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WAVE 4

National Income Dynamics
Study (NIDS) – Coronavirus
Rapid Mobile Survey (CRAM)

Gendered employment dynamics during the COVID-19 pandemic:

Evidence from four waves of a South African longitudinal survey

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Gendered employment dynamics during the COVID-19 pandemic: Evidence from four waves of a South African longitudinal survey
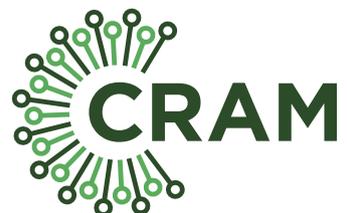
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Abstract

As much global research now shows, women have been disproportionately affected by the COVID-19 crisis. In South Africa, research using the first three waves of NIDS-CRAM found that women's employment was particularly hard hit by the initial lockdown (Casale and Posel 2020), and women also experienced a slower recovery than men as the economy started reopening (Casale and Shepherd 2021). In this policy paper, we exploit the panel nature of the NIDS-CRAM data to analyse gendered labour market dynamics over the course of the pandemic in more detail. In particular, we compare the labour market transitions between the various waves of the panel for women and men. Further, in a multivariate context, we analyse the individual- and household-level characteristics that help predict which women and men lost or gained work over the course of the pandemic, and whether these factors can help explain the 'female penalty'.

Keywords: gender, employment dynamics, COVID-19, lockdown, South Africa

Executive Summary

In this policy paper, we use the first four waves of the NIDS-CRAM panel currently available to analyse labour market dynamics by gender. Unlike in our previous NIDS-CRAM work, **we restrict our sample to the sub-group of respondents who were interviewed in all four waves of NIDS-CRAM**, i.e. the balanced panel of 3 837 individuals (weighted appropriately for attrition).

In comparing the employment transitions for men and women across the course of the pandemic, we find:

- Only 70% of women who were employed pre-COVID (February 2020) were still employed in April 2020, as the COVID-19 shock initially hit the labour market. For men, the corresponding figure was 80%.
- Interestingly, even during that very strict lockdown period, there were some job gains. But of the women who were *not employed* pre-COVID, only 6% gained employment in April 2020, compared to 16% for men.
- The gender differences in employment remained large almost a year later among those who were tracked in all four waves. Of those women who started out employed in February 2020, 70% still had employment in January 2021. For men, the corresponding figure was 78%.
- And, of women who started out *not employed* pre-COVID, 19% had employment in January 2021, with the corresponding figure for men 31%.
- Of women who were employed pre-COVID, only 47% stayed employed *across all four waves* – the 'stable employed'; for men, the corresponding figure was 61%.
- Of women *not* employed pre-COVID, 70% stayed not employed *across all four waves* – the 'stable not employed'; for men, the corresponding figure was 56%.
- In summary, there is considerable churning in the labour market for both men and women. However, where jobs were lost, women were more likely to lose, and where jobs were gained, women were less likely to benefit.

We also analyse these employment transitions in a multivariate context, and find:

- The female penalty noted above cannot be *explained away* by controlling for region, individual and household-level variables, at least not those captured in the data. This result holds across almost all of the transitions we analyse.
- The fact that a large female penalty persists regardless of controlling for regional, individual and household factors, suggests that a significant factor in who lost and who gained jobs over the period—as well as who remained in 'stable employment'—is likely the *type of job* men and women initially held, and the *type of job* that became available over the period. Women were more likely to be in sectors that were hardest hit by the crisis, and perhaps also less likely to have the skills or training to take up the new opportunities available.
- Although household-level characteristics could not *explain away* the female penalty, there were some interesting findings that emerged. While household-level factors appeared to have very little effect on who lost or gained employment in April 2020, or the female penalty itself, they did seem to have more traction when predicting who lost or gained employment in January 2021 or who remained 'stably employed' across all four waves. With the inclusion of these variables, the female penalty fell by around 2-3 percentage points (although remained large in most cases).
- And, there were some notable differences in the effect of these variables in predicting women's and men's employment probabilities in January 2021 and their likelihood of being in 'stable employment'. Among men, a 'fatherhood premium' was observed among those living with young children aged 0-6 (a result also found in other countries), while for women, the expected 'motherhood penalty' was observed for those living with children aged 7-17. This is consistent with earlier work that found that women were much more likely than men to adjust their hours spent on childcare in the face of school closures and re-openings (Casale and Shepherd 2020; 2021).

- That this gendered effect was not found when predicting employment in April 2020, but was found when predicting employment in January 2021 and 'stable employment' across all four waves, suggests the constraints related to childcare for women may have intensified over the period. This is something that requires further investigation (and perhaps more advanced empirical analysis that considers the role of endogeneity).

1.   Introduction

As much global research now shows, women have been disproportionately affected by the COVID-19 crisis. Studies from a number of countries have found that women were more likely than men to lose their jobs or to work fewer hours during the first wave of lockdowns (Adams-Prassl et al 2020; Andrew et al 2020; Collins et al 2020; Deshpande 2020; IWPR 2020a; 2020b; Kristal and Yaish 2020). A key reason for this is that women and men are concentrated in different parts of the economy, and many of the hardest-hit sectors have also been those that typically employ large numbers of women (Alon et al 2020; Joyce and Xu 2020). Another likely reason is that women have borne the brunt of the crisis in care that has occurred concurrently as a result of school and childcare closures, further limiting their ability to engage in paid work, or to work as many hours as before (Alon et al 2020; Cattan et al 2020; Hupkau and Petrongolo 2020). In almost all the studies that have collected data on time spent on childcare during lockdowns, women were found to take on a greater share of the additional care work (Adams-Prassl et al 2020; Andrew et al 2020; Ilkkaracan and Memis 2020; Sevilla and Smith 2020).

In South Africa, our earlier research using the first three waves of the National Income Dynamics Study – Coronavirus Rapid Mobile Survey (NIDS-CRAM), found that women's employment was particularly hard hit by the initial lockdown (Casale and Posel 2020), and women also experienced a slower recovery than men as the economy started reopening (Casale and Shepherd 2021). In addition, women were much more likely than men to adjust the hours they spent on childcare with the closing (and then reopening) of schools in South Africa, highlighting how women take on a bigger share of the responsibility related to children in the home (Casale and Shepherd 2020; 2021). Given this responsibility, it is not surprising that more than twice as many women than men (roughly 3.4 million women versus 1.7 million men) reported that looking after children in June, when most schools and ECD centres were still closed, prevented them from going to work (or made work very difficult), working the same hours as before lockdown, or searching for work (Casale and Shepherd 2020).

In our previous work for South Africa described above, data was analysed at the cross-sectional level and provided simple descriptive estimates of various labour market outcomes. In this policy paper, we exploit the panel nature of the NIDS-CRAM data to analyse gendered labour market dynamics over the course of the pandemic in a multivariate context. In particular, we are interested in comparing labour market transitions during the pandemic for the women and men first interviewed in Wave 1 and then tracked over the course of the panel. Further, we are interested in the individual and household characteristics that help predict which individuals lost work and which individuals kept or gained work during the pandemic, and whether controlling for these various factors can help explain part of the 'female penalty'.

The paper is structured as follows. In the next section we describe the NIDS-CRAM data and the various lockdown phases that were applicable when the data were collected. In Section 3, we present a descriptive analysis of the labour market transitions between the various waves for women and men. In Section 4, we explore some of the main transitions in a multivariate context, and ask whether 'the female penalty' can be explained by the individual- and household-level factors collected in the survey. Section 5 concludes.

2.   Data description

NIDS-CRAM is a rapid assessment telephone survey that aims to track the socio-economic effects of the COVID-19 crisis during South Africa's ongoing lockdown. Computer Assisted Telephone Interviewing (CATI) was employed, with interviews approximately 20 minutes on average, and conducted in the preferred language of the respondent. In Wave 1 the questionnaire was translated into 10 of the 11 official South African languages (Ndebele was excluded), and in Waves 2 to 4, into all 11 official languages.

While a number of rapid online or telephone surveys have been conducted in South Africa since the crisis began, the benefit of NIDS-CRAM is that it attempts to collect information on a nationally representative sample of adults, *to the extent possible under the circumstances*. This was achieved by using a sub-sample of individuals from the National Income Dynamics Survey (NIDS), a pre-existing nationally representative longitudinal survey last conducted in 2017.[1] To be more precise, therefore, the NIDS-CRAM sample is representative of individuals who were 15 years and older in NIDS in 2017, when weighted appropriately.

