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Poverty and Inequality amid COVID-19 – Evidence from Pakistan's Labour Market

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Abstract

This study has attempted to reveal the social disparity between different income groups in Pakistan in the times of a global health and economic crisis of COVID-19. Using the latest data of Pakistan Labour Force Survey (2017-18), the first objective of the study is to measure the opportunity to work from home across the country in different income groups and gauge both economic and geographic inequality in the ability to work from home. The second objective of the study is to find the labour, which is most vulnerable to job lay-offs with their respective occupations and industries across the country. The major findings of the study are that 18.5 percent of the working population can work from home, which is mostly located in the major cities of the country. The investigation reveals that more than 70 percent of the working force in Pakistan is working without any written contract or agreement making them the most vulnerable to job layoffs in the times of global economic crisis. A province wise analysis of vulnerable occupation and industries is also discussed.

Keywords: Poverty, Pandemic, Inequality, Labour Market, Work from home, Vulnerable Employment, COVID-19, Pakistan, Income quintiles

Introduction

The latest COVID-19 pandemic has forced the world to sit at homes in order to save lives but it comes at a great economic cost. Social distancing is the new norm of society but at the same time it is a privilege not all can afford. The RNA strand of COVID-19 may be new for the world but pandemics are not. History is also suggestive of how the poor have always suffered the most in times of crisis; COVID-19 will be no different.

With 50 percent of the world's GDP in lockdown¹, all kinds of markets are under ultimate test. The case of Pakistan's labour market is no exception. Some of the questions this paper aims to answer is who are the people who can perform their jobs from home? How does the degree for telecommuting differ across urban communities, businesses and quintiles? Who are the most vulnerable groups in the labour market amid a major health and economic crisis in this country?

To answer these questions and more, we have analyzed the latest Labor Force Survey of Pakistan and have focused on the disparity in the different income groups across the country. In Section 1, to calculate the opportunity to work from home, we followed the Dingel and Neiman (2020) approach of coding all the occupations into binary codes based on O*NET data provided by Dingel and Neiman (2020) and merge this classification with occupational employment in Labour Force Survey 2018 and Pakistan Standard Classification of Occupation. We then find the opportunity to work from home for major cities of Pakistan. For income quintiles, the income of the employed is equally divided in five equal divisions.

¹ "The Coronavirus Crisis Will Change the World of Commerce", *The Economist*, 2020
<https://www.economist.com/leaders/2020/04/08/the-coronavirus-crisis-will-change-the-world-of-commerce>

In Section 2, we identify the vulnerable groups in the labour market of Pakistan. The definition of vulnerable employment used in this study differs from the traditional definition of vulnerable employment given by International Labour Organization, which includes own-account workers and contributing family members.² The vulnerable group constituted for this study includes all the laborers of the country who are working without any written contract or agreement making them the most vulnerable and easiest to lose jobs in the time of crisis. The rationale behind this is that COVID-19 pandemic is more than a health emergency and now has transformed into a global labour market and economic crisis in the majority of the world. As predicted by ILO, almost 25 million workers or half of the world's workers face the risk of losing their jobs.³ In these times, losing jobs for those who work without any written contracts and agreements can be the easiest and quickest lay-offs. A systematic series of tables is used to demonstrate the vulnerable groups and industries in the country. The investigation also points at the difficulty of being poor during pandemic in a developing country.

Related Literature

Our work of coding the occupations to decide how flexible certain employments can be has clear roots in the investigation of Dingel and Neiman (2020) that surveyed the jobs that can be done from home. While our methodology is comparative, we have extended our work geographically defining work situations in major cities of Pakistan and added vulnerable employment province and industry wise. Our work also relates to the investigation carried by Pakistan Institute of Development Economics for their Corona Bulletin-19 emphasizing on people who can work from

²*Paid Employment Vs Vulnerable Employment* (ILOSTAT: Spotlight on Work Statistics, 2018).

