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WAVE 5

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

Age, employment and labour force participation outcomes in COVID-era South Africa

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Age, employment and labour force participation outcomes in COVID-era South Africa

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Abstract

In this paper we use data from waves 1 to 5 of NIDS-CRAM to investigate employment and labour force participation outcomes in South Africa for four different age groups: youth (aged 18 to 24), prime-age adults (aged 25-39), middle-age adults (aged 40-54) and older adults (aged 55-64). We contrast outcomes just before and just after the advent of the COVID-19 pandemic and lockdown (February and April 2020) with outcomes one year later (March 2021), and study transitions between the periods. We find that although the employment-to-population ratio in March 2021 was near identical to the ratio in February 2020 (56.6% versus 56.4%), there had been a lot of churn between the two periods, with 23% of the February employed no longer employed a year later, and 30% of those without employment finding employment by March 2021. Youth experienced the largest employment-to-population ratio increase between February 2020 and March 2021 (32.5% to 35%), whereas older adults experienced the largest decrease from 45% to 41%. Between April 2020 (the peak of lockdown restrictions) and March 2021 there were decreases in the share of discouraged work seekers across age groups, and simultaneous increases in labour force participation for all groups except older adults. Tentative findings based on industry data revealed that the industries with the most notable increases in employment totals were the community, social and personal services and wholesale and retail trade industries. These industries also displayed high or increasing youth intensity of employment, potentially explaining part of the positive youth outcomes observed in NIDS-CRAM.

Keywords – youth unemployment; older adults; churning; coronavirus; COVID-19; employment transitions

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Executive summary

In this paper we use data from waves 1 to 5 of NIDS-CRAM to investigate employment and labour force participation outcomes in South Africa for four different age groups: youth (aged 18 to 24), prime-age adults (aged 25-39), middle-age adults (aged 40-54) and older adults (aged 55-64). We contrast outcomes just before and just after the advent of the COVID-19 pandemic and lockdown (February and April 2020) with outcomes one year later (March 2021). We then study transitions between the periods.

The employment-to-population ratio in March 2021 was near identical to the ratio in February 2020 (56.6% versus 56.4%). However, there had been a lot of churn between the two periods, with **23% of the February 2020 employed no longer employed a year later, and 30% of those without employment finding employment by March 2021.** This churn was far in excess of the transitions made in pre-COVID benchmark years (2010-2014).

There was also a high prevalence of temporary employment transitions among those who remained in one state in both periods. **Among those employed in both periods, 32% lost their job between February 2020 and March 2021. Among those non-employed in both periods, 24% were employed at some point in-between.**

Youth experienced the largest employment-to-population ratio increase between February 2020 and March 2021 (32.5% to 35%), whereas older adults experienced a decrease from 45% to 41%. The employment-to-population ratio of middle-age adults rose marginally from 68% to 69%, while the ratio among prime-age adults declined marginally from 62.5% to 61%.

We look deeper into these aggregate changes by comparing key labour market transitions from the hard lockdown in April 2020 to March 2021. Job finding was high relative to historical rates among all those without work in April 2020, with active job searching most strongly associated with employment in March 2021. **A striking 44% of the April 2020 searching unemployed were employed by March 2021, compared to 37% of discouraged work seekers and 22% of the not economically active.**

The percentage of discouraged work seekers fell across all age groups between April 2020 and March 2021, but there were differences in what happened to these people by age group. Among younger groups the most common transition was into employment, whereas among older adults the most common transition was into economic inactivity.

Between June 2020—when the lockdown had eased to level 3—and March 2021, the industries with the most notable increases in employment totals were community, social and personal services and wholesale and retail trade. The percentage of the employed accounted for by youth increased over the period in the community, social and personal services industry and was higher in the wholesale and retail trade industry than in other industries, potentially explaining the positive youth outcomes observed. Among occupations there were notable increases in employment in elementary occupations and services and sales workers between April 2020 and March 2021[4].

Small sample sizes and the fact that many changes are not statistically significant mean that these findings are exploratory. Nonetheless, they shed light on the dramatic churning that has taken place in the COVID-era South African labour market, and how employment effects have differed by age group.

4 Data limitations account for these periods of analysis: occupation information was only asked for April 2020 onwards and industry information was only asked for June 2020 (wave 2) onwards.

Introduction

The COVID-19 pandemic has had a profound effect on the South African labour market, in terms of both labour demand - the number and kinds of jobs on offer - and labour supply - with necessity, lockdowns, health concerns, and a scarcity of work potentially affecting people's labour force participation.

In this paper we use data from the National Income Dynamics Survey - Coronavirus Rapid Mobile Survey (NIDS-CRAM) to compare employment outcomes between February 2020 and March 2021 for four age groups: youth (aged 18 to 24), prime-age adults (aged 25-39), middle-age adults (aged 40-54) and older adults (aged 55-64). In particular, we focus on two groups at opposite ends of the working-age spectrum who are likely to be especially relevant in terms of potential labour market restructuring and changes in labour force participation: youth and older adults. Youth faced particularly high rates of unemployment and precarious employment in pre-COVID South Africa, and those who were able to may have been incentivised to prolong their education in response to the pandemic. On the other hand, the decisions of older adults regarding their withdrawal from the labour force may have been affected by the pandemic. Firms may also have used the lockdown as an opportunity for restructuring and the replacement of older workers by younger workers who are generally cheaper to employ.

Previous research by the authors found that there was especially high job finding among youth following the job shedding at the beginning of the crisis (Espi et al., 2021a; Espi et al., 2021b). We extend this research in this paper by examining the extent to which employment decreases among older adults mirrored increases among youth. In addition, we complement our previous study of employment transitions with an explicit focus on labour market participation decisions among the non-employed. Further, we look at employment over time by occupation and industry to shed light on changes in labour demand over the period, and explore how these changes might explain compositional changes in the workforce for different age groups.

NIDS-CRAM provides information about employment in six of the months over 2020/2021: February 2020 (immediately before the lockdown), April 2020 (when the most stringent level 5 lockdown was in place), June 2020 (when lockdown restrictions had been eased somewhat to level 3), October 2020 (lockdown level 1), January 2021 (when there had been a restrengthening of lockdown restrictions to adjusted level 3 in response to a second wave of infections) and March 2021 (a return to lockdown level 1). This provides researchers and policymakers with vital information about the employment effects of the COVID-19 pandemic and associated lockdowns across two waves of infections.

