

SNAPSHOT OF COVID-19 GLOBAL PANDEMIC AND ITS INFLUENCE ON LABOR MARKETS: EVIDENCE FROM ADMINISTRATIVE DATA IN TURKEY

KOVID-19 KÜRESEL SALGINININ İŐGÜCÜ PİYASALARI ÜZERİNDEKİ ETKİLERİNİN ANALİZİ: KURUMSAL VERİLER IŐIĞINDA TÜRKİYE ÖRNEĐİ

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Abstract

The main objective of the paper is to take the snapshot of Covid-19 infection and its dramatic influence on labor markets in Turkey as a whole. Coronavirus pandemic, which hit the world economy and labor markets in a devastating manner, has turned into a significant threat that shapes health concerns and economic activities at the same time. In a way, it forces people to make choices between their health and economic welfare, which is a big dilemma for all. It brings about quick infections as well as deaths pharmaceutically, and business lockdowns, unemployment growth, and job loses financially. It results in psychological disorders and it also changes industrial relations systems and the way of work. Frankly speaking, it is to be noted that it connotes a radical modification in everything and so this new case is called “new normal”. This paper attempts to uncover Covid-19 and its direct impact on labor markets for an emerging economy like Turkey on the basis of some certain criteria such as “unemployment”, “labor force participation”, “health insurance claims”, “employment outlooks”, “unemployment insurance coverages”, “social protection”, and “telecommuting”.

Keywords: Covid-19, Labor Market, Labor Relations, Unemployment

JEL Codes: J01, J08, J4, J6

Öz

Çalıřmanın temel amacı; Kovid-19 salgınının Türkiye iřgücü piyasası üzerindeki etkilerini derinlemesine incelemektir. Dünya ekonomisini ve iřgücü piyasalarını olumsuz etkileyen koronavirüs salgını, sađlıđa yönelik endiřelerle birlikte ekonomik aktiviteleri de řekillendirmesi yönüyle büyük bir tehdiđe dönuřmüřtür. Salgın, bir bakıma bireyleri sađlık ve/veya iktisadi refah arasında tercih yapmak zorunda bırakmaktadır. Bu durum herkes için büyük bir çeliřki oluřturmaktadır. Dolayısıyla bahse konu küresel salgın, bir taraftan sađlık açasından hastalıđın hızlı bir biçimde bulařmasına ve ölümlere neden olurken, diđer taraftan ekonomik anlamda iřyerlerinin kapanmasını, iřsizlik artıřlarını ve iř kayıplarını beraberinde getirmektedir. Ayrıca salgın, psikolojik sorunlara da yol aćmakta ve endüstri iliřkiler sistemlerini ve çalıřma biçimlerini deđiřime uğratmaktadır. Doğrusunu söylemek gerekirse; Kovid-19’un her řeyde köklü bir deđiřime iřaret ettiđi belirtilmekte ve bu yeni durum “yeni normal” olarak adlandırılmaktadır. Çalıřmada, “iřsizlik”, “iřgücüne katılım”, “sađlık sigortası” “iřsizlik sigortası”, “istihdam”, “sosyal koruma” ve “uzaktan çalıřma” parametreleri temelinde Kovid-19 salgınının geliřmekte olan bir ülke konumundaki Türkiye iřgücü piyasası üzerindeki etkileri incelenmektedir.

Anahtar Kelimeler: Kovid-19, İřgücü Piyasası, Çalıřma İliřkileri, İřsizlik

JEL Kodları: J01, J08, J4, J6

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1. Introduction

Labor markets are vulnerable to crisis regardless of its origin, which affect their stable natures and pose absolute threat for their sustainabilities. This can be economic crisis, political upheavals, social disorders, military interventions, financial disruptions and so forth (Schulze-Cleven, 2018: 46-73; Shalev, 1984: 362-386; Erne, 2013: 471-476; Quimby, 1967: 83-101; Cioffi and Dubin, 2016: 423-453; Brody, 1989: 7-18; Park, 2001: 61-75; Pagonis, 2013: 1517-1554; Streeck, 1987: 281-308; Ferreiro and Serrano, 2013: 567-574). This is absolutely the case for coronavirus pandemic that hit the world globally. It leaves the world in dilemma to make preferences between health and finance. Several studies and researches have been made to measure the impact of coronavirus on labor markets in different parts of the world (Bartik et al., 2020: 1-29; Juranek et al., 2020: 1-18; Bernstein, Richter, and Throckmorton, 2020: 1-23; Coibion, Gorodnichenko, and Weber, 2020: 1-13).

Historically speaking, it can be demonstrated that at the end of 2019, the first coronavirus outbreak seemed in the city of Wuhan in the Hubei province of China, which was called as the epicenter of coronavirus crisis later on (Caduff, 2020: 2). Initially, it was defined as new coronavirus (severe acute *respiratory* syndrome coronavirus 2, or SARS-CoV-2), but later on it was renamed as Coronavirus Disease-19 or COVID-19 (Qiu, Chen, and Shi, 2020 cited by Brodeur et al., 2020: 2). In the first half of 2020, the vehemence of the case became quite clear and it was understood that the virus was infectious and fatal. According to Johns Hopkins University Coronavirus Resource Center, there are over 43 million reported cases and more than one million reported deaths right now and the numbers have been surging day by day (<https://coronavirus.jhu.edu/map.html> Accessed October 27, 2020). That's why new restrictions as well as lockdowns are on the fore globally for declining the spread of infection. Some others are entirely against these sorts of restrictions due to economic and political concerns. In this blurring atmosphere, it is quite demanding to ask these questions for researchers especially for those, who conduct studies on labor markets in general: What are the possible impacts of coronavirus on labor markets and macroeconomic indicators? What will be the next for humans and labor relations system? Are social security systems and economies efficient and effective enough to fight against this virus and to protect their citizens' welfare? Do the labor market fragilities grow or terminate from a certain point? Is this the absolute time when the ways of work have been undergoing a radical transformation? Which sectors will be affected in a profound manner? Is this virus a stimulus for poverty increase? These questions go on and still wait to be answered. As a matter of fact, the main goal of the paper is to find some answers to these questions within the framework of Turkish economy and labor markets.

There are a great many studies that focus on the direct influence of coronavirus pandemic on labor markets. These kinds of studies have gained popularity since the infectious disease hit the labor markets in an overall way after closures and lockdowns had taken place on a local and global level. Bartik et al. (2020), Juranek et al. (2020), Costa et al. (2020), Forsythe et al. (2020), Huang et al. (2020), Cheng et al. (2020), Montenegro et al. (2020), Crayne (2020), Campello, Kankanhalli, and Muthukrishnan (2020), Lemieux et al. (2020), Rojas et al. (2020), Jain et al. (2020), Stevenson (2020), Kapoor (2020), Bernstein, Richter, and Throckmorton (2020), Coibion, Gorodnichenko, and Weber (2020), Brodeur et al. (2020), Jackson and Ortego-Marti (2020) conducted researches in parallel to this study and in the aftermath of Covid-19 outbreak. These studies are given as examples and this paper initiates to understand the pandemic effects upon labor markets by examining Turkish labor force and its labor market composition.

The paper proceeds in the following ways. In the first part of the study, conceptualization of coronavirus pandemic and its historical background is given. In the second part, related literature which gives solid theoretical background and statistical data is shared. As for the third chapter of the paper, the position and the precautions of Turkey from the beginning of this process are discussed and the data extracted from administrative centers of Turkish government like Turkstat, Iskur, and their international equivalents (e.g. OECD, Worldbank, Eurostat) is on the fore. The researcher has reserves for economy and he also interprets this dataset within the context of global trends and their possible influences on labor markets, which will draw a path for future researchers. The last part of the study includes discussions and implications.

