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### RESEARCH ARTICLE

#### THE COVID-19 CRISIS AND THE LABOR MARKET IN ISRAEL

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#### Abstract

The Covid-19 pandemic has badly harmed the labor market in Israel, a direct result of increased demand for work due to the social distancing limitations, a drop in local demands – due to reduction in households' income and consumers' concerns of being exposed to the virus – and decreased demands to import. Increased uncertainty, including employment insecurity, and the harm to households' wealth worsened the gloomy situation of the labor market since individuals have decreased their consumption even further. In short, the sharp decline in business' activity triggered many of them to reduce the number of employees and cut wages.

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#### Introduction:-

The Covid-19 pandemic has badly harmed the labor market in Israel, a direct result of increased demand for work due to the social distancing limitations, a drop in local demands – due to reduction in households' income and consumers' concerns of being exposed to the virus – and decreased demands to import. Increased uncertainty, including employment insecurity, and the harm to households' wealth worsened the gloomy situation of the labor market since individuals have decreased their consumption even further. In short, the sharp decline in business' activity triggered many of them to reduce the number of employees and cut wages.

Many studies conducted over the last months around the world show that the damage of the crisis to businesses and employees was non-uniform (Brodeur et al., 2020; International Labour Organization, 2020a and 2020b; OECD, 2020). Due to social distancing limitations, the decline in employment was felt, all the more forcefully, in sectors the activity of which is involved with close contact of workers with customers and among themselves, in particular in closed places with gathering of people and in sectors and businesses whose only a small rate of their employees can work from home. The decline in employment is more prominent in businesses with flexible employment patterns and in those where the productivity of employees was small and efficiency was required to begin with. Prominent examples across the world to economic sectors that suffered more than others from reduced employment include the hospitality and food services; the art, entertainment and leisure sectors; personal services; retail trade, and passenger transport.

As for the personal characteristics of employees who lost their livelihood across the world – the part of young people, people of no education and low skills, people who work in part-time or temporary jobs, people employed in the informal labor market, and foreigners is prominent. The income of members of these groups is normally low, and in the past they were the last to find jobs when markets have recovered. In many countries, the rate of women whose employment was discontinued exceeded that of men, for several reasons: their representation in industries of services that were badly hurt in the crisis is relatively high; many of them work part-time and temporary jobs; the lockdown in educational institutions, and the acceptable distribution of family responsibilities motivated many of

them to stay home and take care of their children. However, in many countries, including Israel, the rate of women is high among the people employed in the health and educational services on whom pressure increased at the time of the crisis (caring for Covid-19 patients and reinforcing the epidemiologic system / shifting to distance learning) on one hand, but who have employment security on the other hand. Another group whose condition was highly worsened during the crisis is the self-employed since their businesses are concentrated in sectors that were damaged more from the crisis (and in some countries they did not receive any governmental support like the salaried employees).

We shall now present a general, concise picture of the developments in the Israeli labor market from the outbreak of the Covid-19 crisis until July<sup>1</sup> followed by a detailed analysis of the data based on labor force surveys. The data of the National Insurance Institute show that since the beginning of the crisis until mid August, nearly one million new claims for unemployment benefit were filed. Since exiting the first lockdown, in the second half of April, until mid-August, more than 460 thousand of the claimants went back to work while approximately 510 thousand claimants (including people with seniority), who are about 12% of the participants in the labor force, remained Not Employed; the number of those receiving unemployment benefit in July was about 420 thousand (compared to about 78 thousand in February). According to a quick survey of the Central Bureau of Statistics on the state of business, the rate of those who were employed by companies immediately prior to the crisis and did not work in them in mid-August was approximately 18% of the participants in the labor force (while approximately 5% new employees were recruited at the same time). According to the quick survey for mid-June, approximately 10% of the employers in the business sector reduced wage, normally at a rate of up to 10%. The poor condition of the labor market is also demonstrated by the drop in vacant jobs in the business sector: in July it amounted to slightly more than 2% of the total jobs, about two fifths less than the rate immediately prior to the crisis. The various sources of information show that in Israel, similarly to the world, the main injured from Covid-19 in the market labor – in terms of loss of employment and reduced income – were those who were employed in the various service industries (in particular hospitality and food, culture and retail trade), young people (and people in retirement age), people of low education and skills, and the self employed.

In reaction to the financial crisis, the government has taken many steps in the labor market, first and foremost reliefs in the conditions of the Unemployment Insurance Law: (a) shortening the qualification period from 12 working months in the 18 months preceding the appearance in the employment bureau to 6 months, and payment of unemployment benefit to those in unpaid leave without any request to exhaust their accumulated days of leave and reduction of the minimum unpaid leave entitling to unemployment benefit from 30 days to 14 days; (b) extending the entitlement period to unemployment benefit beyond the maximal period provided for by the law; (c) rate of unemployment benefit: cancellation of its reduction upon the continuation of unemployment, payment of full-rate unemployment benefit to people under 28 years of age who have children, to returning unemployed people, and to those who undergo professional training, and payment of adjustment grant to people aged 67 and above in lieu of unemployment benefit. In addition, various pensions will not be offset (including income support) against unemployment benefit. The force of all the reliefs under the Unemployment Insurance Law will expire at the end of June 2021, unless it is published by the end of May 2021 that "the monthly rate of the unemployed during the Covid-19 period" fell under 7.5%<sup>2</sup>. Payments of unemployment benefit for July amounted to approximately NIS 2 billion a month comparing to approximately NIS 0.3 billion in the pre-crisis period. In addition, assistance was provided to businesses, including return of fixed expenses and state-guaranteed **loans. Employers also received a grant for rehiring employees who were fired or taken out on unpaid leave in April-October. And finally, self-**

<sup>1</sup>For more details see: **Aviram-Nitzan and Keidar (2020), Achdut (shortly), The National Insurance Institute (2020), The Ministry of Finance (2020a and 2020b), The Israeli Employment Service (2020).**

<sup>2</sup>Pursuant to the Financial Support Plan (the New Coronavirus) (Temporary Order) Law, 5780-2020, the unemployment benefit will decrease by 10% starting one month after the rate falls under 10%, and payment of unemployment benefit will be discontinued one month after the rate falls under 7.5%, for those who exhausted the regular entitlement period for unemployment benefit. "The monthly rate of unemployed during Covid-19" was defined under the law as the rate of the unemployed and those temporarily absent from work for reasons relating to Covid-19 ("Covid-19 Absents") and it is calculated by the **Central Bureau of Statistics** based on a labor force survey. In July, said rate amounted to 10.33% and in August – to 9.8% (**The Central Bureau of Statistics, 2020a and 2020b**). **However, on September 21, 2020, the government notified of its intention to act to extend the entitlement to full unemployment benefit despite the decrease of said rate below 10% in August.**

**employed whose income was injured received sustenance grants until June 2021, which were in fact in lieu of unemployment benefit.**

This document analyses in length the data of the Israeli labor market during the Covid-19 crisis based on labor force surveys conducted by the Central Bureau of Statistics. A prominent advantage of these surveys – in particular during the crisis, which is characterized by increases and decreases in the severity of social distancing limitations, and hence of the condition of the labor market – is the ability to use them to follow the same surveyees over time and examine the changes in their employment situation; this is opposed to acceptable analyses that present the employment condition of individuals at a given time while presenting aggregate changes over time. The purpose of this analysis, then, is to examine the changes in the surveyees' labor force properties from the pre-crisis period until July – focusing on those who worked as salaried employees in the business sector before the crisis – and of surveyees as of exiting the first lockdown in April until July; all that by their demographic-social-economic characteristics and by economic industries. The changes in working hours are also presented, and the scope of injury is estimated for the income of households of salaried employees who worked immediately prior to the crisis and were looking for jobs in July.

We decided to focus on salaried employees who worked in the business sector before the Covid-19 crisis because the vast majority of salaried employees in the public sector did not lose their jobs during the crisis (albeit many of them were on forced paid vacation since mid-March until the beginning of May) and due to the difficulty to identify the employment and financial situation of self-employed whose business is out of work or only partly active. The research population includes surveyees over the acceptable age for completing mandatory military service<sup>3</sup>. For these reasons, the data presented hereunder are different from those appearing in official publications which include all people aged 15 and above (including employees in the public sector and self-employed).

#### **Database, definition of labor force properties, and the studied period**

The analysis is based first and foremost on labor force surveys of the Central Bureau of Statistics which are the main source of data from which one can learn about the events in the labor market. The surveys for January 2018 until July 2020 have been cross-referenced with two additional sources of information: job seekers who appeared at the employment service from the beginning of March 2020 onwards with respect of whom we know, among others, the date and reason of appearing at the bureau and the return date to work based on self-reporting; the files of salaried employees and self-employed of the Israeli Tax Authority for 2018 (the last year with available data) – files that contain information of the income from salaried and self-employed work and of employees' number of working months<sup>4</sup>.

The surveyees in the labor force surveys are being asked for 8 months: 4 subsequent months (Panels 1-4), a break of 8 months, and 4 additional subsequent months (Panels 5-8). The periodic structure of the survey allows, as aforesaid, to follow the labor force properties of the surveyees over a specific period of time. Each month a new panel enters the sample, which includes more than one thousand households, such that for each surveyed month, we have 8 panels that encompass more than 9 thousand households (and some 20 thousand people aged 15 and above)<sup>5</sup>.

<sup>3</sup>Non-ultra-orthodox Jewish (and Druse) men aged 22 and above, non-ultra-orthodox Jewish women aged 21 and above, and ultra-orthodox men and women (excluding Druse men) aged 18 and above. The reason for excluding younger people from the research population is that the harm to youth employment is not at the center of the analysis of the impact of the Covid-19 crisis on the labor market, and soldiers in mandatory military service are defined in the labor force survey as employed and remained as such during the crisis (although some were also employed outside the army and were exposed to the damages of the crisis).

<sup>4</sup>We thank **Danny Pfeiffermann**, the National Statistician and Director General of the Central Bureau of Statistics, for his willingness to provide us with the data at the research center at the Bureau, and the employees of the Central Bureau of Statistics - **Mark Feldman**, **Merav Pasternak**, **Yifat Klopstock**, and **Rivka Krieger** – for preparing the data. We also thank **Ofir Pinto** from the **Israeli Employment Service** for providing the data of job seekers.

