



# Secretariat Covid-19 Working Paper Series

## How We Value Work: The Impact of Covid-19

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**NOTE:** The NESC Secretariat Covid-19 Working Paper Series is to provide timely, concise analysis for policymakers and other stakeholders. This research work, in normal circumstances, would be used to produce NESC reports, which would be published following detailed deliberation by the Council. The Council has members appointed by the Taoiseach, comprising representatives of business and employers' organisations, trade unions, agricultural and farming organisations, community and voluntary organisations, and environmental organisations; as well as heads of Government departments and independent experts. By putting it in the public domain earlier, it is hoped this research can help those now working on Ireland's response to Covid-19. It will also inform Ireland's discussion of its recovery from the Covid-19 crisis. These papers are un-refereed material and are a work-in-progress by members of the Secretariat. The authors are solely responsible for the content and any views expressed therein, and welcome any comment on these papers (email <u>info@nesc.ie</u>). Working papers may be downloaded for personal use only. Given the nature of the crisis, these working papers are likely to be updated on a regular basis. This will be done in as timely as manner as possible. The author thanks colleagues in the NESC Secretariat for invaluable comments. Any errors remain the author's alone.

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### A. Introduction

The Covid-19 pandemic has had a rapid and profound impact on sectors, firms and workers in Ireland and has revealed just how vulnerable employment can be. Although the State has taken effective measures to ease the economic shock of the pandemic, 'the risk of significant output loss, bankruptcies and insolvencies, and an increase in unemployment and people at risk of poverty, remain high'.<sup>1</sup>

Concern about vulnerable jobs predates the crisis of course, with an emphasis to date on employment-vulnerability arising from the transitions to a low carbon and more digital/automated economy and society.<sup>2</sup> Research by the NESC Council and others has revealed just how difficult it is to identify which sectors, firms, and workers will be negatively impacted by economic change.<sup>3</sup> Consequently, rather than focussing on identifying precisely which jobs are vulnerable, policy-makers have been advised to focus on actions to make all jobs better: given the prevailing uncertainty, increased and widespread employment resilience should be the objective.

Now, the crisis has brought into view the occupations and work that are seen as essential and critical to the well-being of the nation and in doing so, has brought attention to the wages and terms and conditions of workers in those areas. It also reinforces the need to work tirelessly to anticipate future changes that will impact on employment. Good jobs is a useful concept in this sense, in that it will and should continue to evolve as circumstances change. A focus on quality work and good jobs is not only critical in tackling vulnerability in transitions, but in establishing resilience following the Covid-19 pandemic. Therefore, a number of key related questions are examined in this Working Paper:

- What has been the impact of Covid-19 on employment and on what constitutes a good job?
- How do these new impacts shape how we value work? and
- Will that impact last, and if so, for how long?

<sup>&</sup>lt;sup>1</sup> EU Commission, 2020: 4

<sup>&</sup>lt;sup>2</sup> NESC, 2020

<sup>&</sup>lt;sup>3</sup> Huessaff, 2020

### B. The Pandemic and Employment

The Covid-19 pandemic has had terrible society-wide public health consequences, and the most truly vulnerable have suffered.<sup>4</sup> The crisis has also had a dramatic impact on employment and prompted extraordinary policy responses. By the end of April 2020, the adjusted measure of unemployment stood at over 694,000 (unemployment rate of 28.2 per cent) and almost half the population have had their employment situation affected by Covid-19.<sup>5</sup>

Employment vulnerability and job quality have moved from the periphery to centre stage in economic and enterprise policy, magnifying the importance and need to understand and indeed re-consider what good jobs mean today, and into the future.

'It is those on the lowest wages who have to travel to work, whether it is to clean, to provide health and social care, to work in food processing factories, or to work in supermarkets. Their work, by its very nature, brings them into close contact with others, making them most likely to be at risk from transmission'.<sup>6</sup>

While health and safety are paramount, the nature of income, terms and conditions had come to define the quality of employment, or a good job. The pandemic has reemphasised the pre-existing negative aspects of some poor jobs. It has reinforced the importance of adequate wages and hours. For example, it spurs consideration of how those on 'if and when' contracts qualify for the pandemic-related unemployment payments. Other examples include:

