political, educational and cultural centre of the country. The city of Athens is the capital of the region, as well as the national capital.

Map 1 Athens and Attica region



1.1 Economic characteristics

In 2019, the GDP of Attica was 87,427.58mil€, which was almost half of the national GDP, while the GDP per capita amounted to 23,400€ (137% of the country average). The GDP values show that Attica is at the forefront of socioeconomic growth in national terms, which, however, a different picture emerges when it is compared to the EU-27 average. The 2011 regional GDP per capita was 24,800€, representing 97% of the EU-27 average. Since the 2019 GDP per capita was at 75% of the EU-27 average, a deteriorating socioeconomic trend brought about by the economic crisis is revealed.

Regarding the specialisation profile of the region, Attica relies heavily on the tertiary sector. At the outbreak of the economic crisis (2009), Attica specialised in all the industries of the tertiary and the secondary sectors, except construction. In 2019, it specialized in industries such as information & communication, professional,

scientific & technical activities, financial & insurance, as well as real estate. However, this specialisation varies for the component NUTS3 regions. Central Athens specializes in almost the entire spectrum of the tertiary sector, whilst East and particularly West Attica specialize in the secondary sector. None of the regional units of Attica specializes in the primary sector, thus the region relies heavily on other national regions for its nutritional adequacy. It seems that the specialization of Attica is following the trends taking place in large metropolitan areas, which include mainly advanced producer services.

Almost half of the national Gross Value Added (48% in 2019) is produced in Attica. Thus, the economic activity and the specialisation of the Greek economy are shaped for the most part by its primary city. As a result, when comparing the medium-term trends of the regional (Attica's) and national GVA of several industries, similar patterns arise. Excluding the primary sector, the contribution of Attica to the national GVA ranges from 36% in "Mining and quarrying, manufacturing, electricity, etc" to 76% in "Information and communication", while the numbers in the industries in which Attica specialises vary from 59% to 76%.

As far as innovation is concerned, Attica concentrates 61% of the national gross domestic expenditure on Research and Development (R&D). The greater part concerns the business enterprise sector (58%), the government and the higher education sectors each of which contribute 20.5%, while the rest comes from the private non-profit sector (10.2%). Employment in the technology and knowledge-intensive sectors is 81,500 employees, equivalent to 70% of the national value. According to the Regional Innovation Scoreboard 2021 (European Union, 2021), Athens is a Moderate Innovator, where Regional 'pockets of excellence' can be identified. The performance change in reference to 2014 (and relatively to that of the EU) is almost 27%, however the 2021 score of Attica in comparison to the European Union score lags behind ($\approx 87\%$).

Even though Attica is the main engine of national growth, as presented above, in the pre-covid period, its economy was in a stabilization phase as it was in the process of recovering from the long-term crisis. Several challenges were identified concerning the negative externalities of its massive population concentration and economic issues such as unemployment, inequality, social segregation and environmental issues, that need to be dealt with in order for Attica to be a linking factor for national socioeconomic cohesion and a notable competitor in the international network of cities.

1.2 Social characteristics

The region of Attica already faced major pre-pandemic social challenges. In this context, there are several main social challenges for Greece, in general, and the Attica Region in particular, including the need to: (i) integrate unemployed persons into the labour market; (ii) combat social exclusion and poverty; (iii) support lifelong learning; (iv) augment the employability of graduates; (v) integrate migrants; (vi) support social inclusion of students from families with low income to fight school dropout; (viii) improve access to health and other social services; (ix) empower the regional network of the social economy; (x) prevent and combat multiple discrimination and domestic violence, (xi) promote equal opportunities, and increase gender equality.

Regarding education and skills, the level of the qualifications of Attica's population is above the national average. More specifically, in 2019, the population with tertiary education is higher than the national average (40.2% against 31.9%), the population with upper secondary and post-secondary non-tertiary education is identical to the national average (44.9%), while the population with less than primary, primary and lower secondary education is proportionally lower in Attica compared to the national average (15.0% against 23.2%). It is important to note that the percentage of young people neither in employment nor in education and training in Attica is around 10.1%, slightly lower than the national average of 12.5%, and exactly the same as the EU average.

In 2019, the employment rate in Attica was 57.6% compared to 56.5% in the country as a whole, while its unemployment rate was 16.9%, relative to the national average of 17.3%. Regardless of the shortage of relevant regional data, it is of great importance to display the national unemployment rates of persons 15-19yo and 20-24yo, which during the first quarter of 2019, were 50.2% and 39.7%, respectively. Even though Attica ranks lower than the national average regarding the unemployment rate, it is still a challenge to integrate unemployed persons into the labour market, since Greece has been struggling with recession as a result of the economic crisis dating back to 2010.

According to the 2019 data on living conditions and income in Greece, some 17.9% of Greeks were at risk of poverty. In Attica, however, the risk of poverty and social exclusion seems to be significantly lower, at 13.7%. This, however, remains a rather high percentage of people living at risk of poverty in the pre-pandemic era.

The 2019 data regarding the population of the region, identified 39,039 fewer inhabitants (-1.03%) compared to 2016. This aligns with the overall decrease of the Greek population (-0.55%) and can be explained by the age distribution in the country. Greece has (2019) 22% of the population above 65 years of age, ranking second in ageing populations behind Italy (22.8%). The crude birth rate is 8.4 (7.8 for Greece) while the crude death rate is 11.2. This translates into a -2.8 natural change in population, while Greece has been receiving refugees and migrants due to the refugee crisis over the past decade. This has added to the general population, 3.3 for Greece in general and more specially 2.0 for the Attica Region which seems to balance the natural change of population, making the crude rate of population change -0.9 for Attica. (-0.6 for Greece).

1.3 Governance characteristics

The region was established by the 1987 administrative reform, and until 2010 was comprised of the prefectures of Athens, East Attica, Piraeus and West Attica. With the 2010 Kallikratis plan (Law 3852/2010), its powers and authority were redefined and extended. Since 1 January 2011, the region represents a second-level local administration. While being supervised by the Decentralized Administration of Attica, it is now an independent self-governing body with powers and a budget comparable to the former prefectures, the capital of which, is the city of Athens. A Governor and a Regional Council are elected directly for a 4-year term. The NUTS3 regions of Attica are the following: the North Sector of Athens, the West Sector of Athens, the Central Sector of Athens, the South Sector of Athens, Eastern Attica, Western Attica, Piraeus and that of Islands. The Region has 66 Municipalities (out of the 332 Municipalities in Greece), where the election of the Mayor and the City Council is direct, and is carried-out every 4 years.