<sup>5</sup>Labor force surveys do not include the population of regular surveys: residents of institutions (boarding schools and nursing homes) and Bedouins living outside of permanent settlements in the South of Israel. These constitute less than 3% of the population of people aged 15 and above. The data displayed here are different from those published by the Central Bureau of Statistics, for three reasons: (1) focusing on the research population defined above as opposed to all of the people aged 15 years and above in the publications of the Central Bureau of Statistics; (2) different definitions of labor force properties (more details later); (3) the labor force surveys do not include, as

For analysis purposes, the surveyees have been classified into five groups (referring to the week preceding the date of survey, i.e. "the Effective Week"): (1) employees who worked (namely, have not been temporarily absent from work) – hereinafter Actually Employed; (2) employees who have been temporarily absent from work from reasons unrelated to the Covid-19 crisis (vacation/illness<sup>6</sup>/reserve duty etc.) – hereinafter Non-Covid-19 Absents; (3) employees who were temporarily absent from work from reasons greatly related to the crisis (reduction in work scope, business stoppage etc.; in March-April this year the labor market survey also includes the possible answer "Because of Covid-19") – hereinafter Covid-19 Absents<sup>7</sup>; (4) Unemployed; (5) excluded from the labor force (Not Participating), including those who despaired from looking for a job in a broad definition<sup>8</sup>. A broad definition of the Unemployed may, thus, include those who belong in one of the following groups: Unemployed and Covid-19 Absents as well as those who despaired from looking for a job in the broad definition. All those shall hereinafter be referred to as Not Employed<sup>9</sup>.

The studied periods were formulated in conformity with the milestones of the social distancing limitations during the development of the Covid-19 pandemic in Israel, which have a close tie to the labor market: at the beginning of March foreigners have been forbidden to enter Israel and gatherings were prohibited, and as of mid-March a general lockdown was imposed (excluding vital employees); in mid-April business places began to gradually go back to work according to the Purple Badge, **at the beginning of May the employees of the public sector resumed work, and the educational system as well as various service industries gradually opened**. Subsequently the **second wave began (and after the end of the studied period, a second lockdown was imposed during the High Holidays)**. It is noted that according to the Stringency Index<sup>10</sup>, Israel took stringent steps of social distancing during the first wave, in terms of intensity and duration both.

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aforesaid, the regular samples. Likewise, we have not performed deduction of seasonality, which may currently be problematic, and instead we compared the data during the crisis to the parallel data in 2019.

The surveys also include temporary residents who have stayed in Israel for more than one year continuously and they therefore also encompass foreign workers (and infiltrators) who live in apartments, but not Palestinians (who are not permanent residents in East Jerusalem) who work in Israel. The latter have accounted for approximately 4% of the input in the business sector in 2019, most of them in the construction sector. During the crisis period, the number of Palestinians who work in Israel in construction has considerably decreased (The Bank of Israel, 2020b).

<sup>6</sup>The Central Bureau of Statistics classifies those in isolation as ill. According to the data of the Ministry of Health, in July the average daily number of isolated people (who were not Covid-19 patients) amounted to approximately 44 thousand (<https://data.gov.il/dataset/covid-19>). The number of active Covid-19 patients amounted to approximately 23 thousand (<https://www.worldometers.info/coronavirus/country/israel>). Data on isolated or ill people are not published by age and therefore the number of those who belong in the research population is unknown.

<sup>7</sup>In Israel, similarly to many other countries, the total people who were temporarily absent from work are those who did not work for the entire last week for various reasons, most of which were stated above, and comply with one of the following conditions: a) were absent up to 4 weeks (or on maternity leave) from their workplace; b) their absence is longer and it is: (1) paid, including unemployment benefit, or who are self-employed; or (2) their absence is unpaid but at their estimate, their return to work is guaranteed.

<sup>8</sup>The official definition of those despaired from looking for a job includes those who do not participate in the labor force and are interested and available to work, who were looking for a job during the last year but not during the last month, for the following reasons: their estimate that there is no work which is suitable for them in profession or area in terms of wage, working hours or interest in work; lack of experience or lack of suitable training, language difficulties, and inappropriate age. A more comprehensive definition of those despaired from looking for a job during the Covid-19 crisis may also include those who did not look for a job in the last month for the reason "Because of Covid-19".

<sup>9</sup>The Central Bureau of Statistics includes, in the broad definition of "Not Employed", in addition to Unemployed and Covid-19 Absents (who, jointly, are used to calculate "the monthly rate of Unemployed during the Covid-19 period"), also the following (see the Central Bureau of Statistics, 2020a and 2020b): people who stopped working due to dismissal or closing of the workplace from March 2020 onwards and did not actively look for a job in the month preceding the interview under the survey. In July the rate of **surveyees** included in these three groups amounted to 11.9% out of all the participants (and approximately 11.2% in August), which are approximately 500 thousand people (in August approximately 470 thousand).

<sup>10</sup>See: <http://covidtracker/bsg.ox.ac.uk/>

This analysis will focus, thus, on following up the changes in the labor force properties in two relevant period: (1) before and during the crisis: salaried employees in the business sector in July-October 2019 (Panels 1-4) who were also surveyed in July 2020 (Panels 5-8); (2) upon exiting the first lockdown: surveyees in April 2020 (Panels 1 or 5), in the period after the removal of the general lockdown (19/4) who were also surveyed in July (Panels 4 or 8).

### Analysis results of labor force surveys

#### C1. Labor force properties in January-July 2020

The labor force properties of all surveyees, who were above the acceptable age for completing mandatory military service (including salaried employees in the public and business sectors and self-employed), from January to July 2020 and comparing to the parallel period in 2019, are presented in Figure 1<sup>11</sup>. The rates of the Actual Employed in both years were similar in January-February (Figure 1a); on the other hand, in March-April this year, when the first lockdown was imposed, the rate decreased, but subsequently increased, and in July amounted to approximately 56% (compared to approximately 59% last year). At the same time, starting from March 2020, resulting from the unpaid leave of masses of employees, the rate of Covid-19 Absents has soared, and only some of them went back to work later on this year, such that in July their rate was more than 5% of the participants of the labor force (Figure 1b). The rate of those Unemployed increased from 3.2% in February to 4.8% in July, and the rate of Not Participating in the labor force increased from about 32.5% to 33.3% (Figure 1c) – about one third of the increase as a result of despair from looking for a job. To conclude, the rate of Not Employed at the age of the research population rose from approximately 4.5% in February to approximately 11.0% in July (Figure 1d) and their number increased from about 170 thousand to about 410 thousand, respectively. The number of working hours for an Actually Employed decreased only during the lockdown after which it was slightly higher than its number last year (Figure 1e), but due to the decrease of the number of employees, their input (total working hours) was reduced. In July it was lower by 5% than the previous year (Figure 1f) and in the business sector – by more than 6%. The rate of new salaried employees in the workplace out of the total salaried employees – which attests at the pace of recruiting workers – extremely decreased over March-April 2020, but subsequently came close to the rate prevailing in 2019 (Figure 1g).

C2. Follow-up of the changes in the labor force properties, working hours, and the income from the work of the same surveyees

**Table 1:-** shows that only about 84% of the salaried employees in the business sector before the crisis were also employed in July (comparing to about 91% in the parallel period last year), and about 6% became Covid-19 Absents; the rest joined the groups of the Unemployed (about 4%) and Not Participating in the labor force (about 7%) – slightly higher rates than those recorded last year. As expected, the rate of Unemployed before the crisis who found a job also decreased comparing to the previous year.

Support to the above findings can be found in the dynamics of the shifts between the labor force properties in subsequent months (Figure 2): in March-April many salaried employees in the business sector became Covid-19 Absents and a few became Unemployed (Part A); later on that year the shift of salaried employees to the status of Covid-19 Absents was stopped, but the leak of shifting to the status of Unemployed continued and indeed increased; some of Covid-19 Absents went back to work in May and June, thanks to the reliefs in social distancing limitations, but in July the stream slowed down, and during the entire period of crisis, the stream of Covid-19 Absents, who became Unemployed or despaired from looking for a job - increased (Part B); continuation of the crisis in the labor market also caused some of the Unemployed to despair from looking for a job (Part C).

When we examine the shifts in the labor force properties between the second half of April – right after exiting the first lockdown – and July, we can see a picture that attests to improvement in the labor market but at the same time to its weakness (Table 2): about 94% of salaried employees in the business sector in the second half of April continued to work also in July, similarly to their rate last year, but it must be born in mind that only about 66% of the salaried employees in the business sector in February were also employed in the second half of April (compared to about 96% last year); only about 76% of Covid-19 Absents in April 2020 went back to work until July. In short, the rate of salaried employees in the business sector who were employed in July was, as aforesaid, significantly lower than before the crisis.

<sup>11</sup> A similar analysis, based on the British labor market survey, is included in Wadsworth (2020). Passover took place in April both in 2019 and 2020, and the majority of Ramadan was in May in both years.

Figure 3 focuses on salaried employees in the business sector right upon exiting the general lockdown in April and on the Not Employed at that time, examining the persistence in their condition until July by their personal characteristics, comparing to the persistence in their condition in the parallel period in 2019. Nearly 6% of those who were salaried employees in the business sector in April lost their job until July, similarly to their rate last year. Among the ultra-orthodox, residents of the South, and people with seniority of less than one year at the workplace, rates were relatively high comparing to those recorded in 2019; on the other hand, they were relatively lower among people aged 50 to retirement age and among the residents of the Jerusalem district and **the Judea and Samaria region. Among people who were Not Employed in April this year, 30% remained at the same condition until June, and this rate remained unchanged in July<sup>12</sup>**. Rates were much higher in young people aged up to 29 years and people with higher education; many of the service industries – which hire many uneducated employees – recovered after the first wave and rehired some of them.

The crude rates of Not Employed in July out of salaried employees in the business sector prior to the crisis – by gender, age group, population group, family composition, district of residence, level of education, ability to work from home (according to profession<sup>13</sup>), seniority at the workplace, and wage – are presented in Figure 4. Rates are relatively higher to those recorded in the parallel period last year among young people (and single people without children) and employees after retirement age, ultra-orthodox, people living in the South and Jerusalem districts and in the **Judea and Samaria region, people with low education level, people who are unable to work from home, people with seniority of less than one year at the workplace, and people with a low wage (in 2018) – see also Figure 9 hereunder.**

In addition to the crude data of rates of Not Employed just presneted, we estimated (in a Logit estimate) the probability of those who were employed in the business sector before the crisis to become Not Employed in July 2020 as well as one year previously. This is, thus, an estimate in the format of the "Difference in Differences", **which gathers two separate groups of salaried employees from two parallel periods of time. The explanatory variables included similar characteristics to those described above and** interaction variables between themselves and a simulation to 020, the financial industry before the crisis (or one year previously), the month in which the surveyee replied to the labor force survey before the crisis (or one year previously) as well as a simulation to 2020. Figure 5 shows the odds ratio to be Not Employed comparing to the basic group shown at the bottom of the figure; this is with respect of 2020 (columns) and 2019 (circles). The odds ratio of ultra-orthodox in 2020 amounts to 1.30, meaning that their chance to be Not Employed in July was higher by 30% from non-ultra-orthodox Jews (with their other characteristics being controlled); in 2019 the chance of ultra-orthodox was higher by approximately 5% from the chance of non-ultra-orthodox Jews that year, hence their chances to be Not Employed increased in 2020 by about 24%. However, the gap in the odds ratio between 2020 and 2019 is not statistically significant (perhaps due to a small number of ultra-orthodox surveyees). Likewise, we could not find significant differences in the chances to be Not Employed in 2020 comparing to 2019 by gender and age group, between Arabs and non-ultra-orthodox Jews, by marital status, position partiality, and district of residence. Exceptional are the residents of the North and Haifa districts: their chances in 2020 comparing to 2019 were lower than those of the residents of Gush Dan area by approximately 30%. The lack of differences by personal characteristics in the chance to be Not Employed (given the financial industry) may suggest that employers did not discriminate against employees when they made the decision to terminate their employment.