The addition of March 2021 employment information in NIDS-CRAM wave 5 means we now have a measure of individuals' employment about a year on from their pre-COVID (February 2020) and peak lockdown (April 2020) situations. These two 'bookends' provide us with insight into differences in the labour market and the employment status of different (age) groups at these two points. However, we know that a lot was happening in the labour market in the year between these two time points. The structure of NIDS-CRAM means that we have a picture of the labour market at multiple points within this period, and that we can track the specific outcomes of individuals over the period.

Following a review of relevant literature (Section B) and a description of the data that we use (Section C), the analysis in this paper is divided into three sections. In Section D we provide a description of cross-sectional outcomes just before and just after the pandemic struck compared to these with labour market outcomes one year later. In Section E we interrogate the dynamics underlying these cross-sectional changes, with a focus on age. In Section F we investigate changes in employment by industry and occupation and explore the link between these changes and age dynamics. Finally, in Section G we discuss and conclude.

Section B: Background And Literature

Research about the pre-COVID South African labour market reveals a lot about churning and participation decisions, both in general and for particular age groups, that are relevant in informing the interpretation of COVID-era statistics. The labour market has been found to be characterised by high levels of unemployment, but also by extensive churning (Kerr, 2018) and precarious work, especially among youth (Banerjee et al., 2008). The volatility of youth employment is echoed in work by Mlatsheni and Ranchhod (2017), who found that only around half of those youth who found work after completing their education were still employed when they were interviewed 2-3 years later. In the light of these findings for high churning in the country, there is a need to benchmark labour market transitions in the COVID-19 period against historical transitions in order to gauge how exceptional they are.

The fact that youth unemployment is so high (De Lannoy et al., 2020), and that youth typically spend a long time job searching after completing their education (Mlatsheni & Ranchhod, 2017), raises questions about what happened to youth in the face of the COVID-19 shock. There are also questions about what has happened to the employment and participation of older adults. South Africans have been found to have gradually declining labour force participation rates in the years preceding retirement age. Lam et al. (2005) found that participation rates fell fairly rapidly after the age of 45 before declining sharply at the age of pension eligibility. They found that higher education and urban residence significantly predicted labour force participation among the elderly, but they were not able to make strong conclusions about what caused labour market withdrawal prior to pension age and were not able to distinguish between voluntary retirement and job loss as driving factors.

Existing research using NIDS-CRAM and other sources like the QLFS have documented the effect of the pandemic and lockdowns on the South African labour market. The initial imposition of a level 5 lockdown in March 2020 led to massive job loss between February and April (as measured in NIDS-CRAM)[5], with youth, women, Africans and low wage workers disproportionately affected (Jain, Budlender et al., 2020; Ranchhod & Daniels, 2021; Casale & Posel, 2020).

In the period that followed, as lockdown restrictions eased, data sources have provided conflicting accounts of the labour market recovery. NIDS-CRAM showed a near-full recovery to February employment levels by October 2020, while the QLFS showed only a minor recovery in employment by Q3 and Q4 of 2020 (Bassier et al., 2021; Simkins, 2021). Amidst the reported recovery in NIDS-CRAM, women were found to still have inferior outcomes relative to pre-crisis levels (Casale & Shepherd, 2021a; Casale & Shepherd, 2021b), while youth outcomes recovered to higher than February levels because of extensive job finding (especially between June and October) (Espi et al., 2021a; Espi et al., 2021b)[6]. In addition, the recovery was found to be driven in large part by job finding among people who were non-employed going into the crisis, and not just 'bounce back' among April 2020 job losers (Espi et al., 2021a).

In terms of the jobs that were driving this apparent employment recovery, Bassier et al. (2021) found that across NIDS-CRAM waves 1 to 3, the recovery was primarily driven by growth in the number of what they call 'service/operators' jobs', as opposed to manual and professional jobs that had failed to recover to pre-crisis levels. However, they fail to find confirmatory evidence for this pattern in either NIDS-CRAM industry trends or QLFS occupation trends, and so they present the finding tentatively.

This disproportionate burden of job loss for youth relative to older groups (at the beginning of the crisis) is consistent with international research that has found younger groups, such as labour market entrants and college graduates, to suffer greater negative employment effects in times of crises

5 In addition to outright employment loss, there was a substantial further decrease in active employment in April 2020, with many workers maintaining an employment relationship but being furloughed or put on paid leave. However, these phenomena had ceased to be unusually prevalent by June and October 2020 (Jain, Bassier et al., 2020; Bassier et al., 2021).

6 While there has been some disaggregation of employment rates by age and a limited focus on middle-age adults (Espi et al., 2021), the outcome for older adults approaching retirement age remain largely unexplored.

(Altonji et al., 2014; von Wachter, 2020). However, the relative success in finding jobs observed among youth in NIDS-CRAM is at odds with findings for the negative employment effects of crises being more persistent for youth relative to older groups (Schwandt & von Wächter, 2018).

Section C: Data

The data for this paper come from the five waves of the NIDS-CRAM panel, with additional benchmarking against historical dynamics based on QLFS panels.

NIDS-CRAM is an individual-level survey implemented during the the COVID-19 pandemic that made use of Computer Assisted Telephone Interviewing (CATI) rather than in-person interviews. The survey is focused on adult individuals' responses to the pandemic and national lockdown (Ingle et al., 2021). The NIDS-CRAM sampling frame came from the NIDS wave 5 sample, and so (after weighting) it estimates outcomes in 2020/2021 for a broadly representative sample of South African adults from 2017. In NIDS-CRAM wave 3 a top-up sample was randomly selected from individuals from the original NIDS wave 5 sample (who had not been selected previously for NIDS-CRAM wave 1 sampling).[7]

NIDS-CRAM provides employment status information for six periods: February, April (both from wave 1), June (from wave 2) and October (from wave 3) in 2020, and January (from wave 4) and March (from wave 5) in 2021. In each case individuals were asked if they had done various kinds of employment activities over the course of the month in question, along with questions about earnings, hours worked, industry, occupation[8] and job search.

We use cross-sectional estimates (weighted using scaled weights released by NIDS-CRAM) from each wave to describe changes over the period in Section D, and for the industrial and occupational time series in Section F. We use the sample of individuals who were interviewed and have employment status information in both wave 1 and wave 5 for the analysis of dynamics in Section E (weighted using wave 5 scaled weights excluding the wave 3 top-up sample released by NIDS-CRAM).