The paper contributes to the literature in various ways. First and foremost, it presents a holistic labor market analysis for Turkish economy following Covid-19 and shares possible concerns and risks with their solutions. In a way, it is like a snapshot of TLMs' fragilities and strengths on the basis of "unemployment", "labor force participation", "health insurance claims", "employment outlooks", "unemployment insurance coverages", "social protection", "telecommuting", and so forth. Second, it is unique to suggest descriptive data obtained from administrative offices, which enable researchers, policy makers, investors to forecast some scenarios for future. Third, the research, which includes a comprehensive analysis, is a pioneer and the guide for sharing basic stylized facts upon TLMs.

2. Covid-19 Pandemic and Its Conceptualization

Pandemics are not novel in human life. According to the World Economic Forum Statistics (2020), they have been around since the emergence of history, which resulted in the deaths of millions and in divergent locations of the world (see Table 1). The thing that makes this era particular is that the world is more globalized through trade activities, transportation systems, digital technologies, production networks, education, technology transfers and so forth, which raise the interaction among humans. This creates a perfect atmosphere for infection (<https://www.weforum.org/agenda/2020/03/a-visual-history-of-pandemics> Accessed October 30, 2020). That's why, it needs to be noted that there has been a relative increase in the number of pandemics since 2000 and hereafter. Actually, this reality enhances the concerns for all (Madhav et al., 2017). As for Covid-19, which causes an acute respiratory illness in humans, it can be alleged that it is called a new zoonotic coronavirus 2 (SARS-CoV-2) (Zhu et al., 2020: 727-733).

Table 1: History of Pandemics in the World

Name	Time	Type	Number of Deaths
Antonine Plague	165-180	Smallpox or measles	5 million
Japanese Smallpox Epidemic	735-737	Variola major virus	1 million
Plague of Justinian	541-542	Yersinia pestis bacteria/Rats, fleas	30-50 million
Black Death	1347-1351	Yersinia pestis bacteria/Rats, fleas	200 million
New World Smallpox	1520-onwards	Variola major virus	56 million
Great Plague of London	1665	Yersinia pestis bacteria/Rats, fleas	100,000
Italian Plague	1629-1631	Yersinia pestis bacteria/Rats, fleas	1 million
Cholera Pandemic 1-6	1817-1923	V. cholerae bacteria	1 million and more
Third Plague	1885	Yersinia pestis bacteria/Rats, fleas	12 million (China and India)
Yellow Fever	Late 1800s	Virus/Mosquitoes	100.000-150.000 (U.S)
Russian Flu	1889-1890	Believed to be H2N2 (avian origin)	1 million
Spanish Flu	1918-1919	H1N1 Virus/pigs	40-50 million
Asian Flu	1957-1958	H2N2 Virus	1.1 million
Hong Kong Flu	1968-1970	H3N2 Virus	1 million
HIV/AIDS	1981-present	Virus/chimpanzees	25-30 million
Swine Flu	2009-2010	H1N1 Virus/pigs	200.000
SARS	2002-2003	Coronavirus/Bats, civets	770
Ebola	2014-2016	Ebolavirus/Wild animals	11.000
MERS	2015-present	Coronavirus/Bats, camels	850
Covid-19	2019-present	Coronavirus-Unknown (possibly pangolins)	1.181.108 (as of October 30, 2020)

Source: World Economic Forum (2020).

Note: Global statistics indicate that pandemics have been existent nearly from the creation of the earth, and their outbreak depends upon various factors. Sometimes, it can be a bacteria or an animal (e.g. rat, avian, mosquitoes, pigs) or it can originate from a special illness or a virus. The influences of pandemic can vary as well. They can appear in any part of the world and in different times. In addition, two things need to be noted. First and foremost, the intensity of pandemics has been surging as the world becomes too integrated. Secondly, they are fatal and deadly free from their timing and locations. It is most probable that humans encounter distinctive sorts of pandemics in the upcoming future, which will result from integration of the economy, culture and acceleration of social networks. Therefore, these pandemics, as seen from the last one called as Covid-19, will not only influence health but also leave a profound impact on economic activities including the functions of labor markets in regards to 'employability', 'labor force participation', 'social protection', 'unemployment insurance claims', 'health coverage', and so on (Table 1).

Due to the fact that it leaves an impact not only on health and health care but also on economic activities in the world because of its rapid transmission from humans to humans (Brenner, 2020: 975), Covid-19 has converted into a global drawback since its outbreak (Wong et al., 2020: 776). It also requires strategies of "suppression" and "mitigation" (Ferguson et al., 2020), which enables this infectious disease to conceptualize some measures. These attempts contribute to the formation of literature as well. As an example, lockdowns/closures, quarantine measures, isolation, stay at home orders, social distancing as well as mask wearing procedures are always in the agenda for all, which are both precautions and the frequent terms used to define this contagious disease as in the others (Luchetti et al., 2020: 897-908; Rakhmanov, Demir, and Dane, 2020: 118-122). Many researches are available to lay an emphasis of various facets of this illness, which contributes to the perceptual philosophy of

Covid-19. Concerning coronavirus pandemic, efforts for its conceptualization can be categorized into two: its pharmaceutical effect (i) and financial coverage (ii) in general. The keywords for pharmaceutical influence are “health”, “pandemic” “stress”, disorder”, “fatality”, “anxiety”, “loneliness”, “public health”, “fear”, “obesity”, “panic attack”, “suicide”, “health care”, “mental health”, “psychology”, and so on while “unemployment”, “labor,” “labor force”, “employability”, “job loss”, “macro economy”, “gender equality”, “consumption”, “recession”, “poverty”, “household income”, “household spending”, “small business”, “vulnerability of labor”, “workplace”, and “remote work” are used as the main words of finance for pandemic search. About pharmaceutical outcome, there is abundance of studies, which are very promising. Roy et al. (2020), Shanafelt, Ripp, Trockel (2020), Mazza et al. (2020), Labrague and De los Santos (2020), Fullana et al. (2020), Junngman and Witthöft (2020), Allington et al. (2020) and many others focus on the treatment impact of the disease. Other than those, many scholars like Chetty et al. (2020), Alon et al. (2020), Montenovio et al. (2020), Kurman, Lale and Ta (2020), Angelucci et al. (2020), Altig et al. (2020), and Atkeson (2020), are over there to keep an eye on the financial outcome of this contagious sickness.

3. Related Literature

As stated well in advance, labor market and Covid-19 can be correlated with one another in terms of “unemployment”, “labor force participation”, “health insurance” and “unemployment insurance claims”, and “remote work.” Perhaps there are some other criteria, yet this study is restricted with all these. The emerging literature review having been written so far is given in this section of the study.

3.1. Covid-19 and Unemployment

Unemployment is the hot topic during corona days as Covid-19, which was recalled with the stay at home orders as well as quarantine measures in its first days, entailed closures and lockdown both locally and globally. This brought about a surge in the unemployment rates and job loss all over the world and so labor demand reduced dramatically. The dimension of these closures and their influence upon economic activity is verified with Google mobility reports, which is witnessed even today. According to these reports, economic activities in retail and recreation is reduced to -19%, which is declined in workplaces to -15% in Turkey between September 15, 2020 and October 27, 2020 (<https://www.google.com/COVID19/mobility> Accessed November 2, 2020). This is a real shock for labor markets and that return to humans as a catastrophic job loss. Many scholars have concentrated on Covid-19 and its correlation with unemployment. For instance, Coibion, Gorodnichenko, and Weber (2020) forecasted that 20 million jobs would be lost in USA, which was more than the rate lost in Great Recession (Coibion, Gorodnichenko, and Weber, 2020: 1). Barnichon and Yee (2020) founded out that unemployment rate escalated to 14.7% in April in USA and it reduced to 11.1% at the end of the second quarter of this year (Barnichon and Yee, 2020: 1). Concerning US labor market again, Petrosky-Nadeau and Valletta (2020) argued that labor market recovery in regards to unemployment has been so speedy in the first six months of the coronavirus pandemic but they detected that unemployment rate would remain higher in 2021 (Petrosky-Nadeau and Valletta, 2020: 1). Forsythe et al. (2020) made an analysis for US labor market based upon job vacancies and they came to the resolution that vacancy of jobs reduced to 30% in the first half of March in USA and they revealed that this contraction would hit all industries (Forsythe et al., 2020: 1). Pullen also reported (2020) that Covid-19 would result in unemployment surge in particular sectors like “tourism”, “recreation”, and “clothing” in USA and those who became unemployed would remain steady in their status in the near future (Pullen, 2020: 1957). McGuinness and Kelly (2020) stated that unemployment rate jumped to 28.2% in April in Ireland, which was just about 4.8% in February 2020 (McGuinness and Kelly, 2020: 2). Caperna et al. (2020) referenced that google searches for the issue of unemployment has risen to 30% during coronavirus pandemic, which illustrates the fact that unemployment is expected to climb (Caperna et al., 2020: 1). Ruiz-Estrada (2020) introduced Covideconomics-19- simulator to literature and through his analysis, he came to the point that Covid would negatively affect employment (Ruiz-Estrada, 2020: 1). There are many more papers like Kaufmann (2020), Gilbertson et al. (2020), Pissarides (2020), Chodorow-Reich and Coglianesi (2020: 1), all of which focused upon the correlation between coronavirus pandemic and unemployment and here it is to be noted and to be deduced that closures halted economic activity that directly gave birth to unemployment.