The crisis in the labor market badly harmed several economic industries, as expressed in the decrease of the number of salaried employees in the business sector, which was sometimes accompanied with a certain decrease in their actual working hours, and therefore also in a decrease of input during March and April, a phenomenon that declined mainly in May and June. The industries that were badly injured include (Figure 6) art, entertainment and leisure; hospitality and food services; passenger transport, and retail trade (excluding food); on the other hand, the injury to high tech industries thus far was relatively small, if any.

<sup>12</sup>According to the National Insurance Institute, about half of those eligible to unemployment benefit due to the Covid-19 crisis went back to work until midAugust, and about three-quarters of the rest did not work for 19 weeks and more.

<sup>13</sup>Thanks to Gilad Shalom for preparing the indicator.

Figure 7 presents the change in the number of actual working hours of a salaried employee in the business sector in June 2020<sup>14</sup> comparing to their number for the same salaried employee in June 2019, compared to the parallel change a year earlier (in which other salaried employees were surveyed). It can be assumed that the labor market crisis may lead to two conflicting phenomena: a) decrease in the actual working hours of salaried employees due to the reduction in business activity and the decrease in their working hours; b) increase of salaried employees' hours since employers decided to dismiss some of the salaried employees and the others filled the openings. Figure 7 shows that the actual number of weekly working hours of salaried employees who worked part-time before the crisis and continued working increased by an average of 2-4 hours while for those who worked full-time prior to the crisis, the number of working hours hardly changed. This finding is consistent with Hypothesis B since the decrease in the number of salaried employees in the business sector who are hired part-time<sup>15</sup> – in positions many of which are temporary and more common in service industries which were badly harmed by the crisis – was sharper than the number of full-time employed.

Results of the estimate of the change in the number of actual weekly working hours between the pre-crisis period and June 2020 (and comparing to the parallel period last year), which is similar in format to the previous estimate, show that in 2020, comparing to 2019, no differential changes occurred in the actual weekly working hours of a salaried employee in the business sector, according to personal characteristics; exceptional are uneducated people and the residents of the South (comparing to the residents of Gush Dan area); they increased this year the number of hours by 2-3 comparing to last year. (Those working part-time jobs added one hour but this addition is not significant.) No differences were found in the change of actual number of weekly working hours of salaried employees also over the various economic industries, similarly to the crude data presented in Figure 6; however, the actual number of weekly working hours of a salaried employee in the medium-tech industry ("mixed" industry) and in food retail trade – an industry that blossomed during the crisis – increased by about 4, relatively to a salaried employee in traditional industries.

### **C3. Calculation of decrease in income from work of households that lost earners**

We shall now proceed to calculate the decrease in income from work (and unemployment benefit) of households that contained, immediately prior to the Covid-19 crisis, at least one salaried employee (in the business/public sector) who lost his/her livelihood during the crisis. (Also see Bank of Israel, 2020a.) Figure 8 shows the distribution of the number of adult salaried employees in the household in July comparing to their number prior to the crisis. In about 17% of the households which contained two salaried employees (in the public and/or business sector) before the crisis, one salaried employee was omitted (comparing to approximately 11% one year previously), and in about 2% of these households both salaried employees became unemployed (comparing to less than 1%); in about 13% of the households with two adults and one salaried employee, the salaried employee lost his/her job (comparing to about 11% one year previously), and in more than 15% of the households with a single salaried employee adult, his/her employment was terminated (comparing to approximately 11%). The decrease of the number of salaried employees in households, which before the crisis contained at least one salaried employee in the business sector, was larger, normally by 2-3 percentage points (not presented), since employment in the public sector was hardly injured.

Distribution of wage for a work month in 2018 of salaried employees prior to the crisis, who were job seekers (at the Employment Service) in July this year<sup>16</sup> is presented in Figure 9. The figure shows that the wage of job seekers was extremely lower than that of salaried employees. Thus, for instance, about 46% of the job seekers earned in 2018 up to the minimum wage (nearly NIS 5,300 per month) comparing to about 30% of all the salaried employees. The figure also shows the unemployment benefit provided for under the law (the green lines and their values on the right-hand axis). The substitution rate between the unemployment benefit and the wage immediately prior to unemployment (the wage immediately prior to unemployment is the grey diagonal) decreases with the wage: thus, for instance, for those who receive minimum wage and are aged 28 and above it amounts to about 80%, and for

<sup>14</sup>The estimate was made with respect of June since in July 2020 the vacation patterns were probably different than last year.

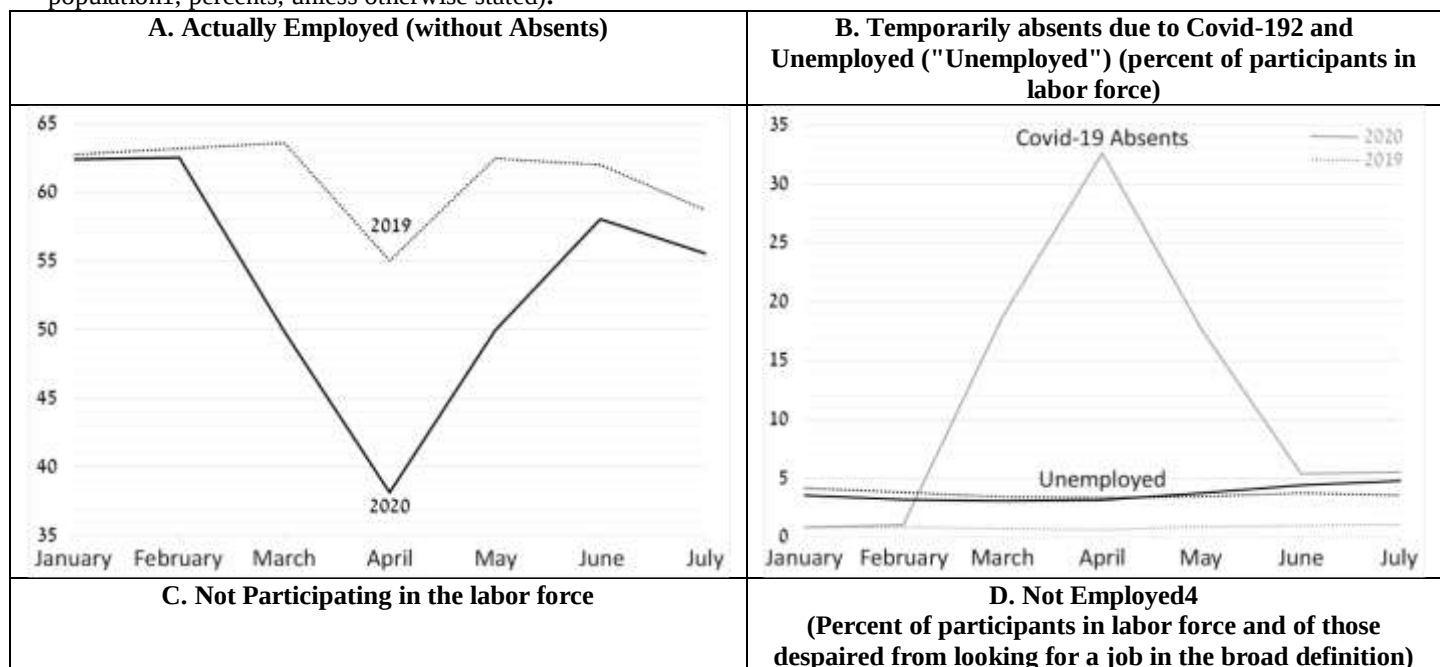
<sup>15</sup>Self-definition of percents of position. The acceptable definition for a part-time job is less than 35 actual working hours per week, but here the intention is to examine the differences in the development of employment between those that under normal circumstances have a full/part-time job, even if a change occurred to the number of their working hours due to the Covid-19 crisis.

<sup>16</sup>Some of the job seekers did not update the Employment Service that they had come back to work until July.

