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THE EFFECTS OF THE COVID-19 OUTBREAK ON THE LABOR FORCE MARKET

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Abstract

Overall, the direct effects of the Coronavirus (COVID-19) outbreak include death and incapacity, while the indirect consequences are quarantine measures, travel restrictions, and social distancing. All of these aspects also have significant impacts on the labor force market. Thus, the present study investigates the direct and indirect effects of the COVID-19 outbreak on the labor force market based on macro indicators (i.e., population size, working and nonworking age population, dependency rate, labor force participation rate, the composition of the labor force, and occupational mobility) as well as micro indicators (i.e., work environment, working hours, working patterns, division of labor, occupational health and safety, leave periods, and absenteeism). According to the findings, since quarantine measures and travel restrictions have limited the mobility of the labor force, there has been a decrease in the labor force participation rate in many countries. Moreover, although a significant proportion of those who die from COVID-19 are not of working age, a considerable number of those infected are in this age range, which has impacted the labor force market. It is hoped that the findings of this study can be used as a starting point for future research on COVID-19 and its economic ramifications on society as a whole.

Keywords: COVID-19, labor force, labor force market, working conditions, social distancing

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Introduction

Companies and the economically active population have been attempting to eliminate the negative consequences of the outbreak for a while. To close the company or to be able to sustain its economic activities; to be able to commute to work, or to be able to do his work while trying to protect himself and his family from the virus, to be unemployed or having risk to be unemployed at any time; to think that they have a job even though they do not have a job; to find a decent job in an environment where economic activities have come to a standstill or to give consent to the employer's wishes, to continue living when factor income declines or ceases, or to be in misery are the situations that experience of many people in the world right now. Meanwhile, the direct (e.g., death and incapacity) and indirect (e.g., quarantine measures, travel restrictions, and social distancing) effects of the COVID-19 virus and outbreak that had significant impacts on the labor force market will be evaluated. Thus, the present study investigates the effects of the COVID-19 outbreak on the labor force market based on macro indicators (i.e., population size, working and nonworking age population, dependency rate, labor force participation rate, the composition of the labor force, and occupational mobility) as well as micro indicators (i.e., work environment, working hours, working patterns, division of labor, occupational health and safety, leave periods and absenteeism).

Population Size

In order to understand the effects of the COVID-19 outbreak on population size, it is important to determine the number of people who have, to date, died from the virus. Although 0.005% of the population of Turkey have lost their lives outbreak-induced (Worldometers, 2020), the loss rate in the population will be larger than the deaths attributed to COVID-19 alone (Demir, 2020, p. 1). While the process is not over yet, when compared to the 1,240,000 people who lost their lives in 2017 due to car accidents (Ritchie & Max, 2020), the death toll of more than 300,000 from COVID-19 (Worldometers, 2020), which is still very striking. This figure is even more relevant when considering that the number of deaths from occupational and traffic accidents has dropped due to the travel restrictions in the regions where production activities have either stopped or slowed down.

Besides the direct effects of the COVID-19 outbreak on population size, there are indirect effects too. For example, on the one hand, the stay-at-home restrictions may increase birth rates over the short term, but on the other hand, the decrease in social activities and postponement of engagements/marriages may decrease birth rates. Either way, the results of

such actions on the working age population and the labor force can be discernible over the next 15 to 20 years.

The impacts of the outbreak on the labor force are much more paramount than the effects of the numerical change originated from the change in the amount of outbreak-induced population on the labor force. It can be said that the numerical effects of the outbreak are more about the seasonal effects and the consequences of these effects on issues such as job, work, employment, unemployment, etc.

Working and Non-Working Age Population

When the distribution of COVID-19 cases by age and gender is examined (see Figure 1),[1] the rate of infection for both genders generally increases until the 60–64 age interval (except for the 35–39 age interval), and then decreases until the 80–84 age interval in women and 85+ age interval in men. At this point, there is a dramatic spike in the number cases, especially among the females in the 85+ age group. Overall, the rate of infection among the females is higher than that among the males, except for the 0–14, 35–39, and 60–79 age intervals.

