# Chapter 4

# Cities are at the Centre of South Africa's Wage Inequalities

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## Introduction

Transformation of the South African labour market is imperative for building a more equitable and prosperous future. The 'triple challenge' of inequality, poverty, and unemployment all have their roots in a slack domestic labour market.[1] Yet, to date, the majority of scholarly work on labour market outcomes in South Africa has focused on micro supply-side issues, or, in other words, on the barriers that exist in the lives of workers, particularly among the youth.[2] Demand-side macro factors, by contrast, such as the impact of technological change, globalisation, and urbanisation, have been largely neglected.

A key dimension in understanding the demand for work is the evolving geography of wages and employment, particularly in cities. The migration of workers from farm to factory and from countryside to city underpins many traditional theories about how economic development is expected to unfold.[3] A central idea is that workers benefit from moving from low-wage, low-value agricultural activities to higher-wage, higher-value industrial production, which is located in cities. Yet, in many parts of the world, including South Africa, urbanisation has not been associated with industrialisation, but rather mass unemployment.[4]

Contemporary economic theory goes further, to suggest that urbanisation itself can drive national development, rather than just being associated with industrialisation. This is because the dense concentration of firms and workers geographically can lead to positive benefits that would not exist if production was spread out evenly (but thinly) across the country (referred to as

'agglomeration economies'). Agglomeration is such an important ingredient in economic development that economists commonly measure the impact of city size on firm-level performance. For example, the World Bank (2009)[5] estimate that a doubling of city size can increase firm-level competitiveness (typically measured by 'productivity', which is the efficiency in turning inputs into outputs) by between 3% and 8%.

There are a variety of ways in which spatial concentration might offer economic benefits, although the relative importance and mechanics of the relationship is the source of ongoing debate. This goes all the way back to Adam Smith's *Wealth of Nations* (a founding treatise on modern economics), where Smith explains the importance of specialisation in boosting production. Physical proximity in local markets – which connects a critical concentration of firms, workers, suppliers, and raw materials – is the basis for deepening specialisation. In general, larger markets tend to operate more efficiently than smaller markets, because of tighter matching between demand and supply. Firms share in the collective benefit of a richer pool of local resources, such as access to scarce skills and experience in the workforce or the quality of their suppliers. In this way, many cities develop reputations as production hubs in a particular sector or 'cluster' of economic activity.

In addition, economic concentration can also offer advantages for firms, not only in terms of their depth (i.e., specialisation), but also breadth (i.e., diversification). The biggest cities are often attractive for investment because of the capacity for innovation which is often related to crosspollination across industries. The spread and spillover of knowledge between local actors is often dependent on physical proximity because of the complex manner in which new (inherently unstructured) information is explored and exchanged. As a consequence, the economy is usually most dynamic and diversified in large cities.[6]

Despite the importance of agglomeration for economic development, many scholars caution against a simplistic or deterministic view of 'bigger is better'. There are clearly negative consequences to urbanisation if population growth is not matched

by large investments into the built environment that can ensure adequate service delivery and connectivity. There are obvious limits to how much any city can grow, because of rising levels of congestion, contagion, crime, and pollution.[7]

South African cities are no exception, with growing concerns over the lack of maintenance and new investment in transport, housing, and service infrastructure.[8] The influence of geography on labour market outcomes is bound to be amplified because of the legacy of apartheid spatial planning. For instance, South African cities continue to disadvantage the bulk of the poor black population because of the physical separation between where they live and work.[9]

To the best of the authors' knowledge, there is no prior research which examines the role of South African cities in (re) producing wage or income inequalities. This is surprising, given that approximately 65% of all formal jobs in the country are concentrated in the metropolitan municipalities (metros), with 38% in the Gauteng metros alone (according to our estimates from the Spatial Tax Panel). The sheer size of the pool of labour in cities means that national trends are dominated by, and skewed towards, outcomes in these places. Earning potential is intertwined with a range of local factors, including the structure of industry, quality of infrastructure, transport and related costs of living, among others, all of which have been neglected in studies of the South African labour market.

The goal of this chapter is to better understand the position of cities in contributing to wage inequalities in South Africa. A key question is: Are wage inequalities particularly high in the metros in comparison to the rest of the country? A follow-up question is: do earnings differ comparing cities of different sizes? How is this related to their industrial composition? Lastly, how have wage inequalities evolved over time in each of the metros?

## The Role of Cities in Wage Inequality

There are good reasons to study urban inequalities alongside – or, at least, in addition to – national inequalities.