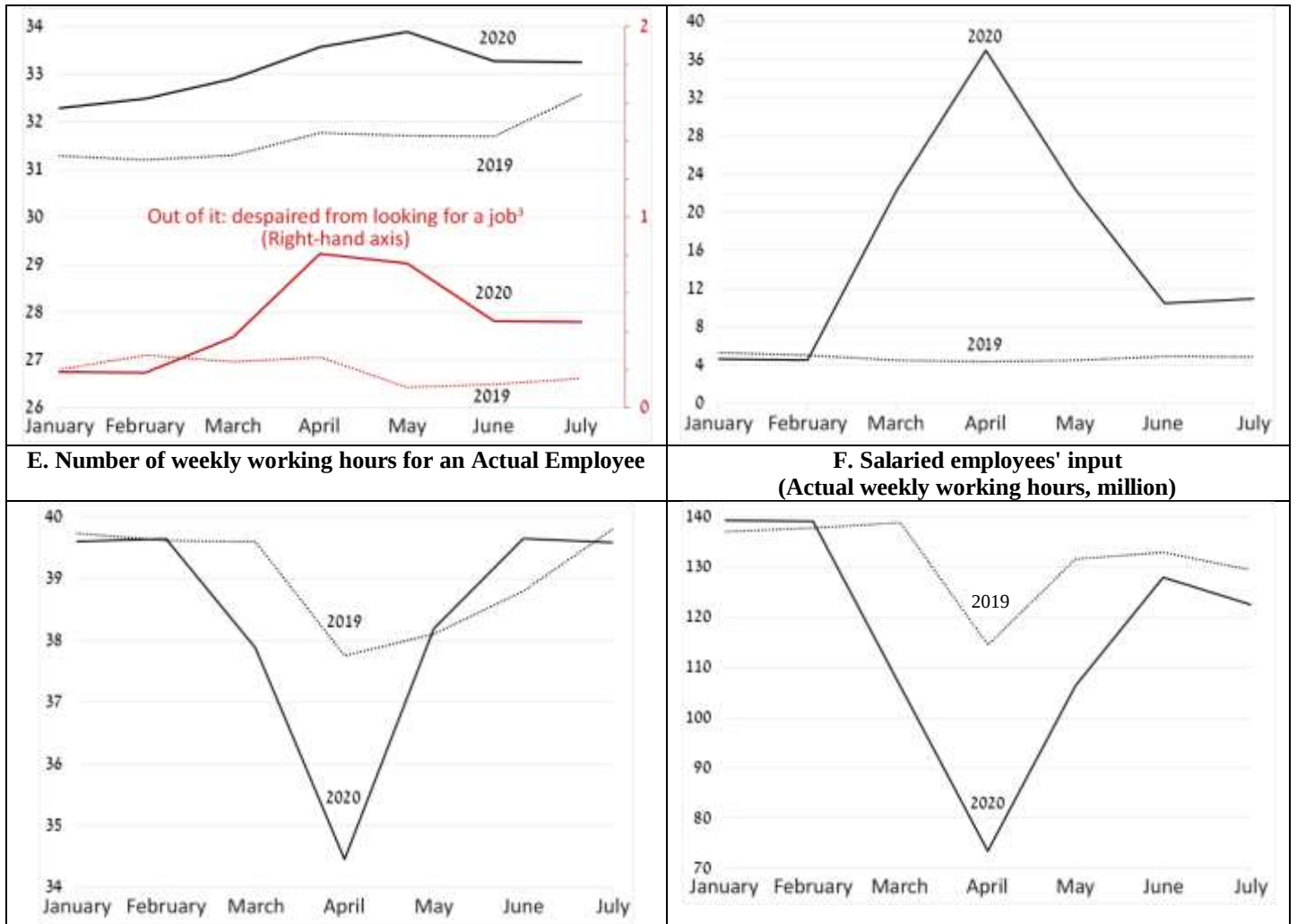
younger people it amounts to 60% only; on the other hand, those who earn more than NIS 25 thousand a month will receive unemployment benefit limited to approximately NIS 10.5 thousand per month. Since the wage of job seekers during the crisis is relatively low, and their substitution ratio is relatively high, the absolute damage to their income is usually limited.

We calculated the increase in the income from work (and unemployment benefit) of households that contained at least one adult salaried employee prior to the crisis and at least one of the adult household members was a job seeker in July 2020. Unemployment benefit was taken into consideration assuming that the job seeker was entitled to it<sup>17</sup>. Figure 10 shows that the income of these households decreased by an average of approximately 20%. While about three quarters of households whose monthly income was lower than NIS 5 thousand lost up to 20% of it, more than one quarter of the households whose income exceeded NIS 20 thousand lost more than 30% of it. A similar picture also arises from an analysis of the decrease in income of households of salaried employees at least one of whom worked in the business sector prior to the crisis.

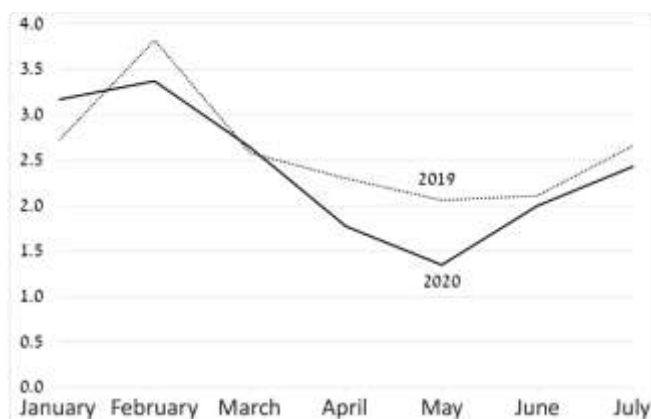
**Figure 1:-** Labor force properties and working hours, January to July 2019 and 2020 (Percent from research population1, percents; unless otherwise stated).



<sup>17</sup>According to the National Insurance Institute (2020), approximately 92% of the claims for unemployment benefit were approved.



**G. Percent of new salaried employees in the workplace<sup>5</sup>  
(out of the total salaried employees, including Non-Covid-19 Absents)**



Source: Labor force surveys of the Central Bureau of Statistics and Bank of Israel's processing.

<sup>1</sup> Surveyees above the acceptable age for completing mandatory military service (including Employees in the public and business sectors alike and self-employed).

<sup>2</sup> Covid-19 Absents: Temporarily absent from work due to reduction in the scope of work, business stoppage and the reason "other" (in March-April 2020 also due to the reason "Because of Covid-19").

<sup>3</sup> Those despaired from looking for a job in the broad definition (namely, including those who stopped looking for a job "Because of Covid-19").

<sup>4</sup> Unemployed, Covid-19 Absents, and those who despaired from looking for a job in the broad definition.

<sup>5</sup> The rate of new salaried employees (Actual Employed and Non-Covid-19 Absents) in the workplace (started working there in the survey month or in the month preceding it) out of the total salaried employees in the labor force (including Non-Covid-19 Absents). The data of the start of work date are missing for some of the salaried employees and are not final. It is unclear how surveyees who came back from unpaid leave answered as for the start date of their work.

**Table 1:- Matrix of shifts between the labor force properties:**

July 2020 comparing to prior to the Covid-19 crisis<sup>1</sup>, and comparing to the parallel periods one year previously (Distribution by line, percents)

| Labor force properties prior to the crisis (2019) / parallel period one year previously (2018) |      | Labor force qualities in July<br>(July 2020 comparing to prior to the crisis – lines 2019 and the parallel periods one year previously – lines 2018) |                  |            |                   |       |
|------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------|-------------------|-------|
|                                                                                                |      | Hired<br>(and Non-Covid-19 Absents)                                                                                                                  | Covid-19 Absents | Unemployed | Not Participating | Total |
| Hired (including Absents) <sup>2</sup>                                                         | 2019 | 83.6                                                                                                                                                 | 5.7              | 3.8        | 6.9               | 100   |
|                                                                                                | 2018 | 91.1                                                                                                                                                 | 0.7              | 2.0        | 6.2               | 100   |
| Unemployed                                                                                     | 2019 | 53.8                                                                                                                                                 | 4.5              | 19.1       | 22.6              | 100   |
|                                                                                                | 2018 | 60.7                                                                                                                                                 | 19.5             |            | 19.8              | 100   |
| Not Participating                                                                              | 2019 | 35.4                                                                                                                                                 | 3.9              | 5.0        | 55.7              | 100   |
|                                                                                                | 2018 | 35.1                                                                                                                                                 | 6.5              |            | 58.4              | 100   |

Source: Labor force surveys of the Central Bureau of Statistics and Bank of Israel's processing

<sup>1</sup> Surveyees in Panel 4 in July-October 2019 and also in Panels 5-8 in July 2020 as well as one year previously.

<sup>2</sup> Salaried employees in the business sector.

**Table 2:- Matrix of shifts between labor force properties: July comparing to the second half of April/2020 and 2019<sup>1</sup> (Distribution by line, percents)**

| Labor force properties in April | Labor force qualities in July |          |            |     |       |
|---------------------------------|-------------------------------|----------|------------|-----|-------|
|                                 | Hired                         | Covid-19 | Unemployed | Not | Total |

|                                               |      | (and Non-Covid-19 Absents) | Absents |     | Participating |     |
|-----------------------------------------------|------|----------------------------|---------|-----|---------------|-----|
| Hired (and Non-Covid-19 Absents) <sup>2</sup> | 2020 | 94.3                       | 2.9     |     | 2.8           | 100 |
|                                               | 2019 | 94.2                       | 2.0     |     | 3.8           | 100 |
| Covid-19 Absents <sup>2</sup>                 | 2020 | 75.6                       | 17.1    |     | 7.3           | 100 |
|                                               | 2019 |                            |         |     |               | 100 |
| Unemployed                                    | 2020 | 49.0                       | 51.0    |     | 0.0           | 100 |
|                                               | 2019 | 78.5                       | -       |     | -             | 100 |
| Not Participating                             | 2020 | 22.8                       | 12.1    | 9.1 | 56.0          | 100 |
|                                               | 2019 | 22.9                       | -       | -   | 68.7          | 100 |

**Source:** Labor force surveys of the Central Bureau of Statistics and Bank of Israel's processing

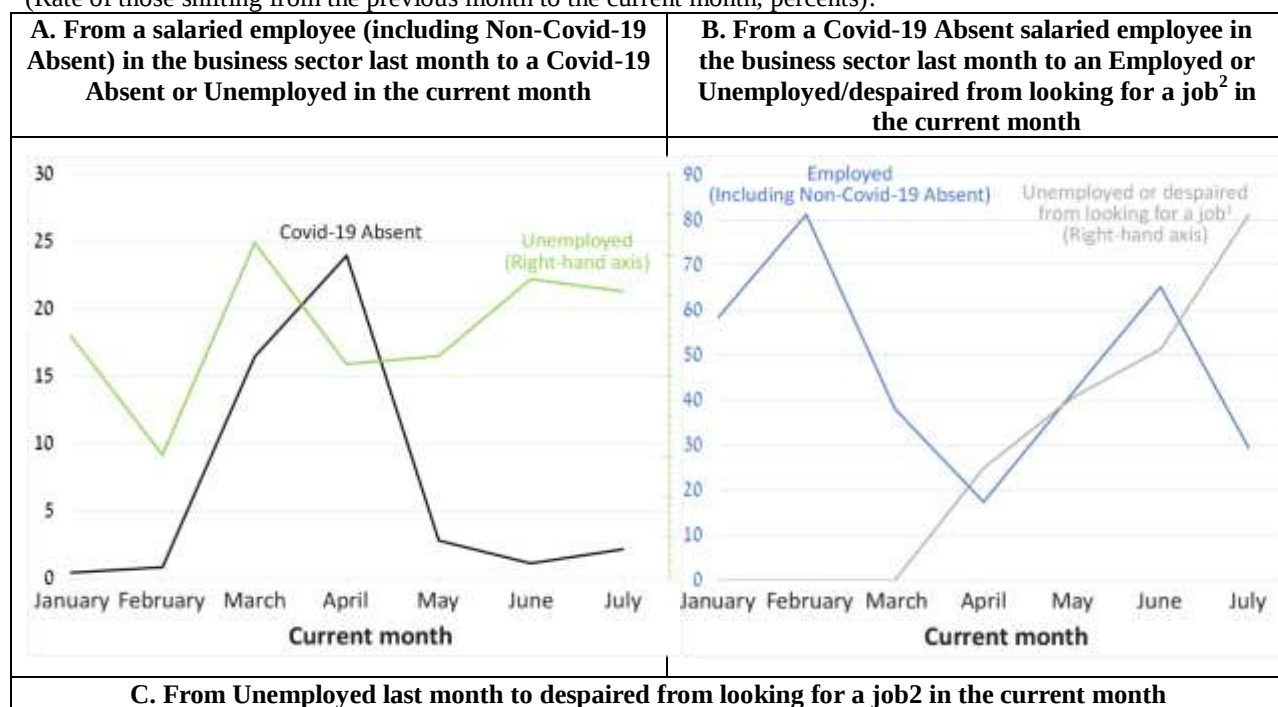
The mark "" indicates few surveyees in the cell. In such cases the values specified in the line do not tally at 100%.

