

2021/3

TESEV
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COVID-19 and Data-Driven Urban Resilience Policies

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Introduction and Background

The COVID-19 pandemic which first broke out in Wuhan, China on 12 December 2019, caught the humankind off guard. On 11 March 2020, the coronavirus outbreak was declared as a “pandemic,” i.e. a global epidemic, by the World Health Organization (WHO). The pandemic has unexpectedly shaken economic and social life and deeply affected public health both mentally and physically. All over the world, people have tried to protect themselves from the negative effects of the pandemic by locking themselves down at their homes. International import and export have stopped, and there have been hardships in access to basic necessities such as food throughout the world.

The process of COVID-19 pandemic has once again revealed the significance of urban resilience in the face of sudden crises. At the beginning of the pandemic process, many cities endeavoured to minimize the possible negative effects of the crisis by developing ad hoc crisis management strategies in response to the emergent conditions and needs resulting from pandemic. As the pandemic process has taken longer, urban life has been seriously affected in economic, social and environmental terms; local governments have also begun to develop new policies to restructure the cities so as to adapt to the



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changes faced. Since March 2020, when the first coronavirus case was detected in our country, Argüden Governance Academy and the municipalities of Sultanbeyli and Maltepe have started to work in order to determine the primary needs of citizens and to meet these needs as rapidly and effectively as possible. The fact that Maltepe and Sultanbeyli municipalities previously conducted a joint study within the scope of the Urban95 program which carried out by the Bernard Van Leer Foundation and of which TESEV was among the partners, positively affected the quality of this research and enabled the study to proceed faster and more effectively.

Within this scope, the data of the activities carried out to combat COVID-19 were analyzed, the findings of the researches conducted to determine the psychological, sociological and economic effects of the pandemic process throughout the country were examined and the needs of citizens were tried to be estimated. However, since these studies proved limited in determining the needs of the people within the governmental boundaries of both municipalities, it was decided to conduct field studies at the local level.

Field studies consisted of six stages in both municipalities. In this context, surveys were conducted for workplaces, households,

in-house and external stakeholders, and interviews were made with institution directors and external stakeholders. Carried out simultaneously and with the same methods in the two municipalities, this study aimed to determine the effects of the coronavirus pandemic that has taken hold of our country as of 11 March 2020 on the workplaces, households and institutions in Sultanbeyli and Maltepe and to put forward recommendations for the municipalities to increase urban resilience in the face of all sudden or expected dangers. In this brief, the results and findings of the aforementioned research will be presented and the action recommendations for local administrations so as to increase urban resilience will be shared.

Social and Economic Effects of the Pandemic on Urban Life

Since it is caused by a virus that is transmitted from person to person and has a high contagion and mortality rate, there is no doubt that the COVID-19 outbreak has mostly affected people living in cities. In order for a local administration to make a data-driven decision, the factor that is primarily affected by the pandemic, namely the human factor should be examined and be informed about. For this purpose, Maltepe and Sultanbeyli municipalities first conducted a research on

households that were most widely exposed to the pandemic. In addition, in order to assess the economic effects of the pandemic, an economic impact study was conducted for the workplaces that were engaged in commercial activity within these districts.

In the economic impact research, it has been revealed that during the coronavirus pandemic process the monthly turnover of the trades people decreased more than 80% compared to the average of both districts. In the research, it has been observed that most of the workplace owners did not prefer destaffing and it has been revealed that on average 39% of the participants anticipated that the coronavirus effects would last more than one year. In both districts, it has been determined that short-time working allowance applications are made for 1 in 4 of all employees. Accordingly, in the household survey, while an average of 31% of the citizens living in the two districts stated that their household income decreased, 22% of them stated that their household income decreased dramatically. This situation shows that there is an economic parallel between the two studies. In the same way, during the COVID-19 process, it has been observed that the applications made to both the municipality and other public institutions for economic reasons have increased or decreased in parallel with the

regional economic development level. In this case, considering the economic effects of the pandemic, it can be said that the low-income segment of the society has become even more disadvantaged in the process.

Pandemic-Induced Changes in Urban Spaces

The pandemic has greatly affected the cities as much as the citizens. In the regions of the city with a low income profile, the pandemic problem has been increasing due to the repercussions of economic problems on the space. First of all, these regions turn out to be places where social distance is reduced due to such reasons as the scantness of common area per person; where there are fewer recreational areas such as parks, green areas, children's playgrounds and sports areas compared to the places inhabited by the wealthy, and where there is more intensive and widespread use of public transportation, factors all of which increase the rate of spread of the pandemic. In addition, since the low socioeconomic level often brings along a low level of education, it can be concluded that the slower spread of knowledge-based methods of combating the pandemic increases the risk of pandemic spread.