The interviews for the first wave were conducted between 7 May and 27 June 2020 among a sample of 7 073 adults aged 18 years and older. In Wave 2, 5 676 of these individuals were successfully re-interviewed between 13 July and 13 August 2020, leading to a response rate of 80.2%. In Wave 3, 5 046 (or 71.3%) of the original 7 073 respondents were successfully re-interviewed. Due to this expected attrition, the sample was replenished in Wave 3 with a top-up sample, resulting in an additional 1 084 successful interviews. The total sample size for Wave 3 was, therefore, 6 130 individuals. Wave 3 interviews were conducted between 2 November and 13 December 2020. In Wave 4, successful interviews were conducted between 2 February and 10 March 2021 among a sample of 5 629 individuals out of a potential 8 157 (a response rate of 69%).[2] Box 1 describes the lockdown regulations that were in place for each wave of data collection.

In this policy paper (unlike in our previous work), **we restrict our sample to the sub-group of respondents who were interviewed in all four waves of NIDS-CRAM**, i.e. the balanced panel. This sub-group comprises 3 837 individuals who were aged 18 and older in Wave 1 (of which 1 775 were employed and 2 033 were not employed in February 2020). We do this to be able to exploit the panel nature of the data and analyse gendered labour market transitions between the various lockdown phases. All data presented in this paper are weighted using the balanced panel weights provided with the data (which account for attrition), and standard errors are corrected for survey design features (namely clustering and stratification). For more detail on the NIDS-CRAM survey design and weighting approach, see Ingle et al (2021).

Box 1. How did lockdown regulations change between the NIDS-CRAM Waves?

WAVE 1: Wave 1 focused on measuring employment outcomes for February 2020 (or pre-COVID) and April 2020. April was the first full month of South Africa's strictest lockdown phase – Level 5 (L5). During this lockdown level, which was in place from 27 March to 30 April 2020, almost all activity was suspended except for the production of essential goods and services (mainly in the food, medical, and security sectors), and workers were encouraged to work from home if feasible.

All schools, ECD centres and childcare facilities were closed, and domestic workers/childminders were not allowed to go to work (although some living with their employers may have continued to work).

WAVE 2: Wave 2 focused on measuring employment outcomes for June 2020, when South Africa was in a less restrictive lockdown phase - (L3 ,which ran from 1 June to 17 August 2020). While there was very little difference in the level of economic activity allowed under L5 and L4, the move to L3 meant that many businesses were allowed to reopen for the first time since 27 March 2020. Instead of specifying which sectors could operate, as had previously been the case, the government transitioned to listing which sectors *could not reopen* under L3. These restrictions included personal care services (if social distancing was not possible); all on-site consumption of food and alcohol in restaurants and bars (until alcohol was banned for the second time from 13 July, after which it was not available for purchase at all); hotels/accommodation for leisure; international and domestic air travel except for essential work; conferences, events and gatherings; entertainment venues; and fitness centres.

On the childcare side, in addition to domestic workers/childminders being allowed to return to work, Grades 7 and 12 were allowed back to school at the beginning of June. Childcare work in households

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with children may have lessened somewhat; however, ECD centres and most school grades remained closed in June.

WAVE 3: Wave 3 measured employment outcomes for the month of October 2020, when South Africa was in Level 1 lockdown (L1, in operation from 21 September to 28 December 2020). By this stage almost all economic activity was once again allowed, although COVID-related health guidelines still needed to be followed. Certain recreational business such as gyms, restaurants, bars and cinemas were not allowed to exceed 50% of their usual capacity, with restrictions on the maximum numbers of people allowed at indoor and outdoor gatherings. A limited curfew was in place from midnight to 4am, alcohol was once again available for on-site consumption in licensed establishments, and the sale of alcohol at retail outlets was allowed from 9am to 5pm, Monday to Friday. Another important change was the reintroduction of international travel for business and leisure in October.

During July and August the government had planned for a phased reopening of the remaining school grades. However, given the rising number of infections recorded during the winter months in South Africa, a decision was made to close schools for four weeks from 27 July - 24 August 2020 for all grades except 7 and 12 (which were to have only a one-week and two-week break, respectively). Most grades returned on 24 August, with the remaining ones phased in on 31 August. A one-week holiday was scheduled for 23 October - 2 November to break the third and fourth terms, with the school year ending on 15 December 2020. Therefore, during the October reference period captured in Wave 3 of NIDS-CRAM, all school-going children would have been allowed back to school. The government was much slower to announce plans for the reopening of ECD centres and other daycare facilities. Eventually after a High Court Judgement on 6 July 2020, they were allowed to reopen, but subject to the regulations set out by the Department of Social Development. There is great concern, however, that given the substantial financial and administrative costs associated with reopening, many such centres will remain closed (see Wills et al 2020, 2021 for an extensive treatment).

WAVE 4: Wave 4 measured employment outcomes for January 2021, when South Africa was placed on an 'adjusted Level 3 lockdown', in operation from 29 December 2020 to 28 February 2021. Rates of infection had already started to increase by the beginning of December 2020 as South Africa headed into the second wave of the pandemic (a more severe wave than the first, fuelled by the emergence of a faster-spreading variant). The government introduced various *ad hoc* restrictions, mostly on crowd size and operational capacity, during the course of December (with additional region-specific restrictions imposed in hotspot areas such as the closure of beaches and an earlier curfew). But on the 29 December 2020, the whole country moved to the adjusted L3 lockdown. The curfew was extended from 9pm to 6am, with all restaurants and entertainment areas closing at 8pm; bars, clubs, public parks and swimming pools were closed to the public; the sale of alcohol for both off-site and on-site consumption was banned; social, faith-based, and political gatherings were prohibited; more stringent regulations around funerals were reintroduced; maximum capacity restrictions for restaurants and other entertainment venues were implemented (with a maximum of 50 indoors and 100 outdoors if health protocols could be adhered to), and businesses were expected to use only 50% of their floor space to maintain social distancing.

The reopening of schools for the year was meant to take place on 27 January 2021. However, due to the second wave, it was delayed to 15 February 2021 for public schools, with private schools allowed to reopen on 1 February 2021.

3. Labour market transitions

In this section, we use the balanced panel sample (i.e. consisting of individuals aged 18 and older who were interviewed in all four waves of the survey) to analyse gendered employment transitions across the four waves of data (weighted appropriately). To summarise from Box 1 above, we have information on employment outcomes for five months:

February 2020: the baseline/pre-COVID estimate (from Wave 1)

April 2020: the first full month of Level 5 lockdown (also from Wave 1)

June 2020: the first full month of Level 3 lockdown (from Wave 2)

October 2020: the first full month of Level 1 lockdown (from Wave 3)

January 2021: the first full month of 'adjusted' Level 3 lockdown (from Wave 4)

Transition trees in *Figures 1 - 4* below show movements between two states—namely 'employed'[3] and 'not employed' (with the latter including both the unemployed and not economically active)[4]— and for two groups—those who started out 'employed' in February 2020, and those who started out 'not employed' in February 2020. *Table 1* then summarises some of the key transitions between Waves 1 and 4.

The transition trees for both women and men indicate substantial churning in the South African labour market over the course of the pandemic, as has been found in other work (Espi et al 2020; 2021). But there are clear gender differences. Looking at transitions between February and April 2020, so following the first month of the 'hard' lockdown, we find that among women who were *employed* pre-COVID, only 70% still had employment in April 2020, compared to 80% of men (*Figures 1* and *2*; first notch of the branch). Interestingly, even during that very strict lockdown period, there were also some job gains. Of the women who were *not employed* pre-COVID, 6% gained employment in April 2020, compared to 16% of men (*Figures 3* and *4*, first notch). Overall, we find that, initially, where jobs were lost, women were affected more, and where jobs were gained, women benefitted less.

There is also a not insubstantial degree of churning between April and June, and June and October, as South Africa moved to less restrictive lockdown levels. However, for the sake of brevity, we analyse the situation almost a year later, using the latest W4 data. And we find similar gendered effects. Of those women who started out *employed* pre-COVID, 70% had employment in January 2021. The corresponding figure for men was 78%. These figures (shown in *Table 1*, top frame) are arrived at by summing the employed in the transition tree diagrams in January 2021, regardless of how they arrived there (i.e. on which branch of the trees in *Figures 1* and *2*). In a similar vein, of women *not employed* pre-COVID, 19% had employment in January 2021, with the corresponding figure for men 31% (based on summing 'not employed' in January 2021 in *Figures 3* and *4*).

Another way to highlight the degree of churning in the labour market and the gender differences is to look at the special cases of the 'stable employed' (to use the nomenclature of Espi et al 2021), i.e. those employed across *all four waves* (the uppermost branches of *Figures 1* and *2*)[5], and the 'stable

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3 A person is defined as employed in each of these months if they had worked in "any kind of job", had done "work for any profit or pay, even if just for an hour or a small amount", had been engaged in "any kind of business such as selling things - big or small – even if only for one hour", or if they had a job/activity that they would return to in the next 4 weeks. Our definition of employment therefore includes furloughed workers (so workers who said they had or expected to return to a job, but who did not necessarily work any hours or earn any income in that month).