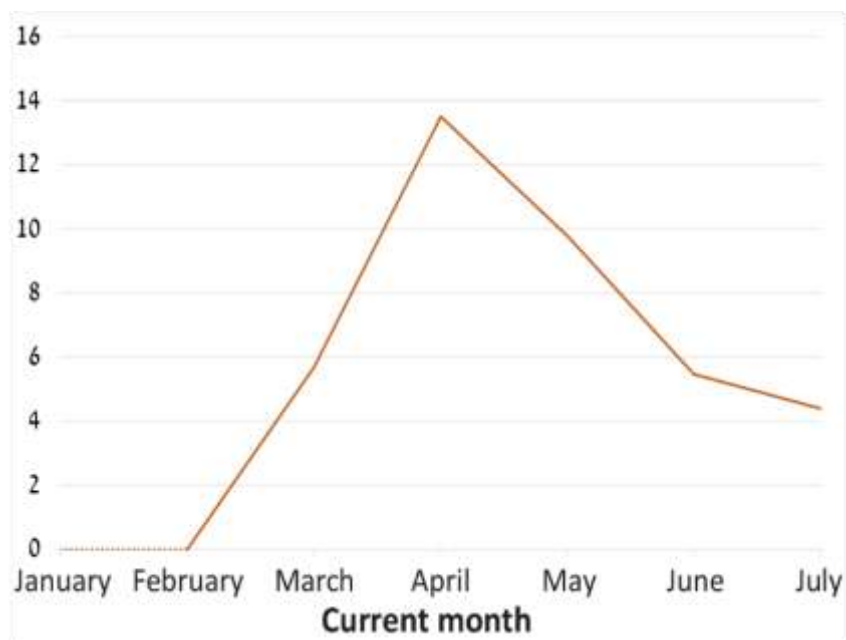
Cells whose values are less than 3% are of limited reliability and so is the distribution of Unemployed.

<sup>1</sup> Surveyees in Panels 1 or 5 in April. The "Effective Week" in the survey starts on April 19, 2020 onwards when the lockdown was cancelled. Please note that in the first part of the month, few people were surveyed due to the lockdown and Passover.

<sup>2</sup> Salaried employees in the business sector.

**Figure 2:-** The chance for shifts in the labor force properties between subsequent months<sup>1</sup>, January to July 2020 (Rate of those shifting from the previous month to the current month, percents).



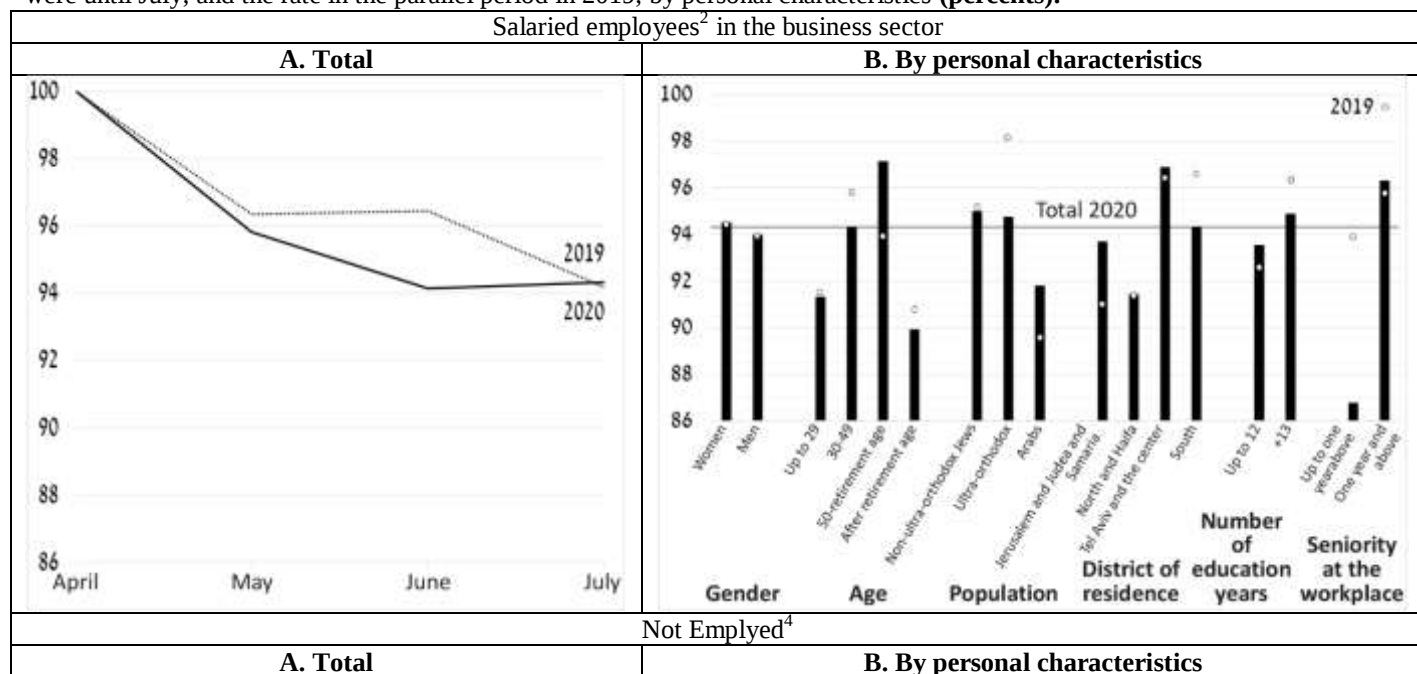


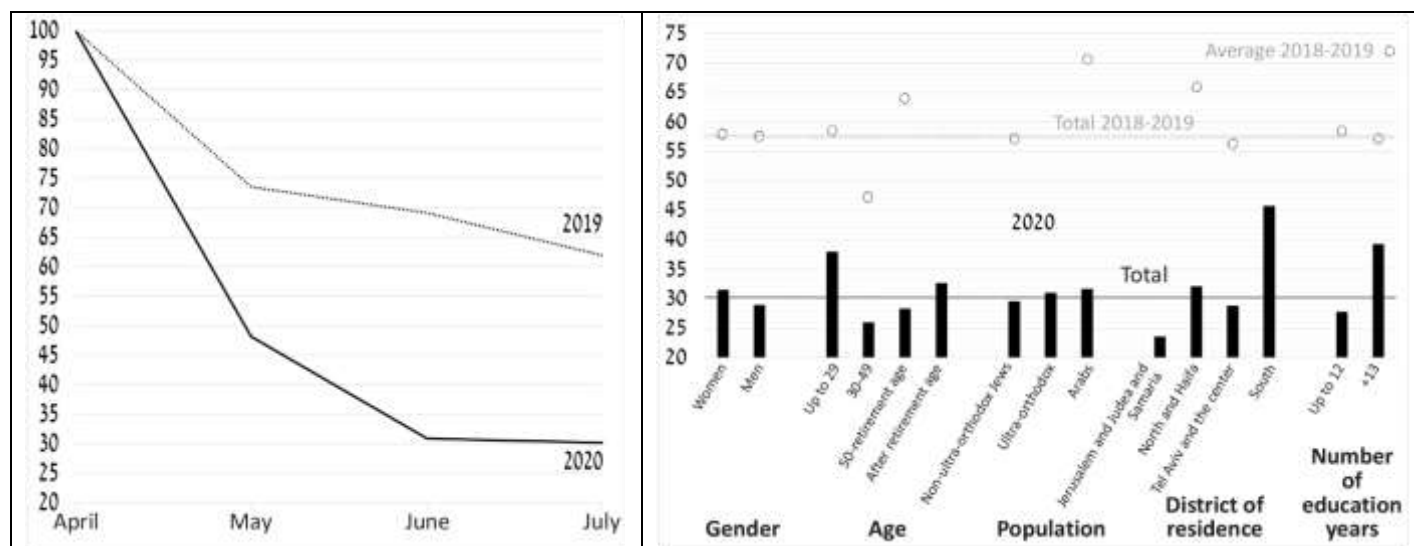
**Source:** Labor force surveys of the Central Bureau of Statistics and Bank of Israel's processing

<sup>1</sup> Surveyees in Panels 1-3 and 5-7 last month.

<sup>2</sup> Despaired from looking for a job in the broad definition (namely, including those who stopped looking for a job "Because of Covid-19").

**Figure 3:-** Rate of Not Employed<sup>1</sup> and salaried employees<sup>2</sup> in the second half of April 2020<sup>3</sup> who remained as they were until July, and the rate in the parallel period in 2019, by personal characteristics (percents).





**Source:** Labor force surveys of the Central Bureau of Statistics and Bank of Israel's processing 2020 data for the South district are of limited reliability, in particular those of the Not Employed. The data of 2018-2019 for Not Employed are not presented when the number of surveyees is small.

