Labour market segmentation in South Africa

JP Geldenhuys

Department of Economics, University of the Free State

Abstract:

Income and wealth disparities are rife in South Africa. One reason for these high levels of economic inequality is a highly skewed earnings distribution, which might be attributed to labour market segmentation. In a segmented labour market, various barriers to entry prevent (or at least substantially hinder) workers in the "secondary" sector(s) from obtaining jobs in the "primary" sector(s). Primary sector jobs are mostly formal sector jobs that offer high wages and salaries, good benefits and lots of job security; secondary sector jobs are mostly jobs in the informal sector that offer low pay, little or no benefits, and little job security. In this paper, I want to determine if the South African labour market is segmented and if there is any worker mobility between the primary and secondary sectors. To this end, I use data from various waves of the National Income Dynamics Study (NIDS). I use both a priori and statistically-driven methods to identify and determine the number of sectors in the South African labour market. In the a priori approach, I make a simple binary distinction between the formal ("primary) and informal ("secondary") sectors (following Heintz and Posel, 2008). In the statistical approach, I use cluster and principal component analyses to determine the number of sectors. After identifying sectors and assigning workers to sectors, I will estimate switching regression models (e.g. Garz, 2013) to determine if the returns to workers' personal characteristics (e.g. education) differ markedly between the primary and secondary sectors. Labour mobility between these sectors will then be analysed using transition matrices and random effects multinomial logit regressions (e.g. Gong and Van Soest, 2002).

1) INTRODUCTION

Income and wealth disparities are rife in South Africa. One reason for these high levels of economic inequality is a highly skewed earnings distribution, which might be attributed to labour market segmentation. In a segmented labour market, various barriers to entry prevent (or at least substantially hinder) workers in the "secondary" sector(s) from obtaining jobs in the "primary" sector(s). Primary sector jobs are mostly formal sector jobs that offer high wages and salaries, good benefits and lots of job security; secondary sector jobs are mostly jobs in the informal sector that offer low pay, little or no benefits, and little job security.

In this paper, my aim is to determine if the South African labour market is segmented and if there is any worker mobility between the primary and secondary sectors. I use survey data from the National Income Dynamics Study (NIDS) to investigate labour market segmentation in the South African labour market. A priori and statistically-driven methods will be used to determine the extent of labour market segmentation in the South African labour market. In the a priori approach, I make a simple binary distinction between the formal ("primary") and informal ("secondary") sectors, while also allowing for further segmentation within the formal and informal sectors (following Heintz and Posel, 2008). Then, in the statistical approach, I use cluster and principal component analyses to determine the number of sectors. After identifying sectors and assigning workers to sectors, I will estimate switching regression models (e.g. Garz, 2013) to determine if the returns to workers' personal characteristics (e.g. education) differ markedly between the primary and secondary sectors.

2) BACKGROUND AND RATIONALE

Given the extent of wage/earnings inequality and unemployment (which, in turn, is associated with high levels of poverty and income inequality) in South Africa, it is imperative to determine if the South African labour market is segmented, and whether the barriers to primary sector employment ("good" jobs with high wages, good working conditions and low labour turnover (Sloane et al. 2013:277) are substantial or not. Furthermore, as Heintz and Posel (2008) note, in an economy with high unemployment and relatively low informal (i.e. secondary) sector employment, significant barriers to (some types) of informal (secondary) sector employment may also exist.

If the South African labour market is indeed segmented and if workers in sectors with "bad" jobs (low wages, poor working conditions and high labour turnover) face substantial barriers

to gaining employment in the primary sector, higher economic growth and further investments in education and training may have limited effects on wage inequality and/or unemployment. A segmented labour market would necessitate the use of labour market policies that actively seek to reduce/eliminate these barriers.

Moreover, in a segmented labour market with a large secondary sector (or sectors), in which workers face substantial barriers in moving to sectors higher up the jobs ladder (i.e. from the secondary to the primary sector), one would expect to observe persistently high levels of low pay. This high prevalence of low pay is associated with high levels of wage/earnings inequality, and may also be related to high levels of household poverty among the employed (i.e. the working poor or in-work poverty, cf. Clark and Kanellopoulos, 2013:122). Attempts to alleviate poverty among the working poor by instituting a high national minimum wage may therefore be counterproductive: if those who receive low pay and who are members of the working poor are mostly secondary sector workers, a high national minimum wage may lead to substantial job losses for workers in this sector, given the precarious nature of secondary sector jobs.

3) LITERATURE REVIEW

In dualist theories of labour market segmentation, workers work in jobs that are located in one of two sectors: "those with low wages, bad working conditions, unstable employment, and little opportunity for advancement (secondary jobs), and those with relatively high wages, good working conditions and opportunities for advancement into higher paying jobs" (Dickens and Lang, 1985:792). Jobs in the primary sector correspond to (depending on the context) jobs in the formal sector, or jobs in urban areas, or jobs in the "modern" sector, while jobs in the secondary sector correspond to jobs in informal sector, or jobs in rural areas, or jobs in the "traditional" sector (Heintz and Posel, 2008). Marginalised or disadvantaged groups often tend to be over-represented in secondary sector jobs (Dickens and Lang, 1985:792; Boston, 1990).