- Workers such as carers, who have insufficient hours of work in one workplace, and who may then also work in other care settings. In addition to the difficulty they face travelling from job to job and balancing changing hours of work, they are more likely to carry infection from one care setting to another;
- Workers on relatively low pay who are more likely to live in over-crowded accommodation, which is also contributing to spread of Covid-19 (e.g. meat processing sector); and

<sup>&</sup>lt;sup>4</sup> For example, <u>it is reported</u> that as of May 20<sup>th</sup> 2020 four members of the Roma community in Ireland have died following a Covid-19 diagnosis. In total, 22 people form the Roma community have been diagnosed and seven hospitalised. There have been 19 cases of the virus in prisons, with two people hospitalised. There were 46 cases among members of the travelling community, with two hospitalised. The Department of Health said 171 people living in direct provision were diagnosed with Covid-19 and 14 people admitted to hospital. There have been 20 cases among the homeless community, with five people hospitalised.

<sup>&</sup>lt;sup>5</sup> CSO, 2020

<sup>&</sup>lt;sup>6</sup> Stanistreet / Irish Times, Pandemic has shown that we are not all in this together equally, <u>here</u>.

• Workers with poor sick-pay provisions who rely on State illness benefit which until recently only commenced on day seven of an illness, and at €203 weekly maximum. This can see staff go to work even though they feel unwell, which can increase infection rates.

The Covid-19 crisis has thus given cause to rethink our understanding of good jobs, and the pandemic has added new criteria to consider such as: the contact-intensity of the job/risk of infection; the essential nature (or otherwise) of the job; and the ability to perform the job at home. Prior to pandemic, these issues were unlikely to feature strongly among the concerns of most workers. The pandemic has cast jobs, and good jobs, in a new light.

**Contact-intensity/risk of infection**: Today, the contact-intensity of work can not only help explain the extent to which a sector is (negatively) impacted by the Covid-19, it can explain the level of risk of infection faced by workers, and can influence how quickly a sector—and hence a worker's employment—can resume.<sup>7</sup> In Ireland there are around 864,000 (37 per cent of all workers) in occupations that require very close physical proximity to other people, containing occupations that could be viewed as more vulnerable, such as barbers/hairstylists and food and beverage preparation and serving.<sup>8</sup>

During the crisis and perhaps for a period after, consideration of contact-intensity could cast previously good jobs in a poorer light; occupations previously considered good jobs (e.g. dentists, teachers, pharmacy technicians) are at higher risk of infection. For many, more platform working means less 'good jobs' but some occupations associated with platform working are among the safest in a pandemic.

Occupations associated with platform work such as graphic and web designers, marketing and sales, business services (finance, sales, strategy, HR, accounting), software development, architects, media, and writing and content provision are also occupations with low contact-intensity and lower Covid-19 risk scores.<sup>9</sup> It is questionable how long this factor will remain an important one.

<sup>&</sup>lt;sup>7</sup> Kozlowski, Faria-e-Castro, and Ebsim, 2020; Leibovici, Santacreu, and Famiglietti, 2020; Lu, 2020; FitzGerald, 2020a

<sup>&</sup>lt;sup>8</sup> FitzGerald, 2020a

<sup>&</sup>lt;sup>9</sup> For example, using a 0-100 scale of increasing occupational Covid-19 risk: computer network architects (4.7), computer hardware engineers (6), graphic designers (12.8), van or delivery services drivers (33.8)—see Lu, 2020 and FitzGerald, 2020a

**Essential Tasks**: Sectors where good jobs were seen as being under threat such as food-retail, food-delivery, couriers/transport have been revealed as essential and 'front-line', protected to an extent from rapid unemployment. The Government has issued sectoral guidance as to what constitutes essential work. On one hand, employment and incomes have been maintained in these occupations during the crisis, which speaks to the resilience and quality of these jobs. On the other hand, some workers in the short-term may not be as attracted to these occupations given that they continue to be active even in the face of a pandemic.