3.2. Covid-19 and Labor Force Participation

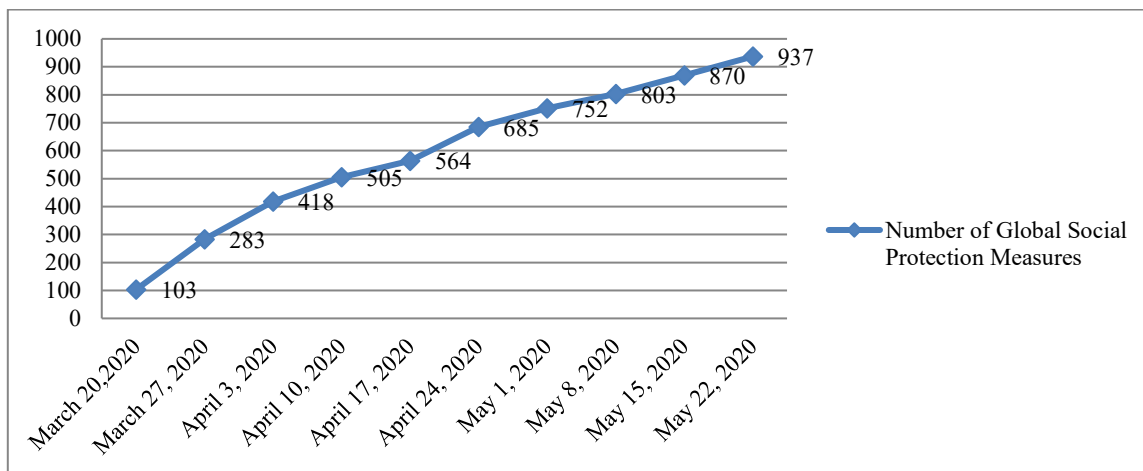
Labor force participation is the second phenomena to be reviewed for labor markets during the spread of coronavirus pandemic. It is so significant to bear in mind that unemployment triggers negative result in labor force participation, which is the case for pandemic as well. It is seen that the literature keeps an eye on gender difference while conducting analysis for labor force participation. Alon et al. (2020) stressed that Covid-19 left a negative influence on labor force participation specifically for women and it had detrimental effects on “gender

equality.” That’s why; women and married couples possess much more vulnerability than men in this process (Alon et al., 2020: 1-37). Stevenson (2020) shares similar ideas with Alon et al. (2020) and she defends that Covid-19 turned into a disadvantage for women’s labor force participation due to job loss and women just held 49.2% of “nonfarm payroll jobs.” This creates an inequality all through economy (Stevenson, 2020: 3, 4). Lemieux et al. (2020) concluded from their analysis conducted for Canadian labor market that Covid-19 had an inducing effect on weekly hours of work for those aged between 20-64, and the rate was about 32%. This induction would give way to 15% reduction in employment and labor force participation in a direct manner (Lemieux et al., 2020: 55). Cowan (2020) searched short term effects of Covid-19 for US economy and he pointed that pandemic would accelerate unemployment and job loss on the one hand while it would deteriorate labor force participation (3% calculated) especially for some vulnerable groups like workers with disabilities, less educated individuals, women with kids, and racial and ethnic minorities (Cowan, 2020: 1). Daly, Buckman, and Seitelman (2020) ensure that education is a key factor for variation in labor market participation in corona days and those, who do not have a college degree, are more defenseless. Hence, participation rate among the high school graduates between February and May, 2020 declined approximately 4% points, which is about %1.2 points for college graduates, so it can be guaranteed that education matters in labor markets (Daly, Buckman, and Seitelman, 2020: 2). In addition, Beland, Fakorede, and Mikola (2020) made some calculations using the Canadian Labour Force Survey about the impacts of Covid-19 on labor force participation in Canada, and they unveiled that Covid led to decline in labour force participation from about 96.3% to 93.8% between February and May, 2020 (Beland, Fakorede, and Mikola, 2020: 71). All these scientific studies validate that corona pandemic negatively acted upon labor force participation in all countries. The level of this influence varies based upon the economic outlook of each country.

3.3. Covid-19 and Health Insurance Claims

Health insurance claims and its affiliation with Covid-19 is the other criterion to assess the influence of coronavirus pandemic on labor markets. Being unemployed due to lockdowns in an upended way means losing health care opportunities at the same time. Banthin et al. (2020) developed a “microsimulation model” for US labor markets and they found that 48 million people would be unemployed due to Covid-19 and 3.5 million people in this group become uninsured (Banthin et al., 2020: 1). Garrett and Ganjopadhyaya (2020) investigated that 25 million Americans would lose their employer sponsored health insurance because of pandemic and 7 million of them (29%) would become uninsured (Garrett and Ganjopadhyaya, 2020: 1), which is more than the forecasts of Banthin et al. (2020: 1). Karpman, Zuckerman and Peterson (2020) made an analysis between March/April 2020 and May 2020 and they estimated that 11,25% of all adults and 15,65% of adults in the families, who lose their jobs on average, would forfeit their insurance status (Karpman, Zuckerman and Peterson, 2020: 5). Alker, Kenney, and Rosenbaum (2020) are on the point of view that coronavirus would enhance the gaps for those children who reach health care opportunities through the expansion of Medicaid in the USA owing to their families’ low income status and they would become uninsured and insecure in this process (Alker, Kenney, and Rosenbaum, 2020: 1743). Here, the analysis signals that coronavirus pandemic would possibly leave a profound impact on health insurance and its coverage for all.

Figure 1: Number of Social Protection Measures in the World between March 20, 2020 and May 22, 2020



Source: Gentilini, U., Almenfi, M., Dale, P. Blomquist, J. Natarajan, H. Galicia, G. Palacios, R., & Desai, V. (2020). Social Protection and Jobs Responses to COVID-19. A Real Time Review of Country Measures, Worldbank Living Paper Version, p. 1.

Note: Social protection is another way to protect labor and its dependents during the outbreak of coronavirus pandemic. Figure 1 demonstrates that number of social protection precautions in the world and between March 2020 and May 2020 for all countries proliferated. These measure sets display the fact that governments are aware of the potential risks of Covid-19 in terms of humans, economy, welfare, labor markets, health insurance, health care coverages, employment, and so forth and they are trying to minimize the costs within the framework of their financial facilities. This figure also confirms the combating strategies of all countries with Covid-19 from different regions in the world (Figure 1).

