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Labour Market Transitions in South Africa and Indonesia: A descriptive analysis using panel data

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► Abstract

This paper provides a descriptive and visual analysis of labour market trajectories in South Africa and Indonesia. Using a sequence analysis of individual labour market trajectories, we illustrate the presence or absence of new labour market trends in the two countries. The analysis highlights differences across cohorts, by educational background, between regions (urban vs. rural), and across gender. Given the importance of school-to-work transitions and the early career phase for mid-and long-term career prospects, we repeat the analysis for a sub-sample of people aged 15-29 years old.

Our findings corroborate the trends observed in the literature for Indonesia and South Africa. In Indonesia, employment is relatively stable with lower levels of labour market mobility and job precariousness compared to South Africa. While employment trajectories in South Africa are more unstable than in Indonesia, this also means that workers have more opportunities to exit precarious labour market conditions. Our regression analyses investigated differences in labour market trajectories by age, gender, and education. In both countries, younger as well as older individuals were more likely to be in unstable employment, while prime-age workers were the most likely to have more stable labour market trajectories. In Indonesia, younger individuals were the most likely to be out of employment, whereas older individuals were significantly more likely to be in more unstable forms of work (casual employment and self-employment). The case of South Africa is similar as both the youngest and oldest age groups were more likely to experience unstable labour market trajectories. Thus, in both countries, it is prime-age workers that have the most stable labour market trajectories over time as they are the most likely to remain as employees.

Keywords: labour market trajectories, life course perspective, panel data, school to work

JEL: C23, C32, C33, J11, J46, J62

The views expressed in this background paper are those of the authors and do not necessarily represent the views of the organizations where the researchers are based.

1. Introduction¹

This report examines labour market trajectories (LMT) by analysing passages of individuals between labour market states, such as employment, unemployment, and inactivity (Delautre, Gardiner, & Verick, 2021). Work trajectories are marked by many events, i.e. the first job at labour market entry, and include recurring phases of unemployment, training, etc. Moreover, they intersect with individual events (sabbatical year, sickness, etc.) as well as with family events in the life cycle such as marriage, children, etc. (Kvist, 2015).

While studying the *stocks* of labour market outcomes (employment, unemployment, wages, etc.) is important, the study of labour market *flows* and LMT is needed. LMT are crucial because the way individuals cope with single events and episodes can have long-lasting consequences for later life. The connections between early career and its consequences along the life course determine the work trajectories and people's well-being. The way we study LMT beyond the traditional approach, which focuses on individual status or conditions, is by analysing the processes and movements between labour market states (employment, unemployment, retirement, etc.). In fact, studying these trajectories is not only important to identify the long-term impacts and to understand who the most affected are, but also for policy implications. Additional knowledge on how transitions work is crucial to prevent and reduce the associated inequalities and injustice.

While the study of LMT is relevant for people of all ages and cohorts, young workers seem to be more exposed to multiple precarious job conditions, such as job instability, lack of social security and informality, which make them more vulnerable to economic shocks and other risks. These vulnerabilities that start in the early career are exacerbated along the life cycle. LMT have been found to be shaped by the level of education, the cohort and age profile, and by the structural country characteristics (Calero & Delautre, 2022). The life course perspective recognizes that social and human capital investments connect the present with future life events. It also considers that individuals' lives unfold in a specific time period, for example when comparing school-to-work transitions of a pre-pandemic and a pandemic cohort. According to Kvist (2015), this generational perspective emphasises that social investments involve horizontal redistribution over the life course, and that these movements are endogenous for building and reproducing the social characteristics of a particular cohort.

Despite the relevance and long-lasting consequences of employment trajectories and the priorities that have been placed by the ILO on understanding their relationship with the future of work (ILO Centenary Declaration), there is still a lack of pertinent research on LMT. In fact, analysing LMT is not easy; it not only requires a deep understanding of peoples' life trajectories, but also high-quality longitudinal data that allows measuring life changes and trends over time. Moreover, it is difficult to choose categories that summarise the multidimensionality of individuals' life trajectories. Importantly, most of the research that investigates labour market transitions covers the developed world. In addition, it covers predominantly the last two decades and focuses on school-to-work and work-to-work transitions.

In this context, this report contributes to the literature by investigating the main challenges that adults experience in establishing themselves in the labour market, focusing on two emerging economies: Indonesia and South Africa. The objectives are twofold: First, it identifies key variables that determine job precariousness during the career paths in these two countries for a range of workers who just entered the labour market and follows them until just before their retirement. Second, it examines in greater depth the characteristics and labour market trends of young people who just entered the labour market.

Indonesia and South Africa are ideal country cases to assess the importance of LMT for two main reasons. First, these are countries going through transition processes and therefore studying the changes and route to development is particularly interesting. In addition, these countries are among the leading economies in their respective regions. South Africa is one of the most developed countries in Africa with a strong dual (formal and informal) economy and one of the highest and most persistent levels of inequality in the world.² Indonesia is the largest economy in Southeast Asia – as well as the fourth most populated nation – with substantial economic growth and poverty reduction since overcoming the Asian Financial crisis at the end of 1990s (World Bank, 2022). Second, both countries have easily accessible high-quality household and labour panel data. The longitudinal data in Indonesia (IFLS, GJTAS) and South Africa (NIDS) allow us to ascertain a person's

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² According to the most recent data of the World Bank, the most unequal country in 2019 was Turkey with a Gini coefficient of 40.3. The most equal country was Slovak Republic with 23.20. Also, using World Bank data, South Africa ranked the highest unequal country at about 63 versus the 42.7 average Gini coefficient for Sub-Saharan countries.

labour market status over time and observe variations in relation to individual and sociodemographic characteristics. Moreover, the availability of these rich panel datasets makes it feasible to conduct an in-depth analysis of labour market trajectories. These countries share features common to other developing countries, such as the importance of the informal sector, the scarcity of decent jobs due to slow job creation and labour market segmentation, as well as labour supply and labour demand mismatches (Brehm et al. 2022). At the same time, they also have a few very distinct labour market features.³ On the one hand, in the 2000s employment rates in South Africa were on the rise thanks to an increase in manufacturing and high-skilled work in the formal sector, but they started to decline consistently just before 2010. On the other hand, Indonesia's labour's market is led by increases in low-skilled work in the service sector and a decrease of unemployment, and its labour force is largely engaged in the informal market (about 60%).

In this report, we focus mainly on two of the most important LMT: (i) Trajectories during School-To-Work Transitions (STW) and (ii) Mid-Career Transitions (MC). STW and MC transitions have important consequences for economic and personal satisfaction, and they are crucial for family stability as well as for later transitions in life, such as work-to-retirement (WTR). From a life course perspective, WTR transitions are often the least studied of the transitions in the working life as they require high-quality longitudinal data that follow individuals from early life to the retirement age. Challenges to collect and construct such data are obvious as the task involves covering people's movements during their working life not only across jobs, occupations, and industries, but also (national or international) migration conditions, idiosyncratic shocks (such as deaths, illness), willingness to answer such surveys and to be interviewed over time. While the study of WTR transitions is important, it is not the focus of this report. However, whenever possible, we reflect on the implications of our findings for STW and MC transitions on the retirement age.

The report makes two key contributions: First, it offers insights and compares trajectories for individuals at the beginning of their working lives to those who are in the middle of their careers two so far understudied developing countries. To our knowledge there is only one working paper that compares WTW trajectories in South Africa and Indonesia. Brehm et al. (2022) find clear differences in the WTW transitions in these countries. South Africa has a larger job-to-job mobility compared to Indonesia. Meanwhile, transitions between employment statuses, mainly shifts from own account worker to employee, are most prevalent in Indonesia. Our study complements and deepens the analysis of Brehm et al. (2022) by investigating the main trajectories from STW for young adults in South Africa and Indonesia. Moreover, by examining the MC transitions between employment and unemployment, we are adding an analysis of a further important life phase. Second, it applies a life course perspective by using sequence analysis to go beyond single transitions and instead study completed trajectories to identify the labour market challenges that workers in emerging economies face over time and compare those with standard challenges in developed countries. With sequence analysis, we are able to visually show the evolution of different labour market trajectories, and the relevance of key socio-demographic characteristics (such as age, education and gender) for transitions, such as becoming/staying employed vs unemployed and for becoming employee vs self-employed. Finally, by working in close collaboration with national experts and researchers from Indonesia and South Africa, we provide not only the descriptive analysis of main features of labour market trajectories in these countries, but also contextualise our research and analyse the mechanisms that might drive these trends.

The rest of the study is structured as follows. Section 2 reviews the key features of labour markets in South Africa and Indonesia. Special attention is given to describing how LMT are affected by changes between unemployment and (self-) employment, informal and formal employment, and the challenges for job stability, particularly relevant for South Africa and Indonesia. This section aims to guide our analysis when discussing LMT for youth and the implications of these (un-)successful LMT for later life. Section 3 describes our data and methodology. Section 4 presents and discusses the results. Finally, yet importantly, section 5 concludes the study.

2. Labour markets in South Africa and Indonesia

2.1 Key features for studying LMT in South Africa and Indonesia

Transitions from school-to-work, from unemployment to work, from job-to-job (across sectors and industries), as well as changing positions along the working life are important events that shape people's career and wage trajectories. They

³ For the ILO, *decent work* "involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for all, better prospects for personal development and social integration, freedom for people to express their concerns, organize, and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men" (Decent work, ILO website). <https://www.ilo.org/global/topics/decent-work/lang--en/index.htm>

also have important implications not only for economic and personal satisfaction, but they are crucial for family stability and may have intergenerational linkages. This section aims to discuss key features determining successful LMT and influence individuals' life course. Calero & Delautre (2022) identify three factors that help understand employment patterns and people's trajectories: (a) the "age effect", which refers to trajectories at different points during the life course, such as the time of leaving education, childbearing, retirement, etc., (b) the "cycle or period effect", which refers to the macroeconomic situation that affects individuals in a specific point of time and (c) the "cohort effect" attributed to the specific characteristics, technological change, or social norms that matter for shaping the work of an age cohort.

In this paper, we review the role of age and year cohorts, gender, and education in the literature of LMT. We subsequently incorporate these dimensions in our analysis to investigate the link between these characteristics and labour market trajectories. To put the results into the labour market context in the two countries, we also provide a general background of what has been found in the literature.

2.1.1 Age and Year Cohorts

Today, South Africa is facing an entrenched unemployment crisis: As of the first quarter of 2022, the official unemployment rate was 34.5%. The rate is higher among youth: Unemployment stands at 42.1% for those aged 25-34 years. Using the expanded definition of unemployment (which includes "discouraged" workers), the national youth unemployment rate is 64.18 % (Statistics South Africa, 2022). South Africa' unemployment problem has its roots in the apartheid era, though almost three decades after the democratic transition, unemployment remains persistently high.

Indonesia has a relatively young population (29 years of median age), indicating a large share of young people within the working age population. The estimate from ILOSTAT shows that, in 2021 Female Labour Participation (FLP) rate in Indonesia declined to about 1 percentage points in 2020, reaching levels of 52 percent. In general, its working class tends to adapt to technological change and learns new skills faster. However, youth employment in Indonesia is very critical (OECD, 2020). Youth employment in Indonesia has continued to remain at a high level (almost double relative to adults for the last two decades) (Yanindah, 2021), particularly challenging with the presence of low workforce participation rates and informal employment.