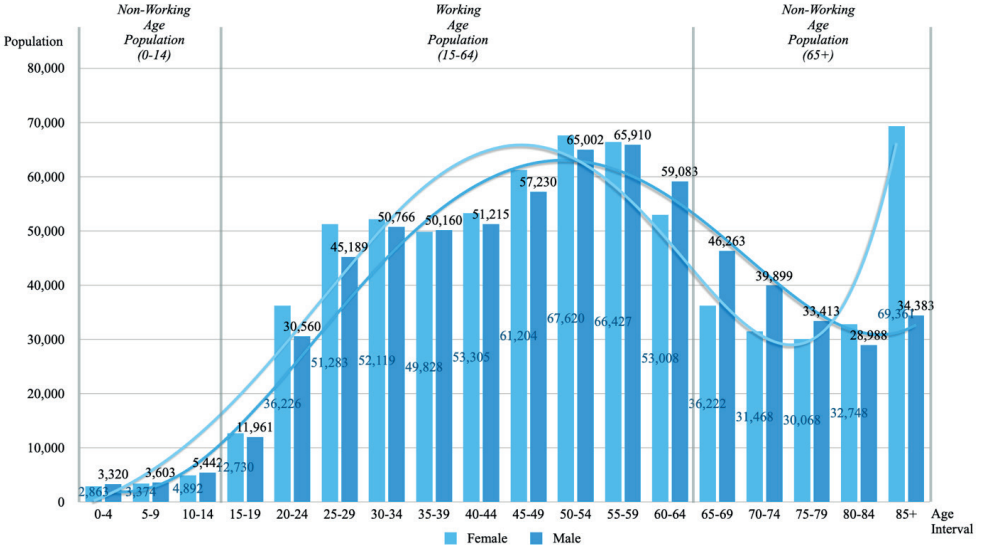

Figure 1. Distribution of COVID-19 Cases by Age and Gender [Based on UN Women (2020)]

In addition, the vast majority of infected individuals are of working age; and women constitute a significant part of them, except for the 35-39 and 60-64 age intervals. This will have a significant effect on work attendance if they are employed, on job search if they are unemployed, and how do they realize the work attendance if they are considering joining the labor force.

1 As of 7th of May, this figure represents 38% of the cases in 125 countries.

There is currently a consensus that COVID-19 can result in death among all age groups, including the elderly and those with weak immune system and/or chronic diseases (International Diabetes Federation, 2020). Based on this account, it can be stated that those who will recently leave the working age population or who have before left are more likely to experience virus-related deaths than those in the 0–14 age group those who had not yet entered the working age and those who will not leave the working age population in the short term. As shown in Figure 2, the fatality rates due to COVID-19 are very low in the 0–14 and 15–64 age groups, whereas they dramatically increase in the 65+ age group.