Another aspect of the impact of the pandemic on economic life can be traced in its effect on

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the working styles of blue-collar and white-collar workers and the changes it has made in this sense. In March 2020, when the pandemic first broke out, and in the following lockdown periods, the white-collar segment was able to apply home-working methods and partly succeeded in this. Some of these methods proved so successful in this regard that it has become no longer surprising to hear big companies declaring that they will continue to work from home even after the pandemic. In the urban economy, the costs and even the presence of supportive activities such as large and flashy business centers, luxury office buildings, food and beverage sectors, meeting and congress centers which are located in the central areas within the scope of the classical site selection criteria of the service sector have all become questionable. The fact that employees have been encouraged to work from home due to the reductions in office costs, that this has relieved the burden of urban transportation and that the need for urban infrastructure has displayed a more balanced distribution from the city center to the periphery in parallel with the geographical location of economic activities have undoubtedly enabled steps that will change the approach to urban planning in the long term to be taken.

Similarly, the increase in online shopping for reasons of protection from the pandemic has started to change the habits of selection among marketplace sites such as shopping malls, supermarkets and bazaars where economic exchange takes place face to face, bringing the urban sites where commercial activities are located and therefore the unearned income arising from these sites into question. However, the changes that have proved so radical for white-collar workers have not been observed among blue-collar workers at least in Istanbul in general and Maltepe and Sultanbeyli districts in particular, which were examined within the scope of the research. In the industrial areas where labor-intensive industrial production is dominant, since the production has not yet reached the level of 4.0, dependency on the physical existence of the worker has not been eliminated, and the remote working infrastructure in the service sector has not been established at the same speed. This situation may give way to faster spread of COVID-19 among blue-collar workers with low socioeconomic status for they have to leave their home to go to work, rendering this group all the more disadvantaged.



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Problems Encountered by Local Administrations and their Stakeholders during the Pandemic Process

The Institutional Impact Research, which is an important part of the same study, aims to identify the institutional effects of the pandemic on these two municipalities and to create an institutional memory about the experience of the pandemic process. Within the scope of this research, the participants were asked questions about their way of action at the beginning of the pandemic process, their activities as a directorate, the units they cooperated with, their communication with senior management, their level of utilizing digital communication channels, their weaknesses and strengths in crisis management, their personnel capacity, financial capacity, the competence of their information infrastructure, their status of cooperation with external stakeholders, and the status of data retention and data exchange. The sample of the study consists of directors of the two municipalities and 528 personnel. A great majority of the units in both municipalities stated that they were caught unprepared for the pandemic process. During the first 10-15 days of the pandemic process, the units had difficulty in both adapting to

the new conditions brought about by the fight against the pandemic and reorganizing routine works in parallel with the process. However, after the first shock was over, it has been observed that most units have been able to establish their own working system within the framework of a certain planning. One of the main concerns among the institution personnel during the pandemic process has been the risk of virus transmission by their colleagues who are in direct contact with citizens in the field. The general opinion on this issue is that all personnel working in the field should be regularly tested for COVID-19. At the same time, it was stated that the new conditions brought about by the pandemic process necessitated a set of in-house regulations. It was emphasized that there should be an effective crisis management within the institution in the face of pandemic processes and similar emergencies. It was stated that institutions should have an effective strategy for combating disasters and epidemics, and that certain measures should be taken in line with this strategy. The units stated that during the pandemic process they extensively cooperated especially with the directorates working in the field. Almost all of the unit directors and personnel stated that they were able to communicate effectively with the executives, to convey their requests to higher authorities

easily and to get quick feedback. In this sense, municipal staff finds both municipalities successful in crisis management.