4 While an analysis of labour market transitions or the estimation of employment probabilities would usually distinguish between the unemployed and not economically active (NEA), as has been the practice in all NIDS-CRAM labour market research, we conflate the two. This is because during the lockdown there were restrictions on movement and economic activity, which would have affected job search, making it difficult to distinguish between various reasons for not working. Given the regular changes in lockdown restrictions and economic activity allowed, there also appears to have been substantial movement between unemployment and inactivity, suggesting that the boundaries between these two labour market states may have become more blurred during this period.

5 It is worth noting that even though these individuals may have had employment in all five of the months for which data were collected, they were not necessarily in the *same* jobs. So these transitions are underestimating the amount of churning that takes place in the South African labour market.

not employed', i.e. those not employed across *all four waves* (the lowermost branches of *Figures 3* and *4*). Of women who were employed pre-COVID, only 47% stayed employed across all waves; for men, the corresponding figure was 61%. Of women *not* employed pre-COVID, 70% stayed not employed across all the waves; for men, the corresponding figure was 56%.

So, in brief, among NIDS-CRAM respondents who were followed throughout the survey, employed women were more likely than employed men to lose jobs, and less likely to stay employed, and not employed women were less likely than not employed men to gain jobs, and more likely to stay not employed.

4.   Analysing the 'female penalty' in a multivariate setting

In this section, we analyse some of the main labour market transitions described above in a multivariate setting, and ask whether controlling for the individual- and household-level characteristics available in the data can help explain part of the 'female penalty' we observe. We also estimate the regressions separately by gender to explore whether some covariates matter more for men's or women's labour market outcomes.

We estimate the probability of employment (where the reference category is 'not employed') among those aged 18 and over using probit regressions, although we display marginal effects in the tables below. For each set of regressions we estimate, in addition to the female dummy (the main variable of interest), we add covariates in a sequential manner. We control progressively for province fixed effects, human capital characteristics (education and age), race and urban residence, and household-level characteristics (married, number of young children aged 0-6 in the household, number of school-aged children aged 7-17 in the household, and number of (other) pensioners aged 60 and over in the household)[6]. Finally, we split the samples by gender and analyse whether certain characteristics (particularly the presence of children in the household) are differentially predictive of employment probabilities for women and men.

While the number of regressions we could estimate is large given the various permutations identified in the transitions trees above, we focus on the following:

1.   The probability of being employed in April 2020 (just after the COVID-19 shock was first felt), conditional on employment in February 2020,
2.   The probability of being employed in January 2021 (so almost a year later), conditional on employment in February 2020,
3.   The probability of being employed across *all* the waves ('stable employment'), conditional on employment in Feb 2020,
4.   The probability of being employed in April 2020, conditional on *not* being employed in Feb 2020, and
5.   The probability of being employed in January 2021, conditional on *not* being employed in Feb 2020.

In other words, we are particularly interested in what predicts who initially lost or gained work as the COVID-19 shock first hit in April 2020, and what predicts who had lost or gained work almost a year later in January 2021 after the economy had some time to adjust, and lockdown was partially eased. We are also interested in the special case of 'stable employment', i.e. who remained employed throughout the four waves.

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6 As our sample includes all adults aged 18 and over that were interviewed in all four waves, this variable excludes the index person, if the index person was aged 60 or over.

Predicting job loss

In *Table 2* below, we show the marginal effects from probit regressions of the probability of being employed in April 2020, conditional on starting out as employed in February 2020. In other words, the dependent variable is equal to one if employed in April 2020, and zero if not employed (either unemployed or NEA) in April 2020. Without any controls, women were 11 percentage points less likely to keep their job in April 2020 relative to men (Column 1, *Table 2*). While being of prime working-age, having tertiary education and being white seemed to have protective effects against job loss, controlling for these various individual-level characteristics hardly affects the female penalty. If anything, controlling for human capital characteristics (education and age) increases the penalty further as employed women are more educated on average than employed men (Casale and Posel 2014).

An oft-cited reason for why women may have been more likely to lose their jobs (or have had to give up their jobs) during the pandemic has been the increase in childcare that arose as a result of the unprecedented closure of schools and other childcare facilities. Measuring this effect is very difficult given concerns with endogeneity. Although the first wave of NIDS-CRAM did ask individuals with children if the hours they spent on childcare had gone up in April, and by how much (with later waves collecting the actual hours spent on childcare on a typical weekday), who takes on the additional childcare might also be determined by whose job was lost. We therefore control for the number of young and school-aged children living in the household at the time of the first wave of data collection, as this is less likely to be endogenous – the number of children living in the household is unlikely to have changed very quickly in response to employment outcomes given the speed with which the virus took hold globally and lockdowns were announced.[7]

Interestingly, there is hardly any change to the female penalty after controlling for the number of children in the household, and there is no significant effect of the number of children in the household on the probability of keeping employment in April 2020 for either women or men. We would have also controlled for marital status, but unfortunately this information was only collected from Wave 2 onwards. But we do control for the number of pensioners in the household (excluding the index person if the index person was 60 years and older) as a proxy for the availability of other carers in the household, given how frequently grandparents (especially grandmothers) contribute to care needs. We find the presence of pensioners in the household reduces the probability of employment in April conditional on employment in February, and especially for men, suggesting perhaps that alternative sources of income may have allowed some people to exit the job market.

Overall, the individual- and household-level characteristics that we can control for do not help 'explain away' the female penalty in employment in April 2020. In the regression in *Table 2* which includes all the controls (Column 5), the female penalty is 12.4 percentage points. This suggests that a key factor in who kept their job in that first month of lockdown is likely *the type of work* individuals were doing. Unfortunately, there is no information in NIDS-CRAM Wave 1 on the characteristics of the job held in February 2020 (we only know about some features of the job from April onwards). But early predictions based on pre-COVID sectoral distributions and job characteristics using labour force survey data both for South Africa and other countries (Alon et al 2020; Joyce and Xu 2020, Mosomi et al 2020), and subsequent empirical analyses (Adams-Prassl et al 2020), suggest sector of employment and other job characteristics were a key factor in post-COVID gender differences in labour market outcomes. When the COVID-19 crisis took hold, women were concentrated in jobs that were more severely constrained by lockdown regulations and the need for social distancing, and less able to be performed from home (such as retail, tourism and hospitality, personal care, domestic work, paid childcare work, among others).

In *Table 3* we show the probability of being employed in January 2021, almost a year later, conditional on being employed in February 2020, and we continue to find a substantial female penalty. Without

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7 We recognise that in the South African context of not inconsiderable inter-household mobility (Posel and Casale 2020), even this strategy overlooks that in the few days between the announcement of lockdown and the implementation of lockdown rules, household members may have moved to different households related to income and childcare availability.

any controls, women were about 7 percentage points less likely than men to be employed in January 2021, conditional on employment in February 2020. Although education and being of prime working age appear to offer protective effects, and especially for women (see the final two columns where the samples are split by gender), we find, again, that individual-level characteristics do not help explain the female penalty. When we predict who had a job almost a year later, now household-level factors have more traction. The coefficient on the female dummy falls from -0.073 to -0.053 and is no longer significant when controlling for household-level characteristics.

There are also some interesting effects on the household-level variables themselves, especially when we estimate the regressions separately for women and men (as shown in the last two columns). The results suggest a 'fatherhood premium', where the probability of being employed almost a year later increases with the number of small children in the household for men (a result also found in the US, Dias et al 2020)[8]. Conversely, women experience a 'motherhood penalty'[9] related to the number of school-aged children in the household. This finding aligns with the descriptive results we have found in our previous NIDS-CRAM policy reports (Casale and Shepherd 2020, 2021): when schools close, women take on the brunt of the additional childcare and when schools reopen they can cut back more than men on childcare hours. In other words, women appear to be affected more by living with school-aged children, and this appears to explain part of the female job penalty in January 2021.

In *Table 4* we estimate the special case of 'stable employment', conditional on employment in February 2020. In other words, the dependent variable is equal to one if the individual was employed in February, April, June, October 2020 *and* January 2021, and equal to zero if employed in February 2020 but subsequently moved in and out of employment. Here we find a considerable female penalty, with women 14 percentage points less likely than men to be in 'stable employment'. Education (especially tertiary), being in the prime working-age categories, and being white all have strong positive effects on the probability of staying employed. However, the female penalty does not change very much when these factors are accounted for (it falls slightly to 13 percentage points).