An individual's perception or experience of inequality is dependent on where they live: how standards of living change within their neighbourhood, district, city, and country.[10] For example, there is evidence that rates of crime are better explained by the degree of local inequality than absolute levels of depravation.[11] The same is true of civil unrest in South Africa, which is not simply correlated with poor service provision but with the disparity between neighbourhoods and communities.[12]

Another distinctive feature of spatial inequality is the importance of class-based segregation. The sorting of individuals based on income and affordability compounds inequalities because the "...more skilled not only take home more money, but also benefit from better neighbourhoods, superior amenities, and better schools".[13] Neighbourhood-based patterns of advantage or disadvantage are persistent, and can have a strong influence on individual and inter-generational mobility.[14] In contrast, national measures of inequality are not affected by the extent of spatial segregation. Therefore, an exclusive focus on national levels of inequality risks ignoring a fundamental mechanism of class-based privilege which has a distinct spatial element. This is particularly relevant for South African cities, which have among the highest levels of segregation in the world.[15]

A related concern is that the policy levers for addressing local or area-based inequality are not necessarily the same as when reducing national levels of inequality.[16] The relative ease of mobility between city administrative boundaries means that local authorities might struggle to enforce redistributive measures, in contrast to national policies. So the relationship between national and area-based inequality, along with the deeper drivers of spatial inequality, warrants explicit attention.[1]

A review of the international literature on global inequality highlights a few key trends which have implications for

1 Ironically, higher levels of segregation can result in lower levels of local inequality if inequality is measured at a very disaggregated scale. To illustrate, the extreme case of total segregation between rich and poor communities could actually produce perfect 'local' equality because everybody has the same income level in that region/area.

labour market outcomes in cities. One important theme is the polarisation of wage distribution, or, in other words, the rise in concentration of both high-wage and low-wage jobs.[17] This has been the experience of many post-industrial cities located in the Global North because of the globalisation and off-shoring of manufacturing jobs to cheaper locations such as China. These lost blue-collar work opportunities had previously occupied the middle band of wage distribution, resulting in a 'hollowing out' of wage distribution.

A closely related issue is skills-biased technological change which has also exacerbated inequalities.[18] Not only have blue-collar jobs been lost in advanced economies, but competitive advantage has fundamentally shifted towards new forms of knowledge-based capitalism. Large multinational and national corporations maintain their lead positions within global value chains by command of knowledge-intensive activities, including R&D, branding and marketing, dissemination of lead technologies, access to finance, and setting standards and certifications.[19] This has disproportionately increased demand for high-skilled work such as professionals, managers, technicians, scientists, and so forth.

Cities feature prominently in the rise of the knowledge economy as the main organising units for pools of talent.[20] While there is debate about whether workers relocate in response to the location of firms, or rather, that firms relocate in response to the location of talent, in either case, the role of agglomeration is central.[21] The influential research by Sassen (2001; 2006)[22] on global cities similarly describes the growing spatial polarisation between high- and low-wage earners in prominent cities. This is related to high earnings for skilled professionals involved in financial and modern business services alongside localised demand for services of low-skill, low-wage workers involved in non-tradable activities such as personalised care, retail trade, the preparation of food, and entertainment. For example, Baum-Snow and Pavan (2013)[23] have shown that there is a strong positive relationship between overall city size and inequality for metros in the USA.

The discussion about cities and inequality is usually studied from the perspective of cities in the Global North. More research is needed to uncover themes for emerging cities in developing countries such as South Africa. For instance, countries in East Asia such as China have benefited from the outsourcing and relocation of blue-collar work from advanced economies, but this has not yet been the case for Africa or Latin America.[24] It is also not clear whether firms located in cities in developing countries can compete at the frontier of the knowledge economy.

Only a handful of studies about the South African labour market deal explicitly with spatial inequalities, although rural-urban estimates are sometimes available.[25]

Mudiriza and Edwards (2021)[26] examine regional wage disparities across magisterial districts in South Africa and find that former homeland regions continue to pay workers less even after controlling for important differences in workforce education or city size. David *et al* (2018)[27] produce municipal level estimates of poverty and inequality based on the Census 2011. The study helps highlight the significant variation in development indicators across municipalities, but focuses mainly on regional poverty trends in former homelands, rather than on cities. Visagie (2018)[28] underscores the challenge of measuring regional labour market outcomes from labour force surveys because of the reduced sample size. Yet, despite a blunt instrument, high levels of spatial inequality still allow for spatial patterns to be identified. None of these studies examine the role of cities or urban labour markets specifically, nor their contribution to wage or income inequalities in South Africa.