³ International Labour Organization, "COVID-19: Protecting Workers in the Workplace", 2020 https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_738742/lang--en/index.htm

home in Pakistan. The study concludes that 18 percent of the workforce of Pakistan could work from work, which aligns with the finding of this paper however; the PIDE bulletin is limited to provinces and does not include industry wise geographical analysis.

Mas and Pallais (2020) have conducted a comparable investigation for alternative working arrangement, also assessing the opportunity to work from home. Their investigation reports that less than 13 percent of those who have full and part time jobs had access to formal arrangements to work from home despite the fact that twice that amount work frequently from home. An important point to be noted with regards to the current pandemic is that there is a significant difference between having the option to do most and the entirety of one's work at home.

Saltiel (2020) conducted a similar estimation of jobs that can be performed while staying at home for ten developing countries using labour surveys. Using the Dingel and Neiman (2020) approach and data defined in Skills Toward Employability and Productivity (STEP) survey, he calculates the feasibility to perform a job at home based on the U.S. economic context. His findings indicate that fewer jobs could be done from home in developing economies ranging from 5 to 23 percent and also confirms a positive correlation between this share and GDP per capita.

Results

Table 1 represents the data for the major occupation groups in the country (except military) and has divided it into five income quintiles. As the table addresses, the richest quintile has the highest percentage of highest income earning occupations, which includes Managers and Professionals. Comparatively, the same highest income earners are a smaller part of the poorest quintile. Similarly, the least earning group of elementary occupations has the highest percentage in the first two quintiles (poorest and poor) while it contributes less than 5 percent in the richest quintile. The

table represents that the poorest quintile not only earns less but also has the least opportunity of improving their skills that can lead them to the highest income earning jobs in the country.

TABLE 1: PERCENTAGE DISTRIBUTION OF MAJOR OCCUPATION GROUPS BY INCOME QUINTILES

Major Occupation Groups	1 st Quintile	2 nd Quintile	3 rd Quintile	4 th Quintile	5 th Quintile
Manager	2.86	1.91	3.02	10.65	81.56
Professionals	17.13	9.61	7.52	15.98	49.76
Technicians and associate professionals	5.71	9.44	13.10	28.33	43.41
Clerical support workers	3.08	6.06	10.64	31.61	48.61
Service and sales workers	15.01	22.43	23.26	22.48	16.82
Skilled agricultural, forestry and fishery workers	10.46	17.65	22.22	32.03	17.65
Craft and related trades workers	26.71	15.21	18.20	25.96	13.92
Plant and machine operators, and assemblers	7.99	20.96	27.10	32.49	11.47
Elementary occupations	29.16	28.15	23.65	14.48	4.55

Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

Work from home: A luxury accessible to few *Economic Inequality*

To work from home to keep safe during a pandemic is a luxury not all can afford. When it comes to earning from home, the inequality is of two kinds, first being the economic inequality and second, the geographic. Table 2 and Table 3 represent the economic disparity in the country. Table 2 reports that the opportunity to work from home for the first three quintiles (poorest, poor and middle income group) is only 8.6 percent on average while the same opportunity is more than 50 percent for those who lie in the fifth quintile (richest income group). Dissecting Table 2 into major occupation groups and quintiles informs us that the inequality in the opportunity to work from home within the same quintiles is large too. For example, in the first quintile the highest paid group of Managers have almost 89 percent opportunity to work from home in comparison to 0 percent in the least earning occupations. A similar pattern can be noticed in the rest of the quintiles too. These tables represent that white-collar jobs are only not highest paid but also are likely to protect their health and economic stability in the household because of the opportunity to earn from home.