➤ Age and Year cohorts: Key findings from the Literature

- Calero & Delautre (2022) find that age and cohort affect people's labour market outcomes. In a comparative study of seven countries, which includes Indonesia and South Africa, they highlight the presence of an inverted U-shape age effect for male labour market participation in formal employment. With the increase of age until mid-career, men raise their chances to participate in the labour market, decreasing before retirement. In the case of women, with exception of South Africa, where female labour force participation (FLP) has also an inverted U-shape regarding age, FLP has an M-shape in most countries showing that women temporarily exit the labour market during their mid-twenties.
- Cohort effects analysis shows that newer generations have very different behaviours from past generations (Calero & Delautre, 2022). In developed countries, it is well documented that labour market outcomes and prospects have worsened for the young (Pastore, 2018; Jean Yung & Yang, 2020; ILO, 2022). These adverse trends are particularly significant for low-skilled women (Dabla-Norris et al. 2022). In emerging economies, the situation is even worse, i.e. young people are overrepresented in temporary jobs or in informal employment (ILO, 2020).
- In the case of South Africa, Burger & Fintel (2009) combine age and cohort effects to explain the presence of high unemployment rates of young people. They explain that the higher unemployment rates faced by young workers are mainly due to the misfortune of entering the labour market during a period of slackness, rather than because of their age *per se*. Moreover, the authors emphasise that higher educational attainment and changes in household formation decisions across generations have led to an increase in labour force participation among younger generations. Furthermore, the increase in labour supply among younger generations (mainly those aged 20 in 1995) are partly explained by the rapid exit rates from schooling resulting from an increase in restrictions on enrolment among overage students during the post-apartheid period. For the authors, these schooling reforms pushed young individuals into the labour market prematurely without the necessary skills to be absorbed into the workplace. The authors highlight the importance of policies that should necessarily target cohort generation problems rather than focusing on age groups *per se*.

Sources: Calero & Delautre (2022); Dabla-Norris et al. (2022); Burger & Fintel (2009).

2.1.2 Gender

In 1997, Indonesia was hit hard by the contagious effect of the Asian Financial Crisis (AFC). The economic growth contracted by 13 percent between 1997 and 1998 (Thee, 2012). Although the country managed to bounce back to 0.8 percent of growth in the subsequent year, the unemployment rate increased from 4.7 to 6.4 percent from 1997 to 1999 (World Bank, 2022), and the poverty rate reached 23.5 percent in 1999 (Thee, 2012). The AFC also expanded the self-employment type of jobs, particularly among those with the highest distribution earnings. The median age at first marriage among women aged 25–49 increased from 17.2 in 1987 to 20.8 years in 2017, and the trends are consistent across education levels (Utomo et al., 2022). Moreover, the gender gap in the labour market continued to exist after the onset of the Reformasi era. FLP increased slightly from 50.2 percent in 1990 to 54.7 percent in 2022, while male LFPR increased from 81.1 percent to 83.7 percent (Badan Pusat Statistik, 2022).

Marital status and childbearing were found to have a negative impact on women's participation, particularly during reproductive age, while men entering familial life stages increased their participation, particularly at age 35-49 years (AIPEG & Monash University, 2017; Comola & de Mello, 2011). Women had a higher labour transition or reallocation given the absence of institution-based childcare services and a lack of flexible working arrangements. Women exited employment after marriage and childbearing, and those working in formal-private sectors were more vulnerable than their counterparts (Setyonaluri, 2013). Women also tended to settle in informal jobs, particularly in self-employment, which offers higher compatibility with the socially prescribed gender norms (Gallaway & Bernasek, 2002).⁴

⁴ In the late 1980s, Indonesia experienced the 'feminization' of the labour market. Young women aged in their 20s, living in urban areas, with some junior-secondary education, gained the most from the expansion of the labour-intensive export boom (Manning, 1998). FLP rates increased from 37 percent in 1971 and 44.6 percent in 1990 to 51.3 percent in 1996, while male participation rates experienced comparatively slow growth from 82.4 percent, 82.7 percent to 84.8 percent during the same period (ILO, 2011). Industrialization seemed to reproduce discrimination against women in the country. Women were allocated

Women in South Africa also face numerous constraints in the labour market. The gender differences present in South Africa are not only in the active labour market, but also have implications for leisure time. We observe that FLP is still low in South Africa (about 46% for women between 15 and 65 years, in 2021), 14 percentage points lower compared to men (ILOSTAT, 2022). Furthermore, female employment remains either within the traditional female dominated occupations or within the farming sectors, which are usually lower paid and experience higher turnover rates. Also, domestic labour is done by women (97%). The unemployment rates are higher for women than for men, but acute for young women (54%) and young men (45%).

► Gender: Key findings from the Literature

- A substantial part of research on LMT focuses on differences between women and men. For example, the impact of children on women's labour market trajectories (Kleven et al., 2019), changes in work and care trajectories during the transition to motherhood (Cabello-Hutt, 2020), but also the effect of labour and marriage market conditions on the incidence of marriage (Blau et al., 2000), and the impact of marriage and childbearing on gender wage gaps (Loughran & Zissimopoulos, 2009) are all seen as important events in people's life trajectories.
- The literature has shown that, instead of moving across jobs within a sector, women leave the labour market following marriage and childbearing (i.e., Schaner & Das, 2016; Cameron et al., 2019). However, the type of employment contributes to the likelihood of exiting from work. In Indonesia, working in the public sector seems to provide more secure employment compared to the private sector (Setyonaluri, 2013). Studies also show that women tend to seek work in the informal sector to accommodate their caring role as well as the pressure for earning income for the family, which is particularly the case for women with low education (Gallaway & Bernasek, 2002; Setyonaluri, 2013).
- Using IFLS 1997 and 1998, Thomas et al. (2003) found a considerable labour turnover during AFC 1997-1999 in Indonesia. They found that while males exited and re-entered the labour market at the same rate, many women entered the labour market more than those who exited.
- Kirkwood (2018) argues that social norms in South Africa prevent women from having more time for productive activities, accessing productive assets, or from studying STEM subjects. Women are therefore more likely to enter low paid sectors and face other labour market challenges, such as workplace violence.
- Moreover, Harrichurran et al. (2021) show that in South Africa the household composition is highly correlated with leisure time allocations and affect men and women differently. This study also emphasises the traditional gender roles within the household and highlights the lack of intra-household bargaining power of women, which results in lower leisure consumption and lower female productivity in terms of paid and unpaid work.

Sources: Kleven et al. (2019); Blau et al. (2000); Loughran & Zissimopoulos (2009); Schaner & Das (2016); Cameron et al. (2019); Setyonaluri (2013); Gallaway & Bernasek (2002); Thomas et al. (2003); Kirkwood (2018); Harrichurran et al., (2021).

2.1.3 Education

Since 1998, Indonesia has dramatically increased its rate of school enrolment and the average years of schooling (ADB, 2016). However, while the supply of workers with more years of schooling is increasing, the composition of the labour force is still dominated by workers with low levels of education. In addition, the quality of education is low and the learning outcomes for most students remain inadequate. ADB (2016) highlights that this is particularly common among workers aged 40 years or older. Moreover, challenges to integrate the labour market remain because workers need to improve their skills and labour productivity to support economic development.

In South Africa, access to primary and secondary education has approached full enrolment (about 98,5%). However, secondary schooling completion rates remain much lower (80,4%, World Bank Indicators 2019), and schooling quality is

to tasks that were valued as appropriate for their stereotypes of being more obedient and docile (Blackburn, 2004; Robinson, 2009; Wolf, 1992), but it undervalued women's education and skills (Manning, 1998). Persistent patriarchal values from employers and the state were argued to contribute to women's temporariness of jobs in the formal sector (Caraway, 2005a, 2005b). Manning (1998) speculated that the participation of the current young and single women in the labour force would fall as they grew older since there was a tendency for the manufacturing sector to employ mainly young females.

mostly poor.⁵ Since the democratic transition in 1994, South Africa has failed to grow the economy's labour absorptive capacity at the same rate as the growth in the labour force (Bhorat, 2005). In fact, Mkhize (2019) points out a negative correlation between non-agricultural employment and GDP in the long run. South Africa's growth path has been biased against unskilled workers and towards skilled workers (Kingdon & Knight, 2004). Labour intensive sectors have gradually tended to substitute labour to capital, with the result that total employment in these sectors has fallen over time as productivity has risen. Manufacturing alone shed 500,000 workers between 1995 and 2011 – from 16 million to 1.1 million workers (Mkhize, 2019). This is particularly problematic when a large part of South Africa's labour force, and the majority of the unemployed, are unskilled workers and would benefit from labour intensive rather than capital intensive growth. The skills-bias in employment creation is also apparent in individual-level employment dynamics: for unskilled workers, employment is more difficult to find, and less secure once obtained (Zizzamia & Ranchhod, 2019).

This review puts into context our quantitative analyses. Our descriptive, cluster, and regression analysis in this paper aim to identify the role of education for labour market integration. We differentiate between workers with primary, secondary, and tertiary education, and investigate which of these groups have more unstable labour market trajectories.

► Education: Key findings from the Literature

- Nilsson (2019) found that higher educated individuals have higher reservation wages and job expectations, and they have longer unemployment duration than those less educated. Also, skills mismatches are explanations for higher unemployment rates and indeed constitute a reason for transition lengths (Nilsson, 2019: 752), though they are heterogeneous across professions.
- Yanindah (2021) argued that training and youth employment are negatively correlated. He argues that in Indonesia, youth also have higher reservation wages. Moreover, he suggested a skill mismatch: in Indonesia, highly educated people are less likely to be employed than those with less education. Workers with a college degree or higher have more willingness to wait to be employed in a formal job and be well paid. This situation causes the unemployment of highly skilled young workers despite their qualifications.
- According to the OECD (2019), regardless of the level of education, in Indonesia, about 90% of men are employed. This is in contrast to young women whose employment rate is 30 percentage points higher for those with tertiary education than for those with only upper secondary.⁶ However, despite the increase in tertiary education among women, gender inequality persists.

Sources: Nilsson (2019); Kong & Jiang (2011); Chuang (1999); Yanindah (2021).

2.2 What are the most important LMT for mid-career workers?

Mid-career transitions (MCT) are still understudied particularly in the developing world. Most of the literature of these transitions in advanced economies started almost 15 years ago. For example, (Autor & Houseman, 2010) show that temporary-help jobs⁷ are good for entering into paid employment, but they are not necessarily the best in the long-term.

In this section, we review some of the most important LMT such as: (1) from unemployment to (self-) employment, (2) from informal to formal jobs, and (3) from temporary to permanent jobs.

2.2.1 LMT from unemployment to (self-) employment

Few papers have investigated job-to-job transitions in Indonesia and South Africa. One of the exceptions is the paper of Brehm et al. (2022), which investigated the driving factors of work-to-work transitions in these countries. They found a larger labour market mobility in South Africa compared to Indonesia, despite the drastic increase in Indonesia over time.