In contrast, controlling for household-level factors does result in the female penalty declining (to 10 percentage points), although it remains substantial and highly significant. And once again, as in the previous set of results, there are differences by gender in how children affect employment probabilities. Men experience a 'fatherhood premium' with the presence of small children in the household (of 6 percentage points), while women who live with school-aged children experience a 'motherhood penalty' (of 4 percentage points).

Predicting job gain

As the transition trees presented earlier showed, an interesting feature of this crisis is that many people who were not working pre-COVID have gained work over the course of the last year, despite a depressed economy. While job losses may have outweighed job gains overall, opportunities were nonetheless created as society adapted to living in COVID-times, and businesses followed suit. In the final two sets of regressions we predict employment in April 2020 and January 2021, conditional on being *not employed* in February 2020. In other words, we are interested to see who joined the ranks of the employed during a year characterised by such upheaval and overall loss.

Table 5 shows the probability of being employed in April 2020, conditional on being *not employed*

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8 Dias et al (2020) find a significant fatherhood premium in the US during the pandemic (mirroring findings in a much larger body of pre-COVID research on parenthood premiums and penalties). Fathers were much less likely to be laid off during the COVID-19 crisis than mothers, men without children, and women without children. Although they cannot distinguish between the possible causes, these include gender-stereotyping (so employers privilege fathers who they view as deserving breadwinners while laying off women who they view as caregivers); differences in tenure and other labour market attributes; and differences in rules and regulations related to layoff within organisations.

9 The terms 'fatherhood premium' and 'motherhood penalty' are frequently used in the global literature to describe how children affect men's and women's labour market outcomes differently. We use these terms loosely here (and always show them in inverted commas) given that we are not strictly capturing parenthood, but rather the effect of living with children more generally, some of whom may not be the index person's own or adopted child. Nonetheless, given how many South Africans care for children that are not their own, it is generally accepted as a reasonable proxy.

in February 2020. Women were much less likely to take up the new job opportunities in the job market as the crisis hit. Without controls, the female penalty is 10 percentage points. With controls, it actually rises to 12.5 percentage points. What is interesting is that education is not at all significant in predicting who gained a job. Age does seem to matter though: In that first month of lockdown, those in the age categories 25-54 were much more likely to take up job opportunities than those aged 18-24, while those aged 55 and older were much less likely. When the regressions are split by gender, it is evident that the age effect is almost exclusively being driven by the male sample. Also, when analysing the split sample, White men appear to be much more likely to have gained work compared with the other race groups. Household-level variables (as we measure them) appear to have very little predictive power for either men or women, and certainly cannot help explain the large female penalty. Again, this would suggest that sector of employment is likely to have been an important factor. It is possible that the kinds of new jobs that became available in that first month of lockdown were not the kinds of jobs that women typically do or that they had the skills to do.[10]

In *Table 6*, we analyse the probability of being employed almost one year later in January 2021, conditional on being *not employed* in February 2020. As was the case in April, women who were not employed pre-COVID were also much less likely than men to have gained a job by January 2021; without controls, the female penalty is 11 percentage points, and with controls, it is around 9 percentage points. Individuals with a tertiary education were more likely to gain work and those aged 55 and over were less likely to gain work. Household-level variables have more of an effect in predicting job gain in January 2021 than in April 2020 (as was the case above when predicting job loss). Married men were more likely to gain jobs, and again we see a negative effect for women living with school-aged children. But these variables cannot explain the large female penalty. Once again, a big driver is likely to be on the demand side, namely the sectoral and occupational composition of the new jobs that became available.

6. Conclusion

In this report, we used the four waves of the NIDS-CRAM survey that are currently available to analyse employment transitions by gender. Unlike in our previous work, **we restrict our sample to the sub-group of respondents who were interviewed in all four waves of NIDS-CRAM**, i.e. the balanced panel of 3 837 individuals (weighted appropriately for attrition).

In comparing the employment transitions for men and women across the course of the pandemic, we find large gender differences. Only 70% of women who were employed pre-COVID (February 2020) were still employed in April 2020, as the COVID-19 shock initially hit the labour market. For men, the corresponding figure was 80%. Interestingly, even during this very strict lockdown period, there were some job gains. But of the women who were *not employed* pre-COVID, only 6% gained employment in April 2020, compared to 16% for men.

The gender differences remained large almost a year later among those who were tracked in all four waves. Of those women who started out employed in February 2020, only 70% still had employment in January 2021. For men, the corresponding figure was 78%. And, of women who started out *not employed* pre-COVID, 19% had employment in January 2021, with the corresponding figure for men 31%.

Of women who were employed pre-COVID, only 47% stayed employed *across all four waves* – what we might call 'stable employment'; for men, the corresponding figure was 61%. Of women *not* employed pre-COVID, 70% stayed not employed across *all four waves*; for men, the corresponding figure was 56%.

In summary, there has been considerable churning in the labour market for both women and men

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10 An example here would be the fast expansion of delivery services during the early lockdown phase. Men, and men of prime working-age, might have been more able to take up these jobs if they were more likely to hold a driver's license (and more specifically a motorcycle license) and their own vehicle. Safety concerns might also dissuade women from taking on these kinds of jobs.

over the course of the pandemic. However, where jobs were lost, women were more likely to lose, and where jobs were gained, women were less likely to benefit.

These employment transitions were also analysed in a multivariate context, and we find that the large female penalty noted above cannot be explained away completely—and in most cases, not at all—by controlling for region, individual and household-level variables, at least not those captured in the data. This holds when we predict the probability of employment both in April 2020 (as the COVID shock hit) and in January 2021 (almost a year later), conditional on employment in February 2020, as well as the special case of remaining employed across all four waves (relative to moving in and out of employment). This result also holds when we predict the job gains, i.e. the probability of employment in April 2020 or in January 2021, conditional on being *not employed* in February 2020.

The fact that a large female penalty persists regardless of controlling for regional, individual and household factors, suggests that an important factor in who lost and who gained jobs over the period is likely the *type of job* men and women initially held and the *type of job* that became available over the period. Women were more likely to be in sectors that were hardest hit by the crisis (Alon et al 2020; Adams-Prassl et al 2020; Joyce and Xu 2020; Mosomi et al 2020), and perhaps also less likely to have the skills or training to take up the new opportunities available.

Although the household-level characteristics we could control for using our data could not *explain away* the female penalty, there were some interesting findings that emerged. While household-level factors appeared to have very little effect on who lost or gained employment in April 2020, or the female penalty itself, they did seem to have more traction when predicting who lost or gained employment in January 2021 (and who stayed employed across all four waves). With the inclusion of these variables, the female penalty fell by around 2-3 percentage points (although remained large in most cases). In addition, there were some notable differences in the effect of these variables on women's and men's employment probabilities. Among men, a 'fatherhood premium' was observed among those living with young children aged 0-6 (a result also found in other countries), while for women, the expected 'motherhood penalty' was observed for those living with children aged 7-17.

This is consistent with earlier work that found that women were much more likely than men to adjust their hours spent on childcare in the face of school closures and re-openings (Casale and Shepherd 2020; 2021). While this gendered effect was not found when predicting employment in April 2020, it was found when predicting employment in January 2021 and 'stable employment' across all four waves, suggesting that the constraints related to childcare for women have perhaps intensified over the period. This is something which requires further investigation (and perhaps more advanced empirical analysis that considers the role of endogeneity).[11]

What policy lessons can we take away from this analysis? The finding that women's employment outcomes are affected more by living with school-aged children is a stark reminder of how important childcare availability is for women, and how the burden of school closures falls disproportionately on their shoulders. This is especially salient given that many schools that have reopened are implementing a system of 'platooning', where children attend school on alternate days or weeks (Mohohlwane et al 2021).

But the fact that neither living with children nor the typical human capital characteristics, such as age and education, can explain away the large female penalty observed, suggests a prominent role for sector and job characteristics in this story. If so-called 'women's' jobs have been affected more by job cuts, with new opportunities arising in typically 'male' sectors, then policy also needs to recognise (and address) the inequality that stems from gendered occupational segregation. This should be the case both in the design of labour market and education policies (related to, for example, subject and field of study choices; training and re-training opportunities; constraints to

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11 Schools were closed both in April 2020 and in January 2021, so the larger (and significant) effect of living with school-aged children on women's employment probabilities in January 2021 compared to April 2020, suggests that school closures had become more of a constraint for women. This is surprising as schools are closed for a period of time in January every year due to school holidays, and parents often anticipate this by taking leave in January or making alternative arrangements. It is possible that by January 2021 many people had already used up (or had been 'forced' to use) their paid leave during earlier lockdown periods. Unfortunately, this issue is difficult to probe any further with the data available to us, but it reinforces the need for further analysis in this area.

taking up certain jobs; etc) *and* social policies (ensuring unemployed women are receiving the income support they need given their disadvantage in the labour market). These are long-standing issues in the South African research and policy arena, but this crisis has brought them to the fore and made their resolution all the more urgent.