TABLE 2: PERCENTAGE DISTRIBUTION OF OPPORTUNITY TO WORK FROM HOME BY QUINTILES

Work from home	1 st Quintile	2 nd Quintile	3 rd Quintile	4 th Quintile	5 th Quintile	Total
Yes	10.4	7.5	7.9	17.5	50.2	18.5
No	89.6	92.5	92.1	82.5	49.8	81.5

Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

TABLE 3: PERCENTAGE DISTRIBUTION TO WORK FROM HOME BY MAJOR OCCUPATION GROUPS (COMPARISON OF POOREST AND RICHEST QUINTILES)

Major Occupation Groups	1 st Quintile	2 nd Quintile	3 rd Quintile	4 th Quintile	5 th Quintile
Manager	88.9	83.3	84.2	91.1	97.1
Professionals	82.2	75.3	81.2	89.5	84.7
Technicians and associate professionals	79.5	87.5	78.2	66.1	65.7
Clerical support workers	58.1	73.7	73.8	72.3	82.0
Service and sales workers	0.0	0.0	0.0	0.0	0.0
Skilled agricultural, forestry and fishery workers	0.0	0.0	0.0	0.0	0.0
Craft and related trades workers	0.0	0.0	0.0	0.0	0.0
Plant and machine operators, and assemblers	0.0	0.0	0.0	0.0	0.0
Elementary occupations	0.0	0.0	0.0	0.0	0.0
Total	10.5	7.5	7.9	17.5	50.2

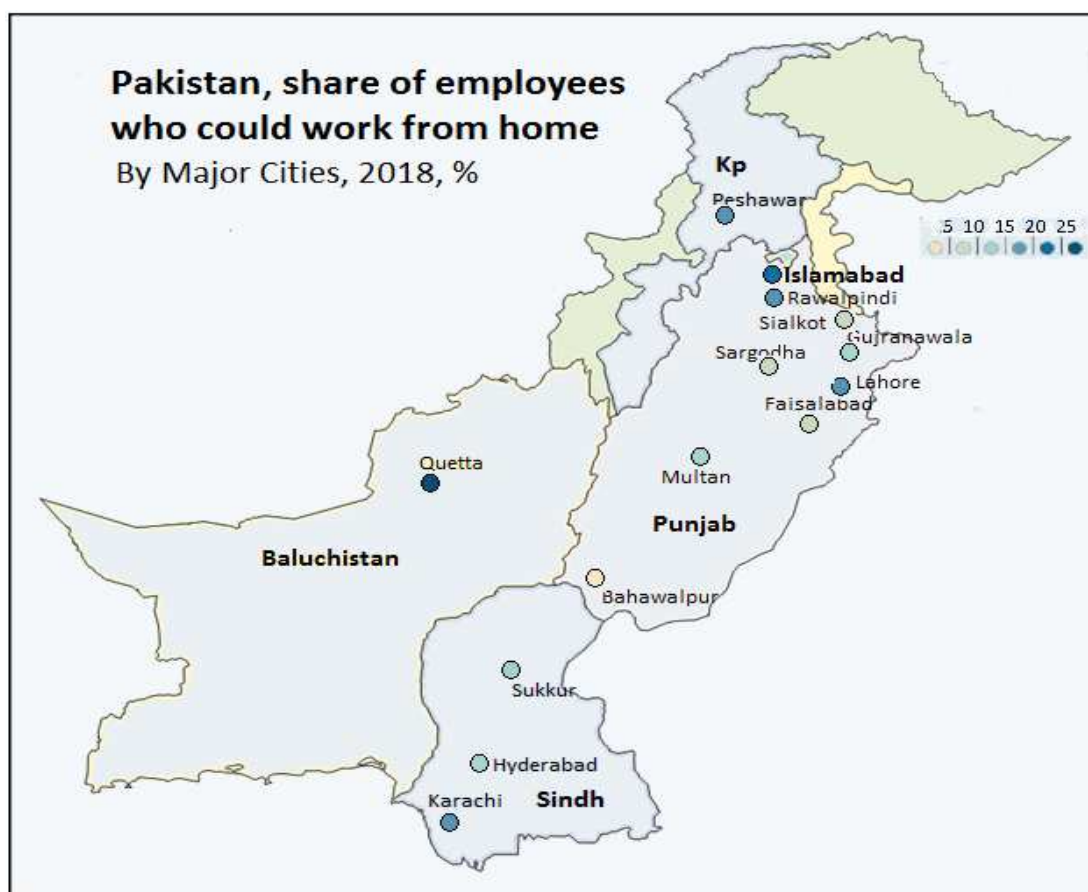
Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

Geographic Inequality

The geographic difference in the local labour market plays a significant role in determining different outcomes. While employees in some regions of the country have the luxury to obey the travel restrictions and work from home, the regions full of factories and lab workers do not have the same privilege. Even if somehow poor families could work from home, the packed space and higher number of household members per house could spread the infection faster and make working from home difficult for the employed. According to the latest Household Integrated Economic Survey of Pakistan, the average household size in the poorest quintile is 8 members per house while in comparison the average household size in the richest is 4.8 members.