Overall, the contribution of cities to wage inequalities is still an emerging theme within the international literature.[29] Most research is limited to studies of the USA, Canada, the UK, and other Western societies.[30] Yet disparities in the physical characteristics of emerging and advanced cities respectively are very noticeable and could have a significant impact on labour market outcomes. South Africa is no exception, where the legacy of apartheid continues to exacerbate inequalities in standards of living and service delivery between rich and poor communities.

## Data and Methods

A lack of research about the spatial dimensions of wage or income inequality in South Africa is partly driven by the absence of reliable data for sub-national analysis. This chapter draws upon a new source of spatial data which is constructed from tax data, known as the Spatial Tax Panel.[31] An advantage of administrative data (as opposed to survey data) is the potential breadth of coverage which, in this instance, provides information on tax-paying individuals in all 213 local municipalities in South Africa – including each of the metropolitan municipalities. This level of spatial detail has not been possible, except in the decennial population Census.

The Spatial Tax Panel provides an impressive range of labour market indicators, including total employment, employment by wage band, the wage Gini coefficient, and median wage levels. The 'wage' data is defined here broadly to include a wide range of labour-related earnings and benefits including salaries, allowances, medical expenses, bursaries, retirement contributions, etc.[32] The tax data covers anyone earning more than R2 000 *per annum* (the legal threshold for companies filing IRP5/IT3a certificates) and so offers comprehensive data on workers from across the income spectrum – even if a person earned too little to actually contribute to Pay-As-You-Earn (PAYE) tax. In many instances, the database goes even further to allow for cross tabulations by industry (at a five-digit standard industrial classification (SIC) level), age, and gender, among others.

However, a noticeable gap in the Spatial Tax Panel is the absence of informal firms and workers (i.e., where no tax certificates are generated) as well as individuals who fall outside of the workforce (i.e., individuals who are not economically active or unemployed).[2] For instance, this would mean the

2 In addition, tax data represent the total number of employer-employee relationships, rather than total employment in the labour market, because some individuals are employed by multiple firms at the same time and hence generate more than one IRP5 tax certificate. Whilst individuals may transition between firms (or become unemployed) within a tax year, IRP5 certificates have been converted to full-time equivalents for that year to avoid double counting.

exclusion of most domestic workers in South Africa. Despite this limitation, South Africa has relatively low levels of informality when compared with the rest of Africa. As such, employment in the formal sector represents as much as 94% of Gross Domestic Product and approximately 83% of national employment.[33]

The methodological approach in this chapter is descriptive, as an initial step towards better understanding spatial patterns of wage inequality in South Africa. It is important to note that estimates of wage inequality presented here represent labour market outcomes *among the employed*, which are further limited to *formal workers*. By contrast, estimates of income inequality include all households or individuals (i.e., both employed and unemployed) and all sources of income (i.e., earnings, social grants, remittances, etc). Therefore, income inequality is a more comprehensive concept than wage inequality, although there is a strong correlation between both measures. The bulk of labour market inequality in South Africa is from inequality in earning distribution, rather than households with no access to employment.[3] That said, the correlation between wage and income inequality might be weaker for many rural municipalities, which lack a formal economic base. A focus on wage inequality is a good place to start with the available data.

## Results

### The geography of employment and wage inequality in South Africa

Figure 1 shows the geographical spread of total (formal) employment across the country, based on tax data. The results are striking and clearly show the heavy concentration of employment in the eight metros compared with the rest of the country. In fact, the four largest job centres – Johannesburg (JHB), Tshwane (TSH), Cape Town (CPT), and eThekwini (ETH) – account for 52%

3 Leibbrandt *et al* (2012) decompose income inequality for households and find that 38% and 62% of household wage income inequality is attributable to households with no employment (i.e., zero wage income) and inequality amongst wage earners, respectively.

of total formal employment in the country. The clear implication is that what happens in each of these urban labour markets would have a disproportionate impact on national employment outcomes. It also reaffirms the central position of cities as drivers of national labour demand and points to the importance of spatial concentration or 'agglomeration economies' for national economic development.

Do cities also exhibit higher levels of wage inequality? Figure 2 shows the geography of earning inequality (among formal wage workers) across the country, as measured by the Gini coefficient in each local municipality.[4] While the wage Gini is high across the whole country, metropolitan municipalities consistently fall into the top two tiers in wage inequality rankings among municipalities (in other words, in the 4th or 5th quintiles). The exception is Buffalo City (BUF), which falls into the middle (3rd) quintile, probably because of a concentration of unionised and protected government jobs.[5] There is also a fair share of variation in wage inequality between municipalities, with the Gini rising from a lower score of 0.42 at the 10th percentile to an upper score of 0.65 at the 90th percentile. The reason why some municipalities have higher or lower wage Gini scores requires more detailed investigation., yet the key point is that the metros are associated with higher levels of earning inequality compared with the rest of the country.