2 Impacts of COVID-19 on the region

2.1 Economic impacts

The first recorded cases of COVID-19 in Greece for Greek citizens, who had travelled abroad, were diagnosed at the end of February and the first days of March 2020. Due to the outbreak of the virus in various parts of the country, it was decided, nationwide, that all educational structures and, gradually, that all restaurants, shops and places of worship would close. On March 17, the European Union decided to close its external borders and ban entry to third-country nationals, effective from March 18. On March 19, the Ministry of Tourism announced the closure of all hotels across the country, with some exceptions. Since March 23 of 2020, significant restrictions were imposed on the local and intra-local movement of citizens throughout the Greek territory. At the end of March 2020, Greece suspended all passenger flights from Great Britain and the Civil Aviation Authority on all flights to and from Italy, Spain, Turkey, the United Kingdom, the Netherlands and Germany. Freight, health, humanitarian and military flights, as well as repatriation flights of Greek citizens were excluded from the suspension, among some other exceptions.

The aforementioned restrictions had a significant impact on the economic activity of the region, except for supermarkets and larger retail stores which already had on-line platforms. Restaurants-coffee shops and micro local enterprises in the tourism and retail trade sector faced considerable problems. Since the metropolitan area of Athens, which coincides with the Attica region, is the largest urban agglomeration in Greece, interactions of such large numbers of people imply a high likelihood of increased contamination cases, compared to less populated and less dense areas of the country. These characteristics put the region several times in the difficult position of stopping its economic and social activity through the measure of lock-down during the pandemic. This is reflected in its economic data.

In 2020, the GDP of Attica was 78,176.30mil€. During the period 2019-2020, the regional GDP decreased by 10.6%, which shows less resilience in comparison to the national change (-9.8%), and an even worse status when compared to the EU-27 country average variation (-4.4%). Furthermore, in 2020, the GDP per inhabitant in Attica was 20,900€ (70% of the EU-27 average, ceding 5 percentage points since 2019). Moreover, in 2021, after a decline of 8.8% in 2020, the Greek GDP is estimated to have reached the pre-pandemic levels, although Financial & insurance activities, arts, entertainment & recreation, as well as real estate do not yet show a similar trend. The trajectory of the metropolitan economy is expected to have recovered also, and the aforementioned industries should be more dynamic in the case of Attica.

As already mentioned, the economy of Attica relies heavily on the tertiary sector and particularly on advanced producer services. Even so, apart from tourism and cultural activities, which were greatly affected by COVID-19, the high level of suppleness that new technologies (ICT) have to offer, allows for the remote continuation of these business activities. Thus, a certain part of the economy was able to maintain its activities, even with such heavy restrictions. Therefore, the main industries of the region should be affected to a limited extent, as it seems that a hybrid model of employment arose. The 5.8% increase in employment in the technology and knowledge-intensive sectors during the period 2019-2020 in Attica is a relevant finding. Nevertheless, it is acknowledged that certain industries still face irregularities related to the COVID-19 measures, such as restaurants and accommodation, since their operation was heavily affected by the different waves of the pandemic, while they still operated under specific restrictions.

Concerning national tourism activity, in 2020, incoming travel traffic decreased by 76.5% and which amounted to 7,375 thousand travellers, compared to 31,348 thousand travellers in 2019. International air arrivals in Attica decreased by 68.5%, from 6,412,591 in 2019 to 2,023,078 in 2020. Domestic air arrivals amounted to 1,502,084 in 2020, a decline of 62.2% from 2019 (3,973,656). In 2021, there is a considerable regional recovery in air arrivals (international: 3,789,979, domestic: 2,358,470). Last but not least, due to the pandemic, people reduced travelling, which was captured by a decrease in trips, as well as shorter stays. Moreover, summer-island tourism was favoured instead of urban tourism for obvious reasons. Thus, the tourism industry of Attica, and particularly the city-break, was hard hit by the pandemic, disproportionately more than the other regions.

The recession caused by the COVID-19 restriction measures led the national government, and to a lesser extent the local ones, to adopt support policies for the economy and society. Thus, businesses and workers in retail, restaurants, tourism, and other professions, were given economic support for several months. This

policy was implemented mainly in the first waves of the pandemic, while the policies were more selective during the later stages of the pandemic.

2.2 Social impacts

COVID-19 exacerbated socioeconomic inequality in Attica, since the most vulnerable groups were hit hardest by the pandemic and the restriction measures (unprivileged, elderly, socially excluded, etc). Certain low-income workers, who need to perform their work in person, such as construction workers, housekeepers etc, faced considerable financial problems because of the pandemic. Financial problems constitute a factor that generates stress and tensions in a family, causing psychological and other issues that are passed-on to the children.

Moreover, a rise in domestic violence was recorded, since it was more difficult for the victims to escape from the abusers and to seek help because of the containment measures. Additionally, there was an increase in the school dropout rate, and it is believed that many children will not be reintegrated into the education system. In this case, the distance learning process exacerbated the problem. The government, regional or local agencies did not respond either timely, or appropriately, to these issues.

As mentioned above, due to the long period of economic crisis Attica was already facing challenges regarding employment levels, risk of poverty, etc. even from the pre-pandemic period. For the most part, these challenges are due to the austerity measures of the debt-crisis period, as well as the ongoing reforms in the public sector. Despite these facts, compensation via public social support programmes helped the unemployment levels not to rise. On the contrary, unemployment declined by almost 3% in Attica (16.9% in 2019 against 14.1% in 2020), following the general trend of the country (17.3% in 2019, 16.3%). However, when one compares these numbers to the European Union average (6.7% in 2019, 7.1% in 2020), unemployment is quite high.

Moreover, the percentage of the population at risk of poverty also dropped, according to the aforementioned data, by 0.2% between 2019 and 2020 for Greece (17.9% 2019, 17.7% 2020), and by 1.2% in Attica (13.7% 2019, 12.5% 2020). The central government's compensation program has addressed the potential unemployment problem even though Greece had one of the strictest and longest-lasting lockdowns in Europe, which consequently led to jobs being lost (especially those of the self-employed). However, most of these people were protected via social measures.