3.4. Covid-19 and Social Protection

Social protection is the fourth parameter to be taken into account while commentating on Covid-19 and its preliminary influence on labor markets. According to Gentilini et al. (2020), precautions implemented on the basis of social protection are the epicenters of securing all. Both social protection measures and the countries developing and practicing these kinds of strategies went up in the very first months of this crisis. In overall, 937 social protection oriented steps (e.g. cash transfers, business loans, childcare support, social assistance, social pensions, social insurance, postponement of financial obligations) for 190 countries and regions were taken globally between March and May, 2020. Amongst these, 60% is social assistance, 27% is social insurance, and 13% is labor markets aids. 51% of these aids are cash transfers while 49% include other social assistance procedures. Cash transfer programs last one to six months (Gentilini et al., 2020: 1-3). That's why, these social protective procedures and their details are to be put into analysis on the basis of labor markets and disadvantaged groups in each particular country.

3.5. Covid-19 and Unemployment Insurance

Covid-19 and unemployment insurance is another criterion for labor market assessment and financial evaluation of the states. Rising claims for unemployment insurance stem from the unemployment itself. Larson and Sinclair (2020) obtained from his autoregressive models that unemployment insurance claims exceeded 6 million in the first week of Covid-19 outbreak in USA (Larson and Sinclair, 2020: 1). Like Larson and Sinclair (2020), Aaronson et al. (2020) asserted that unemployment insurance claims reached the unprecedented level between March 15 and April 25, 2020 in USA and more than 30 million claims were filed at this time of the year (Aaronson et al., 2020: 1). The studies of Wandner and O'Leary (2020), Xie (2020), Bauer (2020), Altonji et al. (2020), Hedin, Schnorr, and Von Wachter (2020) concentrate upon the same issue and correlate these two parameters.

3.6. Covid-19 and Remote Work

Last but not least, the link between Covid-19 and remote work is to be centered since pandemic necessitates an abrupt change on the way of work and labor relations. Because of the infectious facet of the disease, masses initiated to work from home and actually telecommuting has been on the rise. Therefore, telecommuting captures the attention of divergent scholars like Brynjolfsson et al. (2020), B eland, Brodeur, and Wright (2020), and Angelucci et al. (2020) and these two parameters need to be analyzed in regards to their impact on labor markets.

4. Data and Research Method

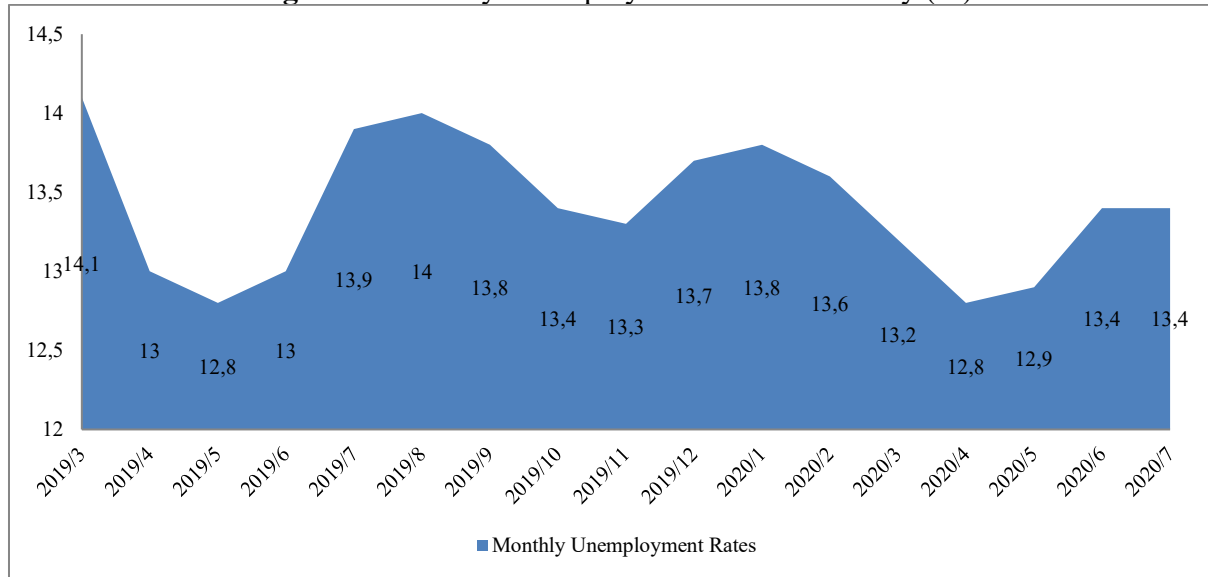
New normal requires the analysis of new labor markets' circumstances. Like Juraneck et al. (2020: 8), the researcher used novel administrative data inflow from local and global data centers including Turkstat (Turkish Statistical Institute), Iskur (Turkish Employment Agency), OECD, and World Bank while snapshotting TLMs, which grounded upon the fundamental parameters addressed in the literature review of the survey. These dataset give an ultimate frame for the assessment of TLMs in pursuit of Covid-19 outbreak.

5. Results and Analysis of Data

Results and the analysis of data about the current position of TLMs in particular following Covid-19 is shared in line with the parameters defined in the literature review of the research. These figures and tables formed through the use of administrative data (traditional and non-traditional) will give a certain outlook for analysis and for

future projections. These dataset will also have implications for policy makers, researchers, investors, and so forth.

Figure 2: Monthly Unemployment Rates in Turkey (%)



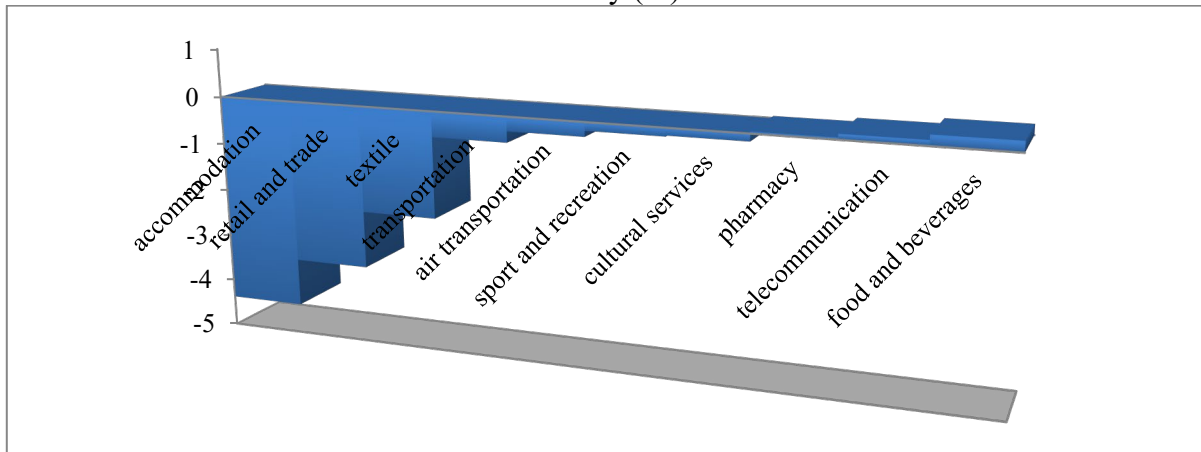
Source: TURKSTAT.

Note: Figure 2 illustrates the monthly unemployment rate in Turkey. The dataset, which displays the unemployment rates in the very first months of coronavirus pandemic, is of great significance. It is seen in figure that unemployment is 13,8% in January, 2020 and it stands on 13,4% in July, 2020 despite some sort of fluctuations. In March when the first case was officially affirmed, the unemployment rate is 13,2%. It becomes 12,8% and 12,9% in April and in May when strict measures including closures, lockdowns and curfew were taken in a consecutive way. Unemployment reached to 13,4% in June, which was the highest rate (Figure 2).