⁵ In 2011 "Of 100 students that start school, only 50 will make it to matric, 40 will pass, and only 12 will qualify for university. Those 18-24-year-olds who do not acquire some forms of post/matric education are a distinct economic disadvantage and not only struggle to find full-time employment, but also have one of the highest probabilities of being unemployed for sustained periods of time, if not permanently" (Spaull, 2013: 1).

⁶ Achieving tertiary education is still a big challenge in Indonesia. In 2017, only about 16 percent of young adults had attained tertiary education.

⁷ According to Autor & Houseman (2010), "temporary-help jobs" are typically brief but offer a rapid entry into paid employment.

Instead, workers in Indonesia experience larger mobility between employment statuses from “own account worker” to employee. In addition, most of the transitions were led by low- and middle-level occupations, rather than high skilled workers, and within formal employment.

Most prevalent transitions in South Africa were heterogeneous across age cohorts and skill levels of occupations. Young workers transition from low to high skill-level occupations, while older cohorts transition back from high to low skill-levels. Moreover, few shifts are observed between economic sectors, but more workers transition from informal to formal jobs (Khuluvhe et al. 2022). An important characteristic of the South African labour market – and one that remains poorly understood – is the dynamic nature of unemployment. Banerjee et al. (2008) discuss the fact that these high rates of individual employment-to-unemployment transitions (and vice versa) co-exist with an unemployment rate that is near equilibrium. They show that a seemingly stable unemployment rate masks high individual-level transition rates in labour market status.

In Indonesia, younger workers (aged 15-29) benefited the most from the export boom as they were able to engage in stable work outside agriculture although most of the employment was concentrated in Java (Shrestha & Coxhead, 2018). Our analysis reinforces this pattern showing a more stable LMT in Indonesia compared to South Africa. Indonesia’s economic growth declined and stalled at around 5 to 6 percent up to 2018. Despite the contracted growth, Wihardja and Cunningham (2021) suggest that Indonesia experienced employment expansion of 1.8 million new jobs per year on average and a relatively low unemployment rate. Manufacturing employment contracted from 10.9 percent in 1990-1996 to 4.7 percent between 2010 and 2018, and Indonesia moved to ‘tertiarization of the economy’ and low-value services with low wages and low-paid agricultural jobs. The service sector took over the manufacturing sector as the main source of employment, creating 14.2 million jobs in 2005-2015 (Allen, 2016) and increased informality.⁸

2.2.2 LMT from informal to formal employment

Other transitions, such as job changes between informal to formal jobs (Vega Nuñez, 2018; Conover et al., 2022), from rural to urban employment (Pissarides & Wadsworth, 1989; Munshi & Rosenzweig, 2016), from non-decent to decent employment (ILO, 2017) are relevant for the developing world. To contextualise our analysis, we revise the most important developments and puzzles for growth and unemployment in each of these countries.

⁸ In 2013, 75 percent of jobs were concentrated in the informal sector (AIPEG & Monash University, 2017).

Historical Context and Economic Background

Indonesia

- Since 1966, Indonesia experienced fast economic growth and rapid social transformation. From 1966-1996, the country had an average economic growth of around 6.7 percent (Thee, 2012). A rapid decline in fertility with the massive implementation of family planning programs reduced the population growth significantly and opened opportunities for women to join the labour force.
- During this era, the Government of Indonesia (GoI) implemented broad-based rural development spurred by the oil boom at the end of the 1970s. The windfall gains from the oil led to growth in non-tradable sectors, particularly construction and trade, and created employment opportunities for unskilled workers at the end of the 1980s. These windfall gains also prompted rapid social development in Indonesia.
- By the late 1980s, Indonesia increased education attainment, as well as widespread family planning and health services that helped reduce maternal and infant mortality (Adioetomo, 2005).
- In the late 1980s, Indonesia re-oriented its industrialization policy to move towards expanding labour-intensive and export-oriented industries, such as textiles, footwear, clothing, wood, and furniture, which contributed to a growing manufacturing sector with an annual average growth rate of 9.1 percent from 1986 to 1997. It also expanded formal employment from 26 percent in 1986 to 35 percent in 1997 (Feridhanusetyawan & Aswicahyono, 2001).

South Africa

- In South Africa, the major puzzle is why the informal sector fails to absorb the labour, which does not find a place in the formal sector. Kingdon & Knight (2004) sketch this problem and provide some explanations, arguing that the “voluntary unemployment hypothesis” probably is not sound and that there are structural (and historically determined) barriers to informal employment.
- For these reasons, the informal sector does not represent a viable alternative to formal work, with the result that most informal own-account workers in South Africa engage in these forms of self-employment as survival strategies. This has profound implications for labour market transitions in South Africa: The absence of viable informal safety nets in the form of informal self-employment opportunities means that transitions out of formal employment are often associated with descents into poverty (Schotte et al., 2022).
- Kerr (2018) and Zizzamia & Ranchhod (2019) descriptively analyse the nature and extent of this labour market churn and worker turnover, finding that worker turnover is high in South Africa by international standards. While employment transitions are frequently associated with poverty transitions (Schotte et al. 2022), the determinants and consequences of employment volatility remain poorly understood.

➤ Informality in Developing countries

Few studies analyse these transitions in single countries.

- Using data from Vietnam, McCaig & Pavcnik (2015) document that migrant young workers are more likely to work in the formal sector permanently and that informal employment varies by age cohort.
- Similar than in developed countries, using retrospective job histories from workers in Bangladesh, Gutierrez et al. (2017) show that workers transitioning from job to job are more likely to remain in the same employment type. However, workers with casual employment, who have the lowest level of earnings and the highest exposure to work hazards and violence, face a significantly greater risk of downward mobility.
- Vega Nuñez (2018) looks at informality as one of the more important characteristics of emerging economies. Using data from Ecuador, she finds that education, experience, and wages across sectors have a significant impact on transitions across formal and informal jobs.

Indonesia

- Indonesia's labour market has been dominated by a large share of workers in the informal sector with stagnant formal sector employment in 2004-2009 and low wages. In part this could be attributed to the rigidity of the hiring regulation. However, despite that, the Indonesian Labour Law provided a form of flexibility in the formal sector through short-term contracting or outsourcing arrangements.
- The Law stipulated that short-term contracts can only be provided for an initial period of two years with an option of adding a 12 month extension. As a result, many formal workers were employed under the short-contract agreement. Around 40 percent of regular employees had a job tenure of 36 months or less, with workers in finance and manufacturing sectors having shorter tenure than those in other sectors (Allen, 2016).
- Recent studies in Indonesia identify that employment in formal sectors has expanded, while reliance on the informal economy has reduced during the second half decade of the 2000s (i.e. 2005-2010), as an outcome of structural transformation of the economy (Allen, 2016; Pratomo & Manning, 2022). In this context, worker mobility across sectors remains low.
- Using the National Labour Force Survey (SAKERNAS) 2010-2018, Pratomo and Manning (2022) found that less than 40 percent of the working-age population moved across labour force statuses or jobs. Among those who changed employment statuses, the largest movement was contributed by new entrants and other jobs within formal employment. Job movers were dominated by young people aged 15-34 with senior secondary education.
- Agricultural-informal workers had the lowest mobility compared to workers in other sectors due to low qualification, lack of employment information, or satisfaction with their current employment (World Bank,

South Africa

- When looking at the South African labour market, Kingdon & Knight (2004) and Banerjee et al. (2008) explain the high levels of unemployment in the early 2000s due to:
 - The lack of affordable public transport and the presence of racial discrimination. Job search success varied significantly by the applicant's skin colour.
 - Little growth of the informal sector compared to other African economies due to high crime rates, anti-informal trading regulations in urban areas, and the historical suppression of the black entrepreneurial class during apartheid, and
 - Industrial and labour market policies, which have biased the growth sectors of the economy towards capital- rather than labour-intensive industries.
- With more recent data, Cichello et al (2014) describe the LMT in SA between 2008 and 2010 for individuals aged 20 to 55 years. They find that casual employment was very unstable.
- In terms of wages, downward payments for self-employed and casual employment, but better wages for those in regular jobs.
- When looking at gender differences, women are generally more mobile than men in terms of employment, but less mobile across occupations. In addition, being a mother of young children seems to be a major driver of leaving regular employment.
- Essers (2014) found that even after the financial crisis, chances of continued employment vary across age, gender, levels of education, and between different occupations and sectors.

2010), suggesting the presence of an ‘informality trap’ (Pratomo and Manning, 2021).

Despite the importance of informality in the Indonesian and South African labour market, in this report, we do not directly analyse changes from informal to formal employment. This is due to a lack of standardized data and variables that would allow us to study and compare these transitions in the two countries. Since we cannot ignore this, we summarise key features regarding the presence of informality in these countries.

Sources: Allen (2016); Pratomo & Manning (2022); World Bank (2010); Kingdon & Knight (2004) Banerjee et al. (2008); Cichello et al (2014); Essers (2014)

2.2.3 LMT from temporary to permanent jobs

Unemployment and its duration are important factors in understanding LMT. The concepts of casual and temporary jobs are closely related and used in the Indonesian Family Life Survey (IFLS) and the National Income Dynamics Study (NIDS). Therefore, we revise in this section its importance for the respective labour markets. In our analysis, we highlight that job instability (with temporary and casual work) is particularly present among youth in emerging economies.

Key points

Indonesia

In Indonesia, **casual work** is understood as the work provided for another person, employer, or institution in a non-permanent capacity (and many multiple employers in any month). A casual worker receives remuneration in the form of money or goods, paid daily or by piece rate. It could be a farm worker or a non-farm worker.

Wihardja & Cunningham (2021) argue that the economic growth of Indonesia between 2008 and 2018 has had two sources. On the one hand, the growth of vulnerable jobs (less likely to have formal arrangements, social security, union, and low productivity) such as those associated with non-agriculture, casual employment, and self-employment. On the other hand, the growth of formal and permanent employment.

South Africa

In South Africa, there are multiple worker definitions related to non-stable jobs: casual, temporary, and contract workers.

Casual worker are usually paid on an hourly basis for the hours worked, provided that the person works for less than four hours on any given day (according to ‘The Policy on the employment of casual-, contract- and temporary workers’, casual workers).

Temporary workers usually refer to workers performing duties that cannot be performed by other personnel such maternity leave, etc. If the temporary worker is appointed for a period not exceeding four months of work, and remunerated at rates set by the government. (‘The Policy on the employment of casual-, contract- and temporary workers’, casual workers).

Contract workers are assigned on a contract basis for a predetermined time, to perform a pre-determined task or set of tasks. Moreover, in South Africa, temporary and casual work are strongly associated with some economic sectors. For example, retail, hospitality, and construction are dominated by casual and informal employment. Permanent employment in these sectors is atypical. Non-permanent employment is common across sectors in the economy. Between 2000 and 2011, only one fifth (about 21%) of jobs were permanent.

Source: Department of Economic Affairs (2014). Policy on the employment of causal-, contract- and temporary workers.

2.3. Youth LMT

In this paper, we do not focus on STW transitions *per se*, but we take a very broad perspective on LMT in Indonesia and South Africa, two countries with very different labour markets. Instead, we analyse relevant age cohorts starting from 16 to 30 years old, which can have important implications for understanding STW transitions, or more precisely early-career labour market integration.