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FIGURES

Figure 1: Transition tree of women's labour market outcomes, conditional on being 'employed' in February 2020, February 2020 – January 2021
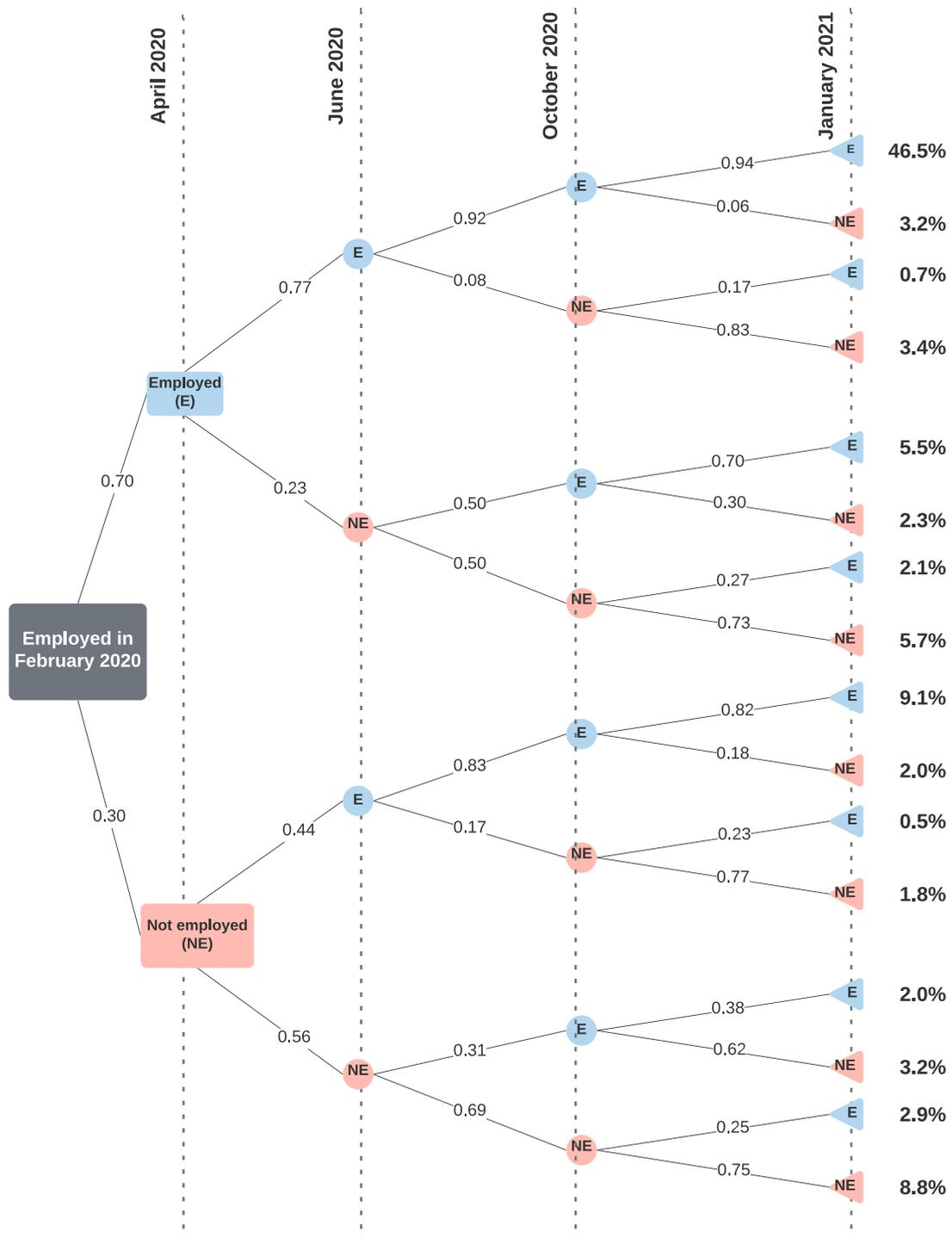
Notes: The sample is restricted to the balanced sample of women across all four waves of NIDS-CRAM who began as employed in February 2020. Balanced sample weights are used. The unweighted sample size is 943.

Figure 2: Transition tree of men's labour market outcomes, conditional on being 'employed' in February 2020, February 2020 – January 2021

Figure 3: Transition tree of women's labour market outcomes, conditional on being 'not employed' in February 2020, February 2020 – January 2021