When the fast spread of the epidemic has made it impossible to hold face-to-face meetings, meeting organizations have begun to be carried out on digital platforms. In this process, the most widely used digital platform by the municipalities has been the Zoom application. It has been observed that phones and the WhatsApp application have been more frequently used in and among units. By switching to the remote working system within technological possibilities, the works have been carried out through online programs. Yet due to the insufficient number of technological devices needed for remote work, such as laptops and the fact that some operations such as citizen applications could not be performed through online platforms, some of the directorates could not switch to remote working systems. It was stated that although there were the problems of insufficient personnel and digital infrastructure, the processes were carried out without interruption with the cooperation among units. Due to the fact that public procurement procedures hindered quick action in crisis situations and that the companies acted cautiously owing to the imbalances in the exchange rate, the provision of technological

products was disrupted and there were difficulties in meeting the technological needs of the units. Due to the decrease in the uniform tax payments, there occurred serious decreases in the financial transfers to the municipalities through the provincial bank. That the citizens had difficulties in paying taxes owing to their financial troubles during the pandemic process gave way to a parallel decrease in the revenues of the municipalities. In order to maintain the budget balance, municipalities implemented fiscal discipline policies by postponing investment projects and large purchases. The importance of communication and cooperation among institutions during the pandemic process has been emphasized, and it has been observed that the involvement of CSOs, mukhtars and volunteers in the process are facilitating factors in both the execution of services and transactions and the raising public awareness.

The pandemic process has shown how important data-driven decision-making strategies are. Data acquisition and analysis and the implementation of data-driven service policies provide efficient production of services by saving resources and time for municipalities. Recommendations have been developed in line with the data obtained from the joint research conducted by both municipalities.

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In line with the findings obtained from the investigation of the impacts of the COVID-19 pandemic on workplaces, households and institutions, the urban resilience level of the municipalities was evaluated and activity proposals were developed for municipalities to increase their urban resilience in the face of potential future crises. The research results and recommendations are collected under these 9 headings: crisis management, technological infrastructure, personnel management, financial management, data management, participation, health, social support and accessibility, education and awareness raising.

Data Management: The pandemic process has revealed that data management is an important part of combating the crisis. In this process, determining the needs rapidly and developing a functional institutional response mechanism against sudden problems can only be possible by the regular collection and evaluation of the data.

Crisis Management: Crisis is an adverse situation occurring at a totally unexpected moment, which affects the current and future condition of a mechanism and against which people are generally late to take measures. Crisis management, on the other hand, involves the creation of threat scenarios and of steps of preparation, intervention and evaluation in order to prevent adverse situations threatening

human life (i.e. global warming, earthquakes, water scarcity, deforestation, floods, etc.) from turning into a crisis. The COVID-19 pandemic, which has brought about many unexpected and unforeseen problems, has once again revealed the importance of crisis management. The economic, sociological and psychological effects of the pandemic have made it necessary for all institutions and organizations around the world to review their ways of action. During this period, many institutions have prepared action plans to combat the crisis and have needed to share their experiences with other institutions in order to take quick decisions and actions in the face of an unknown danger. During the pandemic process, information flow among institutions has been provided via newly-formed online platforms, and having suspended their routine work flow, the institutions have used their financial and human resources to combat the crisis.

Technological Infrastructure: Since public institutions and businesses have shifted to working from home, meetings have begun to be held over online platforms and remote education has started to be implemented with the outbreak of the coronavirus pandemic, there has been a great increase in the demand for laptops. Accordingly, the need for equipment such as webcam and microphone headset required for remote



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work and education has increased. Since many people cannot leave their homes due to the risk of infection, transactions such as shopping, payment, application, etc. have begun to be carried out via digital platforms. While institutions with a good IT capacity have adapted to this process, institutions lacking technological infrastructure and equipment have experienced more intense problems such as unplanned operation, increased workload and disruption in services offered to large masses.

Personnel Management: The new conditions brought about by the COVID-19 pandemic have required public personnel to maintain their physical and mental health in the face of the uncertainty of the crisis process and the threat to health. In addition to this, as a result of the accumulation of workload in certain areas, public employees were expected to adapt to work in different fields in a short time. This experience has confirmed that personnel management is an important part of combating the crisis.

Financial Management: In the pandemic period, the considerable reduction in the activity of certain sectors (such as accommodation and food services) or cessation in others (as in airline transportation) as a result of restriction measures in the face of pandemic;

the increase in food and medical supplies expenses, and the allocation of financial resources for economic support packages have brought additional costs to Turkey's economy. In our country, local administrations have also needed to reorganize their budget items in order to provide disinfection services and to meet increasing demands for social aid.

Participation: Participation is the involvement of all parties affected by decision-making and services in the very processes of decision-making and service development. It ensures the participation of all local actors qualified as stakeholders in decision-making mechanisms to develop more effective local policies. For this reason, the effective management of crisis situations can be achieved through participation. The necessity of meeting the needs arising from the COVID-19 pandemic in a short time has necessitated the consolidation of cooperation among the public and private sectors, academia and CSOs.