The historical benchmark from 2010-2014 in Section E comes from a series of QLFS panels.[9] The rotating structure of the QLFS means that each individual remains in the sample for four quarters. We chose to look at transitions between quarter two (Q2) of one year and quarter one (Q1) of the following year. This period lines up approximately with the February/April 2020 to March 2021 period studied in Section D and E and provides a historical benchmark for the degree of churning, and the extent of labour market entry and exit, between the first half of one year and the start of the next. Estimates for 2010-2014 are based on a pooled sample of all individuals who had employment status across Q2, Q3, Q4 of one year and Q1 of the next year, and are weighted using the cross-sectional weights from Q2.[10]

7 This was done to counterbalance attrition between waves of NIDS-CRAM (Ingle et al., 2021).

8 Occupation data was only collected for April 2020 onwards and industry data only for June 2020 onwards.

9 The QLFS panels were made available on a confidential basis to some members of SALDRU to collaborate with Stats SA on a data quality exercise. Matching data included demographic information, as well as respondents' first and last names. Permission was obtained from Stats SA for project participants to also use the data for research purposes.

10 The fact that these estimates are based on cross-sectional weights from the first period in question, and not on specially created balanced panel weights, means that they do not account for panel attrition over the period, or for the sample rotation that is part of the QLFS design. This will cause some bias in the estimates.

Section D: Cross-Sectional Employment Outcomes In 2020 And 2021

In this section we compare the March 2021 employment of different demographic groups to pre-pandemic (February 2020) employment before contrasting employment status in April 2020 and March 2021. Thereafter, we look at how employment statuses of different age groups varied over the six periods covered by NIDS-CRAM. For the cross-sectional analysis that follows, individuals are classified into age groups on the basis of age at interview in each respective wave.

Because of NIDS-CRAM's relatively small sample, there is a considerable degree of uncertainty in these estimates, especially those based on specific subgroups such as our age categories. In general, small sample sizes meant that changes in employment within age groups were not statistically significant and the trends reported in this section remain indicative findings.

Table 1 shows different demographic groups' employment in February 2020 and employment status in April 2020 and March 2021.

Table 1: Employment and economic participation by demographic group among working-age adults in February and April 2020 and March 2021

	Feb-20			Apr-20					Mar-21				
	N	Employed	Not employed	N	Employed	Searching unemployed	Discouraged	Not economically active	N	Employed	Searching unemployed	Discouraged	Not economically active
Overall	6326	56.4 (1.1)	43.6 (1.1)	6235	48.3 (1)	13.6 (.8)	21.6 (.9)	16.5 (.7)	5219	56.6 (1.2)	17.2 (.9)	12.1 (.7)	14.2 (.7)
Male	2514	62.8 (1.7)	37.2 (1.7)	2478	57.6 (1.7)	12.7 (1.1)	17.4 (1.1)	12.3 (1)	2033	65 (1.7)	16.1 (1.4)	8.6 (1)	10.3 (1)
Female	3812	50.4 (1.3)	49.6 (1.3)	3757	39.7 (1.3)	14.6 (1.2)	25.5 (1.2)	20.3 (.9)	3186	48.5 (1.4)	18.2 (1)	15.4 (.9)	17.9 (1)
African/Black	5460	53.8 (1.1)	46.2 (1.1)	5373	45.9 (1.1)	13.8 (.7)	24 (.9)	16.3 (.8)	4585	54 (1.3)	19 (1)	12.8 (.8)	14.2 (.7)
Coloured	568	60.7 (4.3)	39.3 (4.3)	566	51 (2.6)	20.1 (3.7)	12.6 (2.7)	16.4 (2.1)	434	61 (4.5)	12.6 (3.3)	12.7 (2.4)	13.7 (2.6)
Asian/Indian	65	56.4 (8.1)	43.6 (8.1)	64	36.9 (7)	15.5 (5.7)	14.4 (3.7)	33.1 (7)	40	63.4 (10.2)	13.7 (6)	7.2 (6.9)	15.8 (6.5)
White	233	77.2 (3.2)	22.8 (3.2)	232	72.3 (3.6)	3.6 (1.7)	10 (2.4)	14.1 (2.9)	160	78.1 (3.6)	3.2 (1.6)	4.4 (1.3)	14.4 (3.3)
Youth (18-24)	1075	32.5 (2.3)	67.5 (2.3)	1053	28 (2.5)	19.8 (2)	25 (2)	27.2 (2.2)	834	35.1 (2.8)	22.6 (2.4)	19.4 (2)	22.9 (2.2)
Prime-age adults (25-39)	2775	62.5 (1.6)	37.6 (1.6)	2736	53.1 (1.5)	15.9 (1)	22.3 (1.2)	8.7 (.8)	2241	60.9 (1.5)	21.1 (1.3)	11.9 (1.2)	6.1 (.7)
Middle-age adults (40-54)	1864	68.4 (1.8)	31.6 (1.8)	1842	58.8 (2)	9.9 (1)	20.6 (1.6)	10.6 (1.1)	1562	69.3 (2.1)	14.2 (1.5)	9.4 (1)	7.1 (1)
Older adults (55-64)	612	45 (3.5)	55 (3.5)	604	38.6 (3.4)	4.5 (1.3)	15.9 (2.1)	41 (2.8)	582	41.1 (3.2)	5.3 (1.5)	9.9 (2)	43.8 (3.2)
Urban	4913	58.3 (1.2)	41.7 (1.2)	4845	49.6 (1.2)	13.5 (.9)	21.2 (.9)	15.7 (.8)	3445	57.6 (1.5)	16.8 (1.1)	11.9 (.8)	13.8 (.8)
Rural	1408	47.2 (2.2)	52.8 (2.2)	1385	42 (2)	14.5 (1.3)	23.5 (1.8)	20.1 (1.9)	1518	51.3 (1.9)	19.6 (1.4)	14.5 (1.2)	14.7 (1.2)
Less than matric	3291	48.9 (1.7)	51.1 (1.7)	3245	41.2 (1.5)	13.2 (.9)	24.9 (1.3)	20.7 (1.1)	2751	49.3 (1.7)	17 (1.1)	14.2 (1.2)	19.4 (1.1)
Matric	1572	55.4 (1.8)	44.6 (1.8)	1550	43.6 (1.9)	17.1 (1.6)	24.4 (1.7)	14.8 (1.5)	1299	55.2 (2.2)	18.7 (1.7)	14.7 (1.5)	11.4 (1.3)
More than matric	1439	70.1 (1.1)	30 (1.1)	1417	64.6 (1.9)	11.3 (1.3)	13.2 (1.3)	10.9 (1.3)	1151	70.5 (2.2)	16.3 (1.8)	5.9 (1.2)	7.3 (1.1)

Notes. All estimates restricted to the working-age (18-64) population. Standard errors in parentheses. Groups are defined based on their characteristics (e.g. age, education) at the time of the interview from which information is drawn.