5.1. Unemployment and TLMs

Unemployment is the first parameter to investigate the economic impacts of coronavirus pandemic on labor markets, which is absolutely the case for Turkey. In coordination with the world measures, Turkey prioritized “closures” and “lockdowns” when the first case of Covid-19 was officially witnessed on 11th March, 2020. The cabinet gathered on 12th March, 2020 and they declared some strict measures: primary, secondary, and high schools were shut down for two weeks and the students were directed to online educations through EBA (Education Informatics Network) platforms and TVs, colleges were closed for three weeks starting from March 16, 2020. Collective organizations such as conferences, meetings, cultural and artistic events, and workshops were cancelled. Kindergartens and mosques were also closed. Flights to some foreign countries like Germany, French, Spain, Denmark, Belgium, Austria, Sweeden, and Holland were prohibited. Those who had already been in abroad were evacuated and guaranteed in the dorms of the colleges. Borders were closed (<https://www.aa.com.tr> Accessed November 4, 2020).

Figure 3: Cumulative Changes in Employment by Sector following Covid-19 Measures in Turkey (%)



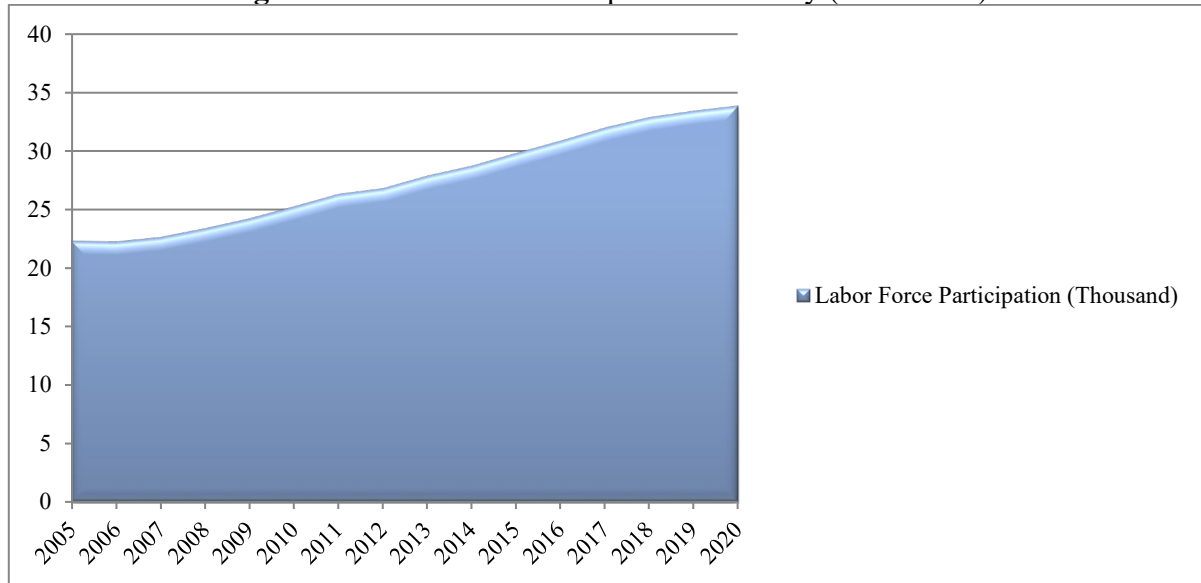
Source: Taymaz, E. (2020). Covid-19 Tedbirlerinin Ekonomik Etkileri ve Politika Önerileri, www.sarkac.org (Accessed November 4, 2020).

Note: In parallel to the data of TURKSTAT, Taymaz (2020) calculated that Covid-19 measures caused contraction in employment on various levels for different sectors (Taymaz, 2020). Figure 3 plots the cumulative changes in employment for the post-Covid period. The contraction was biggest for accommodation and food industry and it was calculated as -4,38%. As for retail and trade, it was -3,39%, which was determined as the second fragile industry in this crisis. The shrinkage for textile and clothing industry was -2,2%, which was -0,52% for transportation services, -0,29% for air transportation, -0,17% for sport and recreational services, and -0,15% for cultural services. The scenario was more positive in pharmacy, telecommunication, and food and beverages, in which the contraction was 0,04%, 0,11%, 0,21% in a consecutive manner. Therefore, accommodation, retail and trade, and textile are the most critical sectors in terms of employment contraction while pharmacy, telecommunication, and food industry are a little bit optimistic since these utilities are vital needs for the sustainability of life and people, in one way or another, has to demand these requirements, so unemployment decline if demand multiplies (Taymaz, 2020 and Figure 3).

The second wave of precautions came on 21st of March on which the case numbers reached to n= 670 and n95 mask type was mandated for health care workers, city pandemic committees were established, flights to other 46 countries were halted, barbers and hair saloons were locked temporarily, picnics and barbecues were prohibited, shopping centers were closed down, perpetual warnings were made and procedures of fine were regulated by Ministry of Health and Ministry of Interior Affairs concerning “social distancing, mask wearing, and isolation”, those who are above the age of 65 and those whose age is below 20 were forbidden to go out. This curfew expanded to everybody in 31 big cities (e.g. Adana, Ankara, Antalya, İstanbul, Hayat, Bursa, Erzurum, Eskişehir, İzmir, Mardin, Mersin, Muğla, Ordu, Sakarya, Samsun) on 10th of April. Moving from the ideas of scientific board as well as city pandemic committees, of course by looking at the number of cases, these regulations were modified from time to time and from one location to another (<https://www.sozcu.com.tr> Accessed November 4, 2020). The healthcare and health concerns were on the fore in the very first months of coronavirus pandemic, yet still economy and financial activities surpassed all the other apprehensions in Turkey and restrictions were lifted day by day while summer was approaching. During this lockdown and closures timeline, many businesses (n=15,948) between March 1, 2020 and April 30, 2020 were went bankruptcy, which enhanced the rate of unemployment in the country (<https://www.cumhuriyet.com.tr> Accessed November 4, 2020).

5.2. Labor Force Participation and TLMs

Labor force participation in an era of coronavirus pandemic is to be kept an eye on, which is one of the core parameters of the paper. Before analyzing the post Covid situation, it is quite essential to have a look at the general trends over the years, which gives some tips for labor market prospects. The reality is that labor force participation has been escalating in Turkey in a linear way since 2005, which is proved by World Bank data. As a matter of fact, this rise up commenced in the middle of 1990s. There were about 22.316.274 employees as participants of labour markets in 2005 in Turkey and this number reached to 33.817.015 in 2020, which depicts the employability potential of Turkish economy (Figure 4).

Figure 4: Labor Force Participation in Turkey (2005-2020)

Source: World Bank, Labour Force, Turkey.

Note: This graph is derived from using ILOSTAT data by World Bank and it plots the escalation of labor force participation in Turkey over 2005-2020. The positive inclination in the number of labor force participants is a signal for employment capacity as well as the job creation capability of the economy, productivity, population growth, and so on. This scene also uncovers the fact that Turkish economy is on the right track for poverty alleviation and proliferation of the welfare and these two can only be succeeded through labor force that participates in the economic activity (Figure 4).

When it comes to the post-Covid case, it can be alleged that there is a ‘difference’ compared to former years and a sharp fall emerged in regards to labor force participation, which stems from the recession due to pandemic. According to TURKSTAT bulletin (July, 2020), the variation concerning labor force participation, is existent and it is quite tangible between 2019 and 2020. It is witnessed in the following table that total labor force participation rate declined from 53,8% in 2019 to 50,3% in 2020 and -3,5% difference is calculated. Labor force participation for males reduced from 73,2% to 69,2% and the difference is -4% compared to 2019. As for females, there is also trenchant reduction in their labor force participations and the number of females who participated in labor markets diminished to 31,7% in 2020 from 34,9% in 2019. And the difference for females is -3,2%. These series of declines can be clinched with the deteriorations in the total employment rates (e.g. 46,4% in 2019 and 43,5% in 2020), which is the case for two sexes. Employment statistics for males is alarming than their equivalents for females again in comparison with the former year. The reason is that the gap for males is about -3,5% and it is -2,3% for females.