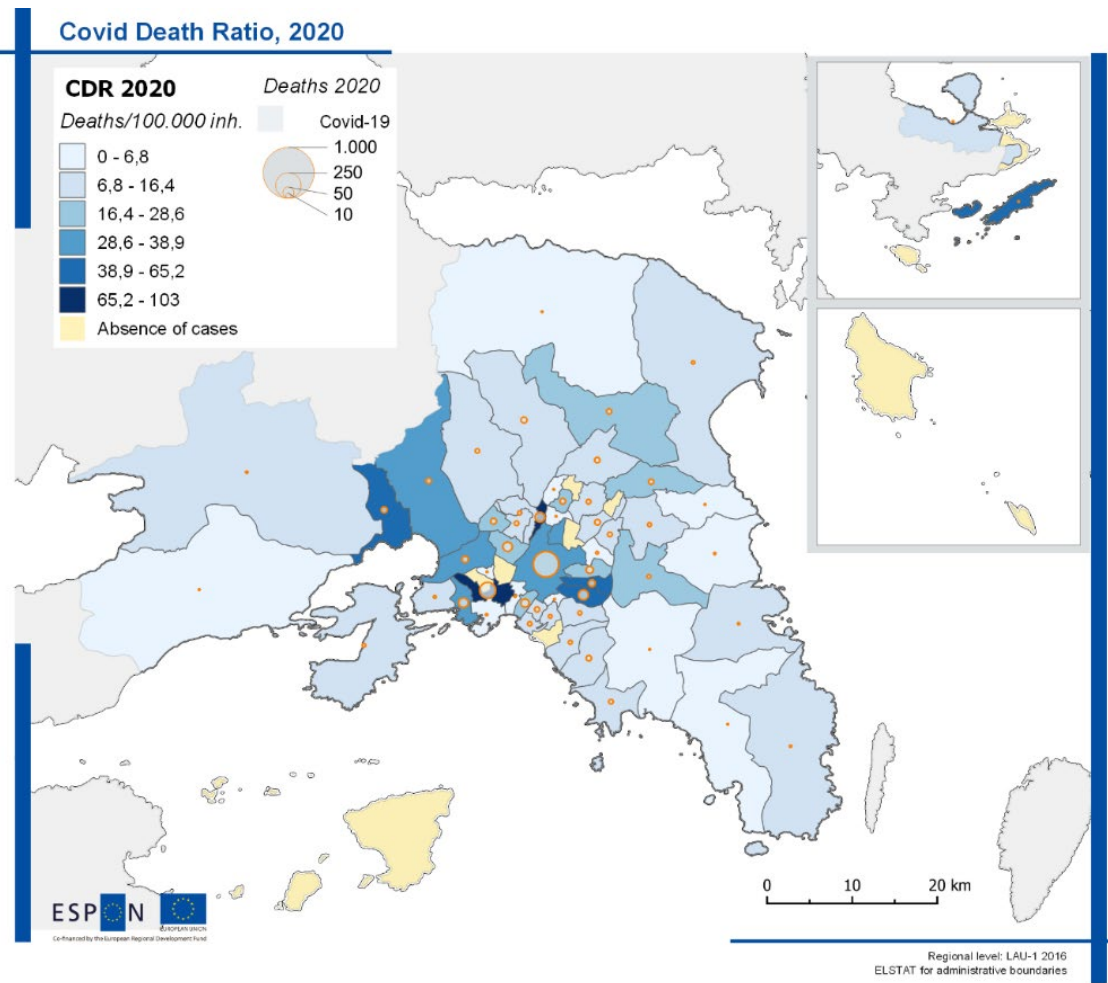
The most crucial aspect of the social impacts of the pandemic, was the infection and death rate, which was one of the highest in Europe. The economic reforms had a considerable impact on the public health-care sector. Hospitals were shut down all over the country, while others were merged, leading to a boom of private hospitals and private health care programs. These facts, combined with the ageing national population (second highest in Europe), led to a high mortality rate.

Greece did have a strict lockdown and imposed restrictions on circulation in public spaces as well as contact between citizens. Hundreds of festivities were cancelled and the first wave of the pandemic was handled successfully. However, the danger of economic collapse led the central government to the controversial decision to restart tourism activity by allowing international tourists to travel to Greece.

During this period, the rate of infections rose significantly, which led to fierce criticism about this decision. Specifically, for Attica, the impact of the second wave and immediately thereafter the opening of the airports and borders was very intense. In 2020 (first wave), there were a total of 39,824 deaths recorded, while only 801 of them were due to COVID-19 (approximately 2%). On the contrary, 2021 showed a rise in deaths in general since there were a total of 44,726 recorded, with the 4,766 of them, being a result of COVID-19 infections, which is approximately 10%.