Comparison of the February 2020 and March 2021 columns allows us to see how the employment-to-population ratio has changed for different groups in the year since the advent of COVID-19. Among all working-age adults, the employment-to-population ratio was nearly identical in the two periods (56.4% in February 2020 and 56.6% in March 2021), showing the extent of the employment recovery depicted by NIDS-CRAM. Disaggregating by age group, youth experienced the largest increase in percentage employed, from 32.5% to 35%; employment of middle-age adults also saw an increase from 68% go 69%. On the other hand, older adults experienced the sharpest decline in employment-to-population ratio from 45% to 41% (while prime-age adults declined from 62.5% to 61%).[11]

Other demographic disaggregations are included for reference but will not be interrogated in detail in this paper. Men had a higher employment-to-population ratio in March 2021 relative to February 2020, whereas women's ratio declined slightly. The employment-to-population ratio remained fairly stable across the different race groups and, especially, across different education groups. The urban employment-to-population ratio remained stable while the rural rate increased slightly.

The sudden, pervasive job loss experienced at the beginning of the pandemic is visible in the differences between the February and April 2020 'Employed' columns (for detailed discussion see Jain, Budlender et al., 2020; Ranchhod & Daniels, 2021; Casale & Posel, 2020). We now focus on changes in employment status between April 2020 and March 2021. The disaggregation of the April 2020 non-employed into the searching unemployed, discouraged job seekers and the not economically active (NEA) provides additional insight into questions of labour supply, and how this had changed by March 2021.[12]

Substantial decreases in the percentage of working age adults who were discouraged (22% to 12%, statistically significant) or inactive (17% to 14%) are observed between April 2020 and March 2021. This was partly driven by a large and significant increase in the employment-to-population ratio over the period (48% to 57%), but also by an increase in the searching unemployed (from 14% to 17%). These results are understandable given that job search was prohibited during the level 5 lockdown in place in April 2020.

Percentages of discouraged job seekers fell sharply between April 2020 and March 2021 across all age groups. Among younger groups, this was accompanied by an approximate 4 percentage point drop in the percentage not economically active and a large (7 percentage point) increase in the percentage employed, along with smaller increases in the percentage of searching unemployed. Only older adults experienced a decrease in participation rates over the period, with 3 percentage points more 'not economically active' in March 2021 relative to April 2020. They also experienced much smaller growth in the employed and searching unemployed categories.

In order to provide a greater understanding of the time point at which these shifts took place, in *Figure 1* we plot the percentage of each age group that was employed (panel a), unemployed (combining the searching and discouraged job seekers; panel b) and not economically active (panel c) in each month.

11 None of these changes within age groups over time are statistically significant. All changes are not statistically significant unless explicitly stated.

12 The unemployed (searching or discouraged) cannot be identified in February because of a lack of questions concerning job search for February in the wave 1 questionnaire.