4 The Gini coefficient is a statistical measure, ranging from 0 to 1, used to quantify income inequality within a population, with 0 representing perfect equality and 1 indicating extreme inequality.

5 Tshwane also had a slightly lower Gini score than the other metros, probably for the same reasons as Buffalo City, but still managed to fall within the 4th quintile.

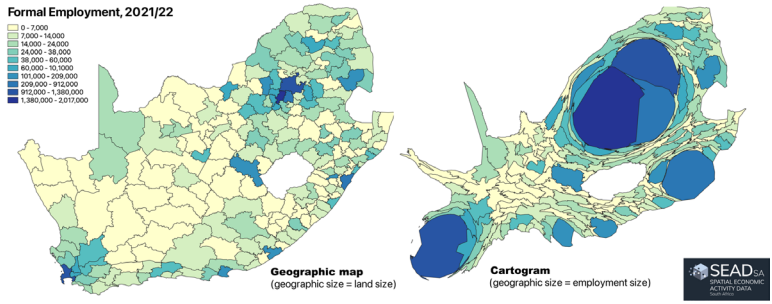


**Fig. 1** Total formal jobs by municipality, 2021/22; Source: Nell, A. and Visagie, J. (2023). Spatial Tax Panel 2014-2022, Version 3

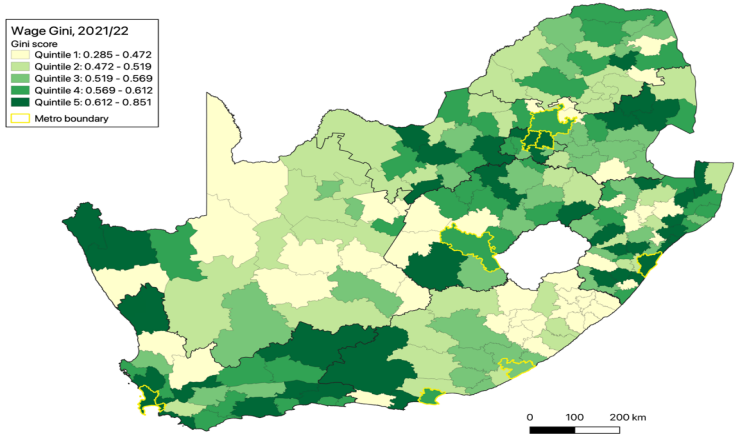


**Fig. 2** Wage inequality by municipality, 2021/22; Source: Nell, A. and Visagie, J. (2023). Spatial Tax Panel 2014-2022, Version 3

### Wage inequality and wage levels between South African cities

A main question is whether there are any noticeable disparities in wage inequalities between metropolitan municipalities. Looking more closely at wage inequalities in each of the metros, we find that inequality appears to be higher overall for larger metros, notwithstanding some year-on-year fluctuations. Figure 3 shows

how levels of wage inequality can be ranked by the four largest and four smallest metros (by population size). This matches up with empirical findings of cities in the USA where inequality is similarly correlated with city size.[34]

Higher wage inequalities in larger cities might be attributed to their mature industrial profiles, which attract workers with a wide range of skill sets and experience. In contrast, the government is typically the primary employer in smaller metropolitan areas, offering more consistent wages. Among the metros, Johannesburg consistently displayed the highest levels of income inequality. This is understandable, considering Johannesburg's role as a prominent financial and business service centre, and a headquarters for big business.

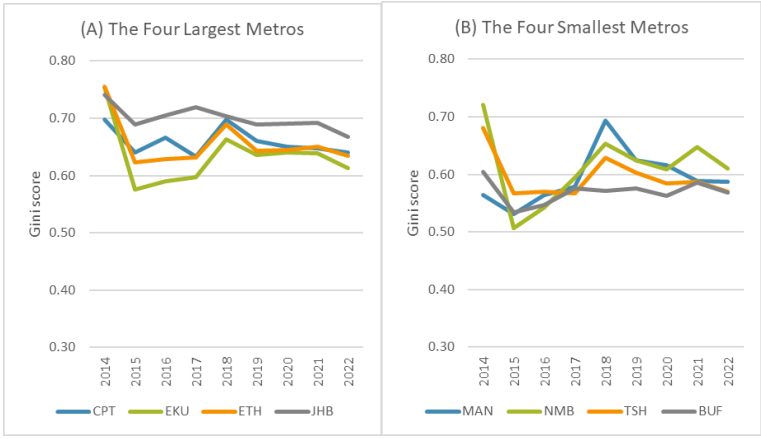


**Fig. 3** Wage Gini coefficient by metro, 2013/14–2021/22; Source: Nell, A. and Visagie, J. (2023). Spatial Tax Panel 2014-2022, Version 3