Table 2: Demographic Variables and Differences of TLMs in Post-Covid Term

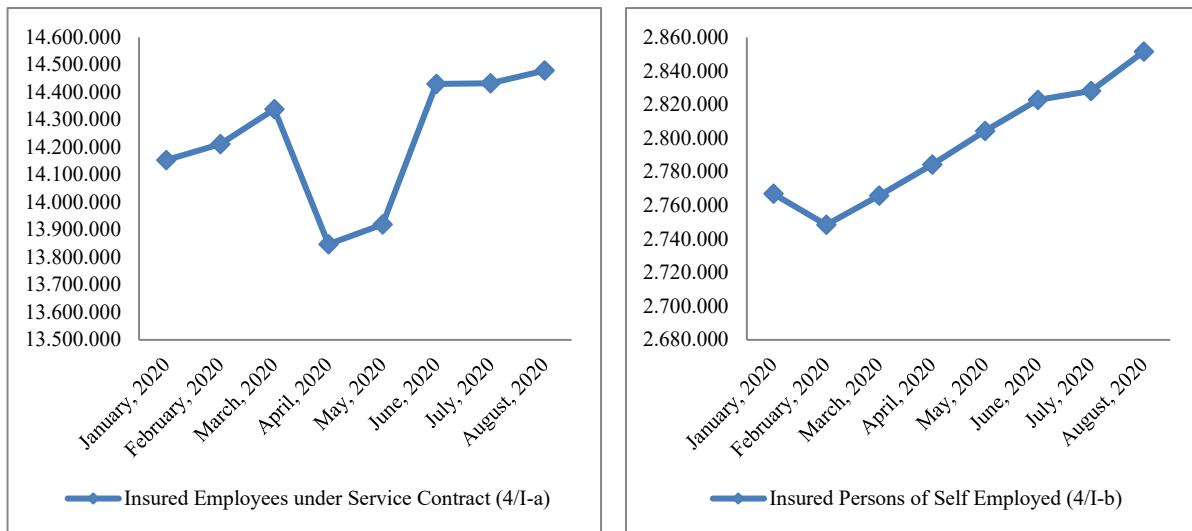
	Total			Male			Female		
	2019	2020	Difference	2019	2020	Difference	2019	2020	Difference
Population	61 507	62 626	1119	30 390	30 982	592	31 117	31 644	527
Labor force	33 113	31 491	-1 622	22 253	21 449	-804	10 860	10 042	-818
Employment	28 517	27 263	-1 254	19 470	18 783	-687	9 047	8 481	-566
Agriculture	5 644	5 283	-361	3 088	3 088	0	2 556	2 195	-361
Industry	5 600	5 354	-246	4 259	4 063	-196	1 341	1 291	-50
Construction	1 555	1 669	114	1 501	1 590	89	53	79	26
Services	15 718	14 957	-761	10 621	10 041	-580	5 097	4 916	-181
The Unemployed	4 596	4 227	-369	2 782	2 666	-116	1 813	1 561	-252
Those not in Labor force	28 394	31 135	2 741	8 138	9 533	1 395	20 257	21 602	1 345
Labor Force	53,8	50,3	-3,5	73,2	69,2	-4	34,9	31,7	-3,2

Participation Rate (%)									
Employment Rate (%)	46,4	43,5	-2,9	64,1	60,6	-3,5	29,1	26,8	-2,3
Unemployment Rate (%)	13,9	13,4	-0,5	12,5	12,4	-0,1	16,7	15,5	-1,2
Non-agricultural Unemployment (%)	16,5	15,9	-0,6	14,3	14,3	0	21,7	19,8	-1,9

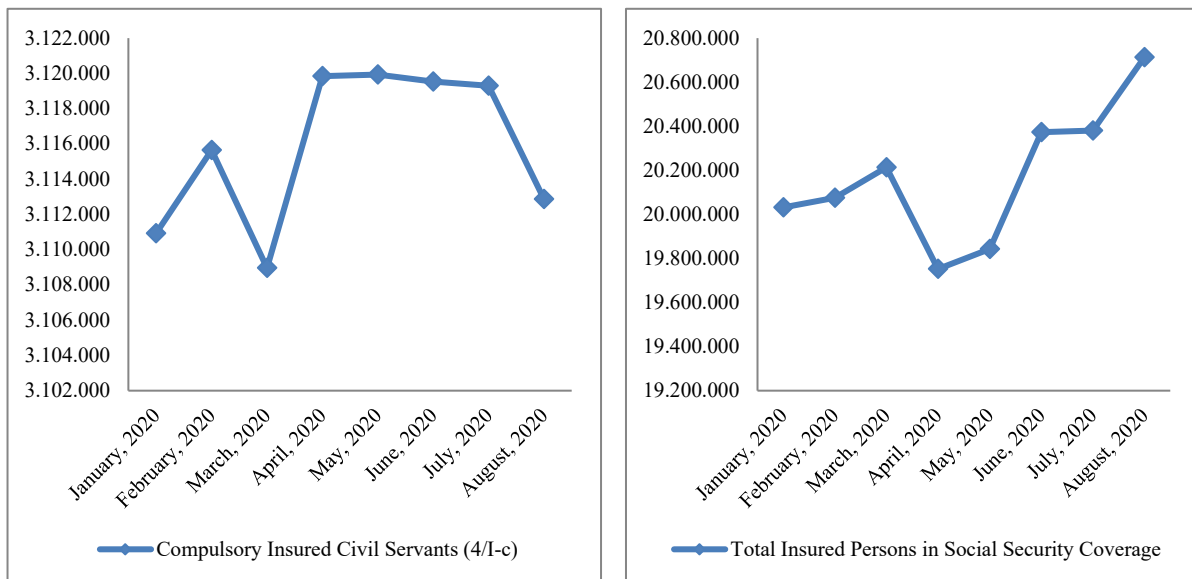
Source: TURKSTAT, Labor Force Statistics, July 2020.

Note: Table 2 shows demographic variables and differences of TLMs in post Covid-19 era and it displays total numbers and rates as well as variations based upon gender. It is noticeable that total employment in all sectors excluding construction declined and labor force is bitterly affected from coronavirus pandemic. And those, who are not in labor force, have augmented dramatically in this period. Actually, these numbers and rates are preliminary signals for financial crisis, which is to be called as “recession” for Turkish economy and for labor markets as a whole (Table 2).

Figure 5: Social Security Coverage in Turkey following Covid-19 and Based upon Employees’ Insurance Status (Thousand) (August, 2020)



Source: Republic of Turkey, Social Security Institution, Monthly Statistical Bulletin, (August 2020).



Note: Figure 5 presents the changes in social security coverage in Turkey in pursuit of coronavirus pandemic. This figure is centered on the insurance status of employees including “employees under service contract (4/I-

a)”, “persons of self-employed (4/I-b)”, “compulsory insured civil servants (4/I-c)”, and “total insured persons in social security coverage” over January and August, 2020. It can be interpreted that there is an abrupt disruption for the numbers of insured persons for 4/I-a, 4/I-b, 4/I-c, and total number of insured people beginning from February and it sees the bottom in April when cases of coronavirus have been surging day by day in Turkey. This dataset also confirms the fact that unemployment is on the rise in post-Covid era and coverages of social security system in Turkey have declined accordingly. Decrease in this coverage would probably result in the vulnerability of labor regardless of their insurance status (Figure 5).