Figure 1a: Employment by age group 2020/1

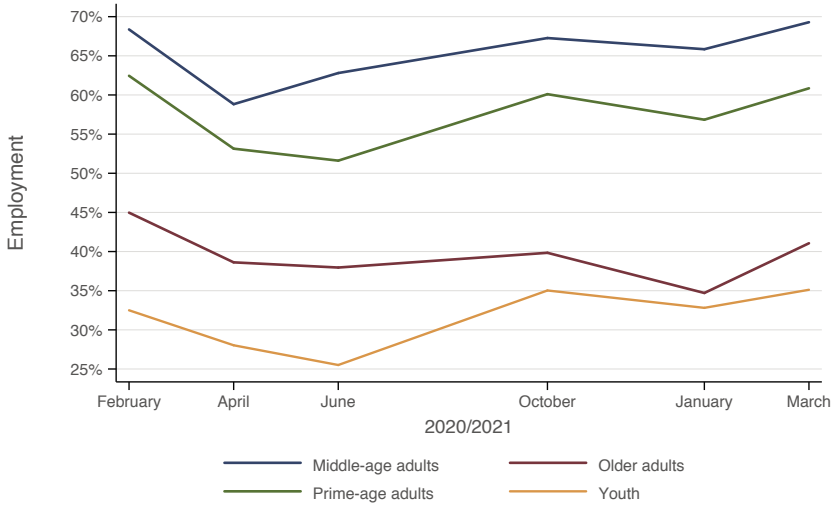


Figure 1b: Unemployment (broad) by age group 2020/1

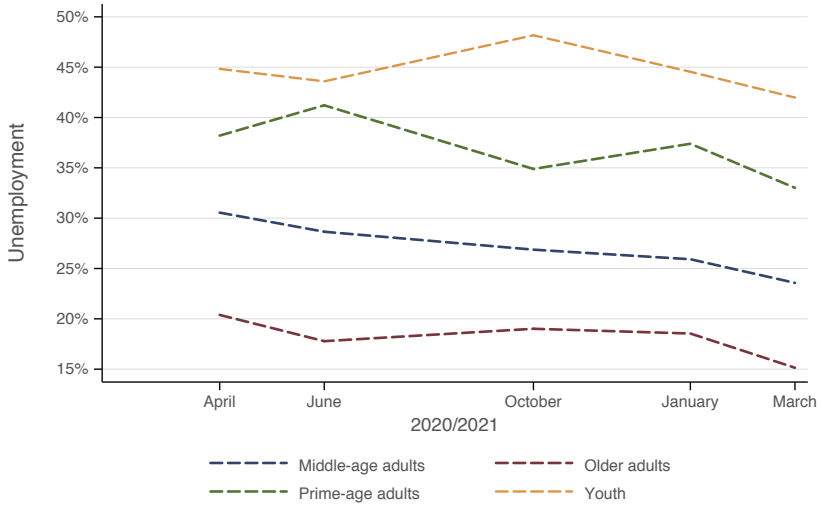
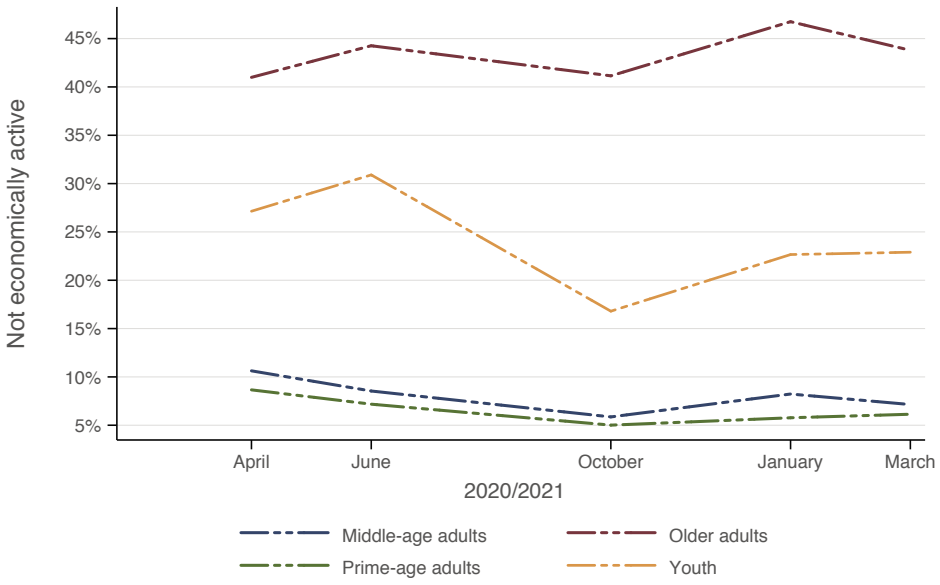


Figure 1c: Economic inactivity by age group 2020/1



The negative employment effects of the return to lockdown level 3 and the second wave during January 2021 are clear in panel a). Although the employment dip in January 2021 was steeper for prime-age and older adults, all groups had returned to their October 2020 employment-to-population ratio (or slightly higher) by March 2021. Youth had the lowest employment-to-population ratio of the age groups but experienced a dramatic increase in employment in October 2020, remaining above their February 2020 employment level between October and March 2021. The employment of older adults never recovered fully to pre-COVID levels after dropping between February and April 2020[13]. Panel c) shows that, apart from a small increase in January 2021 (and an increase in June 2020 for youth), the prevalence of economic inactivity declined over the period across all age groups except for older adults. Panel b) shows that broad unemployment dropped over the period for all age groups, implying that the declining percentages of discouraged work seekers outweighed increases in the searching unemployed.

Section E: Employment Dynamics And Age

In this section we use the fact that NIDS-CRAM is a panel survey to investigate the transitions that underlie the cross-sectional estimates and changes discussed in section D above. We define age groups based on age at wave 1 of NIDS-CRAM and then follow these cohorts over time, examining the employment state individuals had transitioned into by wave 5.

Table 2 presents transitions between employment and non-employment between February 2020 and March 2021, for all working age adults and for our four age groups. This provides a dynamic analysis to complement the previous cross-sectional comparison of employment. *Table 3* presents employment status transitions between Q2 of one year and Q1 of the following year in the 2010-2014 period, as represented by QLFS panels. This provides a benchmark for typical movements in and out of employment over the course of a year in the pre-COVID era[14], for all working age adults and for our age groups.

13 For both youth and older adults (as well as other age groups) differences between February 2020 and later employment-to-population ratios are not statistically significant.

14 The use of the 2010-2014 period was determined by data availability. It is possible that rates of churning were different (higher) in the 2015-2019 period but the extent of the differences in transition rates observed in this section mean that we are confident in the exceptionality of the employment dynamics depicted by NIDS-CRAM relative to historical estimates.

Table 2: Employment transition matrix between February 2020 and March 2021 by age group

a) Working-age adults (18-64)				
	N	March 2021 employment status		
February 2020 employment status		Employed	Non-employed	Total
Employed	2162	76.9	23.1	100
Non-employed	2324	29.5	70.6	100
b) Youth (18-24)				
	N	March 2021 employment status		
February 2020 employment status		Employed	Non-employed	Total
Employed	504	60.2	39.8	100
Non-employed	210	27.1	72.9	100
c) Prime-age adults (25-39)				
	N	March 2021 employment status		
February 2020 employment status		Employed	Non-employed	Total
Employed	820	77.1	22.9	100
Non-employed	1119	34.5	65.5	100
d) Middle-age adults (40-54)				
	N	March 2021 employment status		
February 2020 employment status		Employed	Non-employed	Total
Employed	547	85.2	14.8	100
Non-employed	835	35	65	100
e) Older adults (55-64)				
	N	March 2021 employment status		
February 2020 employment status		Employed	Non-employed	Total
Employed	291	63.6	36.4	100
Non-employed	160	16	84	100

Notes. Estimates weighted using NIDS-CRAM Wave 5 scaled weights (excluding top-up sample). Classification into age groups based on age in wave 1 of NIDS-CRAM. Shaded cells indicate the same state across both waves.