In addition to overall levels of earning inequality, Figure 3 also reveals the trends over time in wage inequality between 2014 and 2021. While the degree of inequality is more volatile over time for the smaller metros than for the larger metros, none of the metros show much of a discernible trend over time. We find no clear evidence that wage inequalities are decreasing in any of the eight metros. The exception might be Johannesburg, where the Gini

falls slightly, from 0.74 to 0.67, although Johannesburg is still the metro with the highest earning inequality overall. This change seems to have occurred during a period of economic stagnation for South Africa's largest city, rather than as a positive outcome of structural transformation. A longer time horizon would help confirm the trend.

Median wages are another useful way of comparing labour market returns between regions. Median income is a calculation of the midpoint in the earning distribution, where half of all workers earn more, and half earn less, than the median wage. A main advantage of the median is that it is not influenced by extreme high or low values, whereas a small number of exceptional income earners can inflate *average* (mean) wages. Figure 4 shows the levels and trends in median wages by metropolitan municipality over time. Wages have been adjusted for inflation in order to take into account that costs of living rose over time.

The disparity in average earnings across metros is a distinctive feature of the figure. The ranking or hierarchy in the levels of median income is fairly stable over the period (despite the downward trend discussed in the next paragraph). The larger (or smaller) metros do not necessarily offer higher (or lower) median wages. Tshwane offers the most favourable median wage level; second is Johannesburg, followed by a cluster in the middle comprising Ekurhuleni, Nelson Mandela Bay, and Mangaung. The bottom three are Buffalo City, Cape Town, and finally, eThekwini. The difference between median wages for the top (Tshwane: R14 607) and bottom (eThekwini: R8 152) ranked metros in 2021/22 is surprisingly large at more than R6 000 per month. This once again reinforces the reality of significant geographical earning differences between different parts of the country – even when comparing metros.

Another important finding is evidence of what appears to be a serious erosion in median wages across all of the metros over the past eight years. This figure implies that the 'average' wage worker in South African cities is getting poorer because wages at the middle have not kept pace with inflation. A number of studies point to a polarisation or hollowing out at the middle of the South

African earning distribution.[35] More careful research is needed to confirm the trend and its applicability across the rest of the distribution. Yet the overall impression from Figure 4 is clear: average worker earnings across the metros have deteriorated over the past eight years, which is consistent with South Africa's sustained poor economic growth.

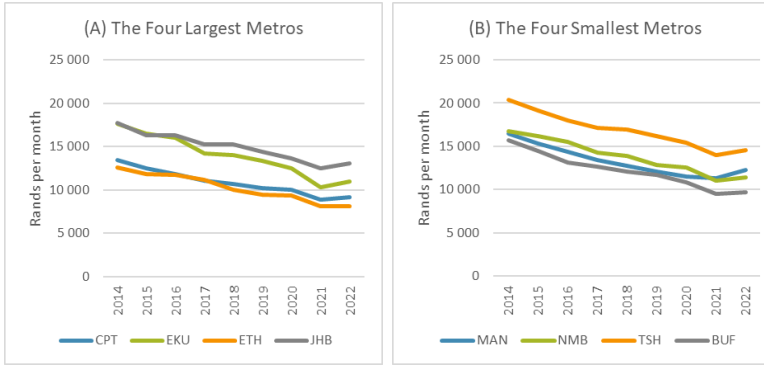


**Fig. 4** Median wage by metro (constant Dec 2021 prices), 2013/14–2021/22; Source: Nell, A. and Visagie, J. (2023). Spatial Tax Panel 2014-2022, Version 3

*Note: adjusted to constant prices according to the Consumer Price Index (base: Dec 2021)*

Gini coefficients and median wages are summary measures to understand the evolution of wages. A fuller picture of labour market earnings is offered by wage bands, as contained in Figure 5. This shows the full range of earning or wage 'distribution' from low to high earners. The results are understandably more nuanced, but generally reinforce the point that there are important differences between metros.

A few important subtleties in the wage distribution are worth mentioning.

First, Johannesburg has double the percentage of earners in the highest earning bracket when compared to other metros, with approximately 4% of workers earning more than R100 000 per month. This corresponds with Johannesburg's higher Gini score

when compared to other metros, which is evidently driven by a concentration of top-paid executives.