Figure 1 represents the share of employees who can work from home in major cities of Pakistan. It is no surprise that even in major cities of the country, the majority of the population do not have the luxury to perform their job from their homes. In the major cities of Sindh, the percentage of people who can work from home is highest in Karachi with 20 percent, Hyderabad (12 percent) and Sukkur (11 percent). In Punjab, the highest percentage is found in Lahore (21 percent), followed by Rawalpindi (20 percent), Multan (13.2 percent), Faisalabad (9.5 percent) and Sargodha (8.6 percent). In KPK, the highest percentage is in Peshawar (19.6 percent) and in Balochistan; the percentage for Quetta is 29.2 percent, the highest in the country. For Islamabad, the figure stands at 24 percent.

Figure 1: Share of employees who could work from home



Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

Identifying vulnerable groups in Labour Market

When it comes to identifying the vulnerability in the Labor Market, several indicators of working conditions and job quality are included but a respiratory-based virus like COVID-19 hardly differentiates between genders or skill level of the labour. It is a unique condition that affects everything from eating in a restaurant, driving an Uber, or running a factory. When millions of these economic activities come to a halt, it means dangers for the jobs with no security. Especially the one with no employment contracts.

The absence of an employment contract is a decent proxy for informal wage because the unsigned labour is not protected under any labour law or legislation. Additionally, since there is no written agreement, the labour is not registered and therefore employers do not pay taxes and security required by the law. Table 5 reports the type of enterprise and status of job's written agreement between the employee and employer. The results are shocking. While the most secure jobs, which are with the Federal or Provincial Govt, it is important to notice that less than 25 percent of the country's population has permanent jobs. As seen, the biggest percentage (70.3 percent) of the country are the people who **“Work Without A Written Labour Contract or Agreement”** making them the most vulnerable group in the time of crisis. Not exclusively the laborers without a written agreement are unprotected by legislation but they also face higher danger of poverty than those with a formal agreement. Due to their vulnerability to external shocks, their rights can be easily abused.

TABLE 5: PERCENTAGE DISTRIBUTION OF ENTERPRISE AND STATUS OF JOB'S WRITTEN CONTRACT/AGREEMENT BETWEEN THE EMPLOYEE AND EMPLOYER

Enterprise	Permanent Job	Less than 1 year	Up to 3 years	Up to 5 years	Up to 10 years	10 Years and more	Without contract
Federal Govt	87.7	1.3	2.5	1.2	0.3	0.9	6.1
Provincial Govt.	93.7	0.4	1.5	0.6	0.1	0.7	3.1
Local body Govt	85.6	0.0	2.7	1.0	0.3	1.0	9.3
Public enterprise	76.5	1.3	4.2	1.7	0.0	2.1	14.3
Public limited company	43.8	3.1	1.6	3.1	0.0	4.7	43.8
Private limited company	19.7	1.8	6.0	3.3	1.9	2.0	65.3
Cooperative society	19.4	1.1	9.7	3.4	2.9	2.9	60.6
Individual ownership	2.0	0.7	0.9	0.4	0.2	0.2	95.6
Partnership	4.3	1.7	3.4	2.1	0.0	0.4	88.1
Other	5.6	2.5	2.7	0.4	0.2	1.1	87.4
TOTAL	24.7	0.9	2.0	1.0	0.5	0.7	70.3

Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

Vulnerability in Major Industries and Occupation Groups

Table 6 reports the major industries in the country with the highest percentage of vulnerable workers in descending order. The industries with the most vulnerable groups include Construction, Agriculture, forestry, hunting and fishing, wholesale & retail trade, restaurants & hotels, Manufacturing and Mining & quarrying industry. It is also to be noted workers of these industries are the ones who cannot perform their jobs from their homes. Table 7 identifies the vulnerability in major occupation groups and the results are not shocking. The most vulnerable occupation groups in the country consist of craft and related trade workers and following are elementary workers and Plant and Machine operators. Individuals of these occupations are low-paid workers who are working in poor conditions and have the highest risk of losing their jobs in the time of crisis.