Notes: The sample is restricted to the balanced sample of women across all four waves of NIDS-CRAM who began as not employed in February 2020. Balanced sample weights are used. The unweighted sample size is 1 287.
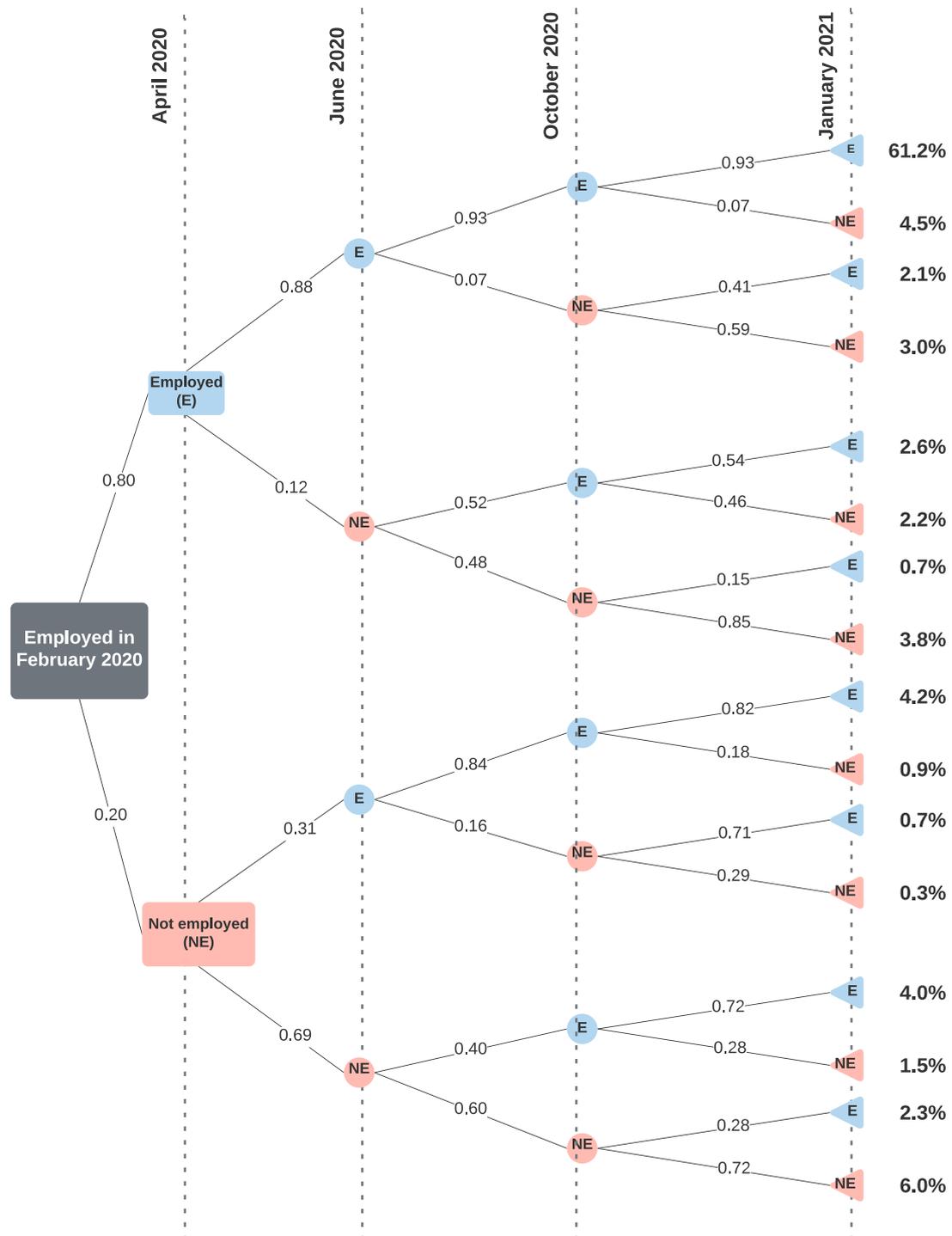
Figure 4: Transition tree of men's labour market outcomes, conditional on being 'not employed' in February 2020, February 2020 – January 2021
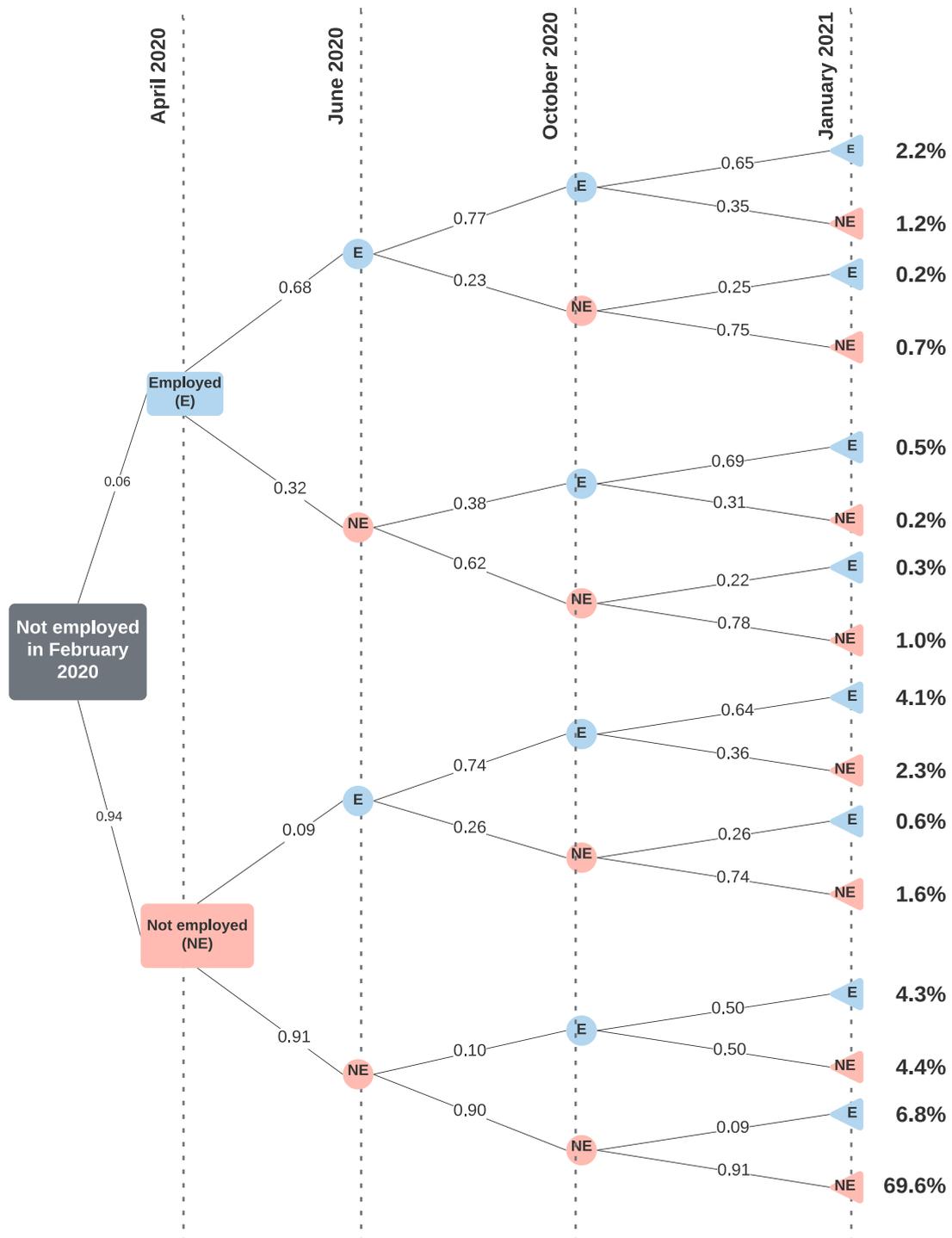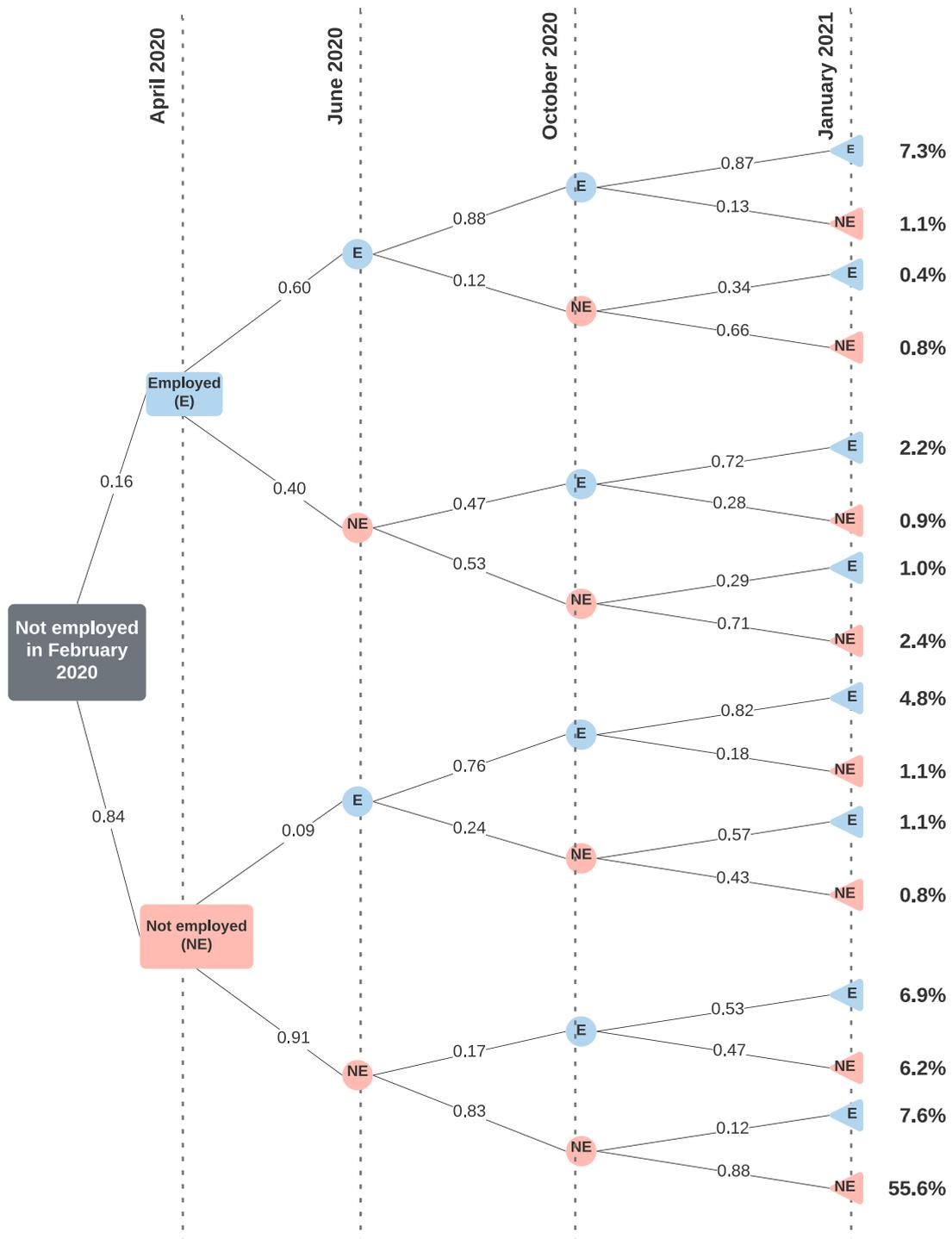
Notes: The sample is restricted to the balanced sample of men across all four waves of NIDS-CRAM who began as not employed in February 2020. Balanced sample weights are used. The unweighted sample size is 592.

TABLES

Table 1: Summary of employment transitions between Waves 1 and 4

	Women	Men
Of those employed in February 2020		
% with employment in January 2021	69.5	77.7*
% without employment in January 2021	30.5	22.3*
	100	100
Of those not employed in February 2020		
% with employment in January 2021	19.0	31.3**
% without employment in January 2021	81.0	68.7**
	100	100
% of all adults with employment in all waves Feb 2020 – Jan 2021	21.0	37.1**
as proportion of those employed in Feb 2020	46.5	61.2**
% of all adults without employment in all waves Feb 2020 – Jan 2021	38.2	21.9**
as proportion of those not employed in Feb 2020	69.6	55.6**

Source: NIDS-CRAM, Waves 1, 2 and 3 (2020) and Wave 4 (2021)
Notes: The sample is all adults 18 years or older. The balanced panel is used and data are weighted appropriately.
* Gender differences are significant at the 90 percent confidence level.
** Gender differences are significant at the 95 percent confidence level.