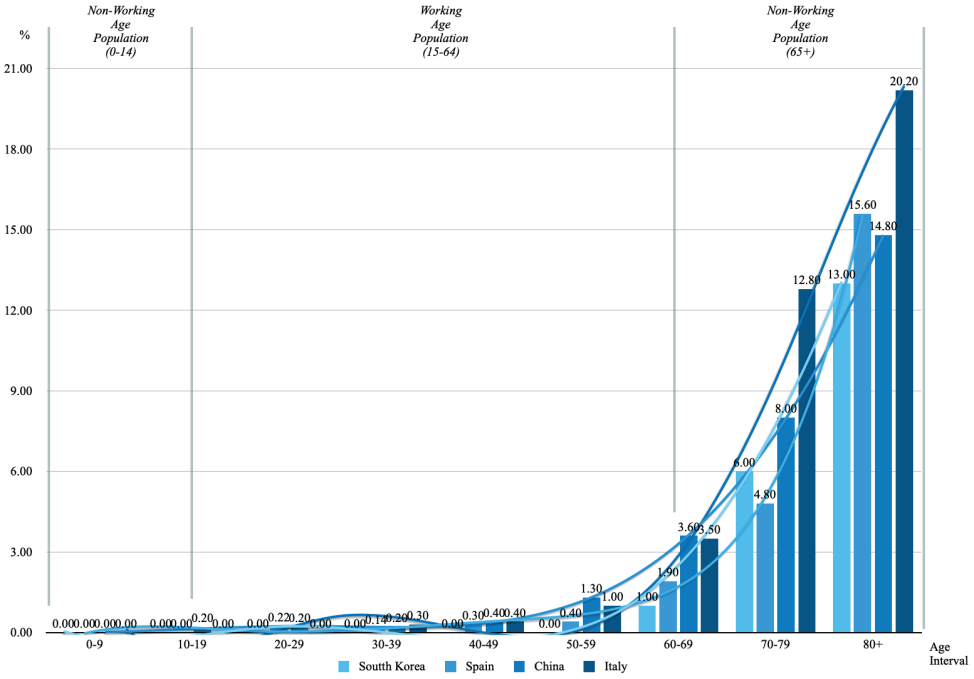

Figure 2. Distribution of COVID-19 Fatality Rates by Age Intervals [Based on the data2 in Roser, Ritchie, Ospina, & Hasell (2020)]

Dependency Rate

Considering that COVID-19-related deaths are concentrated on the elderly, it is possible to conclude that there will be a decrease in the "general dependency ratio", which is defined as the ratio of the young (0–14) and older (65+) population to the working age population (15–64). In terms of the "youth dependency ratio", which is defined as the ratio of the nonworking age population (0–14) to the working age population (15–64), it can be stated

2 Based on the confirmed cases and deaths for South Korea and Spain (as of March 24, 2020), and those for China and Italy (as of March 17, 2020).

that there will be an increase in this ratio, assuming that there are no changes in other factors. This means that the post-outbreak declining working age population will provide care for the younger population that decreases less than themselves. As for the "elderly dependency ratio", which is defined as the ratio of the non-working age population (65+) to the working age population (15–64), it is possible to conclude that there will be a decrease in this ratio, under the assumption that there are no changes in other factors. This indicates that the elderly population, who generally pays less taxes and requires more state support (Economics.Help, 2000), will decrease during the outbreak, while the working age population will provide care for the elderly population that decreases more than themselves.

Labor Force Participation Rate

Since it takes time for official labor force market indicators to be published, the data about the outbreak period regarding labor force participation rate is somewhat limited. However, as of March 2020, the labor force participation rate decreased by approximately 7.5% in India (Vyas & Aiyar, 2020), 0.7% in the United States, 0.31% in Australia, 2.0% in Canada, 1.6% in Sweden, 0.4% in Thailand, and increased 0.1% only in Finland, there were no changes in the Netherlands (CEIC, 2020). The increase in the number of unemployed individuals who do not seek work indicates a predictable relationship between unemployment and the labor force participation rate. For instance, previous research has shown that a sustained 1-point increase in the unemployment rate can reduce the labor force participation rate by 25% to 50% (Aaronson, 2020). This would mean acknowledging that some of those unemployed have stopped seeking work and left the labor force. Meanwhile, a related survey that does not consider those unemployed who are not seeking work has found a smaller increase in the unemployment rate in response to a higher decrease in the labor force participation rate (Coibion, Gorodnichenko, & Weber, 2020, p. 6).

It has also been reported that many individuals who joined the labor force before the COVID-19 outbreak have left their jobs to avoid infection (Bilefskyi, 2020). A significant portion of those who have the right to retirement have been observed that they no longer want to join to the labor force with the psychology brought by the outbreak (Coibion, Gorodnichenko, & Weber, 2020, p. 5). It is also possible that those who could not find a job for a long time may give up their desire to join the labor force during the outbreak.