**Ability to work remotely**: US data suggests that 37 per cent of jobs can plausibly be performed at home.<sup>10</sup> Of those whose employment has been impacted by the pandemic in Ireland, 34 per cent have started remote working from home.<sup>11</sup> The ability to work from home is also now a factor in determining what a good job is. For example, broadly speaking those sectors where remote working and digital technology can be used well may be somewhat protected from an unemployment shock and, where work has been interrupted, be best-placed to restart earlier than others (e.g. financial services, professional and business services, ICT sector, and parts of manufacturing). Those occupations could account for 945,000 workers across sectors in Ireland. Around 1.15m workers in Ireland are in occupations where digital/working from home is more difficult (e.g. education and health services, construction, wholesale and retail, transportation and utilities, agriculture, leisure and hospitality).<sup>12</sup>

Of the three new factors added to what is/is now considered a good job by the Covid-19 crisis, perhaps the ability to work remotely is the one criterion most likely to be sustained as an important variable for more workers in the medium term. It was an aspect of working that was sought-after before the pandemic as it helps balance work and family life. Now, more employers are seeing that it can work well in many circumstances.

<sup>&</sup>lt;sup>10</sup> Dingle and Neiman, 2020. Recent research finds that roughly 56 per cent of all jobs in the current German economy can plausibly be performed at home, see Alipour *et al.*, 2020.

<sup>&</sup>lt;sup>11</sup> CSO, 2020

<sup>&</sup>lt;sup>12</sup> FitzGerald, 2020a

#### C. The Impact of Covid-19 on How We Value Work

One immediately obvious lesson from the crisis is that it has made good jobs better and more valuable to workers, and poor jobs worse but more valuable to society (see Figure 1). This is evident in the contrast between sectors with higher incomes/lower risk, and those with lower incomes/higher risk.



Figure 1: Sectoral Covid-19 Risk, Earnings, and Employment<sup>13</sup>

<sup>&</sup>lt;sup>13</sup> Author's calculations. The size of each sphere is proportionate to the sector's employment. See Appendix for data sources, use, definitions and important assumptions.

For example:

- The 670,100 workers in ICT, financial and professional services, and wider industry have average annual incomes of around €55,200, and an average mean risk score for Covid-19 of 10.6; and
- The 902,400 workers in retail, hospitality, healthcare, and other services (e.g. hairdressing, security) earn €29,300 on average per annum, and have a mean Covid-19 risk score of 57.6.

This second group of sectors are also those where working from home is difficult, and healthcare and parts of retail have been deemed essential activities. The vast majority of businesses in the hospitality sector have closed and, as of mid-May 2020, 96 per cent of its workforce was supported by an emergency Covid-19 State payment, and the sector 'faces significant vulnerability to potential permanent job losses'.<sup>14</sup> Of course, workers are not compensated on the basis of the risk they face.

Firstly, there is a significant difference between these two groups of sectors in terms of their economic activity, if measured in terms of gross value added (GVA) or net operating surplus (NOS). Making comparisons across sectors is a fraught exercise but as an example, average GVA among the ICT, financial and professional services, and wider industry sectors is some €50bn per annum or €74,600 per worker; the same figures for retail, hospitality, healthcare, and other services are around €11.5bn annually and €12,700 per employee. Using NOS, unsurprisingly, suggests a similar contrast: €21.3bn/€31,800; €3.2bn/€3,500.<sup>15</sup>

Secondly, there is likely to be a significant difference between these two groups of sectors in terms of the education attainment of their respective workforces (see Figure 2). After the education sector, workers in the ICT, professional and financial services sectors have the highest level of education attainment (69 per cent with a third-level degree and higher), while the hospitality, retail, and other services sectors have on average, 22 per cent or workers with a third-level degree and higher. Education attainment in the healthcare sector is relatively high (54.7 per cent with a third-level degree and higher). In addition, sectoral differences in earnings and productivity might be explained by use of technology, managerial development and efficiency, and quality of infrastructure.

<sup>&</sup>lt;sup>14</sup> DBEI, 2020: 24

<sup>&</sup>lt;sup>15</sup> CSO data; Author's calculations

Much of this comes down to how work is valued. In more 'normal' times, workers and policy-makers considering 'good jobs' and quality of work could look to the earnings, output, or productivity in a sector. Performance on these criteria is mixed. In the context of a pandemic, work is valued differently: what jobs are essential, frontline, or involve workers putting themselves at risk in the service of others? How do we value jobs that have 'low GVA' but are essential, and enable 'higher GVA jobs' to take place and society to function?