► Indonesia: Youth LMT

Like most developing countries with a large young population, Indonesia faces a persistently high youth unemployment rate at around 16 percent since 2015^(*), the highest among Southeast Asian countries. Unemployment and underemployment among secondary and tertiary educated young people remain a pervasive problem due to the mismatch between the qualification and demand for jobs (Manning, 2008).

- An earlier study by Sziraczki & Reerink (2004) in four regions in Indonesia pointed out that many young people entered the labour market at an early age and were unprepared, with exception of Jakarta. The majority ended up in informal employment and experienced recurrent episodes of unemployment, which left the young people with a scarring effect on their earnings (Pritadrajati et al. (2021).
- Allen (2016) found that one third of youth had to wait for one year to enter the labour market, particularly in formal employment – adding the later life effect of unemployment among current young cohorts. Metropolitan Indonesia seems to have a contrasting pattern compared to the general pattern of less successful transition from school to work.
- Using GJTAS 2012, Absor & Utomo (2017) found that most young people in Greater Jakarta had successfully transitioned into stable jobs, particularly young men and the educated.

► South Africa: Youth LMT

- Using long term panel data, it is estimated that between a quarter and a third of South Africans are stuck in chronic unemployment, with little chance of finding stable employment (Ingle & Mlatsheni, 2017; Zizzamia & Ranchhod, 2019).
- At the same time, South Africa has a very high rate of employment volatility, revealing that many among the employed will lose their jobs over time, and some among the unemployed will move into employment, even if temporarily (Kerr, 2018). As elsewhere, the position of young workers in the labour market is especially precarious. Unable to develop post-schooling human capital and with limited ability to signal their already-existing human capital to prospective employers, young workers are vulnerable to becoming trapped in a state of chronic joblessness.
- The early labour market experiences of young workers are thus fundamentally important in developing and signalling human capital, which would allow for a sustained upward career trajectory. However, labour market volatility affects primarily young workers, women, and those without post-schooling qualifications, illustrating that securing an early job is necessary but not always sufficient to sustain a career trajectory and escape a cycle of precarious employment (Zizzamia & Ranchhod, 2019).
- Using district pseudo-panels in South Africa, von Fintel (2017) argues that the reduction of local labour demand and therefore the rise of local unemployment is caused by the wage growth of workers with medium and high pay, rather than low pay workers.

Notes:

^(*) ILO, Unemployment, youth total (% of total labour forces ages 15-24) Modelled ILO estimate, 2022.

Sources: Sziraczki & Reerink (2004); Allen (2016); Absor & Utomo (2017); Parket & Nilan (2013); Ingle & Mlatsheni (2017); Zizzamia & Ranchhod (2019); Kerr (2018); von Fintel (2017).

3. Data and Methodology

3.1. Data

We use data from five waves of the South African National Income Dynamics Study (NIDS) and two waves from the Indonesia Family Life Survey (IFLS). NIDS is a prospective study which means at each wave of observation (carried out circa every two years) they gather information about each participants' labour market status at a given point in time. So far, NIDS has conducted five waves of data collection, which cover a period of 10 years. Our sample comprises 4,463 individuals aged between 16 and 55 at the initial wave of data collection who were therefore between 26 and 65 at the latest wave and who participated in all waves. We also excluded any individual who had not graduated or left school at the initial wave of data collection. This was done to focus on people labour market trajectories after a definitive transition from school to work allowing us to focus on entries and exits from work.

In contrast, the IFLS data we use is retrospective. In other words, participants are asked at one point in time to report their successive past labour market statuses for up to eight years prior to the year in which they were interviewed. For the main analyses we use the data collected in 2014 during the fifth wave of the IFLS. Using this retrospective data, we obtained a sample of 4,740 individuals who were aged between 16 and 55 in 2007 (the first year of retrospective information) and then aged between 23 and 62 in 2014, and who had already graduated or left school.

We also perform additional analyses on youth sub-samples aged between 16 and 30 at the initial time point in both South Africa (1,541 individuals) and Indonesia (2,049 individuals).

The labour market statuses we use (employed, unemployed, not active, self-employed, subsistence work, and casual work for NIDS and employed, self-employed, casual workers, unpaid family workers, and not working for IFLS) are derived directly from survey questions. Therefore, there are no clear formal definitions for any of these labour market statuses. They are entirely self-reported and subjective, and do not necessarily correspond to the standard definitions for these labour market statuses. In the case of South Africa, the casual work category also includes respondents in unpaid work for family enterprises as this labour market status applied to less than two percent of the sample.

It is important to note that each of these data types – prospective data in the case of NIDS and retrospective data in the case of the IFLS – has advantages and disadvantages. In the case of prospective data, it is less likely for respondents to inaccurately report their current labour market status even if there is tendency for respondents to provide no information in case, they are experiencing labour market difficulties. Retrospective data on the other hand is more likely to be complete but suffer from recall bias with respondents being more likely to underreport less stable labour market statuses such as unemployment. Furthermore, retrospective data allow for more information to be collected even with more infrequent interviews as in the case of the IFLS which interviews respondents every seven to eight years.

It must be stressed that comparing the results from these two studies is a particularly sensitive exercise as they differ in many respects (e.g., employment categories, periods covered, modes of data collection). It is also for this reason that we decided to conduct separate analyses for South Africa and Indonesia.

TABLE 1. Descriptive Statistics

	South Africa	South Africa - 16 to 30	Indonesia	Indonesia - 16 to 30
Sex				
Male	1355	539	2483	1055
Female	3108	1002	2257	994
Age group				
16 to 24	792	—	1073	—
25 to 44	2507	—	2815	—
45 to 55	1164	—	852	—
Education				
No schooling	399	25	84	15
Less than primary completed	798	103	1557	482
Primary completed	361	80	104	47
Secondary not completed	1820	803	961	515
Secondary completed	699	397	1406	745
Tertiary	382	131	624	244
Missing	4	2	4	1

Source: IFLS and NIDS data. Elaboration: Own.

The sample characteristics for South Africa show that we have an overrepresentation of women – something not uncommon in panel studies. Furthermore, as the sample we use in our analyses does not vary over time, this means that the individuals in our sample age. Therefore, we cannot always distinguish between changes in labour market status that may be related to ageing, and overall temporal changes. These two limitations imply that our data is not necessarily representative of the labour force of each country at each point in time, and that they are not necessarily comparable with the data from labour force surveys. However, the aim of our analysis is not to provide an annual cross-section of the labour markets in South Africa and Indonesia but rather to follow individual labour market trajectories over time.

3.2. Methodology

In this paper, we employ sequence analysis (SA) to describe labour market trajectories in Indonesia and South Africa. Sequence analysis is a holistic method, which, rather than looking at specific discrete transitions between labour market states (e.g., from employed to unemployed), instead focuses on movements between states over a period of multiple years. Sequence analysis can also calculate distance or dissimilarity measures between sequences. This allows us to quantify how similar or different an individual's labour market trajectory is to any other person in the study sample. It is possible to subsequently use these distances to group together potentially similar sequences using cluster analysis to create typologies and to understand whether experiencing a certain sequence of states, i.e., labour market trajectories are related to, for instance, sociodemographic factors. Taking such an approach allows us to go beyond a more instantaneous approach and take a broader more encompassing view of individuals' labour market and focus on medium-term dynamics rather than on instantaneous changes in labour market statuses.

The standard use of SA revolves around a 'core program' involving four typical steps. First, the trajectories are coded as states' sequences. This implies specifying the situation occupied by an observation at each time point to describe its trajectory over time. In the second step, the trajectories are compared to one another using a dissimilarity measure. Third,

the distances between each pair of sequences are used to create a typology of the trajectories with cluster analysis. This typology describes the various kinds of patterns observed in the data without making any assumptions on the data generation mechanisms. This exploratory approach can capture complex and potentially unexpected dynamics in trajectories, which is particularly suited to understanding the many interdependencies of the life course. Depending on the research question, such a typology might highlight regularities in the timing of situations, ordering of states, or time spent in each state. Visual inspection of the sequences and the cluster assignments is often used to designate the typologies. The fourth step is to re-use the cluster assignments in subsequent analyses. A more detailed overview is provided in Vaccaro et al. (2022).

Here we employ sequence analysis in combination with optimal matching (with constant indel costs and constant transition costs) as our algorithm for generating our dissimilarity measure and various clustering algorithms. For South Africa, we use a combination of partitioning around medoids (PAM) clustering and Ward's method of hierarchical clustering. In the case of Indonesia, we use a PAM clustering for the complete sample and a combination of PAM and divisive analysis (DIANA) clustering for the youth sub-sample.

4. Results

In this section, we present two distinct sets of results: First, one set of purely descriptive results, which allow us to visualise labour market states and get an idea of individual movements within the labour market over time. We also visualise individuals' trajectories after making a transition between working and not working to get an idea of individuals' labour market trajectories after a major change. Second, we perform specific analyses focusing on younger individuals (16 - 30 years) to characterise their process of transitioning into the labour market at a crucial moment in the life course.

The second set of results is based on a cluster analysis for both the overall samples and the youth samples to identify potential typologies of labour market transitions in Indonesia and South Africa. Subsequently, we conduct multinomial regression to investigate the association between gender, education, and age group (for the complete sample) and the different clusters of labour market trajectories. This allows us to estimate whether certain sociodemographic characteristics lead to an increased risk of experiencing specific types of labour market trajectories.

4.1. Descriptive results for South Africa and Indonesia

Looking at the descriptive results for the complete sample in South Africa provided by the sequence density plot (Figure 1), we find that, over time, the proportion of individuals that are employees at a given survey is consistent (around 35% initially growing to 40% by the end). While the proportion of individuals that are unemployed decreases over time - which is in opposition to the LFS data we analysed above -, this is coupled with an increase in the proportion of inactive individuals from around 20% to just under 40% by the most recent survey wave. As we are dealing with panel data, there is always the problem of differential attrition which means that individuals who drop out of the survey are often the most likely to experience difficult situations in their lives such as unemployment. This in turn could lead us to find that the proportion of unemployed individuals declines over time as they are more likely to be excluded by restricting the analysis to people who never dropped out.

Overall, there seems to be a consistent split over time between people in employment and those that are not. The empirical transition probabilities (Table 2) suggest that there is quite a lot of mobility between labour market statuses. While employed individuals are still the most likely to remain employed, there is a considerable chance of unemployed individuals transitioning to employment though the vast majority are likely to remain out of work. It is also worth noting that casual work is often an intermediate status as individuals who were in casual work are more likely to move to almost any other labour market status than to remain in casual work.

TABLE 2. Empirical transition probabilities for South Africa. Rows are origin states and columns are destination states.