Table 2: The probability of being employed in April 2020, conditional on being employed in February 2020 (marginal effects from probit regressions)

Dependent variable: Employed in April 2020 (conditional on being employed in February 2020)							
Sample:	All	All	All	All	All	Women	Men
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	-0.110*** (0.031)	-0.110*** (0.030)	-0.122*** (0.030)	-0.117*** (0.030)	-0.124*** (0.032)		
Some secondary schooling			-0.016 (0.056)	-0.028 (0.055)	-0.038 (0.058)	-0.037 (0.080)	-0.014 (0.087)
Complete secondary schooling			-0.007 (0.063)	-0.028 (0.063)	-0.035 (0.065)	-0.069 (0.094)	-0.003 (0.087)
Tertiary education			0.110** (0.055)	0.089 (0.056)	0.084 (0.059)	0.079 (0.084)	0.087 (0.081)
25 – 34			0.131* (0.070)	0.125* (0.068)	0.120* (0.071)	0.007 (0.091)	0.161* (0.088)
35 – 44			0.220*** (0.069)	0.207*** (0.067)	0.197*** (0.069)	0.103 (0.090)	0.217** (0.090)
45 – 54			0.200*** (0.068)	0.186*** (0.067)	0.186*** (0.068)	0.064 (0.088)	0.225** (0.092)
55+			0.160* (0.082)	0.123 (0.081)	0.128 (0.082)	0.041 (0.113)	0.145 (0.112)
Coloured				0.021 (0.069)	0.038 (0.066)	0.070 (0.112)	0.012 (0.089)
Indian/Asian				-0.239* (0.136)	-0.201 (0.130)	-0.523*** (0.135)	
White				0.127** (0.056)	0.134** (0.055)	0.158* (0.083)	0.105* (0.063)
Urban area				0.051 (0.041)	0.058 (0.042)	0.050 (0.052)	0.073 (0.057)
# young children in household					0.018 (0.016)	0.022 (0.019)	0.011 (0.023)
# school-aged children in household					-0.003 (0.012)	0.005 (0.015)	-0.019 (0.018)
# pensioner/s in household (excl. respondent)					-0.095*** (0.026)	-0.060 (0.037)	-0.112*** (0.029)
Province fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1 750	1 749	1 749	1 749	1 641	902	739
F-statistic	12.52***	3.82***	4.34***	3.89***	3.95***	2.36***	3.06***

Source: NIDS-CRAM, Wave 1 (2020)
Notes: The sample is all adults 18 years or older. The balanced panel is used and data are weighted appropriately. Marital status is not included as a covariate as it was not available in Wave 1. The omitted categories are male, no schooling, aged 18-24, African and rural residence.
* Significant at the 90 percent confidence level.
** Significant at the 95 percent confidence level.
*** Significant at the 99 percent confidence level.

Table 3: The probability of being employed in January 2021, *conditional on being* employed *in February 2020* (marginal effects from probit regressions)

Dependent variable: Employed in January 2021 (conditional on being employed in February 2020)							
Sample	All	All	All	All	All	Women	Men
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	-0.073*** (0.031)	-0.075*** (0.031)	-0.083*** (0.031)	-0.067** (0.032)	-0.053 (0.033)		
Some secondary schooling			0.040 (0.057)	0.065 (0.065)	0.064 (0.066)	0.138* (0.071)	-0.025 (0.099)
Complete secondary schooling			0.149*** (0.062)	0.164** (0.070)	0.165** (0.071)	0.292*** (0.073)	0.068 (0.103)
Tertiary education			0.248*** (0.054)	0.239*** (0.065)	0.244*** (0.065)	0.311*** (0.073)	0.183* (0.096)
25 – 34			0.212*** (0.068)	0.209*** (0.065)	0.189*** (0.066)	0.173* (0.089)	0.188** (0.078)
35 – 44			0.244*** (0.069)	0.238*** (0.067)	0.223*** (0.070)	0.338*** (0.079)	0.112 (0.104)
45 – 54			0284*** (0.070)	0.279*** (0.068)	0.265*** (0.070)	0.377*** (0.085)	0.150 (0.102)
55+			0.036 (0.084)	-0.004 (0.079)	-0.008 (0.083)	0.141 (0.115)	-0.113 (0.120)
Coloured				0.065 (0.068)	0.066 (0.074)	0.040 (0.098)	0.095 (0.073)
Indian/Asian				-0.058 (0.177)	-0.037 (0.167)	-0.097 (0.175)	
White				0.215*** (0.048)	0.221*** (0.047)	0.262*** (0.070)	0.207*** (0.054)
Urban area				0.060 (0.041)	0.053 (0.041)	0.024 (0.045)	0.048 (0.058)
Married					0.021 (0.033)	0.048 (0.042)	0.027 (0.052)
# young children in household					0.026 (0.017)	0.016 (0.019)	0.043* (0.026)
# school-aged children in household					-0.024** (0.012)	-0.036*** (0.013)	-0.011 (0.023)
# pensioner/s in household (excl. respondent)					-0.058* (0.030)	-0.035 (0.037)	-0.087* (0.047)
Province fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1 763	1 757	1 757	1 707	1 707	951	756
F-statistic	5.46**	2.53***	5.79***	5.86***	5.34***	4.51***	3.41***

Source: NIDS-CRAM, Wave 1 (2020) and Wave 4 (2021)
Notes: The sample is all adults 18 years or older. The balanced panel is used and data are weighted appropriately. The omitted categories are male, no schooling, aged 18-24, African, rural residence and not married. Individual and household-level characteristics are taken from the Wave 4 survey.
* Significant at the 90 percent confidence level.
** Significant at the 95 percent confidence level.
*** Significant at the 99 percent confidence level.

Table 4: The probability of being 'stably employed' in all four waves, conditional on being employed in February 2020 (marginal effects from probit regressions)

Dependent variable: Employed in all four waves of NIDS-CRAM (conditional on being employed in February 2020)							
Sample	All	All	All	All	All	Women	Men
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	-0.144*** (0.035)	-0.143*** (0.035)	-0.145*** (0.032)	-0.130*** (0.033)	-0.102*** (0.033)		
Some secondary schooling			0.055 (0.053)	0.076 (0.056)	0.075 (0.057)	0.088 (0.062)	0.038 (0.086)
Complete secondary schooling			0.123** (0.058)	0.128** (0.061)	0.127** (0.062)	0.090 (0.071)	0.153* (0.088)
Tertiary education			0.280*** (0.053)	0.249*** (0.055)	0.253*** (0.055)	0.188*** (0.068)	0.302*** (0.081)
25 – 34			0.202*** (0.056)	0.207*** (0.054)	0.172*** (0.057)	0.071 (0.082)	0.236*** (0.073)
35 – 44			0.305*** (0.054)	0.297*** (0.053)	0.258*** (0.058)	0.229*** (0.086)	0.260*** (0.077)
45 – 54			0.302*** (0.068)	0.295*** (0.064)	0.252*** (0.068)	0.246*** (0.086)	0.235** (0.099)
55+			0.125 (0.077)	0.072 (0.071)	0.042 (0.077)	-0.041 (0.101)	0.100 (0.107)
Coloured			0.066 (0.066)	0.064 (0.069)	0.055 (0.108)	0.107 (0.079)
Indian				-0.009 (0.117)	-0.003 (0.117)	-0.262** (0.120)	
White				0.322*** (0.063)	0.315*** (0.064)	0.247*** (0.090)	0.332*** (0.074)
Urban area				0.085** (0.041)	0.078* (0.040)	0.066 (0.051)	0.078 (0.060)
Married					0.072* (0.037)	0.105** (0.046)	0.050 (0.054)
# young children in household					0.016 (0.016)	-0.027 (0.021)	0.061** (0.027)
# school-aged children in household					-0.026* (0.014)	-0.039** (0.016)	-0.008 (0.025)
Pensioner/s in household (excl. respondent)					-0.050 (0.031	0.014 (0.038)	-0.136** (0.056)
Province fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1 775	1 769	1 769	1 718	1 718	957	761
F-statistic	16.12***	5.05***	7.20***	8.65***	7.60***	4.91***	4.48***

Source: NIDS-CRAM, Waves 1, 2 and 3 (2020) and Wave 4 (2021)
Notes: The sample is all adults 18 years or older. The balanced panel is used and data are weighted appropriately. The omitted categories are male, no schooling, aged 18-24, African, rural residence and not married. Individual and household-level characteristics are taken from the Wave 4 survey.
* Significant at the 90 percent confidence level.
** Significant at the 95 percent confidence level.
*** Significant at the 99 percent confidence level.