The decrease in the labor participation rate shows that the social distance increases the leaving out of the labor force. Access to unemployment benefits having been made more difficult in the crisis has resulted in people preferring leaving the labor force instead of

becoming unemployed, which in turn results in lower labor force participation rates. The fact that a situation where job searching is not enough for the unemployed to receive benefits (Aaronson, 2020), it also makes worthless how they identify themselves.

The Composition of the Labor Force

As shown in Figure 2, the COVID-19 fatality rate is higher in the older ages. Therefore, fatality rates are higher in the part of the population which will leave the working age in a short period. This indicates also that the median age of the working age population will decrease over time.

In addition, the fatality rate among males tends to be higher than that among females (Roser, Ritchie, Ospina, & Hasell, 2020). Although such data in Turkey has yet to be obtained, some data is available from other countries. For instance, COVID-19-related deaths among males (60–90 years of age) in Germany have been reported to be higher than those among females (Robert Koch Institut, 2020, p. 4).

Labor Force Mobility

The travel restrictions aimed at containing the outbreak have not only impacted those who are employed, but impacted also the unemployed and those considering joining the labor force. Consequently, it can be expected that the labor force will shift from the branches of activity that are struggling against the crisis to the branches of activity that are booming (Stop The Traffik, 2020).

Quarantine precautions and travel restrictions limit commuting of employees that do not exceed the time or distance threshold that is not evaluated under the geographical mobility. They also make an impact on the mobility (e.g., regional, sectoral, branch of activity or workplace) of unemployed and employed who are seeking a new job even they have it. This also applies to individuals who have not yet joined the labor force, but are considering joining.

The aforementioned precautions and restrictions may also limit the geographic mobility of employed persons who are exceeding the time or distance threshold to have a new job (e.g., seasonal workers) or commute from a long distance. (Productivity Commission, 2014, pp. 10, 12). In particular, the overlapping of travel restrictions with planting and harvesting seasons and inability to meet labor demand in agriculture have negatively affected the incomes of seasonal workers and their families, who are already living under the lowest living conditions (FAO, 2020, p. 2).

Doing the work at a distance or at a closer distance than before is also evaluated within the scope of geographical mobility. During quarantine precautions, it is not the situation of the employees commuting to work, but the situation where the job is brought by the employer to the employees will mean the full realization of geographical mobility for these persons.

While the outbreak plays a limiting role in the labor force's occupational mobility due to travel restrictions, it also offers a number of opportunities for the labor force by means of remote vocational training. During the outbreak, those who cannot commute to the workplace or work at a distance may evaluate the leisure time productively to realize desired occupational mobility.

The ongoing situation may also be used to protect disadvantaged groups and to make the necessary changes for them. It is emphasized that the education and training opportunities developed for the labor force will facilitate their transition from precarious jobs to secure employment, which offers more stable and better protection (Durant & Pamela, 2020).

Again, the sense of occupational burnout that occurs in some professions during the outbreak (OH&S, 2020) can play a driving role for them to perform their occupational mobility. It is seen that companies focus on digital-based training programs, rather than in-service or on-the-job training, both in recruitment and in the working process (Meister, 2020).

Work Environment

The trend that has become widespread in recent years is the open-office model in which the majority of employees work together in the same work environment (Singh, 2017), except a limited number of employees, such as managers, assigned to private offices. However, according to a recent survey by McDowell (2020), 52.9% of Americans reported that open offices will cause an increase in COVID-19-related infections, while 41% stated that open offices will become "infection beds". In this regard, based on the recent advancements in computer and telecommunication technologies, there may be radical changes in office design patterns, including placing employees' work areas certain distances away from one another and limiting the number of employees in small and enclosed areas.