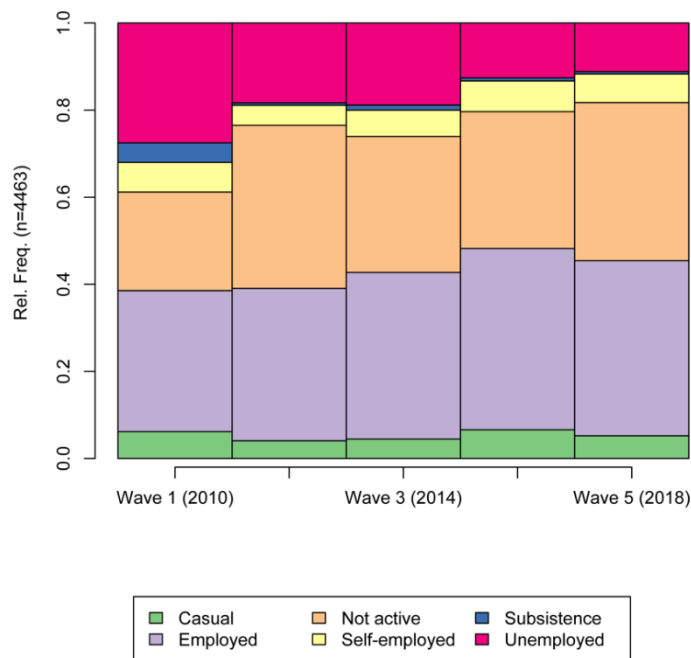
	To Casual	To Employed	To Not active	To Self-employed	To Subsistence	To Unemployed
From Casual	12.4%	33.0%	30.9%	5.0%	0.3%	18.4%
From Employed	3.7%	75.1%	11.5%	2.4%	0.2%	7.2%
From Not active	4.7%	13.4%	58.2%	5.0%	1.5%	17.3%
From Self-employed	5.7%	13.4%	32.7%	35.8%	0.8%	11.5%
From Subsistence	1.9%	9.1%	64.9%	4.2%	1.6%	18.2%
From Unemployed	6.3%	22.2%	37.6%	5.8%	0.7%	27.3%

For Indonesia, the main change over time is an increase in the proportion of individuals in self-employment (from around 20% to around 30%; see Figure 2). The proportion of individuals in the other work categories stays extremely consistent over time. Thus, in contrast to South Africa, there appears to be far less labour mobility in Indonesia. Furthermore, the empirical transition probabilities (Table 3) suggest that there is some indication that the decrease in inactive individuals is related to a movement into employment for previously inactive individuals coupled with movements into self-employment by employees and previously inactive individuals. Nevertheless, in comparison to South Africa, we find a very high level of stability with individuals often having a probability of over 90% to remain in the same category.

TABLE 3. Empirical transition probabilities for Indonesia. Rows are origin states and columns are destination states.

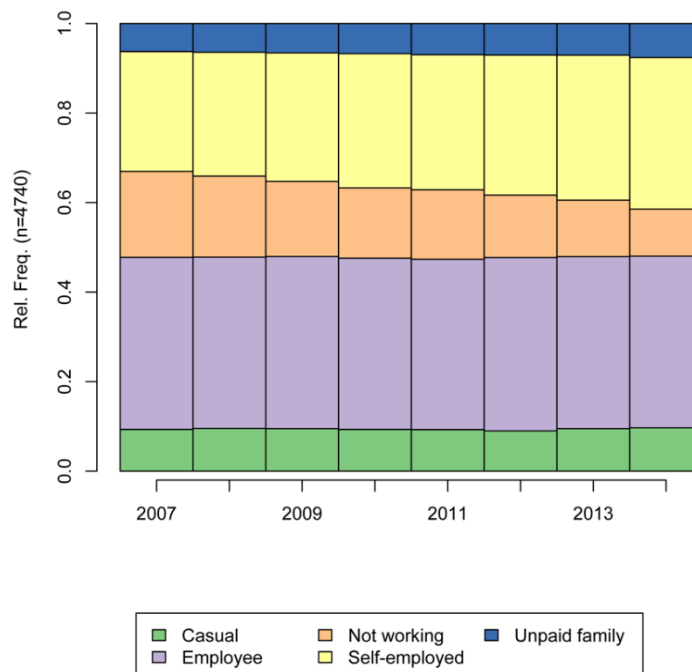
	To Casual	To Employee	To Not working	To Self-employed	To Unpaid family
From Casual	88.0%	4.7%	3.4%	3.0%	0.9%
From Employee	1.1%	92.3%	4.0%	2.2%	0.4%
From Not working	2.9%	11.1%	77.4%	7.0%	1.5%
From Self-employed	0.8%	2.1%	1.4%	95.3%	0.4%
From Unpaid family	0.8%	1.7%	1.3%	2.0%	94.1%

FIGURE 1. State distribution plot for South Africa.



Note: Each bar represents the proportion of individuals in a given state at one point in time.

FIGURE 2. State distribution plot for Indonesia.

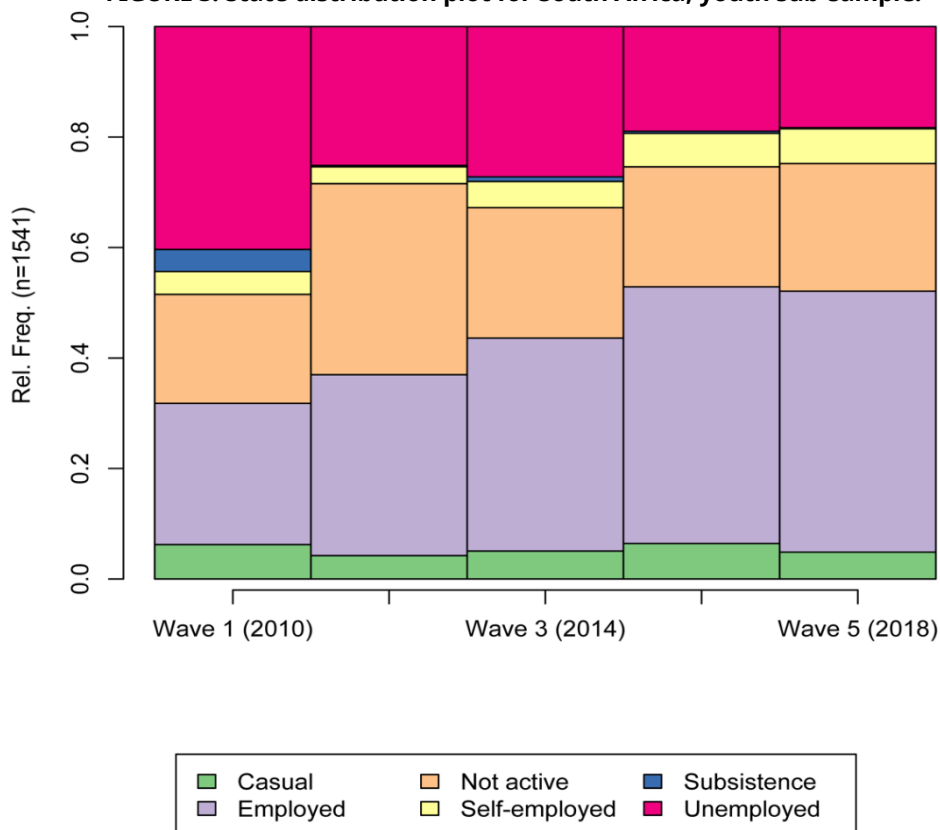


4.1.1 Youth

Comparing the sequence distribution plot (Figure 3) for the youth sub-sample to the overall sample, we see that, in the case of South Africa, there is a greater proportion of individuals who are unemployed across the entire observation period. However, over time, the proportion of individuals that are employees increases substantially and ends up being *higher* at the final wave of data collection than in the case of the overall sample. The empirical transition probabilities (Table 4)

suggest that younger individuals are more mobile as the likelihood of staying in the same status is always lower, especially for employees compared to the full sample. Another difference is that young people are more likely to transition to becoming employees from being inactive than the overall sample.

FIGURE 3. State distribution plot for South Africa; youth sub-sample.



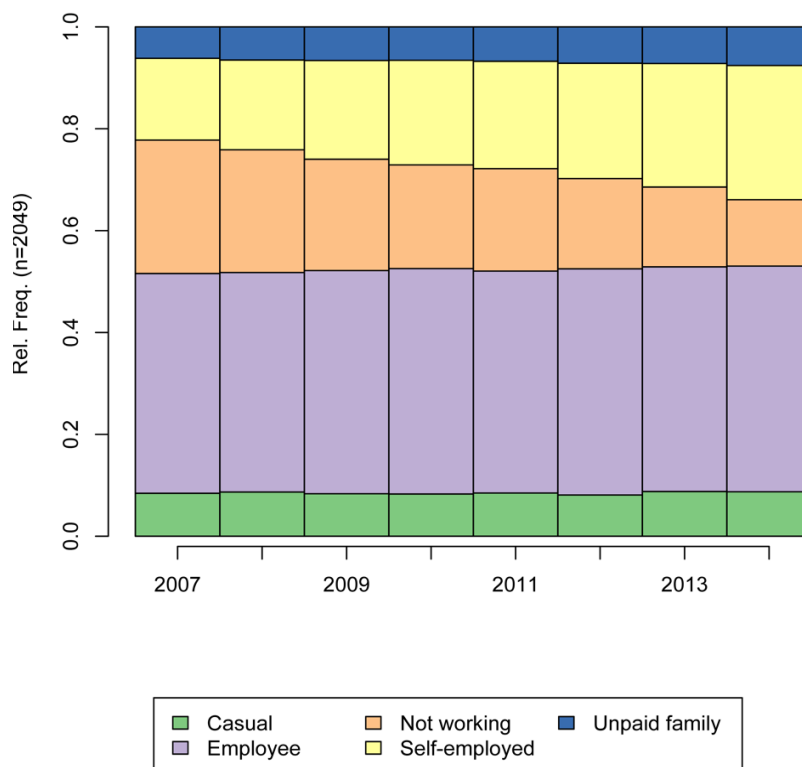
Note: Each bar represents the proportion of individuals in a given state at one point in time.

TABLE 4. Empirical transition probabilities for South Africa; youth sample. Rows are origin states and columns are destination states.

	To Casual	To Employed	To Not active	To Self-employed	To Subsistence	To Unemployed
From Casual	9.5%	37.9%	24.6%	5.6%	0.0%	22.5%
From Employed	3.7%	72.2%	10.5%	2.4%	0.1%	11.2%
From Not active	5.7%	21.1%	38.7%	3.8%	0.8%	29.8%
From Self-employed	6.9%	19.1%	22.0%	30.7%	0.4%	20.9%
From Subsistence	1.2%	11.9%	52.4%	2.4%	1.2%	31.0%
From Unemployed	5.6%	25.2%	33.4%	5.4%	0.5%	29.9%

For Indonesia, the biggest difference between the youth subsample and the complete sample is the relatively higher proportion of individuals who were not working between 2007 and 2014, as well as the proportion of individuals in self-employment being lower for all years (see Figure 4). Overall, the proportion of individuals in the youth sub-sample out of employment is consistently higher over the same period. The empirical transition probabilities (Table 5) for Indonesia also suggest more labour market mobility compared to the full sample, especially as the probability of remaining an employee is lower. Nevertheless, the differences with the full sample are not major. In comparison with the South African youth sub-sample, we again see that Indonesia is characterised by lower levels of labour market mobility in general.

FIGURE 4. State distribution plot for Indonesia; youth sub-sample.



Note: Each bar represents the proportion of individuals in a given state at one point in time.

TABLE 5. Empirical transition probabilities for Indonesia; youth sample.⁹

	To Casual	To Employee	To Not working	To Self-employed	To Unpaid family
From Casual	83.1%	7.3%	4.5%	3.7%	1.3%
From Employee	1.4%	90.0%	5.6%	2.4%	0.7%
From Not working	2.7%	14.1%	75.4%	6.3%	1.5%
From Self-employed	1.1%	3.8%	1.6%	93.2%	0.4%
From Unpaid family	1.4%	3.4%	1.5%	2.7%	91.0%

Note: Rows are origin states and columns are destination states.