As of May 16<sup>th</sup> 2020, of the 24,036 confirmed cases of Covid-19 in Ireland, 7,615 (31 per cent) were among healthcare workers, though they make up just 12.5 per cent of employment. Their average income is €25,000 lower per annum than a worker in, say, the ICT sector, and the healthcare worker's risk of infection is almost seven times higher (see Figure 1). If the risk/income correlation 'signal' were similar for social class, this has implications for those with disabilities. It is reported that people without a disability are 50 per cent more likely to be a professional or managerial worker than a person with a disability; people without a disability are half as likely to be unskilled/other/unknown as a person with a disability.<sup>16</sup> The high-risk retail and hospitality sectors are associated with lower relative skill levels.

'Many of those who are low paid have either lost their job or found themselves in 'front line' employment, such as those who are involved in caring, cleaning and retail. Front-line medical staff are rightly praised and lauded, but there are many others in the front line, whose work has proved to be critical at this time. They include carers, cleaners, those in the food sector, from crop pickers, transport drivers to retail staff, the majority of whom are low paid and often women. Around the world, including here in Ireland, some of the lowest paid in society are now responsible for keeping communities fed, alive and cared for. These individuals are putting themselves at risk by continuing to work. Most can't afford to stop, even if they wanted to.'<sup>17</sup>

<sup>&</sup>lt;sup>16</sup> National Disability Authority, 2018

<sup>&</sup>lt;sup>17</sup> Dublin City Community Co-operative, 2020: 24

#### Figure 2: Education Attainment of Persons at Work, 2016<sup>18</sup>



<sup>&</sup>lt;sup>18</sup> CSO, 2017, emphasis added.

Many healthcare and food-retail workers find it far more difficult if not impossible to work remotely. Workers in food-retail have continued to work in outlets in the face of the outbreak, with average incomes €26,500 lower per year than a worker in, say, the financial services sector, with twice the risk of contracting Covid-19.<sup>19</sup> In this sense, the pandemic has made good jobs better and more valuable to the worker; and made poor jobs worse, yet more valuable to society. Questions arise then as to whether a job's value (income) should reflect output in monetary terms and/or education attainment etc., absent consideration of its importance to society? And will this impact of Covid-19 on good jobs persist into the medium term and beyond? Permanent policy responses to temporary policy problems should generally be avoided, so consideration should be given to whether these effects are fleeting or permanent.

## D. Covid-19: A Fleeting or Permanent Impact?

The coronavirus will be with us for the foreseeable future, but the current crisis will not go on indefinitely. The final phase of the Government's *Roadmap for Reopening Society and Business* (2020) is (at the time of writing) due to begin in July, and effective anti-viral medication and (ultimately) a vaccine will, hopefully, be available at some point. It worth considering what good jobs might mean in that time after the Covid crisis, even though the precise commencement date is not currently known.

Even though the extent of any problems was unclear, policy-makers had a good sense of the criteria which together informed what constitutes good jobs in the period before the pandemic (Figure 3, time-period A). However, it is not clear whether the new criteria added to the concept of good jobs during the pandemic (time-period B) will persist after the pandemic (time-period C), and whether the 'bar' for what constitutes a good job will remain raised (C<sub>1</sub>), will return to the pre-pandemic level (C<sub>3</sub>), or perhaps more likely settle at some mid-point (C<sub>2</sub>) where the crisis has added some new factor that continues to be considered in the medium to longer term.

<sup>&</sup>lt;sup>19</sup> Some workers in the retail sector have received a (10 per cent) premium payment and/or increased staff discounts. See <u>here</u>.



#### Figure 3: Potential Impact of Covid-19 on 'Good Jobs' Criteria in the Medium-Term

#### TIME

It is possible that those 'pandemic-era' factors will remain after the worst is over (Figure 3, C<sub>1</sub>). It is well recognised that unemployment can have quite long-lasting detrimental impacts on individuals, economies and societies, referred to as *scarring*. Ireland has suffered an employment shock: the unemployment rate has soared from 5 per cent to 25 per cent in the space of one month. Employment shocks can impact a person's future employability, potential future earnings, and can lead to poor health and social exclusion. This is especially true for younger people.<sup>20</sup> Some individuals will suffer from post-traumatic stress.<sup>21</sup>

The economic crisis in 2008 was associated with 'deterioration in child physical and mental health, and particularly among those who were socioeconomically disadvantaged prior to the crisis'.<sup>22</sup> Unlike the previous crash, the Covid-19 crisis brings added elements which might impact on scarring, such as physical distancing, social isolation measures, disruption to daily life, disruption to physical activity

<sup>&</sup>lt;sup>20</sup> Oireachtas Library and Research Service, 2013.