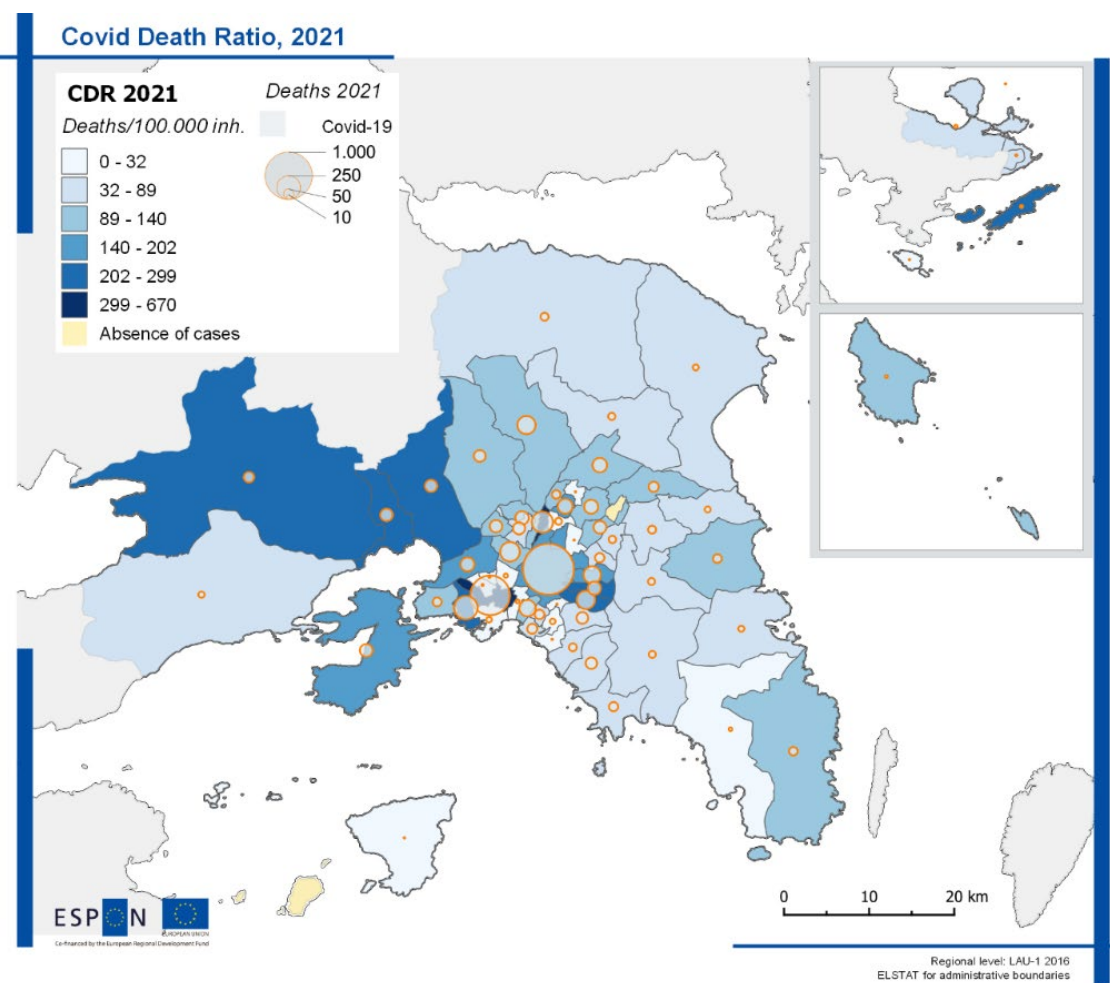
Finally, according to the data provided by the central government, the western region of Attica shows a higher infection rate and thus, a higher mortality rate related to COVID-19 infections. Since these areas are inhabited by low-income people, it would be interesting as a research topic to monitor the societal implications of the pandemic. Moreover, all of the aforementioned issues are expected to have a significant and long-term impact on the mental health of the population, which is something to be assessed in the future.

Map 2 Covid-19 Death Ratio in Attica (2020)



Source: National Institute of Statistics

Map 3 Covid-19 Death Ratio in Attica (2021)



Source: National Institute of Statistics

In 2020, the most of Covid-19 deaths are located in the municipality of Athens (Map 2). The municipality of Athens shows the highest absolute number of Covid-19 deaths in 2021 also, although a certain pattern of higher rates of CDR emerges in the west of the region (Map 3).

Governance impacts

The main positive development in response to the COVID-19 pandemic was the acceleration of the digital reforms related to everyday life for businesses and citizens. For public health reasons, the restrictions made the digitalisation of public services urgent. Examples are the following: digitalisation of local governance administrative services such as online filing of tax returns and citizen registration, online platforms for citizens to express their views on pricing of products, digital signatures, remote citizen services, online applications for enrolment in primary education, issuance of digital certificates, diplomas or excerpts from diplomas, issuance of digital excerpts of civil registration deeds and certificates of municipal registration.

3 Policy Response to COVID-19

Policy Context

It cannot be claimed that more open and multi-participatory practices were promoted during the pandemic, since most policies were planned and executed solely by the national government. The policies of the Region of Attica were mostly short-term interventions for the provision of consumables and equipment to regional infirmaries and hospitals. Therefore, the COVID-19 crisis did not function as a laboratory for policy reforms, at least at the regional level. The pandemic indeed facilitated the evolution of specific tasks (short-term policies), related to social support or vaccinations. Even though they represent an effective strategic response to emerging needs, they don't constitute, nor can they be transformed into long-term strategic policies. Thus, the impact of the pandemic on regional long-term policies or strategies was minimal.

3.1 Proactive Policy Overview

Tables 2, 3 and 4 present the examples of proactive policies in Attica with regard to the just, green and smart transitions, although most of them were applied by the national level of government.

Just transition policies

The policies related to just transition were planned as a response to the immediate and acute hazards of the recession caused by the restriction measures for the pandemic in order to “leave no one behind”. Regional and local authorities contributed to this effort, however the policies planned were less effective than anticipated, and if examined in relation to these of the central government, could be described as disconnected, since there was no coordination with the top-tier of government. The same word could be used to describe the collaboration with the central government and the participation of civil society in dealing with the COVID-19 pandemic. Most of the measures sought to restore the loss of income for households and businesses, and these measures were applied on an unprecedented level, when compared to social policies of previous periods. However, the policy agenda, even if it achieved its goals of socioeconomic cohesion, at least in the short-term, cannot be described as innovative. However, certain policies such as help at home for the elderly and vulnerable groups of citizens were certainly upgraded, and the digitalization of public services contributed greatly to this. Assistance to businesses was accomplished through the “returnable advance payment”, of which the businesses in Attica received almost the 40% of the funding.

Table 2 Just transition policies

Focus area(s)	Policy description	Target group(s)/ Beneficiaries	Responsible level of governance / Financing	Stakeholders involved in policy implementation	Timing of policy	Duration
Business support	Professionals and companies that have ceased their activities due to the Covid-19 pandemic are eligible for exemption from cleaning and lighting and/or the reduction of utility fees.	Businesses	National level	Municipalities	Pandemic	Short term
Business support	Extension for the payment of VAT amounts (as assessed in VAT returns) and installments of other assessed tax liabilities.	Businesses	National level	Central government	Pandemic	Short term