4.2. Cluster & Regression Analysis

The cluster analysis for South Africa indicated that a two-cluster solution was best according to the Average Silhouette Width (ASW). Looking at the sequence distribution plot (Figure 5), we see one cluster, which is characterised by individuals who predominantly remain employees over time (1,687 individuals) and a second cluster (2,776 individuals) comprising individuals who have more difficulty remaining in employment over time. The second cluster being bigger suggests that individuals in South Africa overall have more difficulty in establishing stable labour market trajectories.

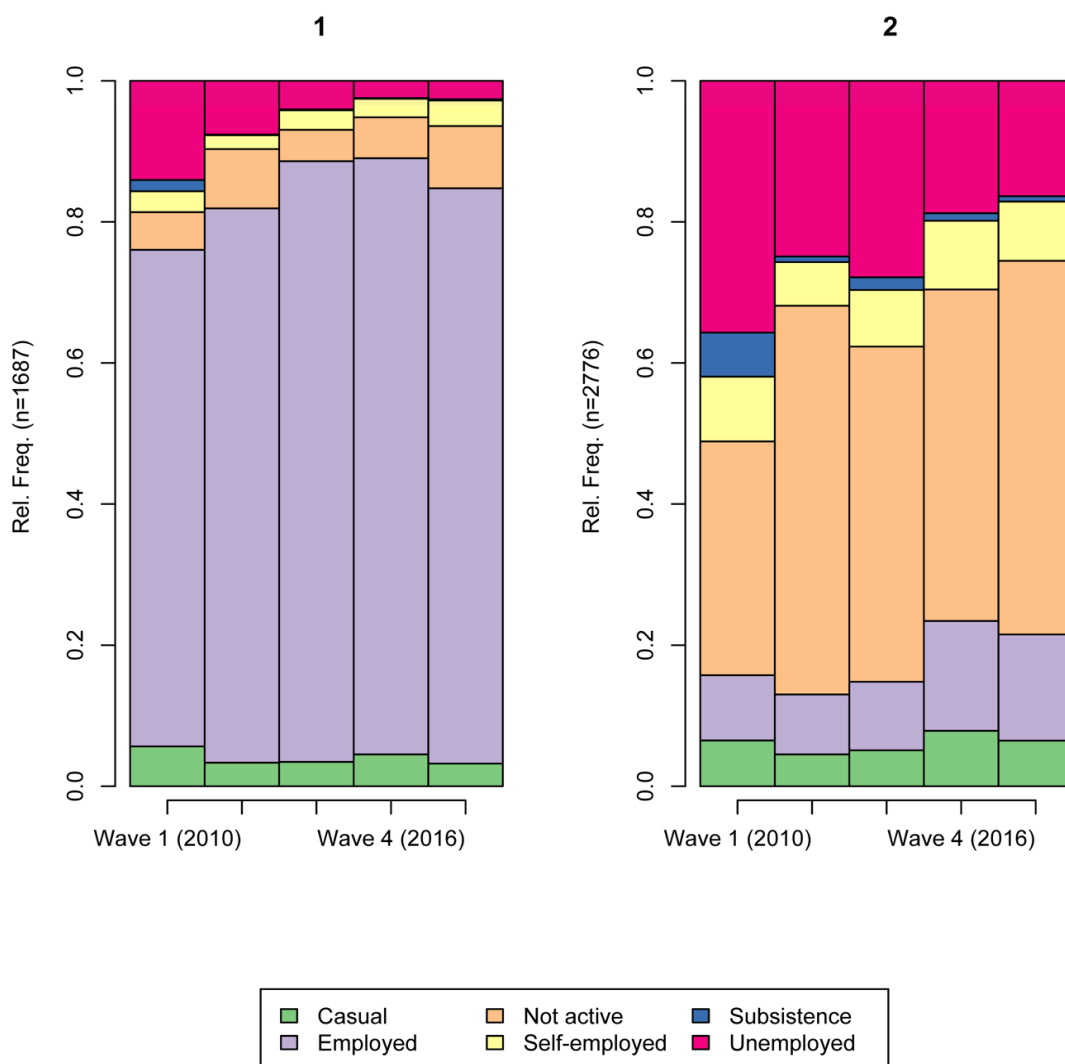
The regression results (Table 6) indicate that individuals with lower levels of education are more likely to experience difficulties integrating into the labour market and the same is true for women. Having a tertiary level of education significantly decreases the odds of being in a difficult labour market situation. This suggests that the return for university-level education compared to secondary schooling is quite substantial. In terms of age, it is interesting to note that both older individuals and younger individuals are more likely to experience labour market integration difficulties than middle-aged individuals, which confirms the results discussed above.

TABLE 6. Logistic regression results for South Africa for difficult labour market integration vs. “successful” integration.

	Estimate	95% CI
Intercept	0.439 ***	[0.362, 0.531]
Age group (ref. 25-44)		
16-24	1.961 ***	[1.635, 2.353]
44-55	1.444 ***	[1.223, 1.706]
Sex (female vs. male)	2.590 ***	[2.256, 2.975]
Education (ref. completed secondary)		
No schooling	3.441 ***	[2.550, 4.675]
Less than primary completed	2.868 ***	[2.270, 3.631]
Primary completed	2.025 ***	[1.534, 2.681]
Secondary not completed	1.794 ***	[1.491, 2.161]
Tertiary	0.295 ***	[0.220, 0.392]

Note: Estimates are odds ratios. Age reference category: 25, 44; education reference category: completed secondary schooling. *** p < 0.001; ** p < 0.01; * p < 0.05

FIGURE 5. State distribution plot for South Africa.

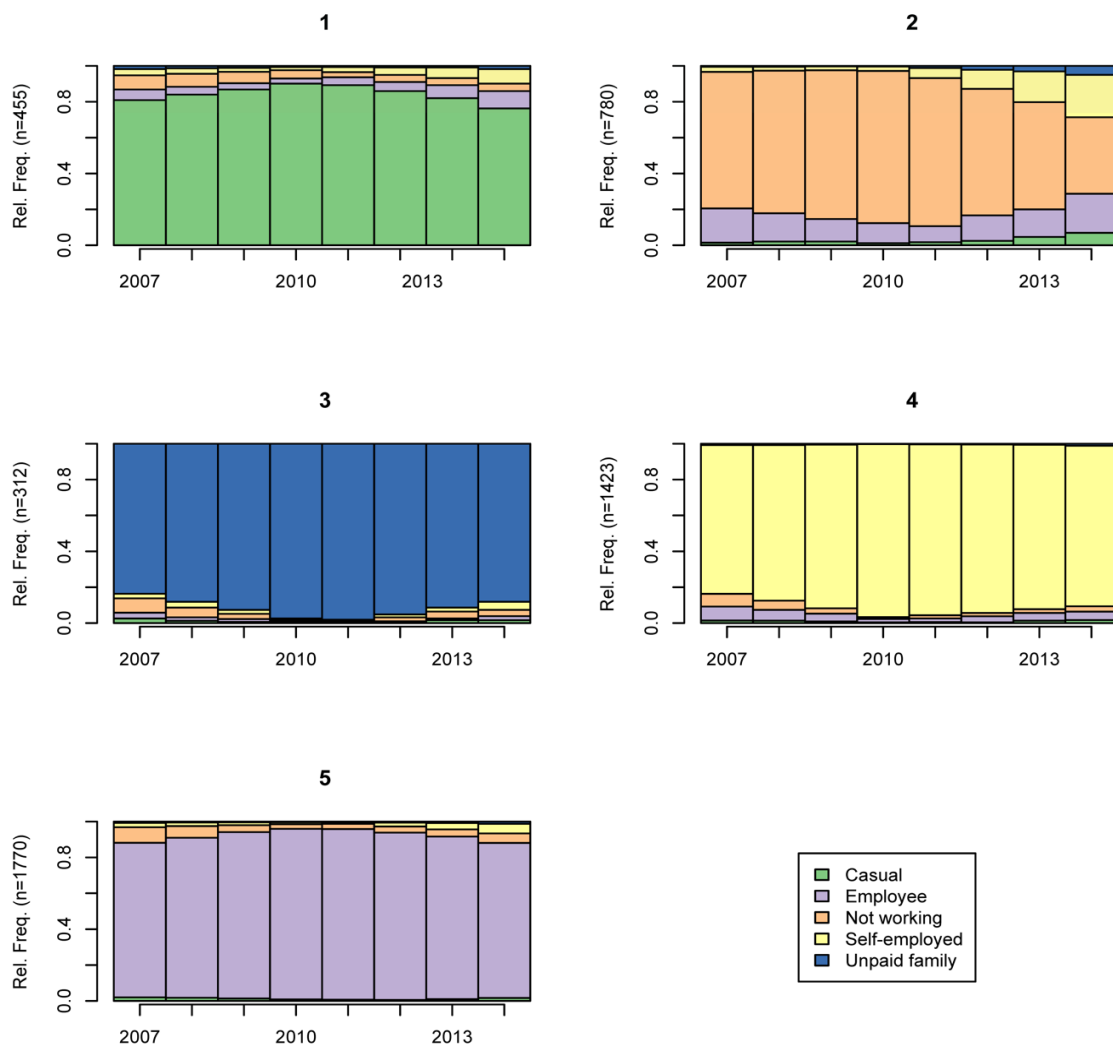


Note: Each bar represents the proportion of individuals in a given state at one point in time within a given cluster. Clusters are described on the y-axis: Cluster 1 = “successful” labour market integration. Cluster 2 = difficult labour market integration.

For Indonesia, the ASW calculated after the cluster analysis suggested that a five-cluster solution was best. Essentially, these clusters partition our sample into clusters of individuals who remain in the same type of labour market status across the entire period studied. Looking at the sequence distribution plot (Figure 6), we see four clusters where individuals almost always remain either as employees (1,770 individuals), self-employed (1,423 individuals), in casual work (455 individuals), or in unpaid family work (312). One cluster (780 individuals) is more mixed, grouping together individuals who initially were mainly out of work, but over time became more likely to begin working either as employees, as self-employed individuals, and to a much lesser extent by taking casual work. The cluster sizes suggest that the vast majority of individuals in Indonesia are in some form of work as more than 75% of the individuals in our sample are either consistently employed, self-employed or in casual work with the two largest clusters being those who were consistently employed or self-employed.

Comparing South Africa and Indonesia, the fact that we obtained different cluster solutions suggests that these two countries are characterized by different labour market trajectories with Indonesia presenting more variation between individual trajectories than South Africa.

FIGURE 6. State distribution plot for Indonesia.



Note: Each bar represents the proportion of individuals in a given state at one point in time within a given cluster. Clusters are described on the y-axis: Cluster 1 = consistently in casual work, cluster 2 = out of work/progressive labour market entry, cluster 3 = consistently in unpaid family work, cluster 4 = consistently self-employed, cluster 5 = consistently employed.