Table 5: The probability of being employed in April 2020, conditional on being not employed in February 2020 (marginal effects from probit regressions)

Dependent variable: Employed in April 2021 (conditional on not being employed in February 2020)							
Sample:	All	All	All	All	All	Women	Men
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	-0.101*** (0.026)	-0.096*** (0.024)	-0.117*** (0.026)	-0.123*** (0.026)	-0.125*** (0.025)		
Some secondary schooling			0.029 (0.030)	0.027 (0.032)	0.041 (0.032)	0.019 (0.021)	0.049 (0.057)
Complete secondary schooling			0.044 (0.044)	0.039 (0.046)	0.050 (0.046)	0.025 (0.031)	0.060 (0.069)
Tertiary education			0.056 (0.034)	0.051 (0.037)	0.044 (0.034)	0.009 (0.023)	0.093 (0.064)
25 – 34			0.062* (0.037)	0.062* (0.037)	0.099*** (0.036)	0.020 (0.022)	0.171*** (0.059)
35 – 44			0.108*** (0.041)	0.111*** (0.042)	0.103*** (0.037)	0.060* (0.031)	0.137** (0.060)
45 – 54			0.073* (0.041)	0.076* (0.042)	0.079** (0.036)	0.004 (0.018)	0.178** (0.071)
55+			-0.055** (0.027)	-0.060** (0.029)	-0.047** (0.024)	-0.016 (0.017)	-0.064 (0.043)
Coloured				-0.058 (0.050)	-0.058 (0.042)	-0.062*** (0.012)	0.073 (0.108)
White				0.058 (0.089)	0.040 (0.074)	-0.055*** (0.014)	0.222** (0.111)
Urban area				-0.039 (0.031)	0.004 (0.023)	-0.023 (0.018)	0.030 (0.041)
# young children in household					-0.021* (0.012)	-0.009 (0.009)	-0.032 (0.020)
# school-aged children in household					-0.015 (0.010)	-0.010 (0.008)	-0.018 (0.019)
# pensioner/s in household (excl. respondent)					-0.031* (0.017)	-0.007 (0.012)	-0.048* (0.028)
Province fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2 003	2 001	2 000	2 000	1 872	1 280	592
F-statistic	16.84***	4.63***	5.97***	5.63***	5.28***	2.81***	4.03***

Source: NIDS-CRAM, Wave 1 (2020)
Notes: The sample is all adults 18 years or older. The balanced panel is used and data are weighted appropriately. Marital status is not included as a covariate as it was not available in Wave 1. The omitted categories are male, no schooling, aged 18-24, African and rural residence.
* Significant at the 90 percent confidence level.
** Significant at the 95 percent confidence level.
*** Significant at the 99 percent confidence level.

***Table 6: The probability of being employed in* January 2021*, conditional on being* not employed *in* February 2020 (marginal effects from probit regressions)**

Dependent variable: Employed in January 2021 (conditional on not being employed in February 2020)							
Sample:	All	All	All	All	All	Women	Men
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	-0.110*** (0.036)	-0.108*** (0.035)	-0.110*** (0.034)	-0.095*** (0.033)	-0.088*** (0.033)		
Some secondary schooling			0.054 (0.044)	0.038 (0.046)	0.037 (0.045)	-0.006 (0.062)	0.094 (0.070)
Complete secondary schooling			0.013 (0.047)	0.004 (0.049)	-0.004 (0.049)	-0.023 (0.061)	-0.011 (0.082)
Tertiary education			0.130*** (0.049)	0.116** (0.053)	0.107** (0.053)	0.100 (0.075)	0.119 (0.075)
25 – 34			-0.004 (0.050)	-0.013 (0.053)	-0.015 (0.050)	-0.024 (0.053)	0.025 (0.081)
35 – 44			0.056 (0.054)	0.065 (0.053)	0.047 (0.053)	0.077 (0.058)	0.009 (0.085)
45 – 54			0.069 (0.076)	0.060 (0.077)	0.035 (0.080)	0.022 (0.094)	0.047 (0.102)
55+			-0.219*** (0.041)	-0.223*** (0.042)	-0.238*** (0.044)	-0.189*** (0.057)	-0.302*** (0.069)
Coloured				0.121 (0.081)	0.117 (0.075)	0.038 (0.092)	0.328** (0.132)
Indian/Asian				0.106 (0.114)	0.093 (0.111)	0.191 (0.283)	
White				0.014 (0.084)	0.006 (0.081)	-0.066 (0.082)	0.186 (0.140)
Urban area				-0.049 (0.036)	-0.049 (0.036)	0.012 (0.037)	-0.127* (0.066)
Married					0.036 (0.033)	-0.020 (0.037)	0.105* (0.060)
# young children in household					-0.003 (0.018)	0.005 (0.022)	-0.033 (0.023)
# school-aged children in household					-0.023 (0.014)	-0.035** (0.016)	0.017 (0.022)
# pensioner/s in household (excl. respondent)					-0.028 (0.026)	0.004 (0.030)	-0.066* (0.038)
Region fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1 998	1 994	1 993	1 916	1 916	1 314	602
F-statistic	10.04***	1.74*	5.80***	5.33***	4.37***	2.93***	3.38***

Source: NIDS-CRAM, Wave 1 (2020) and Wave 4 (2021)
Notes: The sample is all adults 18 years or older. The balanced panel is used and data are weighted appropriately. The omitted categories are male, no schooling, aged 18-24, African, rural residence and not married. Individual and household-level characteristics are taken from the Wave 4 survey.
* Significant at the 90 percent confidence level.
** Significant at the 95 percent confidence level.
*** Significant at the 99 percent confidence level.

Table 7: Sensitivity check - the probability of being employed in April 2020, conditional on being employed in February 2020 (marginal effects from probit regressions) – non-mobile during L5

Dependent variable: Employed in April 2020 (conditional on being employed in February 2020)							
Sample	All	All	All	All	All	Women	Men
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	-0.133*** (0.031)	-0.132*** (0.031)	-0.141*** (0.031)	-0.137*** (0.031)	-0.144*** (0.032)		
Some secondary schooling			0.005 (0.058)	-0.010 (0.057)	-0.012 (0.060)	-0.030 (0.087)	0.037 (0.088)
Complete secondary schooling			0.006 (0.067)	-0.018 (0.067)	-0.018 (0.070)	-0.083 (0.099)	0.025 (0.094)
Tertiary education			0.113* (0.060)	0.087 (0.060)	0.089 (0.063)	0.065 (0.091)	0.108 (0.087)
25 – 34			0.127 (0.078)	0.117 (0.074)	0.119 (0.074)	0.083 (0.103)	0.127 (0.093)
35 – 44			0.223*** (0.076)	0.206*** (0.072)	0.199*** (0.074)	0.198** (0.097)	0.160 (0.099)
45 – 54			0.198*** (0.073)	0.179** (0.070)	0.180** (0.070)	0.146 (0.099)	0.164* (0.098)
55+			0.153* (0.088)	0.109 (0.086)	0.125 (0.087)	0.110 (0.133)	0.104 (0.113)
Coloured				0.024 (0.074)	0.042 (0.072)	0.019 (0.122)	0.059 (0.069)
Indian/Asian				-0.257* (0.138)	-0.207 (0.132)	-0.492*** (0.135)	
White				0.129** (0.058)	0.131** (0.059)	0.165* (0.093)	0.100 (0.062)
Urban area				0.087* (0.045)	0.097** (0.046)	0.064 (0.054)	0.126** (0.062)
# young children in household					0.017 (0.018)	0.027 (0.025)	0.003 (0.025)
# school-aged children in household					-0.001 (0.013)	0.004 (0.016)	-0.022 (0.020)
# pensioner/s in household (excl. respondent)					-0107*** (0.027)	-0.056 (0.039)	-0.133*** (0.031)
Province fixed effects	No	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1 525	1 524	1 524	1 524	1 428	795	633
F-statistic	17.96***	3.77***	4.11***	3.76***	3.85***	2.32***	3.07***

Source: NIDS-CRAM, Wave 1 (2020)
Notes: The sample is all adults 18 years or older that reported that they did not move to another house/dwelling for April lockdown and were still living in that same house/dwelling in May. The balanced panel is used and data are weighted appropriately. Marital status is not included as a covariate as it was not available in Wave 1. The omitted categories are male, no schooling, aged 18-24, African and rural residence.
* Significant at the 90 percent confidence level.
** Significant at the 95 percent confidence level.
*** Significant at the 99 percent confidence level.

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