Business support	Eligibility for a deduction of 25% on payments of instalments of assessed tax liabilities (excluding withholding taxes and VAT), on condition that these payments are settled in a timely fashion.	Businesses	National level	Central government	Pandemic	Short term
Business support	Eligibility for offsetting 25% of the VAT amount which will be settled in a timely fashion, against assessed tax liabilities.	Businesses	National level	Central government	Pandemic	Short term
Business support	Financing scheme by means of a returnable advance payment (for companies with 1-500 employees).	Businesses	National level	Central government	Pandemic	Short term
Business support	Suspension of the payment of capital instalments regarding the loans and credits that had been honored to date.	Businesses	National level	Central government	Pandemic	Short term
Business support	The date of payment of securities of companies (cheques, bills of exchange and promissory notes), was suspended for 75 days.	Businesses	National level	Central government	Pandemic	Short term
Business support	Enterprises are exempted from paying 40% of the rental for their commercial premises or from payment for finance leases.	Businesses	National level	Central government	Pandemic	Short term
Business support	Extension for the payment of social security contributions (both for employers and employees).	Businesses	National level	Central government	Pandemic	Short term
Business support	Extension for 3 months for the payment to National Social Security Agency (E.F.K.A) of instalments of assessed liabilities under a special settlement regime.	Businesses	National level	Central government	Pandemic	Short term
Business support	Eligibility for temporary suspension of employees' contracts for 45 days without payment of their contractual salary and social security contributions.	Businesses	National level	Central government	Pandemic	Short term
Business support	"Syn-Ergasia" Program is an EU-funded support program to mitigate unemployment risks in an emergency. Businesses that face difficulties may reduce the working hours of some of their employees due to public health	Businesses	National level	Central government	Pandemic	Short term

	reasons and the state undertakes the obligation to contribute 60% of the employee's income for the hours the employee is away from work.					
Business support	The National Recovery and Resilience Plan "Greece 2.0" will, among others, make available almost €13bil. in the form of favorable loans to support private investments, complemented by a set of financial sector reforms to address private indebtedness and strengthen capital markets.	Businesses	National level	Central government Private sector	Pandemic	Medium term
Business support	Support for restaurants and coffee shops with legislation that allows for expanding table seating in public spaces	Businesses	National level	Central government - Municipalities	Pandemic	Short term
Business support	Financial support of Small and Very Small Businesses that were affected by Covid-19.	Businesses	Regional level	Regional government	Pandemic	Short term
Income support	Extension of the unemployment benefit (for two months 4/2020, for one month 4/2021).	Unemployed people	National level	Central government	Pandemic	Short term
Income support	One-time financial assistance (special purpose allowance) for those who have resigned or are dismissed, and do not receive unemployment benefits (€800).	Unemployed people	National level	Central government	Pandemic	Short term
Income support	One-time financial assistance to the non-subsidized long-term unemployed (€400).	Unemployed people	National level	Central government	Pandemic	Short term
Business support Income support	Provision of monthly financial support to the seasonally unemployed in the tourism sector (until September 2020) and coverage of employers' insurance contributions for seasonal part-time workers.	Unemployed people Businesses	National level	Central government	Pandemic	Short term
Income support	Provision of monthly financial support for employees, the self-employed, and the companies which do not have employees or employ up to twenty (20) employees (€800).	Employees and self-employed people Businesses	National level	Central government	Pandemic	Short term

Income support	Special financial support for the medical & nursing staff as well as to the employees in the General Secretariat of Civil Protection.	Key workers	National level	Central government	Pandemic	Short term
Income support	Financial support-compensation of special-purpose (€600) to scientists-freelancers (engineers, economists/accountants, lawyers and notaries, freelancers or salaried professionals, doctors, educators and researchers).	Employees and self-employed people	National level	Central government	Pandemic	Short term
Income support	Payment of a subsidy for the unemployed seafarers whose unemployment subsidy expired in the first quarter of 2020, while the duration of the insurance protection provided by their dedicated insurance program The Sailor House, which expired in the first quarter of 2020, was extended until 31.5.2020.	Unemployed people	National level	Central government - Labor Force Organization	Pandemic	Short term
Income support	Implementation of the measure for the provision of special purpose compensation due to the suspension of seafarers' contracts.	Unemployed people	National level	Central government - Labor Force Organization	Pandemic	Short term
Income support	Participation in the coverage of the special purpose leave for the eligible employees due to the suspension of the operation of school units.	Employees and self-employed people	National level	Central government	Pandemic	Short term
Food, medical and housing support	Payment of 60% of the rent of the primary residence for March & April 2020 with a corresponding deferral of tax liabilities of the property owners for 4 months.	General population	National level	Central government	Pandemic	Short term
Food, medical and housing support	Reduction by 40% of the rent of professional housing, main residence, student housing and the main residence of sailors (until September 2020).	General population Students	National level	Central government	Pandemic	Short term
Income support	Suspension, extension of the deadline and deduction of payments of tax obligations (certified debts of the Tax Office and installments for the settlement of certified	Employees and self-employed people	National level	Central government	Pandemic	Short term

	debts) for 4 months to employees who are in a status of suspension of the employment contract.					
Income support Business support	Extension of the deadline for payment of tax debts and suspension of their collection, to companies and employees who were financially affected due to the coronavirus.	Employees and self-employed people Businesses	National level	Central government	Pandemic	Short term
Investment in infrastructure	Establishment of Mobile Health Groups (KOMY) Special Purpose for in-home nursing and reception services biological material.	General population	National level	Central government	Pandemic	Medium/Long term
Income support	One-time increase in support of the Program "Minimum Guaranteed Income" for large households having minor members.	General population Children and youth	National level	Central government	Pandemic	Short term
Social support	Provision of special-purpose licenses and teleworking for meeting the needs of public servants	Public servants	National level	Central government – Ministry of the Interior	Pandemic	Short term
Social support	The "Aid at Home" program was reinforced with staff and it offered more activities and social services	Elderly people Vulnerable groups	National level	Central government	Pandemic	Short/Medium term
Social support	"Aid at Home Plus" program for the elderly and other vulnerable people.	Elderly people Vulnerable groups	Municipal level	Municipalities	Pandemic	Medium/Long term
Social support	Support of programs to feed 60,000 vulnerable citizens in the Attica Region (and Central Macedonia), which due to the quarantine the Greek Church program was unable to support.	Elderly people Vulnerable groups	National level	Central government – Ministry of the Interior	Pandemic	Short/Medium term
Food, medical and housing support	Temporary shelter structures for the homeless and other vulnerable people.	Homeless people Vulnerable groups	Municipal level	Municipalities	Pandemic	Short term

Communication and knowledge sharing	Telephone service for the provision of medical advice on Covid-19 (EOPYY).	General population	National and regional level	Central government - Regional government	Pandemic	Short term
Mental health services	Telephone service for the provision of psychological support during the pandemic.	General population	Regional level	Regional government	Pandemic	Short term

Green transition policies

The pandemic had a minor impact on the green transition policies in the case of Athens, as well as on Greece as a whole. There were projects and actions already planned before the COVID-19 outbreak, which went forward, albeit at a slower pace, due to the objective difficulties that the lock-downs caused. The green policies refer to the promotion of more environment-friendly means of transport and appliances, as well as the energy-saving renovation of buildings, the support of green transition of businesses, and the enhancement of citizen awareness on environmental matters. Although there are some policies for the protection of nature, there are no policies related to sustainable urban planning.