<sup>&</sup>lt;sup>21</sup> Grant, 2020

<sup>&</sup>lt;sup>22</sup> Nolan, 2020

regimes, cessation/delay of elective healthcare, and loneliness. Looking at the longer term, NESC research into low work intensity households refers to similar effects: higher poverty rates and a long-lasting negative impact on the children growing up in these homes.<sup>23</sup> Data from a large-scale online survey across the Europe in early April reinforces these concerns:<sup>24</sup>

- Life satisfaction, happiness and optimism are below usual levels.
- Young people and those not working have lowest mental well-being.
- Some 18 per cent of all workers report working in their free time to meet work demands.
- Work-life balance is challenging for workers with young children.
- Around 4 in 10 of respondents are pessimistic about their financial situation.
- Over half of respondents have insufficient savings to cope without an income.
- Around half of all households report difficulties in making ends meet.
- Being in arrears is a significant problem for the unemployed and selfemployed.
- One unemployed respondent in five is fearful of losing their home.

Even if the unemployment rate falls back to the estimated 12—13 per cent by the end of the year,<sup>25</sup> there is no certainty that job-seekers and workers will fall back on the previous criteria for what constitutes a good job. Prolonged anxiety, a feeling of helplessness, and loss aversion by workers (or those close to them) can shape decision-making.<sup>26</sup>

It is possible that workers could continue to consider how closely a job's tasks bring them to others and their risk of infection by Covid-19 or some other disease. The arrival of an effective anti-viral medication and/or a vaccine does not necessarily mean that workers will revert to feeling as comfortable around others as they did prior to the coronavirus outbreak.

<sup>25</sup> Central Bank of Ireland, 2020

<sup>&</sup>lt;sup>23</sup> NESC, 2018

<sup>&</sup>lt;sup>24</sup> Eurofound, 2020

<sup>&</sup>lt;sup>26</sup> Prospect theory, specifically loss aversion, could come into play: when a major loss is expected but uncertain (such as an infectious disease that may never occur), risk-taking may increase. See Kahneman and Tversky, 1984; FitzGerald, 2020b; Moukaddam, 2019

Whether a job is considered essential to society and the economy, and would hence continue during a crisis, could persist as an influential criterion long-after the current pandemic is over. This could cast the job in a positive light ('robust') or negative light ('risky'). It may not only be the view of the worker that is consequential here: an extensive literature review has concluded that parents have 'a strong influence over the career choices their children make, which can be both intentionally and inadvertently. Their influence can either inspire children to explore a diverse set of potential occupations or to stick to a path they think their parents will approve'.<sup>27</sup>

In contrast, the ability to work remotely will likely only cast a job in a positive light as it is not only robust to unemployment in a crisis, it is associated with improved work/life balance, reduced costs and fuel usage, reduced congestion/journey times, reduced greenhouse gas emissions, reduced need for commercial space/reduced rents, and less office waste and energy usage. Recent survey research reported that just over half of respondents had never worked remotely before the Covid-19 crisis, and of these workers, more than three-quarters would like to continue to work remotely after the crisis is over.<sup>28</sup> The top three advantages of working remotely were found to be no traffic and no commute, reduced costs of going to work and commuting, and greater flexibility as to how to manage the working day. The top three challenges of working remotely were not being able to switch off from work, collaboration and communication with colleagues and co-workers is harder, and poor physical workspace.

While there is no doubt that the pandemic will have lasting effects, it is possible that behaviours and attitudes will return to a pre-Covid state to a greater extent than suggested above. This includes the extent to which workers are concerned about the contact-intensity of the job/risk of infection, the role's essential nature (or otherwise), or the ability to work remotely.