Working Hours

According to the International Labor Organization (ILO, 2020), the number of working hours will decrease by 6.7%, which corresponds to 195 million full-time jobs. This decrease will be due to unemployment, furlough, disrupted public transportation (delaying employees' commutes to work), and changes in work schedules (Maidenberg, Cutter, & Feintzeig, 2020).

Regarding the labor force, this will ultimately result in an increase in time-based underemployment. Aside from those who work in registered sectors, those working in shadow sectors will feel the greatest impact of such underemployment (FAO, 2020, p. 1). Conversely, in workplaces where economic activities improve, employees are forced to work overtime or to perform additional shifts to keep up with the demand (Stop The Traffik, 2020). According to the World Health Organization (WHO, 2020a, p. 1), one group that will be significantly affected by such conditions is healthcare workers.

It can also be said due to decreases in the frequency of public transport vehicles, the necessity of complying with the social distance in public transportation vehicles, fewer people' being able to ride on to the public transportation vehicle, etc. the difficulties in commuting to work have led to delays in troubles reaching to the workplace can also contribute to the decrease of the working hours of the labor force.

Working Patterns

Even though there are currently no travel restrictions regarding employees' commutes to work, the risk of exposure to COVID-19 during such travel or while working in a closed environment has led employers to work their employees at a distance. This type of work, which is known telework in Europe and telecommuting in the United States (Erdem, 2004, p. 51) and point out whether the work is done at a distance or remotely using information and communication technologies (Alastair, 1994, p. 1) has been performed by employees for many years.

The outbreak has been particularly challenging for employers who have never offered this work option. In fact, it is not possible to say that employers and employees were prepared for transitioning to this working pattern, which normally should have started and experienced as pilot projects beforehand.

Even though the salaries/wages remain the same, employees working from home still have to use their own computer equipment, pay for their higher electricity bills, and work long hours to complete certain projects (McKeever, 2000; Erdem, 2004, pp. 157-163).

Although it allows working during an outbreak, the possibility of performing some of the professions by teleworking is quite difficult. The efficiency of teleworking is extremely low, especially for professions that require physical contact such as a doctor, nurse, hairdresser (Morikawa, 2020). Thus, telework is an important opportunity for some to be able to work at a distance during the outbreak, it is a way of working for others who would not be able to experience due to the nature of their work.

Despite its many advantages, working from home can be difficult for some employees, due to various adaptation issues such as maintaining a solid work schedule in the home office, dealing with the family and children, and achieving a healthy work/life balance (Erdem, 2004, pp. 75-86). For those who started working at home for the first time, we can say that working at home will be as difficult as adapting to quarantine conditions.

Division of Labor

In general, the online capabilities of companies have played a key role in sustaining their economic activities during the COVID-19 outbreak. In this regard, it is possible to conclude that those who have been the least impacted by the outbreak are online employees (Erdem, 2004, pp. 101-102). Interestingly, the labor force has been further divided into online (i.e., working from a distance or telecommuting) and offline (i.e., working at a specific location) workers during this period. This recent classification of jobs is similar to the sharp differentiation between white-collar and blue-collar workers (Torry, 2020). Although more data is necessary to generalize the impact of this outbreak on the division of labor, it can be predicted that certain changes will be made by employers once they evaluate the productivity of these two types of workers. Additionally, it can be expected that job delays caused by the difficulties of commuting to work during the outbreak will also contribute to mandatory changes in the division of labor.

Occupational Health and Safety

While a lot of employers encouraged their employees to work at home in the process and even offered paid leave for those in quarantine, there were also others who waited for their employees to come to the workplace and continued to work despite the outbreak (McDowell, 2020).

Despite the increase in the number of occupational health and safety guidelines during the COVID-19 outbreak (Unite the Union, 2020), the obligation to work in person during the outbreak not only risks the health of the employee and his/her family, but also risks the health of other employees and their respective families. In this regard, employers should not only ensure that their employees are protected in the workplace, but they should also prevent sick employees from coming to work (World Economic Forum, 2020a).