Table 3 Green transition policies

Focus area(s)	Policy description	Target group(s)/ Beneficiaries	Responsible level of governance / Financing	Stakeholders involved in policy implementation	Timing of policy	Duration
Travel and mobility	Through the "E-mobility" programme, the purchase/rental of electric cars (private use and taxis), bicycles and motorcycles are subsidized.	General population Businesses	National level	National government	Pre-pandemic	Medium/ Long term
Travel and mobility Investment in infrastructure	Electrification of transport, including the building of charging infrastructure and boosting entrepreneurship in the field of batteries and chargers	General population Businesses	National level	National government	Pre-pandemic	Medium/ Long term
Travel and mobility Investment in infrastructure	Expansion of bike lanes, smart bikes and pedestrian areas - at an early stage of implementation	General population	Municipal level	Municipalities	Pre-pandemic	Medium/ Long term
Business support	Policies and funding to support businesses with green transition processes - at an early stage.	Businesses	National level	National government	Pre-pandemic	Medium/ Long term
Green spaces	Protection of nature, upgrade of protected areas and the design of a national plan for reforestation.	General population	National level	National government	Pre-pandemic	Medium/ Long term

Tourism	Support for local green tourism businesses - at an early stage.	Businesses Other groups	National level	National government	Pre-pandemic	Medium/Long term
Business support	Raising citizen awareness of local and sustainable food products - at an early stage.	Businesses General population	Municipal level	Municipalities	Pre-pandemic	Medium/Long term
Waste management and circular economy	Building 17 new waste treatment plants.	Businesses General population	National level	National government	Pre-pandemic	Medium/Long term
Waste management and circular economy Communication and knowledge sharing	Educating citizens on how to separate domestic waste - at an early stage	General population	Municipal level	Municipalities	Pre-pandemic	Medium/Long term
Climate mitigation and adaptation	A target is set for more than a 42% reduction over 1990 Greenhouse Gas (GHG) Emissions and more than 56% over 2005 emissions by 2030, to achieve a climate-neutral economy by 2050.	General population Businesses	National level	National government	Pre-pandemic	Medium/Long term
Climate mitigation and adaptation Investment in infrastructure	The programme "Saving energy/Energy autonomous buildings" aims at energy-saving and energy autonomy of households, with new incentives and interventions that encourage the production and storage of energy from RES and the installation of "smart" energy systems.	General population	National level	National government	Pre-pandemic	Medium/Long term
Climate mitigation and adaptation Investment in infrastructure	The programme "Electra" intends to improve the energy efficiency of public buildings through interventions related to heating, cooling, ventilating, lighting, etc.	General population	National level	National government	Pre-pandemic	Medium/Long term
Climate mitigation and adaptation Investment in infrastructure	Building renewable energy plants and electrical interconnectors, linking the islands with the mainland.	General population	National level	National government	Pre-pandemic	Medium/Long term

Communication and knowledge sharing	Advice to low-income households on how to save energy - at an early stage.	Other groups	Municipal level	Municipalities	Pre-pandemic	Medium/Long term
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Smart transition policies

Attica is the most innovative region in Greece, since the concentrated universities, laboratories and relevant companies create the necessary localisation economies for the expansion and the reinforcement of this trend. The public sector is increasingly integrating new digitalized services that facilitate the operation of several socioeconomic functions, as well as the transactions between the state, citizens, and businesses. Although, this is applaudable, it is also a belated development that lags behind the average European digitalization status.

Table 4 Smart transition policies

Focus area(s)	Policy description	Target group(s)/ Beneficiaries	Responsible level of governance / Financing	Stakeholders involved in policy implementation	Timing of policy	Duration
E-governance	The digitalisation of local governance administrative services such as online taxes and citizen registration, online platforms for citizens to express views on pricing of products, digital signatures, remote citizen services, Online applications for enrolment in primary education, Issuance of digital certificates, diplomas or excerpts from diplomas, Issuance of digital excerpts of civil registration deeds and certificates of municipal registration.	General population	National level	National government	Pre-pandemic	Medium/Long term
Digital access and competencies	Government-issued vouchers of 200 euros addressed to low-income households for purchasing equipment (tablets).	Vulnerable groups	National level	National government	Pandemic	Short term
Multi-locality working	Compensation for home-office (max. 28euros/month for power usage), mandatory percentage of employees working from home, no equipment provision.	Employees and self-employed people	National level	National government	Pandemic	Short term
The digitalisation of public services	Establishment and operation of the archiving system of the National Registry of patients with coronavirus. Operation of the emvolio.gov.gr platform for the scheduling of vaccinations by the citizen. Operation of	General population	National level	National government	Pandemic	Medium/Long term

	the self-testing.gov.gr platform.					
The digitalisation of public services Cultural offers	The digitalisation of the healthcare prescription system ("Ayli Syntagografisi"). The digitalisation of theatrical performances. The digital start-up of a sole proprietorship (freelancers) and later the electronic business file are anticipated. Digitalisation in the field of Justice is limited.	General population Businesses	National level	National government	Pandemic	Medium/Long term
Big data	Government is due to the increased use of big data for municipal admin and healthcare purposes.	General population Municipal staff	National level	National government	Pandemic	Medium/Long term
E-governance	Electronic issuance of unemployment card.	Unemployed people	National level	National government	Pandemic	Medium/Long term
Education and training	Distance training for the unemployed and employees.	Unemployed people Employees and self-employed people	National level	National government	Pandemic	Medium/Long term
The digitalisation of public services	Online Prescription Services.	General population	National level	National government	Pandemic	Medium/Long term
The digitalisation of public services	At home or remotely provided medical services by Public Healthcare unit doctors.	General population	National level	National government	Pandemic	Medium/Long term
Education and training	Distance learning at all three levels of education (pandemic waves 1 & 2).	Children and youth Students	National level	National government	Pandemic	Short term
Business support	Launching of an online platform "agoradelivery" through which retail stores and small and medium-sized enterprises are given the possibility to create e-shops for free.	Businesses	Regional level	Regional government	Pandemic	Short term
Cultural offers	The organisation of online concerts and cultural events.	General population	Regional level	Regional government	Pandemic	Short term

The main aim of the proactive policies was to ensure a cash flow to households and businesses, to forestall the further development of poverty or inequality issues. Policies to address the socioeconomic effects of the restriction measures included suspension of fees, rents and tax collection: such as the extension of the

deadline for the payment of VAT and instalments of other assessed tax liabilities, the eligibility for a deduction of 25% on instalments of assessed tax liabilities, a returnable advance payment, and an exemption from paying 40% of the rental for their commercial premises or payment of financial leases. Furthermore, in the industries that had ceased their activity, employees, self-employed, and companies that had no employees or up to twenty employees, received monthly financial support (800€). Unemployment benefits were extended for a longer period of time; those who had resigned or were dismissed and did not receive unemployment benefits received a one-time financial assistance (800€), as did the non-subsidized long-term unemployed (400€).