Table 3: Employment status transitions between Q2 of one year and Q1 of the following year between 2010 and 2014

a) Working-age adults (18-64)						
	N	Q1 employment status				
Q2 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	11831	89	4.8	2.1	4.1	100
Searching unemployed	4480	17.8	58.6	8	15.6	100
Discouraged	2280	12.5	14.8	50.3	22.5	100
Not economically active	10737	4.4	6.9	5	83.7	100
b) Youth (18-24)						
	N	Q1 employment status				
Q2 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	1047	78.9	9.9	3.9	7.3	100
Searching unemployed	1280	13	59.8	8.7	18.4	100
Discouraged	647	9.7	18	49.4	22.9	100
Not economically active	3818	3.1	11.6	6.5	78.8	100
c) Prime-age adults (25-39)						
	N	Q1 employment status				
Q2 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	4925	89.4	5.3	2.1	3.2	100
Searching unemployed	2161	20.9	59.6	7.7	11.8	100
Discouraged	995	12.5	15	54.3	18.1	100
Not economically active	2197	8.7	12.5	9.5	69.4	100
d) Middle-age adults (40-54)						
	N	Q1 employment status				
Q2 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	4660	91.7	3.4	1.8	3.1	100
Searching unemployed	918	16.1	56.5	7.5	19.8	100
Discouraged	534	16	11.9	47.1	25	100
Not economically active	2372	7.6	5	5.7	81.7	100
e) Older adults (55-64)						
	N	Q1 employment status				
Q2 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	1199	85.8	2.1	1.5	10.5	100
Searching unemployed	121	15.7	37.5	11.2	35.6	100
Discouraged	104	11.7	6.4	30.6	51.4	100
Not economically active	2350	4	1.3	1.4	93.3	100

Notes. 2010-2014 estimates based on the pooled sample of all individuals who were present and had employment status across all four quarters from Q2 of one year to Q1 of the next year in QLFS panels over the period. Estimates are weighted using cross-sectional QLFS weights from Q2 of the year in which an individual was present (their first recorded period). Shaded cells indicate the same state across both waves.

Among the working age, the 77% of February 2020 employed who remained employed in March 2021 was much lower than in 2010-2014, where 89% of the employed retained employment between Q2 and Q1 of the following year. The estimate of around 30% of those without work finding work over the February 2020 to March 2021 period is also far beyond the scope of transitions in 2010-2014, where between 4 and 18% of those without employment in Q2 had found employment by Q1. Taken together, this suggests that although the employment-to-population ratio was at a similar level in February 2020 and March 2021, an unprecedented level of churn had taken place in the interval between these two time points.

We know that the period between these two points was a tumultuous one in the labour market. We can, therefore, use the panel element of NIDS-CRAM to examine the extent of temporary transitions among those who remained in one state in both periods. Among those employed in both periods, 32% lost their job between February 2020 and March 2021 (15% just for one period; results not tabulated). Among those non-employed in both periods, 24% were employed at some point in-between (14% for just one period).

Disaggregating by age group, employment retention between February 2020 and March 2021 was substantially lower for youth (60%) and older adults (64%) relative to prime-age (77%) and middle-age adults (85%). All groups had lower employment retention relative to historical rates, but older adults' employment was particularly volatile in the COVID era relative to 2010-2014, when 86% remained employed between Q2 and Q1.

Job finding rates in March 2021 among the February 2020 non-employed were highest for prime-age and middle-age adults (35%), followed by youth (27%) and older adults (16%). Benchmarked against historical (2010-2014) job finding between Q2 and Q1, these rates were especially high for youth and for middle-age adults.

Table 4 presents transition matrices for employment status between April 2020 and March 2021. The distinction between the searching unemployed, discouraged work seekers and the NEA allows us to explore how the labour force participation of different groups changed between the peak lockdown restrictions and a year later.[15] The interpretation of these transitions is complex because a large degree of the unemployment and the lack of job search or participation in April 2020 would have been because of lockdown restrictions.[16]

15 Disaggregating by age group and distinguishing between four employment statuses means that the sample sizes for estimates of transitions within groups are quite small in some cases (see Table 4), and the uncertainty of these estimates should be borne in mind.

16 It would be possible to identify April 2020 lockdown job losers, but it is not possible to identify those who are discouraged or not economically active as a result of the lockdown.

Table 4: Employment status transitions between April 2020 and March 2021

a) Working-age adults (18-64)						
	N	March 2021 employment status				
April 2020 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	1883	80.3	10.3	5	4.4	100
Searching unemployed	651	44.4	31.3	16.2	8.1	100
Discouraged	1128	37.4	24	23.6	15	100
Not economically active	759	22.4	14.4	15.8	47.4	100
b) Youth (18-24)						
	N	March 2021 employment status				
April 2020 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	172	62	19.5	7.7	10.9	100
Searching unemployed	147	42.6	25.4	14.7	17.3	100
Discouraged	202	30.8	20.5	26.9	21.8	100
Not economically active	183	17.8	23.6	22.7	36	100
c) Prime-age adults (25-39)						
	N	March 2021 employment status				
April 2020 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	882	80.8	11.7	4.7	2.8	100
Searching unemployed	327	41.8	37.5	17.6	3.1	100
Discouraged	510	38.4	29.8	24.2	7.6	100
Not economically active	189	43.2	21.4	13.1	22.3	100
d) Middle-age adults (40-54)						
	N	March 2021 employment status				
April 2020 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	692	87.7	6.5	3.9	2	100
Searching unemployed	157	53.3	25.3	14.7	6.7	100
Discouraged	339	46	21.8	19.5	12.8	100
Not economically active	176	27.7	14.7	18.1	39.4	100
e) Older adults (55-64)						
	N	March 2021 employment status				
April 2020 employment status		Employed	Searching unemployed	Discouraged	Not economically active	Total
Employed	137	71.2	7.8	7.1	13.9	100
Searching unemployed	20	46.4	19.4	16.1	18.1	100
Discouraged	77	23.3	12.3	25.4	38.9	100
Not economically active	211	10.2	1.3	9.9	78.7	100

Notes. Estimates weighted using NIDS-CRAM Wave 5 scaled weights (excluding top-up sample). Classification into age groups (across periods) based on age in wave 1 of NIDS-CRAM. Shaded cells indicate the same state across both waves.

We first look at all working age adults. Whether an unemployed individual was searching for work in April 2020 made a big difference for their prospects of employment in March 2021: A striking 44% of the April 2020 searching unemployed were in employment in March 2021, compared to 37% of discouraged work seekers and 22% of the not economically active. Only 24% of the April discouraged remained in that group (with an equal share moving into searching unemployment), and inflow into the group from other categories was small - explaining its decline as observed in section D of this paper.

The information in *Table 3* can also act as a benchmark against which to understand these transitions in and out of different employment states. In 2010-2014 (between Q2 and Q1), there was a higher rate of job retention[17] but much lower rates of employment attainment among the different non-employed groups. In particular, the majority of the searching and discouraged unemployed remained in the same state in those years, whereas in NIDS-CRAM the most common outcome for both of these groups was a movement into employment.