History provides examples of how new crisis-era behaviours are not as sticky as might be assumed, once the peak of the emergency has passed. These examples include the return to spending (and not saving) not long after war-era rationing ended, and the return to pre-September 2001 lower levels of church attendance within a few months, despite a surge immediately after the 9/11 attacks.<sup>29</sup> That being the case, the criteria for what constitutes good jobs may revert to something more

<sup>&</sup>lt;sup>27</sup> Nawabi *et al.*, 2019

<sup>&</sup>lt;sup>28</sup> McCarthy et al., 2020

<sup>&</sup>lt;sup>29</sup> See Tugend/New York Times, 2009. According to the US Bureau of Economic Analysis, the percentage of personal savings as part of disposable personal income in 1945 was 20.4 per cent; in 1946, the year after the war ended, it dropped to 9.6 per cent.

like the pre-Covid state (say, C<sub>2</sub>) where the crisis has added some new criteria that continue to be considered in the medium to longer term, but has not simply returned to the pre-pandemic suite of factors (C<sub>3</sub>). Of the criteria added to the good jobs definition by the Covid-19 outbreak, the ability to work remotely looks (on the face of it) to be more likely to stick than contact-intensity/risk of infection or the role's essential nature (or otherwise).

As the infectious nature of Covid-19 becomes less salient over time (end of physical distancing and social isolation measures, return to more normal daily life/work, end to wearing of face-coverings, end of daily reports etc.) it would be understandable if workers became less concerned about contact-intensity, infection, and potentially having to continue working during a crisis (as the most recent one becomes increasingly distant in the past). The perceived weight of cost-to-benefit of preferring low-contact, low-risk, non-essential jobs will rise so as to make these criteria less important. In contrast, the salient benefits of working remotely are robust: workers who benefit from the ability to stay employed (and paid), face no traffic and no commute, have reduced costs of going to work and commuting, and gain greater work flexibility during the pandemic (time period B) will seek to hold them afterwards (time period C).

Regardless of how long the effect lasts, the most immediately obvious impact from the crisis is that it has made good jobs better and more valuable to worker, and poor jobs worse but more valuable to society. Therefore society needs to have very practical and detailed discussion about good jobs, what a good jobs economy means, and about what levers are available to policy-makers to promote them.

#### E. Conclusions

In the time before the pandemic, Ireland's society and economy faced two significant challenges—climate action and a more technological world—and these remain. NESC's work has examined the associated vulnerability for sectors, firms, and workers, and provided advice to Government on how to respond. The notion that Ireland has a deregulated labour market or that a 'race to the bottom' is being facilitated is simplistic and untrue. Yet, the Covid-19 emergency has brought new vulnerabilities to light and re-emphasised some pre-existing ones. It has forced a reappraisal of what are termed good jobs and how work is valued:

- The pandemic has brought attention again to the negative aspects of poor jobs: low incomes; inadequate incomes, hours, benefits, pensions, representation; and contractual insecurity. Considerable uncertainty and debate remain regarding the extent of precarious work in Ireland, as to whether there is an inevitable trend away from good jobs, and what the State can and should do. Research is underway in NESC on this, considering the future of the social welfare system in relation to participation and protection.
- The pandemic has added new criteria with which to assess job quality: the contact-intensity of the job/risk of infection, the essential nature (or otherwise) of the role, and the ability to work remotely. Of these new criteria, it is likely that the ability to do a job remotely will persist as an important consideration after the crisis has ended.
- The pandemic has revealed the true value to society of lower income, higher risk jobs in retail, hospitality, healthcare, and other services. The current misalignment needs careful consideration. Employers and policy-makers must act to transform these 'precarious/low paid, but now essential' jobs into 'good jobs'.

Policy-makers must take the opportunity now to consider how the coincidence of those pre-existing issues and new criteria inform our understanding of the quality or value of work. The arrival of the pandemic has knocked society's approach to how work is valued: what jobs are essential, frontline, or involve workers putting themselves at risk in the service of others? There is a stark contrast between sectors with higher incomes/lower risk, and those with lower incomes/higher risk. Covid-19 has made good jobs better and more valuable to the worker; and made poor jobs worse, yet more valuable to society. This has consequences for workers, employers, and policy-makers.

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## Appendix

The purpose of this Appendix is to set out the data sources, use, definitions and subjective assumptions underpinning Figure 1 in the paper, entitled Sectoral Covid-19 Risk, Earnings, and Employment. The figure presents three pieces of data: sectoral average annual earnings (y-axis), Covid-19 risk score (x-axis), and sectoral employment represented (size of the spheres).