Simultaneously, the Region of Attica and the Municipality of Athens had already put social food programmes into place for socioeconomically deprived groups and the elderly, who also made home deliveries, if necessary. Moreover, there was support for distributing shopping and medical consumables to people with mobility issues. Another measure was the attempt to provide additional care to the homeless of the region and the city of Athens. The Region of Attica and the Municipality of Athens reinforced the policies for the homeless and scheduled the upgrading of the relevant facilities.

As was the case in public administration, the COVID-19 pandemic allowed a new chapter in labour relations and the nature of work itself. The existing technology for teleworking was utilized and policy measures were introduced to promote and regulate it. This is one of the few proactive COVID-19 policies that will become long-term policies. Moreover, it is acknowledged that digitalisation will facilitate the everyday life of citizens as well as the businesses of the region. To name only a few, digitalization changed the way people work, transact, educate and deal with the public authorities. Thus, in the post-COVID reality, flexible/hybrid forms of work, education etc. are expected to dominate.

The implementation of the pandemic-related policy measures was quite challenging for the various tiers of government. Firstly, most of the measures were financial, a fact that posed serious stress for a governmental system that was attempting to deal with a long term financial crisis. The central government, as well as the regional and municipal ones, were implementing measures that reduced their available funds (i.e. monthly financial support), alongside measures that reduced their expected revenue (i.e. exemption from municipal charges). Thus, the need for social and economic inclusivity, during the pandemic, led to very delicate budgetary acrobatics, mainly for the national government. Another critical issue is that of coordinating the implementation of the measures, which however in the case of Attica, as well as Greece overall, was quite straightforward. Since the main interventions were planned and implemented by the central government, there was little room for misunderstanding, or overlapping of competences. This fact is considered positive, since the Greek state is not rather competence-deconcentrated and multi-partner coordination in such circumstances may likely have had doubtful results.

The COVID-19 crisis management and resilience plan was largely developed by the national government, without the participation of municipalities or the Region of Attica, although the structural specification of the plan included certain stakeholders. The various measures of the plan were related to economic activity and the functioning of public infrastructures, public space and public services. The evident need for social distancing gave an unprecedented boom to the use of digital platforms. In this way, the volume of the physical contact for the provision of public or private services was reduced to a minimum. As mentioned above, this rise in the use of digital services is expected to remain even after the COVID-19 era.

3.2 Policy Governance

Multi-level territorial governance structures had a limited role in the response to the pandemic of COVID-19 in the case of Attica. Even though the region of Attica hosts the largest metropolitan area in the country, which makes territorial coordination a prerequisite, the multi-level governance structures are quite underdeveloped. Thus, the response to the pandemic was planned at the top tier (national government) and the other levels of government were, in most cases, agents for the implementation of the relevant measures and policies. Even though the Region and the municipalities of Attica responded to the pandemic to restrain its impact on the health and economic and social life of the citizens, the actions undertaken were far from coherent, as the measures were scattered, it was not possible to get the most out of them or to achieve synergies. It is believed, however, that strong central coordination is a more efficient approach during a crisis.

Regarding the level of cross-sectoral cooperation to respond to the challenges of the pandemic, it is also recorded at the top tier. Certain stakeholders were invited to participate in the formulation of policies to address COVID-related issues for specific sectors. For instance, the Hellenic Chamber of Hotels was a stakeholder that participated in the discussion of the tourism-related policies. There is however, a perception that the participation of stakeholders was quite selective. Other similar examples of cooperation are yet to be ascertained.

3.3 Policy Finance

The reduction of operational costs for businesses was the main concern of the national government in order to achieve certain levels of economic and social cohesion during the COVID-19 pandemic waves. Thus relevant measures and policies were prioritized according to this criterion. In addition, the Region of Attica and the municipalities pursued the same goals via the exemption or reduction of charges for businesses and a special provision for the businesses to use public spaces free of charge. It should be noted, however, that the funding for businesses refers mainly to restaurants and tourist businesses. Retail businesses did not receive funds for their restarts, other than the programme “e-λιανικό” for the development of e-shops. The financial policies were funded through public funding, or through European funds. Finally, during the pandemic, the Greece 2.0 program was approved. This is a correspondent program to the EU temporary recovery instrument of “Recovery and Resilience Facility”. It aims at mitigating the economic and social impact of the coronavirus pandemic and making the Greek economy and society more sustainable, resilient and better prepared for the challenges and opportunities of the green and digital transitions.

4 Policy impacts

4.1 Policy impact

As already mentioned, the main concern of the different tiers of government was to preserve socioeconomic cohesion, through proactive policies for maintaining the income of households. For the most part, the policies indeed had the desired results, and without this positive impact, the Region of Attica would have faced particularly harsh consequences. The massive concentration of population and the economic activity in the region inevitably would have resulted in considerably higher rates of unemployment and the consequent loss of private income. However, the policy measures implemented effectively addressed these challenges. The provision of monthly financial support, the reinforcement of the social lunch mode, the provision of mobile devices to students etc. made the consequences of the COVID-19 pandemic for the society milder. Last but not least, they helped to keep the economy of the Region (and the country) functional, since they facilitated the operation of businesses (reduction of charges and rents, flexible recruitment policies, etc.). However, since the latest available GVA statistics for the Greek economy are for the year 2019, one must hesitate to call the impact of the measures a success, beforehand.

Additionally, in recent years there has been a global trend in the tourism sector, that of a diminishing labour pool of seasonal workers. This issue is less acute in Attica, since the industry employs more permanent staff. This phenomenon is attributed to the COVID-19 pandemic, since it triggered a large employment restructuring, which has been a result of the differentiated opportunities during the crisis. The correlation, of any causal relation of this trend with the financial measures has yet to be fully assessed. Moreover, part of the public spending of the central government during the pandemic was questioned. As an example, there was political controversy about the allocation of massive funding to the media for the anti-COVID-19 campaign.