Employment attainment among the searching unemployed was similar across age groups (42-46%), but was especially high for middle-age adults (53%). There were strikingly high rates of employment attainment for the NEA among middle-age adults (28%) and, especially, prime-age adults (43%), perhaps capturing those who temporarily ceased work during the level 5 lockdown. In 2010-2014 it was much more common for people across age groups to remain inactive, and job finding was very low amongst the NEA.

The share of people remaining in the discouraged group was low across age groups. Unlike in younger age groups where the most common transition from discouraged work seeking was into employment, among older adults the most common transition was into economic inactivity (matching the pattern for older adults in 2010-2014). This partly explains the decrease in participation rates in this group.

Section F: Employment By Industry And Occupation And Implications For Age Groups

The previous results have indicated that there was a substantial amount of churn over the April 2020 to March 2021 period, and that there were differential outcomes for different age groups, especially youth and older adults. In this section we examine estimated employment totals for different industries and occupations over time, with a focus on whether these changes can explain the growth in youth employment over the period. The relatively small size of the NIDS-CRAM sample means that industry- and occupation-specific trends are in some instances based on very small sample sizes. Therefore, caution should be exercised in interpreting these findings too strongly, and we refrain from commenting on changes within industries and occupations that are based on very small samples (such as the utilities sector). Further, we only discuss and interpret those industries or occupations for which a clearer pattern emerges over the period.

Occupation information was only asked for April 2020 onwards, while industry information was only asked from June 2020 (wave 2) onwards. Because we do not have a pre-COVID measure of industry or occupation totals in NIDS-CRAM, it is difficult to distinguish between any growth after April (or June) that is extraordinary relative to a sector or occupation's pre-COVID employment level, on the one hand, and growth that is just the return of jobs that were temporarily lost during the most severe lockdown, on the other.

To provide context for the industry and occupation totals, the total employment estimates from NIDS-CRAM are April (16.3 million), June (16.2 million), October (18.4 million), January (17.2 million) and March (18.5 million).

17 Substantial additional job loss after April 2020 has been observed elsewhere (Espi et al., 2020).

Figure 2: Estimated occupation totals in 2020/1

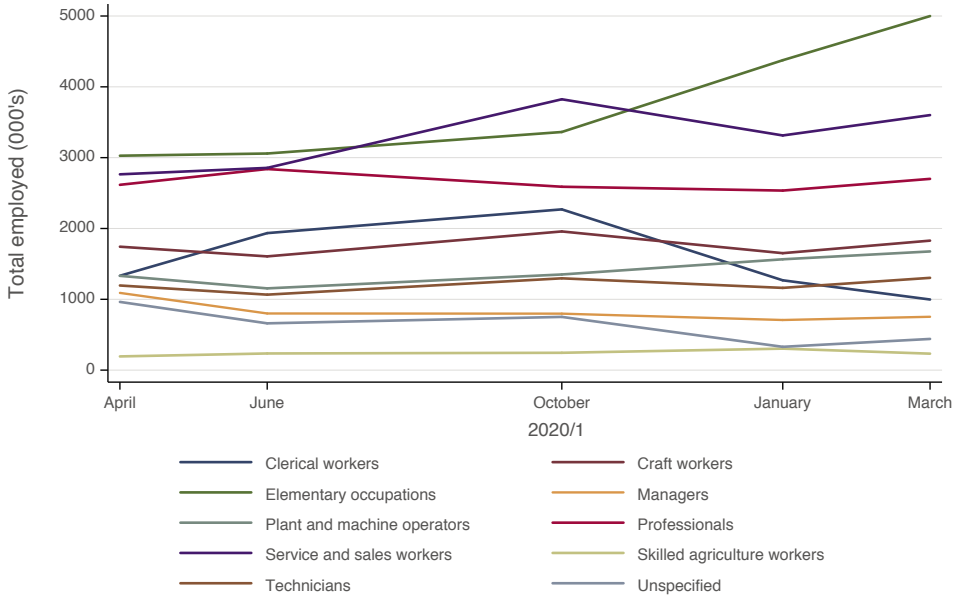


Figure 2 shows the estimated totals employed by occupation between April 2020 and March 2021.

There were four consecutive periods of growth in employment in elementary occupations (from 3 million to 5 million), with especially rapid growth between October 2020 and March 2021[18]. There was also substantial (albeit more inconsistent) growth in the numbers of services and sales workers (from 2.8 million to 3.6 million over the same period).

Figure 3: Estimated employment totals by industry in 2020/1

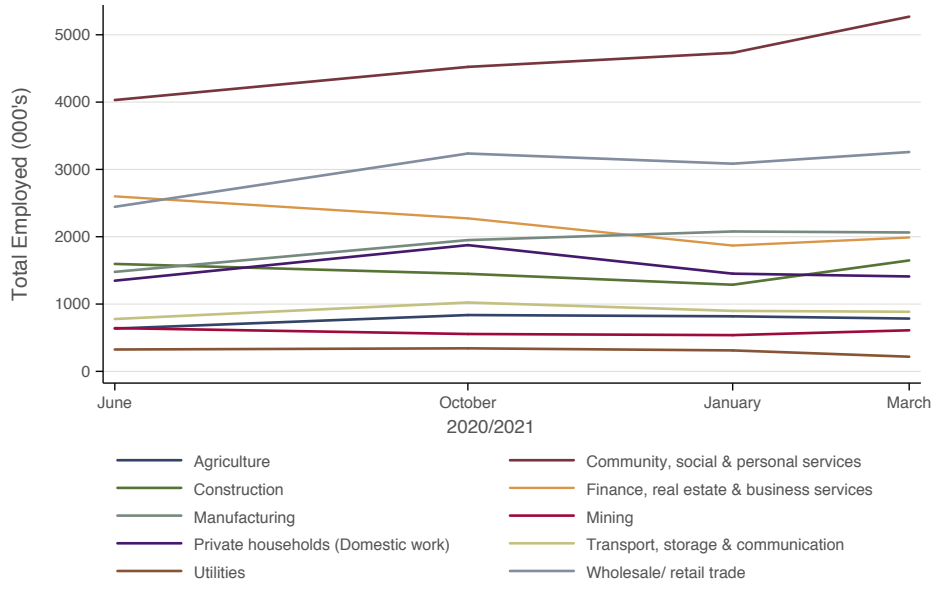
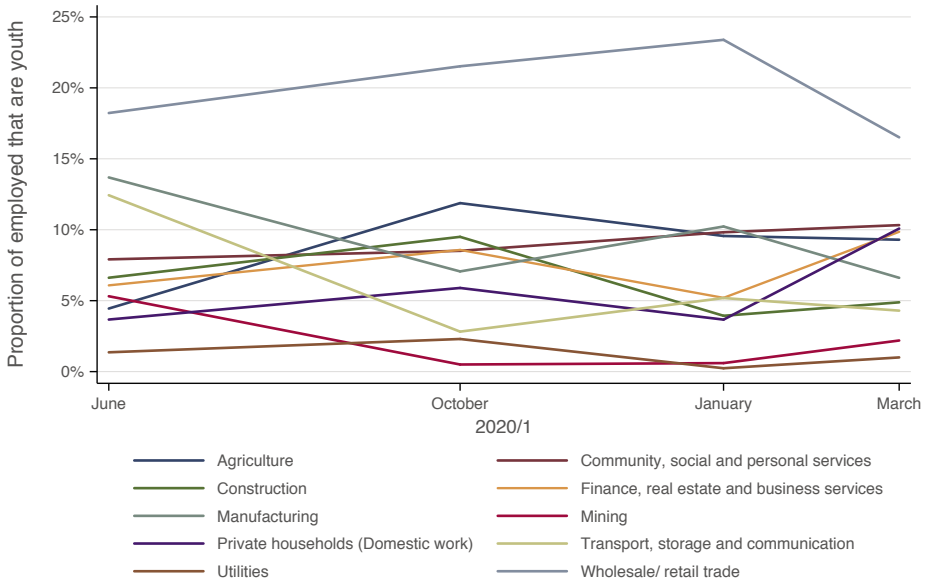