Health: The COVID-19 pandemic has emerged as a global crisis threatening public health. Throughout the pandemic process, the physical and mental health of millions of people, especially individuals over age 65 and with chronic diseases was adversely affected. That local governments have organized online and free social and cultural activities to improve

the mental health of citizens is considered as an alleviating factor in this difficult situation.

Social Support and Accessibility: Accessibility means that any product, service, technology or environment is accessible and usable by everyone including the disabled and the elderly. The access of disadvantaged groups to services such as education, health, culture, etc. in urban life is supported by social support activities. The conditions brought about by the COVID-19 pandemic particularly put disadvantaged groups in a difficult economic position. At the same time, due to the economic bottleneck, the pandemic process has led to further growth of disadvantaged segments.

Education and Awareness Raising: During the pandemic process, the need to provide that citizens act without panic, to adopt and spread preventive rules against the pandemic throughout the society and to raise awareness about social supports have brought public awareness activities to the fore.

Final Remarks and Conclusion

As a result, like all other public institutions in our country and throughout the world, our local administrations, which are yet at the stage of consolidating their policies on urban resilience, have been caught unprepared for the pandemic. This situation has revealed the

importance of establishing a data culture in institutions and making data-driven decisions. It has also revealed that only in this way can a healthy and appropriate assessment and evaluation system be achieved, for otherwise, crises cannot be managed in the face of uncertainties and unforeseen situations.

At the end of the process, it is understood that the effects of the crisis on our institutions can be briefly examined and evaluated under 4 main topics. These topics can be listed as the effects of COVID-19 on the city, on the citizens, on local administration employees and on local decision-makers.

Although the pandemic has directly affected public health, the most striking effect on urban dwellers has been the economic one, and both workplace and household surveys revealed that heavy economic losses were experienced in both regions during this period. In the very process, the income of the trades people decreased significantly, and in parallel, the income level of the households decreased, bringing along increased financial hardships.

Secondly, the cities have been adversely affected by this economic depression and the usual urban dynamics have had to be adapted to the new economic and physical conditions brought about by the pandemic. Especially with the changing remote working conditions

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of white-collar employees, the criteria for urban transportation and site selection for the third sector have gained a different dimension. In this regard, the blue-collar and relatively poorer segments of the population have risked their health more by having been exposed to risky public transportation and working environments for they could not benefit from the opportunities such as remote working. In this process, although turning to healthier transportation ways such as cycling and pedestrian transportation seems to be an appropriate solution, compelling geographical and weather conditions as well as long driving distances render this alternative ineligible.

When the effects of the pandemic are evaluated in terms of local administration employees, it appears that a differentiation similar to the blue-white collar distinction seen in the city in general has also been observed in municipalities. Those working in field services such as cleaning, infrastructure, parks & gardens and municipal police have been the working groups more adversely affected by the pandemic. It has been detected that the personnel who could work from home in the municipality switched to the remote working model, but this transition period slowed down due to the lack of technological infrastructure. In service models that necessitate contact with citizens, it is revealed that risks were tried to be eliminated by working in shifts, but the personnel did not feel safe enough. It can be considered as a positive result that the

personnel in both institutions contributed to the overcoming of the process in the safest and most efficient way for themselves, for the citizens and the institution by working devotedly, and that they did their best to do so.

When the relationship of local decision makers and stakeholders with municipalities is examined, it has been revealed that overcoming a crisis process depends on improving institutional and inter-institutional communication skills, and besides the importance of putting data sharing and utilization strategies into practice in line with a plan by predetermining them in crisis management has been understood. If this planning is designed under headings such as crisis management, technology, personnel management, financial management, data management, participation, health, social support and accessibility, education and awareness raising, it will be an important step towards having strong and resilient cities that can make data-driven decisions in potential future crises.

In conclusion, thanks to the fact that the study was carried out with the same methods with the collaboration of the two municipalities, it was ensured that the problems were compared and the solution proposals were diversified, it was seen that the two municipalities became stronger thanks to their collaboration, and it was revealed that similar collaborations should be established in future studies.

How to Cite:

Aktaş, Mehmet and Keşan, Bahadır. 2021. "COVID-19 and Data-Driven Urban Resilience Policies" *TESEV Briefs* 2021/3.

<https://www.tesev.org.tr/en/research/covid19-and-data-driven-urban-resilience-policies/>

This brief was translated from its Turkish [original](#) by **Emine Ayhan**.

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TESEV would like to thank the Bernard van Leer Foundation for their support for this publication.