TABLE 6: PERCENTAGE DISTRIBUTION OF VULNERABLE MAJOR INDUSTRIES IN PAKISTAN

Major Industries	Vulnerable
Construction	96.9
Agriculture, forestry, hunting and fishing	96.5
Wholesale & retail trade and restaurants & hotels	93.1
Manufacturing	83.7
Mining & quarrying	83.6
Transport, storage and communication	78.1
Financing, insurance, real estate and business services	42.9
Community, social and personal services	33.6
Electricity, gas and water	11.2

Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

TABLE 7: PERCENTAGE DISTRIBUTION OF VULNERBLE OCCUPATION GROUPS IN PAKISTAN

Major Occupation groups	Vulnerable
Craft and related trades workers	91.5
Elementary occupations	88.7
Plant and machine operators, and assemblers	82.5
Service and sales workers	68.5
Skilled agricultural, forestry and fishery workers	46.4
Technicians and associate professionals	41.8
Professionals	34.8
Clerical support workers	27.8
Managers	26.2

Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

Vulnerability across Provinces and Major Industries

To point out the majority of the fragile employment in each province, we have analyzed the vulnerable employment across the major industries and occupation groups. Table 8 in its totality explains that from the employed population of Punjab, the majority of the vulnerable employees lies in the Manufacturing industry with 31.2 percent share. It is followed by Construction industry with 21 percent share and then comes the Agriculture, forestry & fishing industry with 14.7 percent share. By occupation group, the majority of vulnerable labour lies in elementary occupations. This

does not mean that the rest of the listed industries or occupations are not equally vulnerable, but this table locates where the majority of these vulnerable employees can be found in each province.

TABLE 8: PERCENTAGE DISTRIBUTION OF VULNERABLE GROUPS IN MAJOR INDUSTRIES AND MAJOR OCCUPATION GROUPS IN PUNJAB

	1	2	3	4	5	6	7	8	9	Total
Agriculture, forestry, fishing	0.1	0.0	0.7	0.1	0.3	0.6	0.0	6.0	92.1	14.7
Mining & quarrying	0.0	0.0	20.0	0.0	20.0	0.0	0.0	60.0	0.0	0.0
Manufacturing	0.8	1.6	2.6	1.2	1.8	0.1	49.7	14.6	27.5	31.2
Electricity, gas, water	0.0	0.0	4.5	4.5	22.7	0.0	36.4	4.5	27.3	0.2
Construction	0.2	0.2	0.3	0.1	0.1	0.0	36.2	1.2	61.6	21.0
Wholesale/retail trade, restaurants	0.9	0.5	4.8	1.1	64.2	0.0	11.9	0.8	15.9	13.8
Transport & communication	0.8	3.8	4.1	4.6	9.7	0.0	1.8	58.2	16.9	5.5
Financing, real estate, business	6.3	5.8	31.2	9.0	23.8	1.6	2.1	6.3	13.8	1.6
Community, social services	1.1	41.3	2.1	1.5	14.2	1.5	3.2	2.4	32.8	12.0
Total	0.7	5.9	2.6	1.2	12.1	0.3	25.3	9.4	42.4	100.0

Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

Note: In the horizontal bar the codes are used for different occupation groups, (1) Manager, (2) Professionals, (3) Technicians and associate professionals, (4) Clerical support workers, (5) Service and sales workers, (6) Skilled agricultural, forestry and fishery workers, (7) Craft and related trades workers, (8) Plant and machine operators, and assemblers, (9) Elementary occupations