Figure 3 shows the estimated totals employed by industry between June 2020 and March 2021. Over the period there was a consistent increase in community, social and personal services, with around 1.3 million additional people employed in the sector in March 2021. There was also an increase in the number of people employed in wholesale and retail trade, from 2.4 million to 3.3 million (with most of the growth occurring between June and October 2020), and in manufacturing (1.5 million to 2.1 million).

18 A range of occupations fall under the elementary occupation banner, including cleaners and helpers, food preparation assistants, and labourers in agriculture, forestry, mining, construction, manufacturing and transport (ILO, 2012).

To inform our questions about what is driving the divergent outcomes of different age groups, we can estimate whether the growth in jobs in certain industries favoured particular age groups. There may also have been compositional changes within industries where employment was relatively constant. To explore this, *Figure 4* shows the proportion of the employed within each industry that are youth (i.e. the youth intensity of employment) over time.

Figure 4: Youth intensity of employment by industry in 2020/1



Across industries, there are several fluctuations, yet some clear patterns stand out: we observe a consistent increase in the youth intensity of employment in the community, social and personal services sector (from 8% to 10%), and net increases in the domestic work and financial services sectors. For older adults (results not graphed) the clearest declines in their intensity of employment were in the domestic work and finance industries (mirroring the increases for youth).

In understanding the promising youth outcomes, it is relevant to note that the youth intensity of employment was rising in the community, social and personal services industry at the same time that the industry exhibited some of the highest and most consistent growth among industries (see *Figure 3*). In addition, the fact that youth intensity of employment is highest in the wholesale and retail trade industry (despite a drop from 23% to 17% between January and March 2021) is relevant in light of the growth of that sector over time.

Section G: Discussion And Conclusion

The analysis in this paper has shown that, although there appeared to be a stabilisation back to pre-COVID employment levels by March 2021, NIDS-CRAM depicts a set of employment dynamics undergirding this that far exceed historical rates of churning, both in terms of employment attainment and job loss. Even among those who were in the same state (employed or non-employed) in March 2021 as they had been before the crisis (in February 2020), many people experienced temporary employment transitions in the intervening period. Job finding by March 2021 was highest among those who were actively searching for work during the level 5 lockdown, but was also high among discouraged work seekers and the economically inactive (especially in younger groups). Amidst this churning, some age groups fared better than others, with youth facing the biggest increase in employment and older adults the biggest decrease, although small sample sizes meant these changes were not statistically significant.

Many older adults transitioned from discouraged work seeking into economic inactivity, whereas younger discouraged workers were more likely to subsequently seek and find work. Older adults were less likely to retain employment relative to previous years, and their labour force participation dropped between April 2020 and March 2021 (uniquely among age groups). This suggests that there may have been a degree of early exit from the labour market among older adults who may have decided that it was not worth continuing to seek work in the challenging COVID-era conditions, or who may have been put off work because of health risks. However, the rates of remaining economically inactive or of transitioning from discouragement into inactivity were only exceptional relative to other age groups, and not relative to historical years where, amidst lower job finding rates, labour market exit was very common among non-employed older adults. To investigate this further, future research could look at the education and health profile of the elderly who are leaving the labour force (see Lam et al., 2005).

Among industries, the most notable increases in employment totals during the labour market recovery were for the community, social and personal services and wholesale and retail trade industries. The percentage of the employed that are youth increased over the period in the community, social and personal services industry and was higher in the wholesale and retail trade industry than in any other, potentially explaining part of the positive youth outcomes observed. However, given the scale of the NIDS-CRAM survey, the analysis of these industry and occupational changes is based on small sample sizes, and other research has raised questions about the reliability and representativity of this data (Bassier et al., 2021). A preliminary investigation of industry levels in the QLFS between Q2 2020 and Q1 2021 (Stats SA, 2020; Stats SA, 2021a; Stats SA, 2021b) shows much more muted (or negative) growth across the relevant industries. However, along with finance, the community, social and personal services sector was one of the two sectors with the biggest growth in employment between Q2 of 2020 and Q1 of 2021, lending some support to the findings in this paper surrounding that sector's contribution to employment.

Taken together, these findings provide some insight into the nature of the restructuring that has occurred in the South African labour market over the first year of the COVID pandemic. We do not yet know the extent to which the high churning and the differential outcomes for different age groups that we have observed are predominantly indicative of the substitution of different (e.g. younger) workers within the same jobs, or of the growth of new jobs and demise of old jobs. However, we have provided evidence of the relatively stronger recovery of youth intensive sectors, as well as the changing youth intensity of employment within some sectors, to indicate some of the kinds of restructuring that may have taken place as the labour market recovers and adjusts to the COVID pandemic.

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