Second, eThekwini (39%) and Cape Town (36%) have greater shares of people earning less than R6 400 per month. The high concentration of low-wage earners in these coastal cities is difficult to interpret. It could be related to the prominence of tourism and retail sectors, which generally offer lower wages due to factors such as lower skills requirements, higher levels of competition, and the seasonal nature of some jobs.[36]

Last, the metro wage distributions appear to lack a consistent peak, with the heaviest concentration of earners in some cases falling in a low R3 200-R6 400 monthly wage band (such as in eThekwini, Buffalo City, and Cape Town), and sometimes falling in a high monthly wage band of R25 600-R51 200 (such as in Tshwane). Ekurhuleni had the highest concentration of workers in the middle wage band, with 46% of workers earning between R6 400 and R25 600. The same middle tier made up less than 37% of all workers in Buffalo City. A stronger middle wage tier in Ekurhuleni is consistent with the larger share of manufacturing or 'blue-collar' workers in Ekurhuleni. Notwithstanding the fact that wage bands offer a fairly crude representation of the earning distribution, the evidence does suggest that too few individuals fall into the middle, which is symptomatic of high levels of wage inequality.

**The role of industry specialisation in explaining wage inequalities between cities**

There are clear differences in earning potential across South African cities, as presented in the section above. A key question is the extent to which differences in wage levels can be explained by differences in the industrial profile of each city. We expect the industrial mix to matter for wages because of differences in occupations and skills demanded by different sectors. Alternatively, do local conditions have a decisive influence on what workers earn, irrespective of sector? This could be because of the quality of local infrastructure, the degree of specialisation,

good governance, and ultimately differences in productivity between cities.

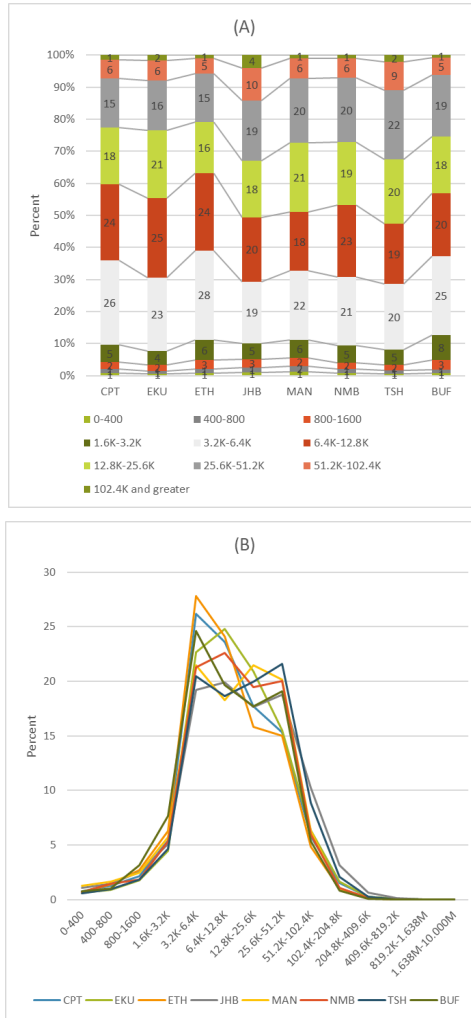


**Fig. 5** Employment by wage bands and by metro, 2021/22; Source: Nell, A. and Visagie, J. (2023). Spatial Tax Panel 2014–2022, Version 3

*Note: Diagrams A and B are different representations of identical data, using different visual tools to enhance clarity.*

Table 1 combines information about average wage levels across metros together with information about average wages in industries to allow for a comparison of wages by sector between metros.

As seen in the table, economic sectors play an important role in driving wage differences between cities because not all sectors of the economy pay the same. In general, the highest-paying sectors (in terms of formal employment) include utilities, finance, and mining, with average wages in excess of R40 000 per month in some places. The lowest-paying sectors include administrative services, tourism, retail, and agriculture, which frequently pay less than R15 000 per month on average.

Yet the table also reveals the insufficiency of the industrial composition as the only reason behind wage inequalities. When comparing average wages between cities in the *same sector*, the differences can be striking. For instance, the average monthly wage level in utilities is as high as R59 312 in Johannesburg but as low as R11 479 in eThekwini. This probably has to do with the influence of Eskom, which has its head office in Sandton. The same is true of financial services, which pays, on average, R51 147 in Johannesburg but only R21 413 in Buffalo City. Again, Johannesburg is headquarters to most of the big banks in South Africa.

In other words, while some sectors pay better than others, it is also true that some cities pay better than others, even when comparing differences within sectors. The descriptive evidence suggests that, in general, workers from Johannesburg receive higher average wages in any sector, while workers in the smallest metros (Buffalo City and Mangaung) seem to experience some wage penalty. Further research is needed to unravel the role of place-based factors from that of a range of important demographic and demand-side features, including industry, occupation, education, age, and experience.