5.3. Health Insurance Claims and TLMs

Health insurance claims is the other indicator of labor market analysis in the aftermath of coronavirus pandemic. In the related literature, it was witnessed that these claims intensified because of Covid-19. Additionally, the rises or falls possess signaling impacts for labor who are insured or not. That’s why; this section covers the analysis of health insurance claims in this crisis and their influences on TLMs. The legal framework of social security system was established by Social Insurance and General Health Insurance Act (Law No: 5510) in Turkey. This law was passed in 2006 but it could be activated only in 2008 due to constitutional reasons. Through this enactment, the whole members of the society free from their wage were guaranteed with social security procedures. The inclusiveness of this insurance type could be enabled via ‘premium mandated’ and ‘premium free’ systems, both of which basically constitute the infrastructure. ‘Premium mandated systems’ are valid for active and documented workers while ‘premium free systems’ are formed for disadvantaged groups and for those whose level of wage is too low. The dependents of “premium mandated systems” have to pay premiums when they initiate to work to get benefit from health insurance whereas the premiums are compensated for taxes in “premium free regimes.” In this Act, the insured employees are categorized depending upon their insurance status and type. Those, who are employed with a service contract, belong to 4/I-a (article number in the law) while the insurance status of self-employees is regulated by article 4/I-b. As for civil servants, their insurance status is regulated and protected by article 4/I-c in social security act (Law No: 5510) (Karadeniz, 2012: 103-123; Yüksel, 2017: 19-33). In post-Covid term, the number of insured employees working under service contract (4/I-a) declined to 13.847.835 in April from 14.339.304 in March, which is about a half million loss. The reduction for those insured persons working as self-employees and civil servants is not so high compared to service contract workers. The numbers of insured self-employees reduced to 2.748.447 in February, 2020, and the downfall was 3.108.959 in March for civil servants. This decline is the case for the total number of insured persons in social security coverage. In that the numbers slipped to 19.752.080 in April, which was 20.214.050 in March, 2020 (Republic of Turkey, Social Security Institution, Monthly Statistical Bulletin, (August 2020), available at <http://www.sgk.gov.tr/wps/portal> Accessed November 5, 2020). All these data pave the way that coronavirus pandemic left a negative impact on health insurance claims and so, the vulnerability of labor enhanced because of social security loss (see Figure 5) in parallel to unemployment, which is reasserted by de-escalation in the number of job vacancies in comparison with former year (Table 3).

Table 3: Changes on Job Vacancies in Turkey following Covid-19

		Date Range (Month/Year)	Date Range (Month/Year)	Rate of Change in Comparison with Former Year
Job Vacancies Change in Turkey	Total Number of Vacancies	September, 2019 188.422	September, 2020 120.281	Change (Year) -36,2%
	Total Number of Vacancies	August, 2019 165.802	August, 2020 114.113	Change (Year) -31,2%
	Total Number of Vacancies	July, 2019 191.556	July, 2020 95.046	Change (Year) -50,4%
	Total Number of Vacancies	May, 2019 227.085	May, 2020 70.460	Change (Year) -69,0%
	Total Number of Vacancies	April, 2019 200.468	April, 2020 52.418	Change (Year) -73,9%
		March, 2019	March, 2020	Change (Year)

Total Number of Vacancies	202.069	167.306	-17,2%
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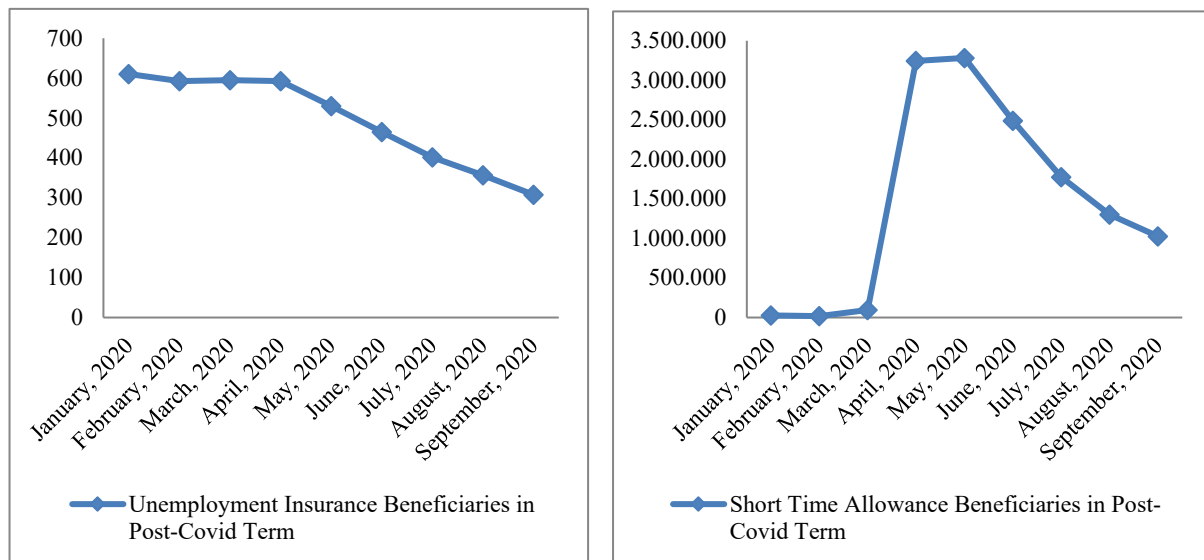
Source: ISKUR, Monthly Statistical Bulletin.

Note: Table 3 exemplifies the variations on job vacancies in Turkey following Covid-19. The table includes the total number of job vacancies starting from March to September in comparison with 2019. It also classifies the rate of changes. Total number of job vacancies diminishes in April, 2020 (n=52.418) in proportion to April 2019 (n=200.468). For these years, the rate of change is -73,9%, which designates the contraction in employment and that is the highest point among the others. This means that the shrinkage in employment reaches its peak in April, 2020 when Covid-19 cases have been proliferating in the country. What's more, the negative differences in these cited months all the way down notifies the fact that economy, that is to say, labor markets are in crisis (Table 3).

5.4. Unemployment Insurance and TLMs

The rise or decline in unemployment insurance claims denominates the reaction of TLMs against Covid-19 as well. The code of unemployment insurance is regulated by Law No: 4447 in Turkey and it were enacted in 1999. Several circumstances are available to get benefit from this code of conduct and it is just for employees working under service contracts (4/I-a). Self-employees and civil servants or those working in agriculture are beyond the scope. Those, who would like to be the beneficiary of this insurance, is to be unemployed out of his/her own control and will (i), to work with labor contract in the last 120 days before its cancellation (ii), to pay at least 600 days of unemployment insurance premiums in the last three years before the cancellation of labor contract (iii), to apply in mail or electronically to the nearest ISKUR center in thirty days following the termination of labor contract (iv). There are minimum and maximum periods for insurance payments depending upon the length of premiums paid by laborers. Those, who pay 600 days of insurance premiums, can be beneficiary only for 180 days, those, who pay 900 days of insurance premiums, can be beneficiary only for 240 days, and those, who pay 1080 days of insurance premiums, can be beneficiary only for 300 days. That's why, the minimum period of insurance payments is just six months and the maximum period lasts for ten months. As for the amount of payment, it can be affirmed that it is equal to 40% of gross income in average per day, which is calculated based upon the last four months of earnings taken as basic to premium (<https://www.iskur.gov.tr> Accessed November 9, 2020). Concerning the unemployment insurance claims in post-Covid era, it can be certified that these claims seems to have enhanced in a surprising manner in 2020. But this rise is not in line with the expected numbers for unemployment insurance, which can only be elucidated through "bans of layoff", and which is initiated with AKP government's legal arrangements following pandemic. In parallel with the unemployment insurance claims, there is a certain amount of escalation on the numbers of employees who apply for short time working allowance, yet the numbers are higher than the former ones. In a way, this statistics plots the green facts. Dismissal of people is not allowed through state legislatures in this period, but they are given short time allowance to meet their basic needs. So, the dataset about short time allowance pinpoints the vehemence of the case and it's more than unemployment payments in a quantitative manner.

Figure 6: Unemployment Insurance and Short Time Allowance Claims in Turkey Following Pandemic (Thousand) (September, 2020)



Source: ISKUR, Unemployment Insurance Fund Statistical Bulletin, (September 2020).