Sectoral average annual earnings come from CSO Earnings, Hours and Employment Costs Survey EHECS Survey data presented in the Department of Business, Enterprise and Innovation's *Economic Considerations for Reinstating Economic Activity* (2020), with the exception of the figure for agriculture. Annual figures are weekly rates times 52. The figure for agriculture is taken from the Department of Agriculture, Food and the Marine's *Annual Review and Outlook for Agriculture, Food and the Marine 2019* (average family farm income, 2018).\*See Table A1.

The Covid-19 risk score is based on Lu, 2020.<sup>30</sup> As that dataset refers to occupations rather than sectors (which are the unit of analysis here), an occupation had to be selected to represent each sector as per Table A2. This is entirely subjective. Data, time, and resources allowing it would be preferable to employ an objective basis for the choice of occupations e.g. the largest occupational group or a large occupational group within the sector. Revisions of this Working Paper, or related work could address this. Further, there was no individual Covid-19 occupational risk score among the 100 listed occupations which was representative of the agri-sector. However, contact-intensity occupational data was available for farm labour/contractor activity from Leibovici et al., 2020.<sup>31</sup> In that dataset, farm labour/contractors have the same contact—intensity score as, for example, insurance appraisers/examiners, logisticians/analysts, human resources specialists, regulatory affairs, property inspectors etc.. Covid-19 risk scores are available for this type of work and this was used to generate a score for farm labour/contractors to represent the agri-sector. This was 16<sup>\*\*</sup>, the rounded mean of the scores for financial analysts (19.3), postal workers (16), market analysts (14.4) and management analysts (14.1). Again, this is entirely subjective. See Table A2.

<sup>&</sup>lt;sup>30</sup> See <u>https://www.visualcapitalist.com/the-front-line-visualizing-the-occupations-with-the-highest-covid-19-risk/</u>. Accessed April 16<sup>th</sup> 2020.

<sup>&</sup>lt;sup>31</sup> See <u>https://www.stlouisfed.org/on-the-economy/2020/march/social-distancing-contact-intensive-occupations</u>. Accessed April 16<sup>th</sup> 2020.

Sectoral employment data comes from CSO Labour force survey results presented in the Department of Business, Enterprise and Innovation's *Economic Considerations for Reinstating Economic Activity* (2020). See Table A3.

Sectoral Earnings	Weekly	Annual
Agriculture	-	€23,333*
Industry (B to E)	€920	€47,840
Construction (F)	€822	€42,744
Wholesale and retail trade; repair of motor vehicles and motorcycles (G)	€604	€31,408
Transportation and storage (H)	€810	€42,120
Accommodation and food service activities (I)	€382	€19,864
Information and communication (J)	€1,241	€64,532
Financial, insurance and real estate activities (K,L)	€1,115	€57,980
Professional, scientific and technical activities (M)	€973	€50,596
Administrative and support service activities (N)	€617	€32,084
Public administration and defence; compulsory social security (O)	€972	€50,544
Education (P)	€874	€45,448
Human health and social work activities (Q)	€758	€39,416
Other NACE Services	€517	€26,884

 Table A1:
 Sectoral Average Annual Earnings

Sector	Occupation	Covid-19 Risk Score
Agri	Farm labour/contractor	16**
Industry	Engineer (technology)	6
Construction	Construction labourer	36.2
Retail	Retail salesperson	38.7
Transport	Van Driver	33.8
Hospitality	Waiter/waitress	43.6
ICT	Web Developer	12.5
Financial Services	Financial Analyst	19.3
Professional Services	Computer Network Architect	4.7
Admin/Support Services	Accountant	22
Public Service	Office worker	40.5
Education	Teacher (primary/middle school)	46.6
Healthcare	Registered Nurse	86
Other Services	Hairdressers, Hairstylists, and Cosmetologists	62

## Table A2: Sectoral Covid-19 Risk Scores

#### Table A3:Sectoral Employment

Employment	Q4 2019
Agrifood	106,900
Industry (B to E)	286,300
Construction (F)	147,100
Wholesale and retail trade; repair of motor vehicles and motorcycles (G)	310,200
Transportation and storage (H)	108,000
Accommodation and food service activities (I)	179,200
Information and communication (J)	127,600
Financial, insurance and real estate activities (K,L)	115,100
Professional, scientific and technical activities (M)	141,100
Administrative and support service activities (N)	112,100
Public administration and defence; compulsory social security (O)	117,000
Education (P)	191,600
Human health and social work activities (Q)	294,300
Other NACE Services	118,700