Regarding the environmental impact of the proactive policies, some developments were noted. The indisputable impact of the restriction measures, mainly during the first wave of the pandemic, was the great reduction of commuting by private cars. Particularly for a large metropolis, such as Athens, the environmental impact of this phenomenon is noteworthy. The increase in tele-working reinforced this trend. Nonetheless, during later waves of the pandemic the social-distancing habit led to a decreased use of public transport and a consequent increase in private car use. This latter trend is accompanied by an increase in the use of electric scooters and commuters who chose to walk, which is a promising development for a resilient city.

Last but not least, the increase in on-line shopping due to the containment measures, during the first waves of the pandemic mostly, caused the local shops to lose much of their clientele. Small commercial shops did not have platforms for e-shopping, a fact that put their economic viability at risk, although this changed during the later stages of the pandemic, mainly through public policies.

4.2 Governance impacts

Regarding the impact related to governance and the related structures in Athens, one can notice minor results. Some unanimity of the political forces was present, although only during the outbreak of the pandemic with regard to the call for restriction measures to maintain public safety. This changed shortly after, when the opening of tourism and other issues sparked a political debate. In the later stages of the pandemic, criticism of the public policies was more than obvious. Nevertheless, the policies related to the acceleration of the digital governance reforms are deemed quite successful, since they brought considerable improvement to the functioning of the public services, and the mitigation of COVID-19 cases. Moreover, digitisation-related policies are seen as a factor that facilitated cooperation between public or municipal authorities and private actors.

During the COVID-19 pandemic no private, or new private-public funding practices were recorded. Moreover, the pandemic put certain priorities on the different levels of government. The goals of public safety, and social and economic cohesion made the rearrangement of the pre-COVID investment planning and particularly the time scheduling unavoidable.

5 Future policy directions

5.1 General recommendations

Achieving a just transition

Greece had already faced a severe recession which began in 2009, and the COVID-19 crisis was added on to the effects of the former. Thus, overcoming the heightened recession which followed COVID-19 pandemic is the main task for future policies in order to make possible the transition to a just, green and smart society. The financial support to citizens and businesses that took place during the COVID-19 crisis is relevant from the cohesion point of view. It is among the most efficient policies, however, it should be implemented with caution and only in special circumstances, since it is characterized by the same negative characteristics as those of unemployment benefits. Thus, the short-term COVID-related proactive distributive policies implemented in Greece are not upscaling-friendly, nor do they have any innovative elements, and their application in other regions of the European Union has little to offer.

Healthcare policy and crisis management

Regarding health-related issues, during the pandemic it was clear that the greatest stress in such a crisis falls upon the public health system. Drawing from this fact, it is important to preserve the public health system at an adequate capacity, since it is not possible to provide these services in an ad hoc manner. The lessons learned from the current crisis should also facilitate the management of similar scenarios in the future. Regarding the good practices of the health system, during the COVID-19 pandemic waves, three public hospitals in Attica were designated as COVID-19 treatment hospitals, and later a fourth was added, to provide more efficient services. However, the adoption of the same practice to create temporary vaccination centres on the premises of primary health-care centres, which led to the merging of primary health-care centres, was treated with scepticism. Nonetheless, the setting-up of the vaccination information system, as well as the hospital admission monitoring system were quite successful, meeting the standards of the rest of the digitalization advancements that took place during the crisis.

Development of multilevel governance and stakeholder cooperation

As for the relations and the cooperation between component units of the Region, Attica has little to provide in terms of good practices. Multi-level governance in the Athens metropolitan area is underdeveloped, and this continued to be so during the pandemic period. This is evident from the scattered nature of the interventions. The region has quite limited collaborative initiatives and new structures that could be upscaled in other regions, indicative of the absence of a relevant culture. In the case of the pandemic, this became more apparent, and this condition did not function as a catalyst for innovative solutions. Thus, in this field Attica should elaborate on the best practices of other regions with regard to governance and stakeholders.

Digitalisation

A quite positive development in response to the COVID-19 pandemic was the acceleration of the digital reforms in Attica, and in Greece as a whole. As already mentioned, the restrictions due to public health reasons facilitated the digitalisation of public services, as well as teleworking. These proactive policies have the most long-term and upscaling potential. However, this was, more or less, a global development. An important and particularly large project carried-out during the pandemic was the 2021 census that took place for several months and was executed, for the most part, remotely. This process laid the foundation for a more immediate and up-to-date collection of data, compliant with the increased needs for valid information to address the upcoming challenges with precise policies.

5.2 Regional recommendations

Policy Recommendations

The best proactive policies of the Attica case study are those of monthly financial support, which however have a restricted level of upscaling, and the digitalization of the public services. This latter policy is long-term, it is applied on multiple levels, and it was quite efficient in the mitigation of the pandemic. Moreover, the vaccination program was also very efficient, however it is highly related to the digitalization of the public services. The greatest advantage of the digitalization of public services is that it can be upscaled as a policy.

Governance Recommendation

Regarding best practices for the improvement of the governance processes, stakeholder interactions and cross-sectoral collaboration in the case study area, the Attica case study has little to offer. There is a need to increase coordination between the different tiers of government and the shareholders of the metropolitan area to advance institutional governance. During the pandemic, different institutions adopted policies and all were implemented policies that were formulated by the national government without the participation of the stakeholders. The lack of cooperation in the formulation of the relevant policies led to policies with reduced efficiency.

Territorial Recommendations

In the case of Athens, the proactive policies were not relevant to territorial issues or spatial planning. However, the pandemic brought to the fore the viability and resilience issues that relate to large and densely populated areas. Policies about the preservation of the quality of open public spaces, as well as the mobility patterns should be more closely assessed.

Financial Recommendations

Since no new or innovative funding instruments were introduced to deal with the current pandemic in Attica, it would be of great importance to create such a tool for the management of future crises. The increasing uncertainty regarding a possible new pandemic shortly, combined with the disruption of the global and national-regional economic activity caused by the COVID-19 pandemic makes this an imperative task. It would be very useful to have the means and know-how to retain socioeconomic stability and cohesion in the future, since there are plenty of lessons to be learned from the COVID-19 crisis.

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