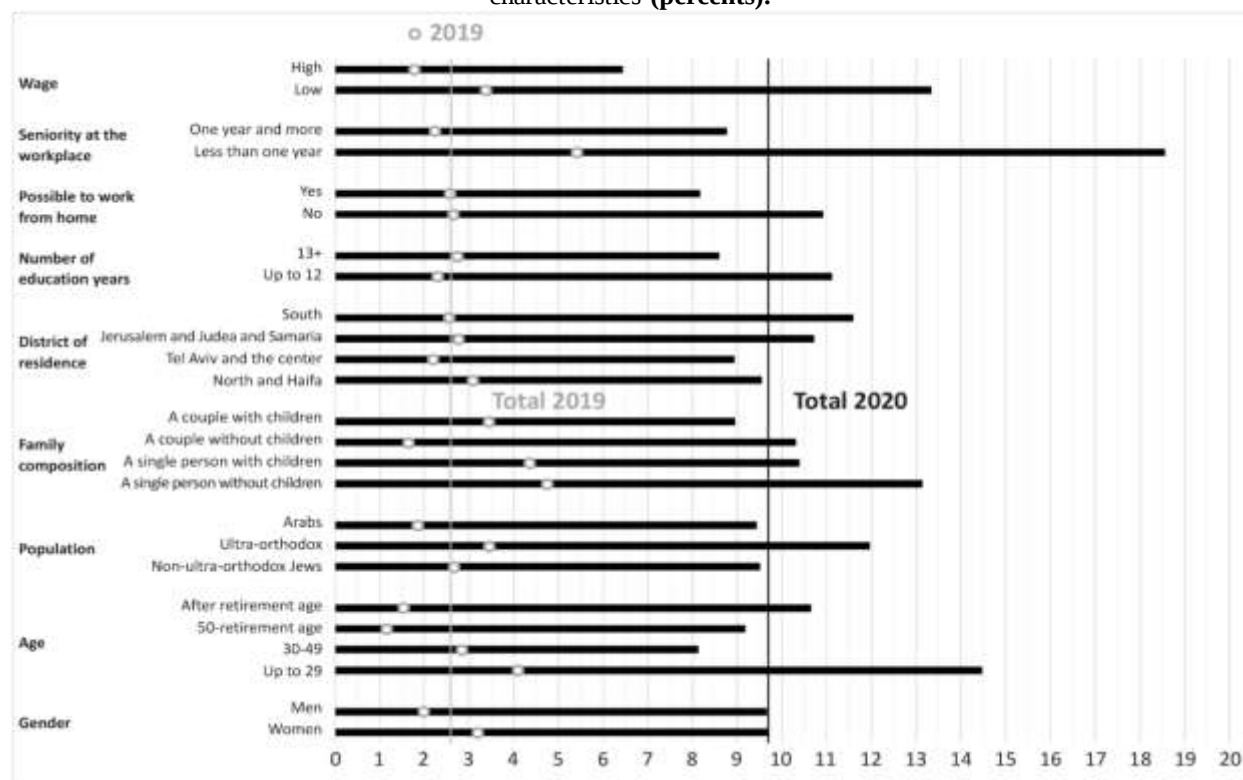
<sup>1</sup> Unemployed, Covid-19 Absents, and despaired from looking for a job in the broad definition.

<sup>2</sup> Including Non-Covid-19 Absents.

<sup>3</sup> Surveyees in Panels 1 or 5. The "Effective Week in the survey starts on April 19, 2020 onwards when the lockdown was cancelled. In the first part of the month, few people were surveyed due to the lockdown and Passover.

<sup>4</sup> Rate of Not Employed who remained Not Employed or became Not Participating (who do not despair from looking for a job in the broad definition and are included in the Not Employed group).

**Figure 4:-** Rate of Not Employed<sup>1</sup> in July 2020 out of the salaried employees<sup>2</sup> in the business sector prior to the Covid-19 crisis<sup>3</sup>, and the rate in the parallel period one year previously, by demographic-social-financial characteristics<sup>4</sup>(percents).



**Source:** Labor force surveys of the Central Bureau of Statistics, Israel Tax Authority, and Bank of Israel's processing.

All the differences in the rates of Not Employed in 2020 comparing to 2019 are significant at a 1% level.

<sup>1</sup> Unemployed, Covid-19 Absents, and those who despair from looking for a job in the broad definition.

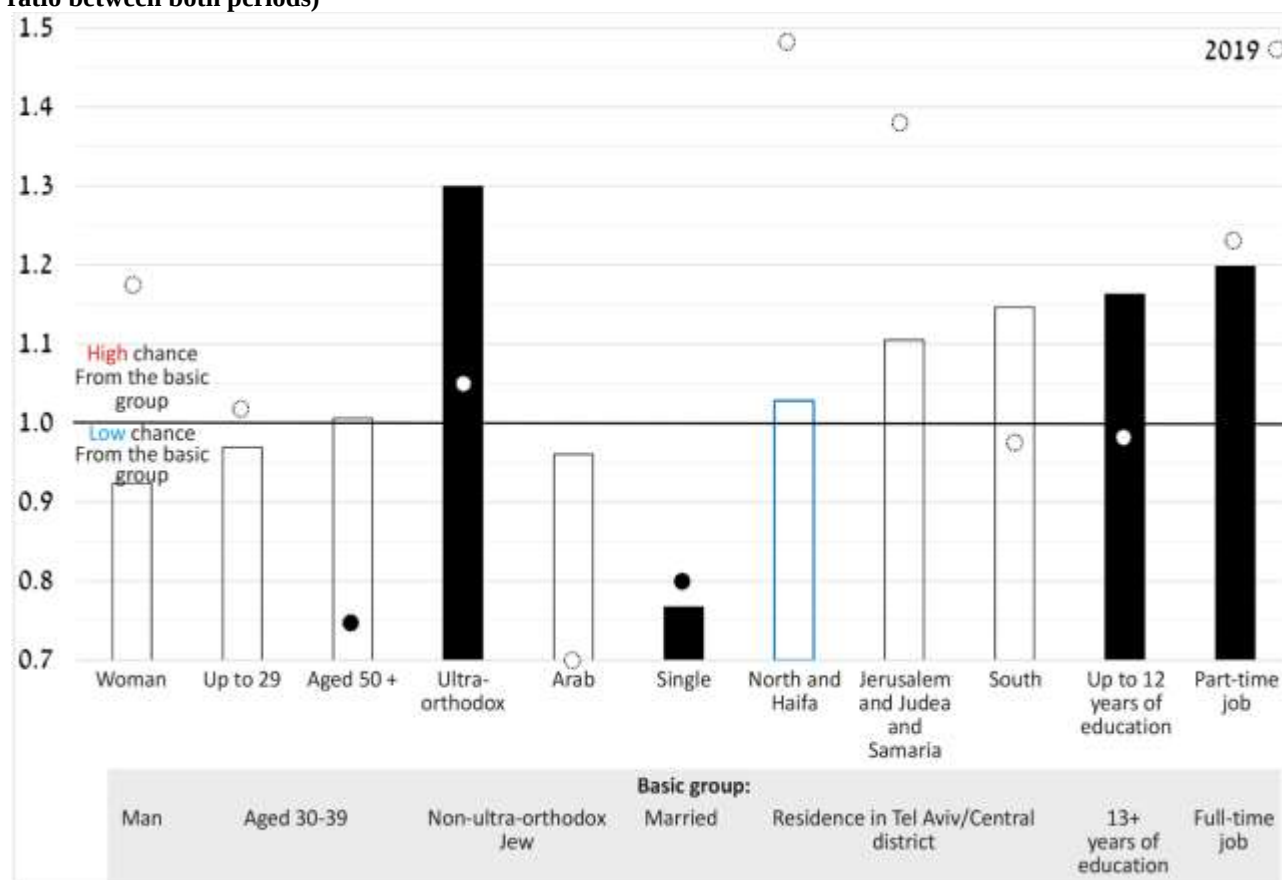
<sup>2</sup> Including Absents.

<sup>3</sup> Surveyees in Panel 4 in July-October 2019 (or 2018) as well as in Panels 5-8 in July 2020 (or 2019).

<sup>4</sup> Seniority at the workplace: calculation of workplace seniority in February 2020 (or 2019) according to the actual seniority prior to the Covid-19 crisis (or in the parallel period one year previously), assuming that the surveyee continued at the same workplace until February. Possible to work from home: based on an adjustment to Israel of a classification of professions allowing to work from home, conducted by Dingel and Neiman.(2020)

Wage: gross annual income from work as a salaried employee in 2018 (low – below the median, high – above the median). The calculation was only made for those who had a wage in 2018. The retirement age: 62 for women and 67 for men.

**Figure 5:-** Estimated chances of salaried employees<sup>1</sup> in the business sector prior to the Covid-19 crisis<sup>2</sup> to be Not Employed<sup>3</sup> in July 2020, and estimates for the parallel period one year previously<sup>4</sup>  
(The odds ratio comparing to the basic group; the blue column indicates a significant difference in the odds ratio between both periods)



**Source:** Labor force surveys of the Central Bureau of Statistics and Bank of Israel's processing

<sup>1</sup> Including Absents.

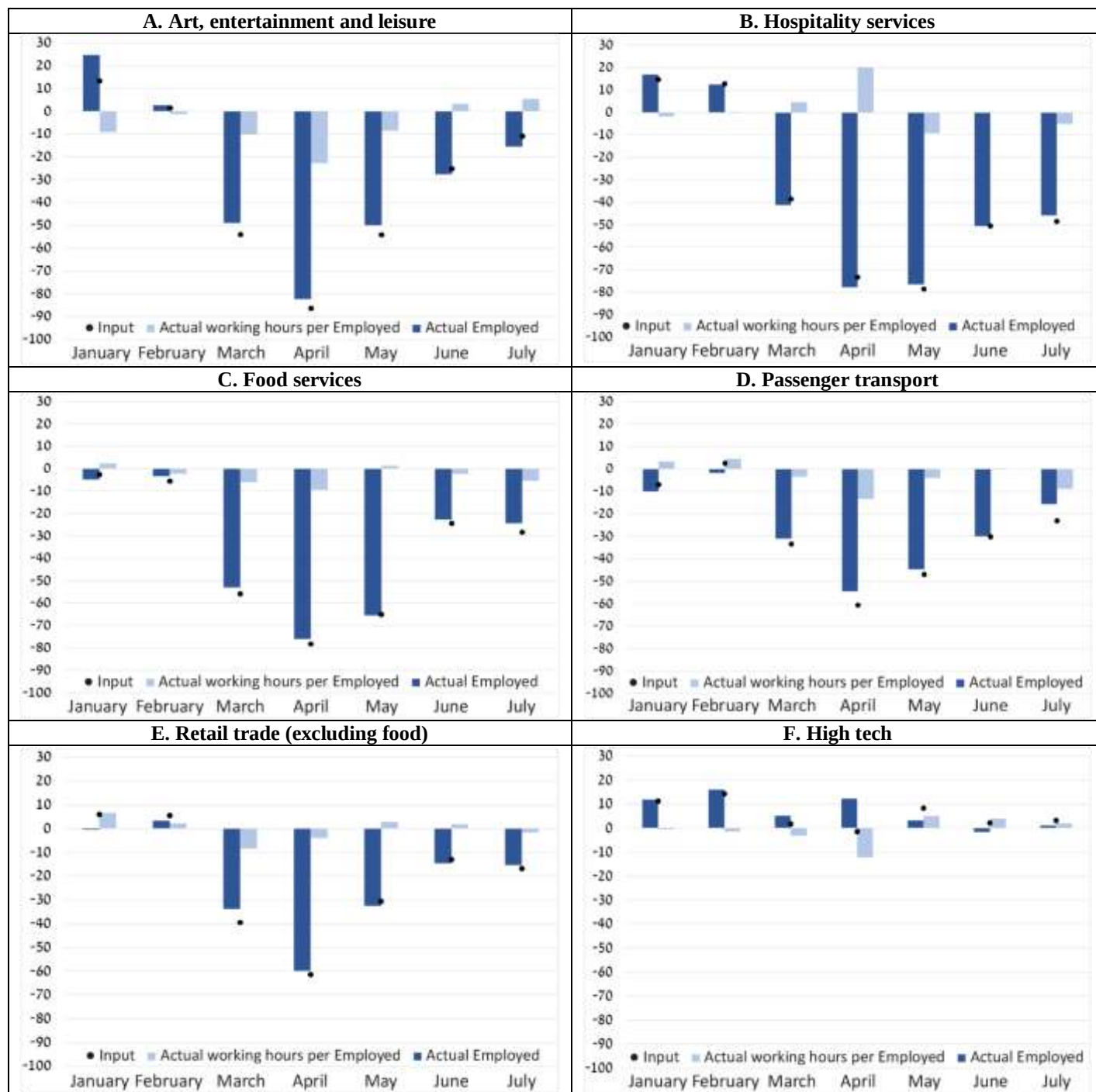
<sup>2</sup> Surveyees in Panel 4 in the labor force surveys of July-October 2019 (or 2018) as well as in Panels 5-8 in July 2020 (or 2019). The estimates only include surveyees up to retirement age (62 for women and 67 for men).