A final approach to understanding wage differences between cities is a focus on top earners. Table 2 shows the top three economic sectors in each metro, ranked according to the greatest concentration of highly paid workers – workers earning

**Table 1** Mean monthly wages by sector and by metro (in rands), 2018/19. Source: Nell, A. and Visagie, J. 2023. Spatial Tax Panel 2014–2022: Version 3

*Note: Mean wages are calculated by imputing the mid-point of each wage band. This is a rough approximation of the mean wage.*

| Sector | All Metros | JHB | EKU | TSH | CPT | ETH | NMB | BUF | MAN |
|---|---|---|---|---|---|---|---|---|---|
| ALL | 22 187 | 29 198 | 23 274 | 26 664 | 20 190 | 18 852 | 21 957 | 20 850 | 21 550 |
| AGRIC | 16 091 | 19 033 | 13 431 | 18 709 | 14 133 | 18 161 | 14 639 | 8 397 | 11 751 |
| MINING | 41 377 | 52 019 | 35 689 | 30 227 | 51 314 | 33 763 | 14 402 | 14 043 | 24 701 |
| MANU | 25 223 | 31 976 | 27 480 | 24 912 | 18 026 | 22 026 | 26 340 | 15 801 | 15 446 |
| UTILITIES | 46 804 | 59 317 | 23 670 | 19 871 | 31 466 | 11 479 | 14 583 | 21 178 | 41 643 |
| CONST | 18 240 | 23 353 | 22 868 | 15 582 | 14 911 | 13 532 | 15 018 | 12 810 | 13 814 |
| RETAIL | 15 880 | 19 115 | 19 670 | 16 157 | 13 340 | 13 496 | 14 305 | 13 370 | 14 529 |
| LOGISTICS | 27 773 | 34 138 | 28 343 | 25 752 | 22 066 | 25 317 | 18 109 | 17 526 | 17 284 |
| ICT | 39 578 | 45 061 | 36 534 | 45 330 | 27 982 | 28 172 | 31 714 | 30 920 | 26 072 |
| TOURISM | 12 416 | 14 511 | 12 548 | 11 059 | 11 770 | 11 904 | 9 361 | 9 364 | 10 660 |
| FIN | 43 558 | 51 147 | 28 469 | 40 100 | 38 577 | 25 686 | 28 454 | 21 413 | 29 549 |
| PROF SERV | 34 469 | 40 941 | 28 369 | 34 755 | 31 768 | 24 651 | 24 670 | 25 748 | 23 502 |
| ADMIN SERV | 10 742 | 10 495 | 11 244 | 12 493 | 12 976 | 8 768 | 9 835 | 7 000 | 9 177 |
| GOV SERV | 37 143 | 36 018 | 35 519 | 39 315 | 36 750 | 36 260 | 37 258 | 35 337 | 35 889 |
| HEALTH&EDU | 21 131 | 21 804 | 18 942 | 22 967 | 19 866 | 21 179 | 19 800 | 18 955 | 17 788 |
| OTHER | 17 484 | 21 974 | 17 896 | 15 939 | 15 919 | 12 930 | 13 142 | 13 714 | 12 035 |

more than R51 200 per month. In addition to the absolute number of highly paid workers in each sector, we also calculate the share of highly paid workers against the total workforce in that sector. This is the relative intensity of highly paid workers amongst all workers in that sector. A greater intensity means that the economic sector offers a greater proportion of workers with high earnings.

**Table 2** Workers earning R51 200+ per month by sector and by metro, 2021/22

| | Rank | Sector | Total | Intensity (%) |
|---|---|---|---|---|
| JHB | 1 | FIN | 63,738 | 31.6 |
| | 2 | ICT | 33,213 | 29.4 |
| | 3 | MANU | 1,351 | 17.5 |
| EKU | 1 | MANU | 23,494 | 12.1 |
| | 2 | RETAIL | 9,026 | 8.4 |
| | 3 | GOV SERV | 7,143 | 11.5 |
| TSH | 1 | GOV SERV | 43,332 | 17.0 |
| | 2 | HEALTH&EDUC | 12,982 | 10.3 |
| | 3 | PROF SERV | 11,768 | 18.7 |
| CPT | 1 | GOV SERV | 16,795 | 11.4 |
| | 2 | RETAIL | 16,563 | 4.6 |
| | 3 | FIN | 16,484 | 17.2 |
| ETH | 1 | MANU | 12,767 | 9.2 |
| | 2 | GOV SERV | 11,928 | 9.4 |
| | 3 | RETAIL | 6,679 | 3.9 |
| NMB | 1 | MANU | 5,403 | 11.2 |
| | 2 | GOV SERV | 4,182 | 11.6 |
| | 3 | RETAIL | 1,462 | 5.3 |
| BUF | 1 | GOV SERV | 5,601 | 11.7 |
| | 2 | MANU | 966 | 6.3 |
| | 3 | RETAIL | 648 | 4.0 |