The regression results (Table 7) show that individuals with higher levels of education are far less likely to consistently be in casual work, unpaid family work, self-employed or out of work overtime. As for age differences, younger individuals are more likely to be out of work or finding work over time while this is not the case for casual work, self-employment, or unpaid family work. Older individuals are more likely to be consistently self-employed. Sex differences are especially visible in relation to being consistently out of employment or consistently doing unpaid family work as women are nearly 8 and more than 9 times more likely (respectively) to be in one of these types of labour market trajectory compared to the reference cluster comprising people who were almost constantly employees. This may occur due to the persistence of strong male-breadwinner norms in Indonesia (Setyonaluri et al., 2020 & Utomo et al., 2022).

TABLE 7. Multinomial logistic regression results for Indonesia.

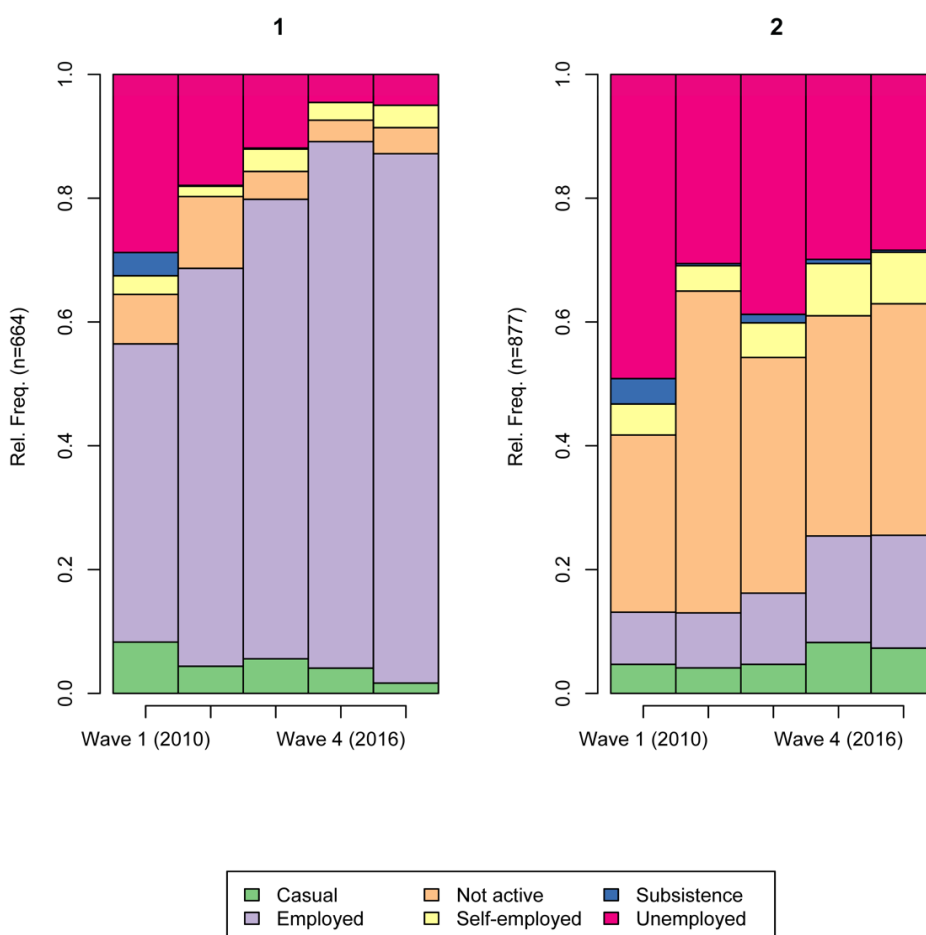
	Casual vs. Employee		Self-employed vs. Employee		Unpaid family vs. Employee		Not working/entering work vs. Employee	
	Estimate	95% CI	Estimate	95% CI	Estimate	95% CI	Estimate	95% CI
Intercept	0.133 ***	[0.102, 0.173]	0.619 ***	[0.533, 0.718]	0.030 ***	[0.021, 0.044]	0.109 ***	[0.086, 0.137]
Age group (ref. 25-44)								
16-24	0.714 *	[0.545, 0.936]	0.416 ***	[0.340, 0.510]	0.785	[0.569, 1.083]	1.551 ***	[1.261, 1.907]
44-55	1.123	[0.833, 1.514]	1.872 ***	[1.530, 2.290]	1.100	[0.772, 1.568]	1.103	[0.829, 1.466]
Sex (female vs. male)	0.688 **	[0.544, 0.869]	1.025	[0.879, 1.196]	9.914 ***	[7.077, 13.888]	7.813 ***	[6.330, 9.644]
Education (ref. completed secondary)								
No schooling	19.848 ***	[8.714, 45.210]	4.210 ***	[1.948, 9.097]	12.345 ***	[4.949, 30.796]	3.358 **	[1.353, 8.338]
Less than primary completed	5.936 ***	[4.391, 8.024]	2.355 ***	[1.942, 2.856]	2.759 ***	[1.982, 3.839]	1.395 **	[1.102, 1.764]
Primary completed	4.536 ***	[2.169, 9.487]	3.154 ***	[1.847, 5.385]	5.334 ***	[2.351, 12.102]	2.524 **	[1.299, 4.901]
Secondary not completed	3.554 ***	[2.553, 4.947]	2.055 ***	[1.666, 2.535]	1.909 ***	[1.307, 2.789]	1.416 **	[1.102, 1.820]
Tertiary	0.101 ***	[0.040, 0.251]	0.392 ***	[0.306, 0.503]	0.160 ***	[0.081, 0.317]	0.278 ***	[0.200, 0.386]

Note: Reference category for dependent variable: consistently employed. Estimates are odds ratios. Age reference category: 25-44; sex reference category: female; education reference category: completed secondary schooling.
 *** p < 0.001; ** p < 0.01; * p < 0.05

4.2.1 Youth

In the case of South Africa, a two-cluster solution was identified as being the best according to the ASW. The results suggest that a binary typology distinguishing between “successful” – the first cluster – and “difficult” labour market integration – the second cluster – best describes our youth sub-sample (see Figure 7). The first cluster comprises individuals who can be thought of as making a successful transition. While more than 30% of the individuals in this cluster are in employment at the first wave, the vast majority make it into employment and by the fifth wave of observation over 80% of the 664 individuals in this cluster are employed. Conversely, the second cluster comprises 877 individuals who have more difficulty making a successful transition to work as we observe more individuals remaining in unemployment or remaining inactive across the five waves of observation. This suggests that it is somewhat more common for younger individuals to have trouble getting a foothold in the labour market in South Africa as the second cluster is larger.

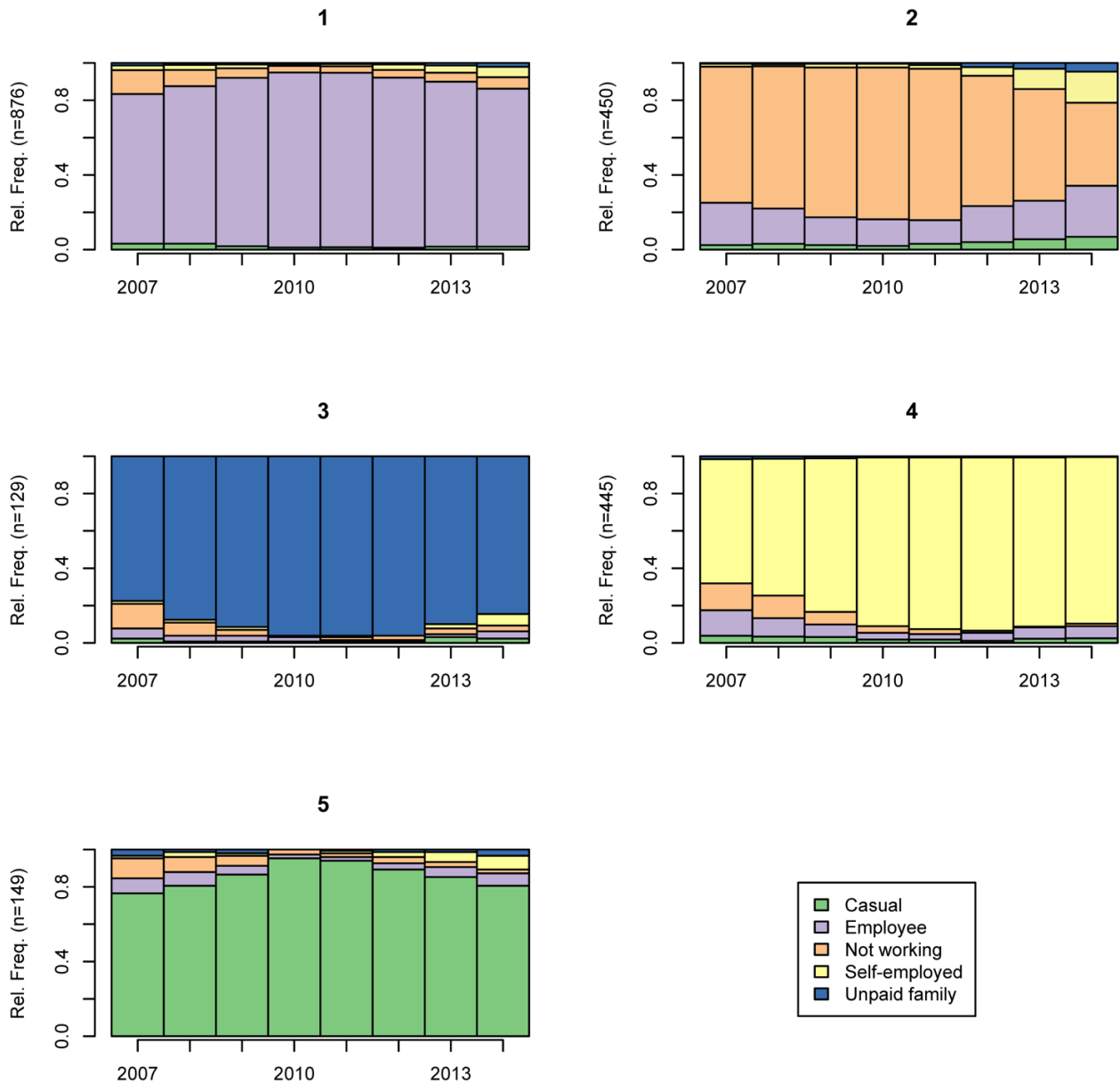
FIGURE 7. State distribution plot for South Africa; youth sub-sample.



Note: Each bar represents the proportion of individuals in a given state at one point in time within a given cluster. Clusters are described on the y-axis: Cluster 1 = “successful” labour market integration. Cluster 2 = difficult labour market integration.

For the Indonesian youth subsample, we obtain a five-cluster solution (see Figure 8). Moreover, these clusters are extremely similar to those obtained for the entire sample. Nevertheless, contrary to the full sample, we find far fewer individuals proportionally in the cluster of individuals who are consistently self-employed (445) as the two most numerous clusters are those who are consistently employees (876) and those who are consistently out of work (450). Compared to the full sample, we notice that individuals are more likely to experience being out of work towards the beginning of their working lives even in the clusters characterised by consistent employment or self-employment.

FIGURE 8. State distribution plot for Indonesia; youth sub-sample.



Note: Each bar represents the proportion of individuals in a given state at one point in time within a given cluster. Clusters are described on the y-axis: Cluster 5 = consistently in casual work, cluster 2 = not working/entering work, cluster 3 = consistently in unpaid family work, cluster 4 = consistently self-employed, cluster 1 = consistently employed.