<sup>3</sup> Unemployed, Covid-19 Absents, and those despaired from looking for a job in the broad definition.

<sup>4</sup> Figure 4 shows the odds ratio derived from the Logit estimate of the chance to be Not Employed in July 2020 (or 2019) as dependency of the explanatory variables appearing in the figure and interactions between themselves and the simulation of 2020, the economic industry (in a digit level), the month in which the surveyee

answered prior to the crisis (or in the parallel period in 2018) and the simulation for 2020. Empty columns/circles indicate non-significant estimates (at a 10%-level).

**Figure 6:-** The change in the number of salaried employees, the actual working hours for a salaried employee and the total working hours (input), in selected economic industries in the business sector<sup>1</sup>  
(January to July 2020 comparing to the parallel month last year, percents)



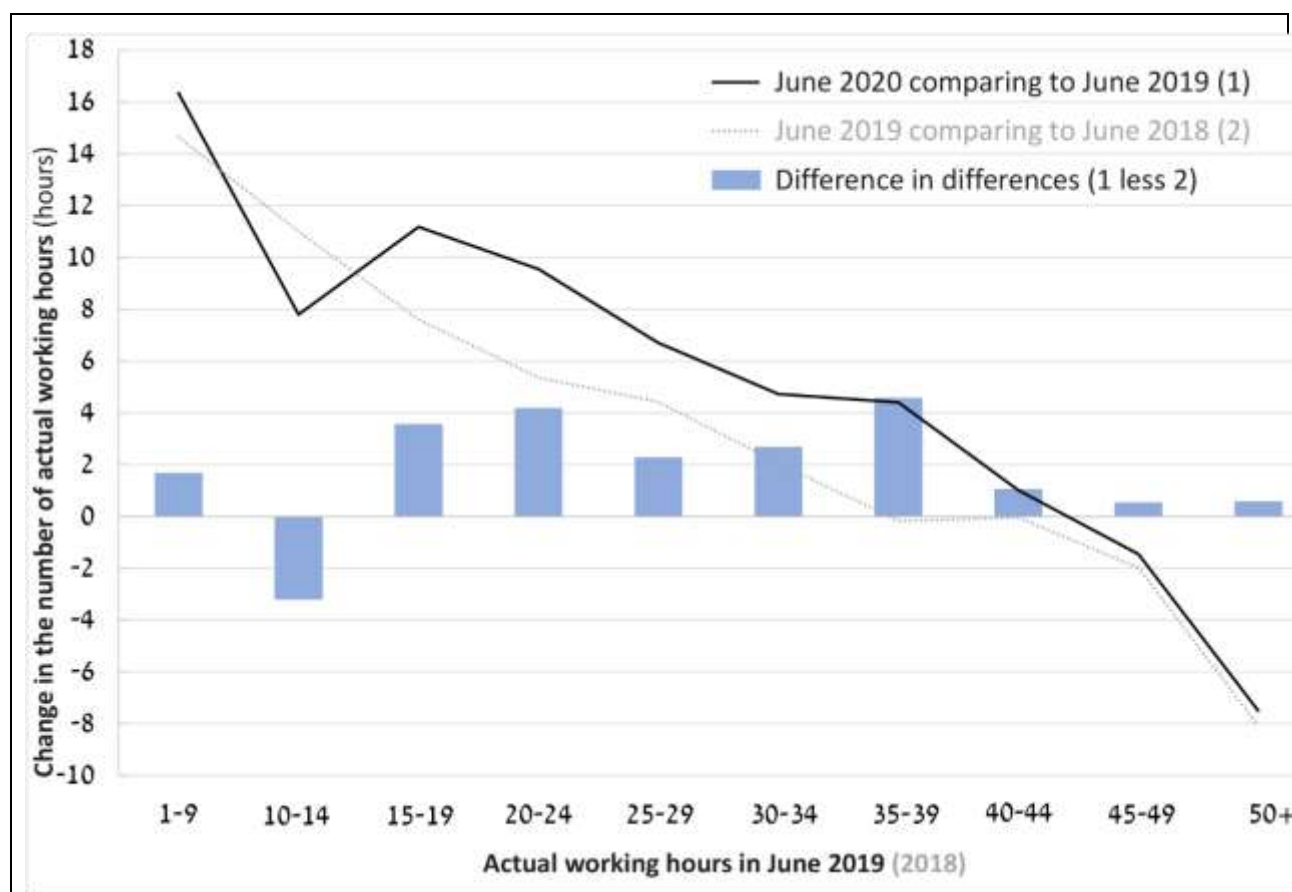
Source: Labor force of the Central Bureau of Statistics and Bank of Israel's processing

These are not the same surveyees (panel).

<sup>1</sup> The following is the classification of economic industries (in brackets the branch code) by the order of their appearance

in the figure: art, entertainment and leisure – art, entertainment and leisure (93-90) and productions (59); hospitality services (55); food services – food and beverages services (56); passenger transport - passenger transport by intercity trains (4911), other land transportation of passengers (4921, 4924-4929), air transportation of passengers (511) retail trade (excluding food) – retail sale (excluding motor vehicles and motorcycles) (47) except retail sale in general stores specializing in food products, beverages and tobacco (4711) and excluding retail sale in stores specializing in food, beverages and tobacco (472); high tech – manufacturing of medications (21); manufacturing of computers, electronic and optical equipment (26), manufacturing of aircraft (303), computer programming, consultation in the computer filed and related services (62); data processing, storage and related services, and portals (631), scientific research and development (73).

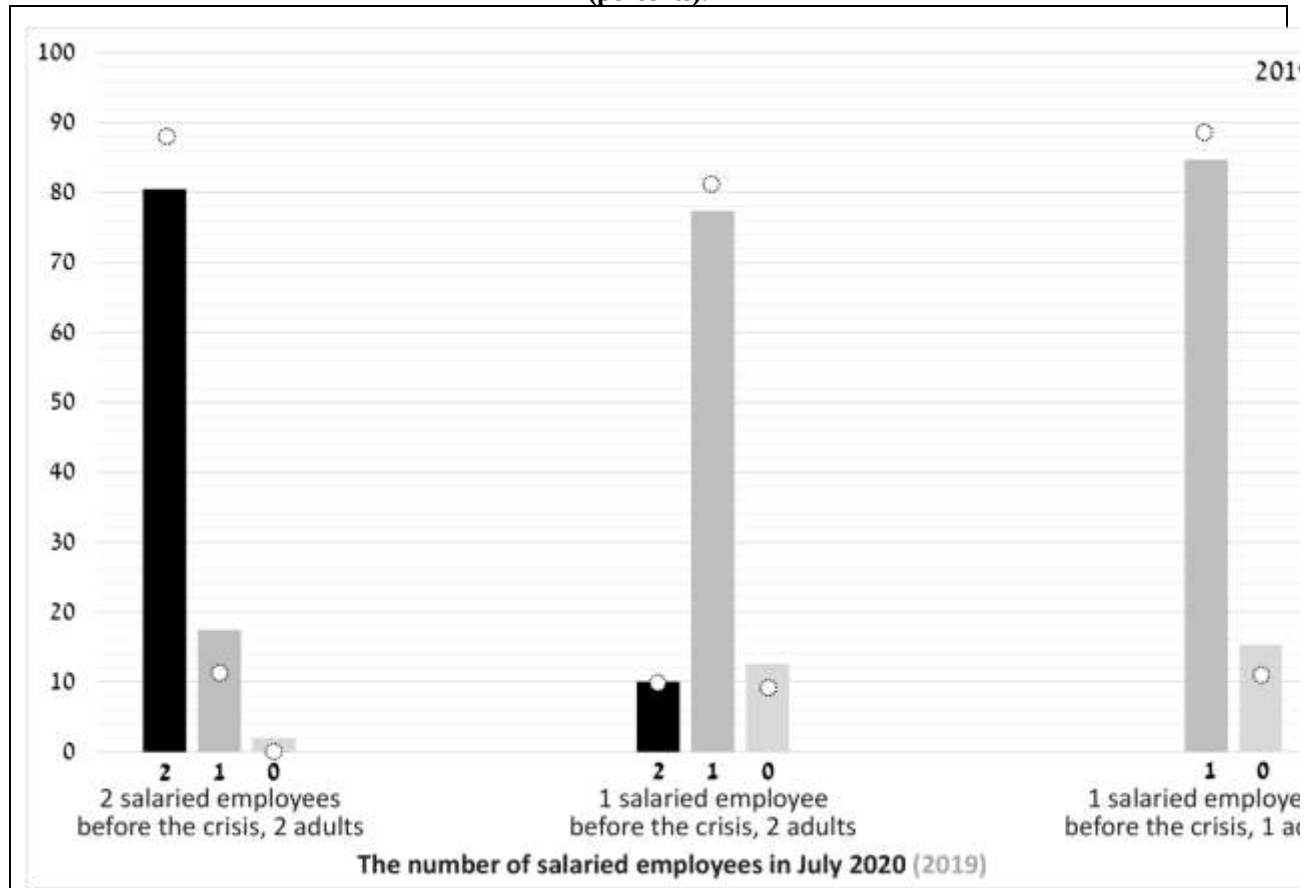
**Figure 7:-** The change in the number of actual working hours of salaried employees in the business sector: June 2020 comparing to June 2019 and also one year previously<sup>1</sup>(hours)./



Source: Labor force surveys of the Central Bureau of Statistics and Bank of Israel's processing

<sup>1</sup> Surveyees in Panels 1-4 in June 2019 (or 2018) as well as in Panels 5-8 in June 2020 (or 2019). The calculation was prepared for June since in July 2020 the vacation patterns were probably different than last year (for instance, only during some of the weekdays, an assumption which is supported by the fact that the rate of Non-Covid-19 Absents was low this year).