| | Rank | Sector | Total | Intensity (%) |
|---|---|---|---|---|
| MAN | 1 | GOV SERV | 5,263 | 12.4 |
| | 2 | HEALTH&EDUC | 1,930 | 8.6 |
| | 3 | FIN | 885 | 16.9 |

*Source: Nell, A. and Visagie, J. (2023). Spatial Tax Panel 2014-2022, Version 3*

*Note: Intensity represents the percentage of all workers within the sector earning R51 200 or more per month.*

A noticeable feature of the table is how the ranking of the top three sectors for highly paid workers changes across metros. This is useful in recognising the specialisation of each metro economy. For instance, Johannesburg can be characterised as a financial centre (finance is ranked first), Ekurhuleni as a Manufacturing-logistics centre (manufacturing is ranked first), Tshwane as a national government and professional services centre (Government services is ranked first and Professional services third), etc. Each city's strength is rewarded in the labour market.

It is also interesting to see how the intensity of high-income earners by sector fluctuates across the metros. In other words, what percentage of the workforce in each sector falls into top earning brackets. For instance, within manufacturing, 17.5% of workers earn above R51 200 per month in Johannesburg, compared with just 6.3% of manufacturing workers in Buffalo City. The same is true of finance, where 31.6% of workers in Johannesburg fall into the top-paying bracket, compared with 16.9% in Mangaung. The large number of high-paying jobs in government services is apparent in most metros, fluctuating between 9.4% in eThekwini and 17% of public sector jobs in Tshwane. Overall, Johannesburg and Tshwane stand out with both the largest number and greatest intensity of top-paying jobs in their three top-ranked sectors.

## Conclusion

The poor performance of the South African labour market is one of the greatest puzzles of our time. We have made the case that

cities are central in reproducing wage inequalities. The sheer size of employment concentrated in the largest metros implies that local conditions should not be ignored. Firms and workers must interact in their local environment, which is often distinctive in terms of the size of the market, industry mix, quality of the built environment, and influence of local actors including government, organised labour, local business forums, universities, and civil society. This reinforces the need for a holistic approach to labour market reform.

We repeat some the key insights emerging from our analysis of wage inequality in formal employment based on tax data. First, wage inequalities tend to be higher within cities, compared with the rest of the county. The role of cities in driving wage inequalities is amplified by the sheer concentration of employment in South Africa's bigger urban centres. In addition, wage inequalities are persistently high over the period 2013/14 to 2021/22, with little sign of improvement. In fact, median wages (in constant prices) declined significantly over the period because wages did not keep pace with inflation. Further research is needed to establish whether this was an issue for earners at the middle of the earning distribution, or more widespread.

Second, there is evidence of a hierarchy in degrees of inequality and wage levels between cities. For instance, wage inequalities are highest in Johannesburg, which also paid better median wages and had double the percentage of top earners (above R100 000 per month), compared to other metros. On the other hand, earning inequalities are lower in Buffalo City and Tshwane. The median wage level in Tshwane was as much as R6 000 per month higher than in eThekwini.

Third, the structure of industry explains some of the wage variation between metros, but is insufficient as the only reason behind earnings differences. While certain industries offered higher salaries than others, it is equally true that specific cities offered higher wages than others, irrespective of industry. The same message is repeated when looking at the concentration and intensity of top-income earners by sector, which showed significant variation both within, and between, cities and

sectors. Johannesburg and Tshwane stand out with the highest concentration of top earners.

The implication of our findings for policymaking is that it makes sense to bear in mind the unique characteristics of local labour markets when tackling labour market reforms. This could start with an evaluation of the goals of local industry plans and their knock-on effects for wages and labour absorption in the local economy. Education and training programmes could also be designed in close collaboration with local business in order to better align with workplace demand. Another opportunity is for deeper exploration of wage profiles by sector (and sub-sector) as a way of identifying potential hotspots of non-compliance with regulatory protections. Any of the above interventions would depend on further investment in research and experimentation in order to design and test a more targeted approach. A key conclusion is that applying generic formulae to labour market reforms across all cities and regions is unlikely to have the intended outcomes, in light of their distinctive characteristics.

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