The regression analysis does not show many surprising patterns either. For South Africa (Table 8), we find that individuals with higher levels of education are more likely to make a successful transition to work as they are far less likely to have trajectories where they spend most of their time out of work or in precarious forms of work. We also find that women are almost four times more likely to be in the cluster having more difficulty making a successful transition into the labour market.

TABLE 8. Logistic regression results for South Africa youth sub-sample for difficult labour market integration vs. “successful” integration.

	Estimate	95% CI
Intercept	0.470 ***	[0.364, 0.604]
Sex (female vs. male)	3.124 ***	[2.494, 3.923]
Education (ref. completed secondary)		
No schooling	1.737	[0.745, 4.210]
Less than primary completed	4.519 ***	[2.706, 7.817]
Primary completed	2.014 **	[1.205, 3.431]
Secondary not completed	1.674 ***	[1.301, 2.155]
Tertiary	0.306 ***	[0.190, 0.480]

Note: Estimates are odds ratios. Education reference category: completed secondary schooling. *** p < 0.001; ** p < 0.01; * p < 0.05

The results for Indonesia (Table 9) broadly follow the same pattern with lower levels of education being associated with more precarious labour market trajectories and individuals with higher levels of education generally being less likely to experience labour market trajectories characterised by being out work or having precarious jobs. In terms of sex-related differences, we find that women are more likely to experience less secure labour market trajectories as they are more likely to be consistently out of work or in unpaid family work overtime, than to be consistently employed.

TABLE 9. Multinomial logistic regression results for Indonesia; youth subsample.

	Casual vs. employee		Not working/entering work vs. employee		Self-employed vs. employee		Unpaid family vs. employee	
	Estimate	95% CI	Estimate	95% CI	Estimate	95% CI	Estimate	95% CI
Intercept	0.110 ***	[0.076, 0.160]	0.132 ***	[0.099, 0.175]	0.424 ***	[0.344, 0.523]	0.030 ***	[0.018, 0.049]
Sex (female vs. male)	0.434 ***	[0.281, 0.669]	7.902 ***	[5.939, 10.514]	0.769 *	[0.599, 0.986]	7.071 ***	[4.442, 11.257]
Education (ref. completed secondary)								
No schooling	2.567	[0.277, 23.760]	1.565	[0.259, 9.454]	1.859	[0.410, 8.421]	18.706 ***	[4.319, 81.017]
Less than primary completed	4.752 ***	[2.954, 7.644]	1.597 **	[1.150, 2.216]	2.327 ***	[1.710, 3.165]	2.751 ***	[1.659, 4.562]
Primary completed	3.442 *	[1.161, 10.203]	2.521	[0.977, 6.505]	2.590 *	[1.216, 5.517]	7.365 ***	[2.373, 22.859]
Secondary not completed	3.201 ***	[1.984, 5.166]	1.510 *	[1.101, 2.070]	1.768 ***	[1.310, 2.387]	2.281 **	[1.376, 3.781]
Tertiary	0.158 *	[0.037, 0.668]	0.311 ***	[0.202, 0.479]	0.530 **	[0.347, 0.809]	0.270 **	[0.110, 0.660]

Note: Reference category for dependent variable: consistently employed. Estimates are odds ratios. Education reference category: completed secondary schooling. *** p < 0.001; ** p < 0.01; * p < 0.05

5. Discussion and Conclusion

Focusing on our descriptive results, we corroborate some of the trends observed in the literature for Indonesia and South Africa. In the case of Indonesia, we do find relative stability in employment situations indicating that once people find work, it is relatively stable with low levels of labour market mobility. However, this also means that there is very little movement out of potentially precarious work overtime. Individuals in casual employment do not usually leave it and the same is true for those in unpaid family work. Moreover, there is a large number of individuals who are consistently self-employed. Therefore, despite individuals' work situation being stable, it also means that movement out of potentially precarious employment situations is low. On the other hand, in South Africa, we find more instability in labour market trajectories overall, in line with expectations based on the existing literature, but also a higher likelihood of individuals leaving more precarious labour market situations and entering more stable ones over time compared to Indonesia. Nevertheless, persistent unemployment or labour market exclusion are also pervasive in South Africa, with a specific and large cluster of unstable labour market trajectories. This finding highlights a stronger vulnerability of workers who are continuously unemployed compared to those unemployed once.

In the case of our youth subsamples, our analyses showed relatively similar trajectories to those identified in the full sample. Nevertheless, in Indonesia, one of the major differences was a higher proportion of individuals outside of employment whose labour market trajectories were characterised by a gradual entry into the labour market. Additionally, we also found a higher chance of young Indonesians moving in and out of employment than in the overall sample. In the case of South Africa, the opposite was true with the overall proportion of young people in employment increasing at a greater rate over the years compared to the full sample. This finding suggests that, on average, young unemployed people are more successful at finding employment than older cohorts.

The regression analyses allowed us to investigate differences in labour market trajectories by age, gender, and education. In both countries, younger as well as older individuals are more likely to be in unstable employment, while prime-age workers are the most likely to have more stable labour market trajectories. In Indonesia, young individuals are the most likely to be out of employment, whereas older individuals are significantly more likely to be in more unstable forms of work (casual employment). The case of South Africa is similar as both the youngest and oldest age groups are more likely to experience unstable labour market trajectories. Thus, in both countries, it is prime-age workers that have the most stable labour market trajectories over time as they are the most likely to remain as employees.

Regarding gender differences, we find that in both South Africa and Indonesia, women are generally more likely to experience trajectories characterised by persistent labour market exclusion (unemployment, not working, unpaid family work). Thus, while the female labour participation is increasing in both countries, women nevertheless remain more likely to be out of employment and experience difficulties in gaining a stable foothold in the labour market. Education generally follows expected patterns with lower levels of education being associated with less secure labour market situations in general, in both South Africa and Indonesia. Consequently, better educational attainment can lead to more labour stability.

The youth sub-samples confirm the same patterns in terms of gender differences with women being more likely to be out of work in both South Africa and Indonesia. In addition, in Indonesia, we again find that women were more likely to engage in unpaid family work and were less likely to be in casual work or to be self-employed. For education, in South Africa we see a clear educational gradient again suggesting that higher levels of education help in favouring more stable labour market trajectories. It is important to note that some differences are not significant due to the very small number of individuals in certain educational categories (notably those with no schooling completed). In Indonesia, once again, lower levels of education are associated with lower chances of being out of work or more unstable forms of work. We find that individuals with tertiary levels of education are significantly less likely to be out of work overtime.¹⁰

Overall, the main findings of this paper corroborate most of the literature indicating that women and individuals with lower levels of educational achievement are more likely to experience unstable labour market trajectories. However, in both Indonesia and South Africa, things are less clear within age groups. While we find that younger workers are generally more likely to be out of work, they are not systematically more likely to occupy insecure jobs in Indonesia. In South Africa, we find that the older individuals are also at greater risk of having labour market trajectories characterised by periods of

¹⁰ Nevertheless, the literature also shows that, in Indonesia, highly educated but younger individuals can be more likely to remain out of employment while looking for the job that best suits them compared to people with lower levels of education.

unemployment or precarious work compared to prime age workers. Future studies may be useful in exploring whether older cohorts may potentially have difficult work to retirement transitions due to interruptions in income, which may lead older workers to delay their exit from the labour market and prolong working in potentially precarious jobs.

As for the overall comparison between Indonesia and South Africa, the main contrasting point is the level of stability in labour market positions. In South Africa, a substantial amount of individuals transition between labour market statuses, while Indonesia is characterised by a higher level of stability. This is, however, a double-edged sword as people in precarious labour market positions are also unlikely to move into more secure forms of work. Therefore, while they are not unemployed, they are also very unlikely to improve their labour market situation at least in the short to medium term. South Africa, despite the extremely high level of joblessness, seems to offer more opportunities to move between labour market statuses. Nevertheless, the country also experiences a strong opposition between individuals who manage to conserve a stable job and those who work in relatively unstable forms of employment.

Despite the strengths of our holistic longitudinal approach, limitations remain with regard to the analysis. Some are inherent to our choice of analysis while others are more general. Taking a holistic or encompassing view of individuals' labour market states with sequence analysis allows us to go beyond simply looking at specific transitions. Secondly, we are limited in our conclusions as the data we have are either not very long in duration (South Africa), or problematic and inconsistent despite covering a long period (Indonesia). However, these problems are not limited to these specific datasets and are, in fact, issues shared with many panel studies past or present. Additionally, there is the problem of attrition in the case of the South African data. As it is a prospective study, people can drop out and therefore we end up with incomplete information about individuals' labour market status. Here we chose to only keep complete trajectories, i.e., individuals who responded to all waves, which can potentially introduce bias as individuals who do not drop out of studies often differ from the general study population and in large part are in more stable situations. In addition, as the data collection for South Africa takes place every two years, there may be transitions or movements between labour market statuses that we simply miss. In the case of Indonesia, despite using retrospective data, which in practice are generally more complete, there is always the risk of recall bias especially for work, as respondents are often likely to underreport time spent out of work or in unemployment. An additional issue is that the labour market statuses used to construct the sequences differ between the two countries despite our best efforts to keep them as comparable as possible. The main limitation is that the Indonesian data does not allow us to distinguish between unemployment and inactivity unlike for South Africa. Furthermore, the labour market statuses do not necessarily correspond to those that appear in labour force surveys, nor do they correspond to existing established definitions such as those of the ILO as both surveys use their own classifications to establish labour market statuses.

There are also many options for future research. It is possible that further waves of NIDS data will be collected, and may therefore continue to offer even more information over time to study labour market trajectories in South Africa. In addition, it offers much more detailed information on the labour market than the IFLS that can be exploited to define more detailed typologies. However, it will take a few years to be able to make longer duration trajectories. Both the NIDS and IFLS offer a wealth of data in other domains as well – especially the simultaneous/parallel evolution of family and working life over time – that can potentially be used to investigate labour market trajectories in parallel with other processes in these emerging economies and therefore deepen our understanding of them. In other words, these rich data sources have the potential to be used for not just labour market trajectories but for studying the life course more generally and to go beyond the traditional geographic regions – mainly North America and Western Europe – covered in past studies. Thus, contrary to labour force surveys, panel studies can be used to explore more broadly the interaction between different life domains and to investigate how people's lives unfold over time. Panel studies go beyond simply providing a snapshot of the labour market at a specific point in time as most labour force surveys do and instead provides the potential for understanding medium and long-term changes at the individual level. However, for panel studies to deliver useful results, they need to run for a long period with the same people and minimising drop-out and attrition in this context is a challenging task. However, conducting them annually can also be expensive as they require interviewing many people and processing large amounts of data. Thus, while panel studies are a useful policy tool in understanding individual- or meso-level dynamics of the labour market and the interaction between the labour market and other life domains, they remain less numerous in low- and middle-income countries (see Vaccaro et al. 2022). This significantly reduces the number of countries that such an analysis can be applied to. Therefore, while the potential for even more detailed and complex analyses exists with panel data, its availability remains limited, which reduces the role it can play in assessing individual-level change over time and potentially evaluating the individual-level effects of policy changes over time.

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