Table 9 presents a matrix of major industries and occupation groups in the province of Sindh. The majority of vulnerable employment in Sindh lies in Agriculture, forestry & fishing industry with 25.2 percent share. Next follows the Manufacturing industry with 21 percent share and then Construction industry with 20.2 percent share. Similarly, like Punjab, by occupation the majority of the vulnerable labour is involved in elementary occupations. This does not mean that the workers in rest of the industries of Wholesale/ retail trade and restaurants, Transport and Communication, Finance, retail and Business services, Social and Community services, Mining & quarrying and Electricity, gas, water are not equally vulnerable of losing jobs. Instead it represents that in the province of Sindh, the industries of Agriculture, Manufacturing and Construction are the ones with the majority of these vulnerable workers.

TABLE 9: PERCENTAGE DISTRIBUTION OF VULNERABLE GROUPS IN MAJOR INDUSTRIES AND MAJOR OCCUPATION GROUPS IN SINDH

	1	2	3	4	5	6	7	8	9	Total
Agriculture, forestry, fishing	0.0	0.0	2.1	0.0	0.3	0.9	0.0	3.8	92.8	25.2
Mining & quarrying	0.0	0.0	0.0	0.0	0.0	0.0	0.0	69.6	30.4	1.1
Manufacturing	1.4	1.5	4.7	1.4	3.1	0.3	48.1	11.0	28.5	21.0
Electricity, gas, water	0.0	0.0	16.0	8.0	12.0	0.0	16.0	16.0	32.0	0.5
Construction	0.0	0.0	0.4	0.2	0.5	0.0	19.8	0.5	78.7	20.2
Wholesale/retail trade, restaurants	1.6	0.4	1.7	0.6	74.9	0.1	11.6	0.7	8.5	13.7
Transport & communication	0.2	1.3	2.2	2.7	7.0	0.0	1.1	64.3	21.1	8.6
Financing, real estate, business	8.8	7.4	23.5	10.3	25.0	2.9	2.9	11.8	7.4	1.3
Community, social services	1.1	48.2	2.0	2.7	20.5	0.0	5.0	3.6	16.8	8.5
Total	0.7	4.7	2.6	1.0	13.8	0.3	16.3	10.3	50.2	100.0

Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

Note: In the horizontal bar the codes are used for different occupation groups, (1) Manager, (2) Professionals, (3) Technicians and associate professionals, (4) Clerical support workers, (5) Service and sales workers, (6) Skilled agricultural, forestry and fishery workers, (7) Craft and related trades workers, (8) Plant and machine operators, and assemblers, (9) Elementary occupations

In KPK and Balochistan, the industries with the majority of vulnerable labour is in the Construction industry with 36.5 percent and 30 percent respectively. Manufacturing comes next in KPK by 18.6 percent share while the second in Balochistan is Agriculture (16 percent). By occupation, the elementary occupation remains the majority of the vulnerable labour in the employed population of both the provinces.

TABLE 10: PERCENTAGE DISTRIBUTION OF VULNERABLE GROUPS IN MAJOR INDUSTRIES AND MAJOR OCCUPATION GROUPS IN KPK

	1	2	3	4	5	6	7	8	9	Total
Agriculture, forestry, fishing	0.0	0.0	0.6	0.6	1.2	3.0	0.0	4.8	89.7	4.1
Mining & quarrying	0.0	0.0	7.4	0.0	0.0	0.0	0.0	92.6	0.0	0.7
Manufacturing	0.4	1.5	2.1	1.3	1.6	0.0	67.9	6.9	18.3	18.6
Electricity, gas, water	0.0	12.5	0.0	0.0	12.5	0.0	25.0	25.0	25.0	0.2
Construction	0.1	0.1	0.5	0.1	0.3	0.0	30.8	1.2	67.0	36.5
Wholesale/retail trade, restaurants	0.8	0.5	3.1	0.8	58.9	0.0	25.9	0.7	9.3	15.1
Transport & communication	0.8	1.9	0.8	4.3	9.1	0.0	1.6	68.6	12.9	9.2
Financing, real estate, business	1.5	13.4	17.9	9.0	40.3	0.0	1.5	7.5	9.0	1.7
Community, social services	2.0	62.5	1.6	3.0	8.0	0.9	4.3	3.7	14.1	13.9
Total	0.6	9.5	1.7	1.4	12.0	0.2	28.6	9.7	36.3	100.0

Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

TABLE 11: PERCENTAGE DISTRIBUTION OF VULNERABLE GROUPS IN MAJOR INDUSTRIES AND MAJOR OCCUPATION GROUPS IN BALOCHISTAN

	1	2	3	4	5	6	7	8	9	Total
Agriculture, forestry, fishing	0.0	0.0	0.7	0.0	0.0	0.3	0.0	3.1	95.9	15.9
Mining & quarrying	0.0	0.0	6.6	0.0	0.8	0.0	1.7	71.9	19.0	6.5
Manufacturing	0.6	4.4	2.5	2.5	3.1	0.0	52.2	15.1	19.5	8.6
Electricity, gas, water	0.0	16.7	33.3	0.0	16.7	0.0	0.0	0.0	33.3	0.3
Construction	0.0	0.4	0.4	0.0	0.0	0.0	14.2	1.1	84.0	30.0
Wholesale/retail trade, restaurants	0.0	0.7	4.4	0.4	78.9	0.0	11.5	0.4	3.7	14.6
Transport & communication	0.7	0.0	1.1	3.6	11.6	0.0	0.4	75.8	6.9	15.0
Financing, real estate, business	0.0	0.0	21.4	21.4	57.1	0.0	0.0	0.0	0.0	0.8
Community, social services	3.2	56.1	3.2	1.9	16.8	0.0	1.9	1.9	14.8	8.4
Total	0.4	5.3	2.2	1.1	15.5	0.1	10.8	18.4	46.2	100.0

Source: Authors' analysis based on the Labour Force Survey, LFS 2017-18

Note: In the horizontal bar the codes are used for different occupation groups, (1) Manager, (2) Professionals, (3) Technicians and associate professionals, (4) Clerical support workers, (5) Service and sales workers, (6) Skilled agricultural, forestry and fishery workers, (7) Craft and related trades workers, (8) Plant and machine operators, and assemblers, (9) Elementary occupations

Conclusion

This report has attempted to a) reveal the social disparity between different income quintiles of the country in the times of a global health crisis and b) pointed at the majority of the vulnerable industries and occupation across the country. The minimum wage essential workers, who work without any written or formal contract, are the most vulnerable occupation group in all the provinces and in all the industries across the country. In the need of lockdown, it is essential to track these minimum wage no contract workers to be provided with aid through government and private philanthropy. For the layoffs to slow down, the government needs to consider a relief package for business including waiving rents and wage bills so these workers can be retained without business going bankrupt. A strategic and unique package is needed according to the situation of each province

References

Dingel, J. I., & Neiman, B. (2020). *How many jobs can be done at home?* (No. w26948). National Bureau of Economic Research.

Faraz, N., & Nasir, M. (2020). *Working from Home in a Smart Lockdown Changing Dynamics of the Labour Market under COVID-19* [Ebook] (19th ed.). Pakistan Institute of Development Economics. Retrieved 15 May 2020, from <https://www.pide.org.pk/pdf/PIDE-COVID-Bulletin-19.pdf>.

ILOSTAT: Spotlight on Work Statistics. (2018). *Paid employment vs vulnerable employment* [Ebook]. Retrieved 11 May 2020, from.

International Labour Organization. (2020). COVID-19: Protecting workers in the workplace. Retrieved 11 May 2020, from https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_738742/lang-en/index.htm.

Mas, A., & Pallais, A. (2020). *Alternative work arrangements* (No. w26605). National Bureau of Economic Research.

The coronavirus crisis will change the world of commerce. (2020). Retrieved 15 May 2020, from <https://www.economist.com/leaders/2020/04/08/the-coronavirus-crisis-will-change-the-world-of-commerce>.