**Figure 8:-** The distribution of the number of salaried employees in the household<sup>1</sup> in July 2020 by their number prior to the Covid-19 crisis<sup>2</sup>, and the distribution in the parallel period one year previously (percents).

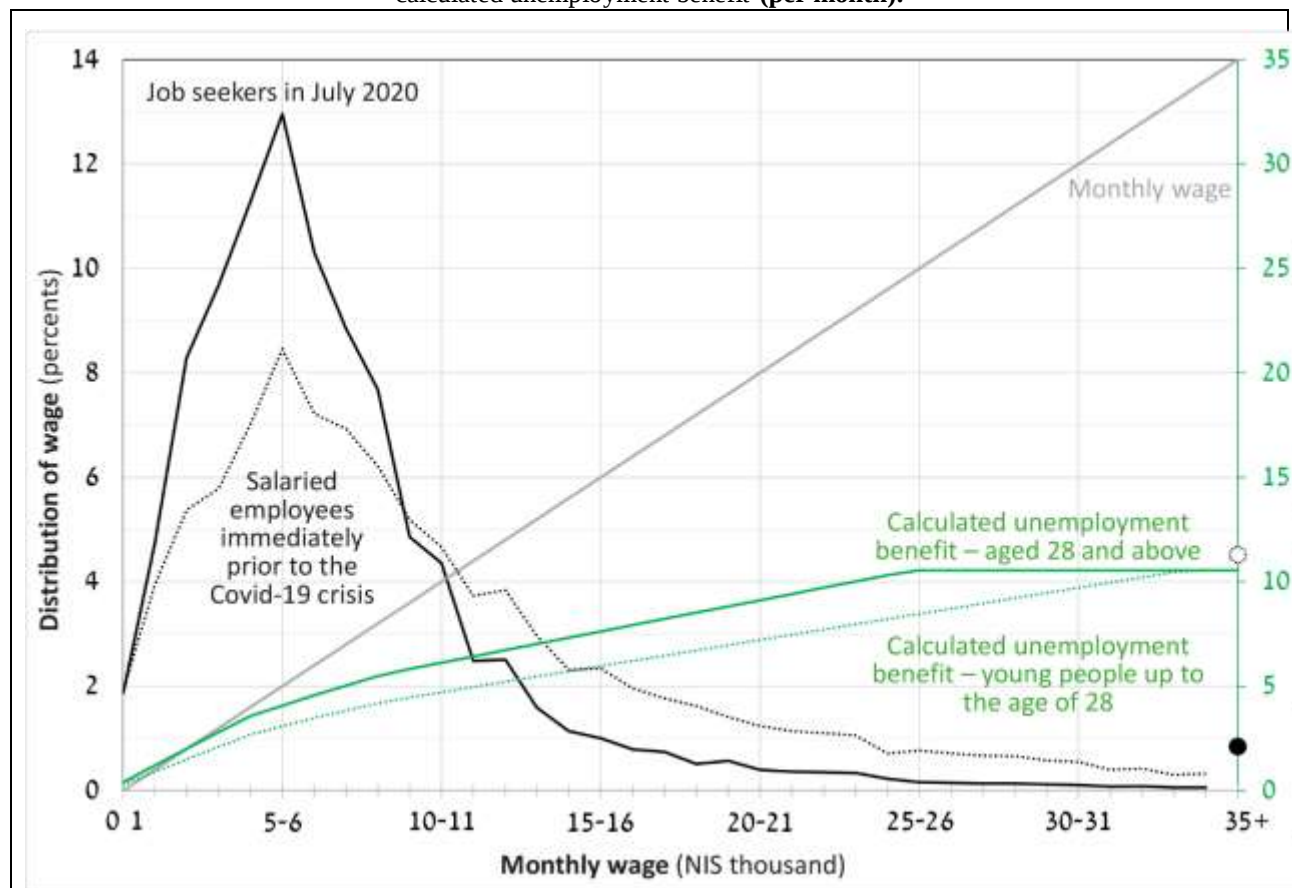


Source: Labor force surveys of the Central Bureau of Statistics and Bank of Israel's processing

<sup>1</sup> The number of adult salaried employees in a household (the surveyee and his/her spouse). The calculation only included households with at least one surveyees who was a salaried employee (including anyone who was temporarily absent from work) before the crisis (in the parallel period one year previously). In July a salaried employee includes a Non-Covid-19 Absent. The number of salaried employees in the household (before the crisis/in the parallel period one year previously and in July). The calculation did not include households which, prior to the crisis/in the parallel period one year previously, had more than two adults and/or a self-employed, and people whose marital status prior to the crisis/in the parallel period one year previously, was different than that of July.

<sup>2</sup> Surveyees in Panel 4 in July-October 2019 (or 2018) as well as in Panels 5-8 in July 2020 (or 2019).

**Figure 9:-** The distribution of gross wage of salaried employees and job seekers in July 2020<sup>1</sup>, and the rate of calculated unemployment benefit<sup>2</sup>(per month).

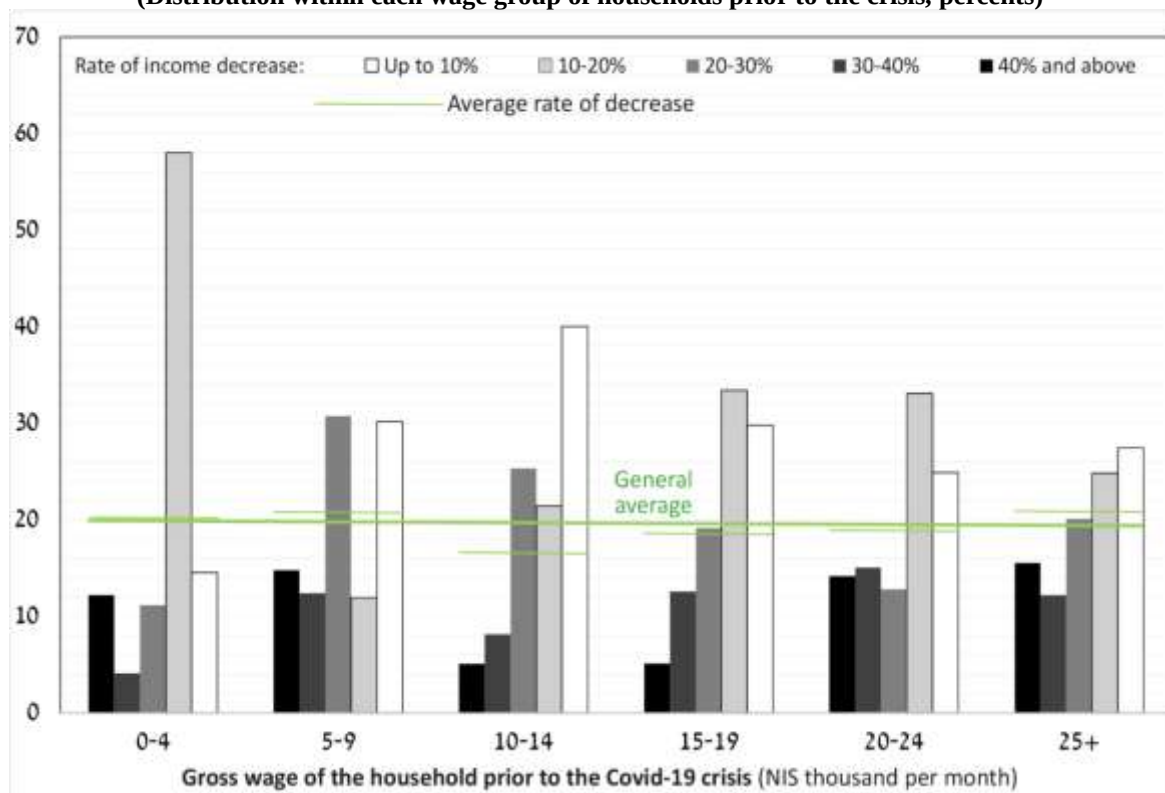


Source: Labor force surveys of the Central Bureau of Statistics, the Israeli Employment Service, the Israel Tax Authority, and Bank of Israel's processing.

<sup>1</sup> Surveyees who were salaried employees in October 2019 until February 2020, out of whom: new job seekers from March 2020 onwards who did not report the Employment Service until the end of July that they went back to work. Gross annual wage in 2018 (the last year for which data are available) is divided by the number of work months.

<sup>2</sup> Calculation of unemployment benefit rate assuming that the job seekers are entitled. Young people up to the age of 18 – without child(ren). From August 1, 2020 young people up to the age of 28 with child(ren) are entitled to unemployment benefit just as people aged 28 and above.

Figure 10: Estimate of the decrease in income from gross wage (including unemployment benefit) of households of salaried employees prior to the Covid-19 crisis<sup>1</sup> at least one of whom was a job seeker in July 2020<sup>2,3</sup>  
(Distribution within each wage group of households prior to the crisis, percents)



**Source:** Labor force surveys of the Central Bureau of Statistics, the Israeli Employment Service, the Israel Tax Authority, and Bank of Israel's processing.

<sup>1</sup> Households with at least one salaried employee (including anyone who was temporarily absent from work) in July-October 2019. The calculation does not include households that contained more than two adults and/or self-employed at that time.

<sup>2</sup> New job seekers from March 2020 onwards who did not report the Employment Service by the end of July that they went back to work.

<sup>3</sup> The following is the method of calculating the gross monthly income of the household: the wage of the household prior to the Covid-19 crisis – the average gross monthly wage of the surveyees and his/her spouse in 2018 and provided that they were Employed (or Absent) prior to the crisis. The households of job seekers in July 2020 – the calculated unemployment benefit of the job seeker/s provided that they were Employed (or Absent) prior to the crisis, and the gross average wage per work month in 2018 of the job seeker's spouse provided that he/was Employed (or Absent) prior to the crisis, or zero if both were job seekers; the calculation was only made for households where the adult who worked (or was Absent) prior to the crisis received wage in 2018. In calculating the income of the household, the benefit for income support was not taken into account. (In February 2020 there were approximately 71 thousand benefit recipients and in July – approximately 83 thousand.).

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