With South Africa's long history of colonialism and apartheid, in which most white workers, and a minority of black workers, occupy primary sector jobs, while most black workers (and especially black African workers) are employed in the secondary sector, it becomes imperative to determine if the South African labour market is segmented, because the significant barriers to entry that exist to primary sector employment cannot be overcome by only investing more in education and training of poor South Africans.

Several studies have found evidence of labour market segmentation for a variety of countries (high-, middle- and low-income), using household survey data. Earlier empirical studies of labour market segmentation focussed on high-income countries, while later studies have included middle- and low-income countries.

Dickens and Lang (1985) used a switching model (estimated simultaneously using maximum likelihood) and found strong evidence in favour of labour market duality in the United States. These findings were corroborated by Boston (1990), who estimated separate earnings functions for the US primary and secondary sectors (and who further estimated these earnings functions separately by sex and race). Furthermore, Flatau and Lewis (1993) used principal component analysis and cluster analysis and identified three (primary, intermediary and secondary) segments in the Australian labour market.

Studies from 2000 onwards find evidence of labour market segmentation in Mexico, Italy, Germany, Turkey and Egypt.

Gong and Van Soest (2002) study labour market segmentation (wage differentials between formal and informal employment, as well as transitions between formal and informal employment) in urban Mexico, using multinomial logit and linear random effects panel regressions. Their results suggest that urban Mexican labour markets tend to have dualistic features for highly educated workers, but not for less educated workers.

Howell (2011) uses principal component and cluster analysis to identify and determine the number of sectors in the Urumqi (Xinjiang, China) labour market and then subsequently groups workers into three segments/clusters (primary-independent, primary-subordinate, and secondary). Using (canonical) discriminant analysis, he finds that a significant amount of the variance in the discriminant scores are due to differences between these three sectors (indicating the presence of three labour market segments in Urumqi).

Salem and Bensidoun (2012), using finite mixture models, find evidence of labour market segmentation in informal employment in Turkey. They use information criteria (AIC or BIC) to decide on the optimal number of segments to use (i.e. the number of segments that minimises the AIC and/or BIC). Battisti (2013), also using finite mixture models, find large differences in the returns to human capital between homogenous Italian workers in different markets/segments. Since the number of segments needs to be decided on before estimation of the mixture model, the number of segments was identified using information criteria (AIC

and/or BIC) to determine if the addition of a further segment to the mixture model increased the explanatory power of the model, relative to the increase in heterogeneity.

Garz (2013) uses (panel) switching regressions and finds evidence of labour market dualism in Germany: the two identified segments correspond to regular and non-standard employment and the estimated probabilities from a regime-switching model were used to assign sector affiliation to individual workers). There is also evidence of a primary sector wage premium, as well as barriers to primary sector entry. Furthermore, Radchenko (2014), using a (non-parametric) model with essential heterogeneity, finds evidence of labour market duality (corresponding to the split between the formal and informal sectors) in Egypt.

There is also evidence that the South African labour market is segmented: Heintz and Posel (2008) find evidence of a wage premium between the formal and informal sectors, and also find evidence that the informal sector is segmented. They use ordinary least squares (OLS) to estimate Mincerian earnings functions for South Africa. Using Chow tests, they find evidence of labour market segmentation (i.e. they reject a common or pooled earnings function), not only between the formal and informal sectors of the SA labour market, but also within the formal sector. The findings about informal sector segmentation are in line with findings from other countries, e.g. Günther and Launov (2012), for Cote d'Ivoire; Salem and Bensidoun (2012), for Turkey; and Radchenko (2014), for Egypt.

4) DATA

Survey data from the National Income Dynamics Study (NIDS) will be used to investigate the extent of labour market segmentation in the South African labour market. NIDS is the first nationally representative South African panel study, and is undertaken by the South African Labour and Development Research Unit (SALDRU) at the University of Cape Town (UCT). SALDRU conducted the first wave 2008, while the second, third and fourth waves were conducted in 2010-11, 2012 and 2014-15. During the first round, 7305 households (about 28000 individuals) were interviewed (Leibbrandt et al. 2009), while subsequent survey rounds have tracked these same individual household members over time (Chinhema et al. 2016).

5) METHOD

This section describes the methods that will be used to investigate the extent of labour market segmentation in the South African labour market.

Both a priori and statistically-driven techniques will be used to identify and determine the number of segments in the South African labour market. In the a priori approach, a simple (binary) distinction between formal and informal employment (segments) will be made. Then, following Heintz and Posel (2008), the formal and informal sector employment will be divided into further sectors or segments (formal agricultural employment, formal non-agricultural employment, formal self-employment, etc.). Lastly, Boston's (1990) occupational segmentation will also be used to identify primary and secondary sectors. Alternatively, measures that try to capture the casualization of employment will be considered. After assigning workers to sectors using these a priori approaches, switching regression models will be estimated to determine if the returns to education (and other personal characteristics) differ between formal and informal sector workers (cf. Garz, 2013).

In addition to the a priori approach described above, multivariate statistical techniques will also be used to obtain the number of segments in the South African labour market. Specifically, this study uses principal component and cluster analyses to determine the number of segments (cf. Howell, 2011), after which switching regressions will be estimated to determine if these segments differ markedly (regarding the returns to the personal characteristics of workers).

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