Note: Figure on the left particularizes unemployment insurance beneficiaries in post-Covid term whereas the other plots the numbers of short time allowance beneficiaries in the same period. Between February and March 2020, it can be seen that claims for unemployment insurance rose from 592.810 in February to 594.577 in March. Beginning from this point, decline happens in a perpetual way, which stems from “bans of lay off” by government. Right now, the claims for unemployment insurance is 307.812 in September, 2020, which is the lowest. On the other hand, the soar is quite palpable in the numbers of short time allowance claims between March and May, 2020, which refers to the exact time of coronavirus outbreak. So, the number of short time allowance claims escalated to 3.243.126 in April all of a sudden, which was just 96.636 in March. It reached its peak in May and the number became 3.282.817. These numbers pave the way that unemployment insurance and short time allowance claims went up in those months, but there are some certain gaps between these two indicators and the numbers increased outrageously for short time allowance claims (Figure 6).

5.5. Social Protection and TLMs

Since employees are the pioneering vulnerable and disadvantaged groups in labor markets because of their dependencies to employers, taken protective measures are of great significance to minimize the detrimental impacts of Covid-19. In this context, Turkey has also developed some kinds of policies in line with his global partners in post-Covid era. The adequacy and the efficiency of these policy sets are still open to discussion. According to Gentilini et al. (2020), who wrote a detailed report on the social protection measures taken by every single country following coronavirus pandemic, set criteria and they assessed each countries’ policies under the main headings like “social assistance”, “social insurance”, and “labor markets.” They also created some sub criteria such as “cash transfers”, “public works”, “in-kind transfers”, “utility waivers”, “health insurance support”, “unemployment and paid leave”, “pensions and disability benefits”, “social security contributions”, “activation measures”, labor regulation adjustment”, “reduced work time”, and “wage subsidy”. In regards to their ascertainments, Turkey developed and implemented social protection policies related to eight subtitles of all these (e.g. “cash transfers”, “in-kind transfers”, “utility waivers”, “pensions and disability benefits”, “social security contributions”, “labor regulation adjustment”, “reduced work time”, and “wage subsidy”) (Gentilini et al., 2020: 441-443). To illustrate, monthly budget, which is allocated to foundations established for providing social assistance, escalated to 27 million US dollar from 21 million, new payments for healthcare employees were given due to their services during pandemic and it was promised that 32.000 new healthcare workers would be employed, financial aid transfers (e.g. 1000 TL) were declared for families who were in need, payments of taxes for individuals who are over 65 were postponed, university students debts of loan and debts of water bills were postponed, minimum levels of pensions were promoted to 1.500 TL (230 US dollar), a holiday bonus for retirees was planned (Gentilini et al., 2020: 442, 443). More than that social protection measures, prioritized for labor markets, are predominantly crucial for this study. Concerning these procedures, Turkish government laid an emphasis on “labor market regulations”, “reduced work time”, and “wage subsidies.” In terms of “labor market regulations”, layoffs were ban for the next three months in Turkey. Because of this extraordinary case, firms forced employees to leave without getting any payment. In this case, they were given 1.170 TL (nearly 180 US dollar) payments by government. On the basis of “reduced work time”, it can be underlined that times for work were declined due to quarantine measures and so, short term work allowance were given for 3 months and for those who received minimum wages. It was 1.752 TL (nearly 271 US dollar). 3 months period could be extended to 6 months via decrees of Presidency. In regards to “wage subsidies”, two measures are available for labor markets. The first is about compensatory working periods, which would be increased from 2 to 4 months, and which is enacted in labor law (No: 4857) to compensate the work loss in case of emergencies like Covid-19. At last, teachers working with contracts in state schools were still given payments during school closures (Gentilini et al., 2020: 443).

5.6. Remote Work and TLMs

Coronavirus pandemic has transformed the ways of work radically and it has compelled masses to work in a remote manner owing to its infectious characteristics, which is of course the case for TLMs. In this process, remote work has not been so liable for agriculture, manufacturing works, and construction owing to the requirements and duties of work. However, it has become so convenient for services and education through technological apparatuses like internet, smart phones, laptops, tablets, and so forth. To put in an explicit way, it can be assured that education is the leading and noticeable sector for remote work in corona days in Turkey. Having seen the closures and the lockdowns in both state and private schools in March 2020, more than one million teachers commenced to work in a remote way in parallel to the establishment of EBA platforms and its online teaching environments by Ministry of Education. Therefore, all these teachers including the

administrative staff have found themselves teaching or managing in electronic settings by eliminating time and space, which can be deciphered as a ‘revolution’ for all. These initiatives have still been going on interchangeably, which delineates the influence of remote work on TLMs in coronavirus pandemic.

6. Conclusion

This paper addresses how Covid-19 has influenced TLMs on the basis of “unemployment”, “labor force participation”, “health and unemployment insurance claims”, “social protection measures”, and “remote working”. These criteria were developed in parallel to the academic literature written following the outbreak of pandemic. Making an in depth analysis, the researcher used traditional and non-traditional data from local and global data centers including Turkstat (Turkish Statistical Institute), Iskur (Turkish Employment Agency), OECD, and World Bank so as to snapshot the current situation of labor markets following Covid-19.

As a result of the research, it is validated that coronavirus pandemic has resulted in an unemployment crisis in Turkey, which happened late June and August, 2020 (Figure 2). This can also be comprehended from the changes of job vacancies in the aftermath of Covid-19 and there is a direct reduction here (Table 3). It is also witnessed that economic contraction is quite probable as a result of decline in economic activities and consumer spending, which is mainly the case for ‘accommodation’, ‘retail and trade’, and ‘textile industries’ (Figure 3). As for labor force participation, it can be alleged that there is also an absolute deterioration in post Covid term, which verifies the economic recession (Table 2). In this term, there is a negative disruption about total insured people including workers with service contracts, self-employees, and civil servants, which signals the fact that people have become either unemployed or they have been employed in an undocumented way starting from corona days (Figure 5). At the same time, unemployment insurance beneficiaries fell due to “bans of layoff”, yet the beneficiaries of short time allowances escalated in a dramatic manner (Figure 6). Measures taken in correlation with social protection are compiled in “cash transfers”, “in-kind transfers”, “utility waivers”, “pensions and disability benefits”, “social security contributions”, “labor regulation adjustment”, “reduced work time”, and “wage subsidy” in Turkey; however, the efficiency and efficacy of these precautions still open to debate because of inflation, devaluation, and rising costs. Last but not least, it can be claimed that remote working among teachers, working in state and private schools, are fairly tangible, which is a sharp swift in working habits. This negative scenario and outcomes are not peculiar to Turkey, but it is valid for the other emerging economies including developed ones all over the world.

6.1. Limitations of the Study

This research has the following limitations. First, this paper utilizes only administrative data and just for a specific period of time. Maybe, much more time is needed for the clear understanding of the results of coronavirus on labor markets, yet these results are essential for a starting point. Secondly, evaluating all the parameters of labor markets like ‘unemployment’, ‘labor force participation’, ‘social protection’, and so on at the same time and in a consecutive manner is the other restriction, which maybe creates bulk of information but which suggests a holistic point of view for researchers, policy makers, and scientists.

6.2. Implications and Insights for Future Researchers

There are various suggestions for upcoming researchers. As an example, they can conduct time series analysis or they can focus on just one parameter or let’s say criteria in an elaborate manner. Maybe, field studies can be conducted on those, who becomes unemployed in this time period and who works through telecommuting. Moreover, some statistical software programs can be utilized to forecast the negative impacts of coronavirus pandemic on economy, labor relations, and labor markets as a whole and for a long time period.

6.3. Implications and Insights for Policy Makers

Policy makers are expected to concentrate upon the alleviation of the negative impacts of coronavirus on economy and labor markets. It’s of great importance for them to minimize the costs, unemployment rates, inflation, currency devaluation, budget deficit, manipulations and to maximize employment, labor force participation, social insurance rates, trust, economic growth, wage subsidies, job vacancies, and so forth. I have got the feeling that state interventions into the economy have become on the fore more than ever.

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