The qualitative consequences of this outbreak on the labor force are loss of skilled workers due to outbreak-induced deaths. In particular, police officers, firefighters, childcare workers, adult care workers (World Economic Forum, 2020a), and healthcare workers who are in close

contact with people on a regular basis are more likely to become infected (WHO, 2020b, p. 1). In addition, female healthcare workers have twice the probability of being infected, compared to their male counterparts (UN Women, 2020). In addition; the long work hours, exhaustion, occupational burnout, disease symptoms, and physical and psychological pressure (WHO, 2020a, p. 1) make their working conditions more arduous.

As for occupational health and safety in Turkey, many aspects need to be addressed in workplaces. For example, there is a need to ensure the hygiene of the work environment by conducting health checks at both the entrances and exits. In addition to this, Occupational Health and Safety Boards should be convened at workplaces, and measures should be taken to raise awareness of the occupational health and safety issues during this outbreak.

Leave Periods

As stated earlier, the COVID-19 outbreak has made it difficult for businesses to sustain their economic activities, which has forced them to change their work schedules. In some cases, it has been reported that employees were either placed on unpaid leave (Weber, 2020), were asked to volunteer for unpaid leave (World Economic Forum, 2020b), or threatened with discharge when attempting to stay home due to quarantine measures (Singh, 2020). However, some employers, especially those in branches that did not see a drop in economic activities, gave their employees paid leave during the outbreak (McDowell, 2020). Regarding to the businesses in which the demand is increasing, administrative decisions should be made regarding annual paid leave and its related stipulations (Chapman, 2020).

Absenteeism

The fact that part of the labor force is infected from COVID-19 has resulted in an increase in absenteeism, especially in close-contact fields such as healthcare, public services, and cosmetology (Oddone, 2020). Meanwhile, the closures of schools, due to social distancing practices, have also led to an increase in absenteeism, as some parents had to stay at home to care for their children. For example, in one study, it has been estimated that school closures will reduce the number of outbreak-induced deaths by 2% to 4% (Viner et al., 2020, p. 398). However, a related study found that this estimate does not take the increase in case fatality rates caused by the absenteeism of healthcare workers into account (Bayham & Fenichel, 2020, pp. 271-272).

Without a doubt, the way employers approach the childcare responsibilities of their employees during school closures will influence employees' absenteeism. In this regard, a

recent survey has found that 73.4% of employers allowed their employees to work in flexible shifts, 11.4% created specific communication channels for their caregiver employees to support one another, 5.4% provided stipends for child/eldercare, 3.3% organized supplies runs for employees in need (e.g., those at home who are unable to leave), 2.7% distributed surplus company computers to employees for their children's online learning, 2.3% provided childcare for essential workers (i.e., those not working from home), and 20.9% provided assistance via other means, whereas 14.5% offered no assistance (i4cp, 2020, p. 3). Depending on the nature of their work and assuming that there are no long-term online interruptions, a significant decrease in absenteeism of employees working from home can be expected.

Conclusion

The present study investigated the direct and indirect effects of the COVID-19 outbreak on the labor force market based on macro indicators (i.e., population size, working and nonworking age population, dependency rate, labor force participation rate, the composition of the labor force, and occupational mobility) as well as micro indicators (i.e., work environment, working hours, working patterns, division of labor, occupational health and safety, leave periods, and absenteeism). Firstly, based on the findings, since quarantine measures and travel restrictions have limited the mobility of the labor force, there has been a decline in the labor force participation rate in many countries. Secondly, although a significant proportion of those who die from COVID-19 are not of working age, the fact that a considerable number of those infected are in this age range, which has impacted the labor force market. Thirdly, the decreasing demand for goods and services has forced employers to decrease the number of working hours, require employees to take unpaid leave, and make pay cuts. Finally, although this outbreak is not over yet, it is hoped that the findings of this study can be used as a starting point for future research on COVID-19 and its economic ramifications on society as a whole.

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