Western Cape Personnel Expenditure Benchmarking Report 2023

December 2023

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1 Findings

1.1 Western Cape Personnel Expenditure Benchmarking Report 2023

Increase in population per public service official:

- The 2023 Census reveals the Western Cape's significant population growth since 2011, making it the third most populous province. Notably, a large portion of this growth stems from in-migration (Census 2022 Highlights).
- Despite population growth, WCPG public service personnel haven't kept pace, leading to a rising number of citizens per official. This trend is particularly amplified in provinces like Western Cape, Gauteng, and KwaZulu-Natal with higher population growth rates (Figure 17).
- In 2010, the Western Cape had 960,000 learners in public ordinary schools. By 2022, this number had grown by 23% to nearly 1.2 million, which was a significantly higher growth rate than the average across all other provinces, where the increase was only 6%. Gauteng experienced the highest growth at 27%, while the Eastern Cape saw a decline of 13% (The Education department relative to Provincial Populations).
- In the same period, the full-time equivalent (FTE) educators in the Western Cape increased by 9%, excluding School Governing Body (SGB) educators. This suggests that the demand for public education in the Western Cape has grown faster than the increase in personnel (The Education department relative to Provincial Populations).
- The Western Cape's uninsured population increased by 27% between 2010 and 2022, reaching 5.6 million. This outpaced the national average growth of 21%. While the province increased the specialised healthcare workers (SHWs) by 21%, it couldn't keep pace with the rising uninsured population, leading to a 3% drop in the ratio of SHWs to uninsured residents (Figure 20).

Personnel growth:

- WCPG size increased 27% (1.5% per year) between 2006 and 2022 with slightly slower overall growth after 2019 (1.3% per year between 2019 and 2022). In all other provinces, FTEs increased by 16% (0.9% per year). The province with the highest growth rate in FTEs was Gauteng which increased by 64% (3.1% per year) and FTEs in Limpopo decreased by 10% (0.6% per year) (Figure 13)

- More appointments than terminations: 1.18 appointments for every termination between 2007 and 2021. The average ratio of appointments to terminations in all other provinces was also 1.18. The province that had the highest ratio of appointments to terminations between 2007 and 2021 was Gauteng, 1.48. Furthermore, province with the lowest was Limpopo, 0.94, where there were more terminations than appointments over the period (Table 6)

Western Cape Provincial Government personnel composition:

- Shifts in salary level groups: Proportion of officials in lower groups (01-04) decreased, while those in higher groups (09-12) increased since 2006 (Figure 4).
- OSD introduction impact: Significant salary growth between 2006 and 2010 due to OSDs for specific occupations like nurses, medical practitioners, and educators (Figure 6).
- Distribution of personnel and expenditure: Education OSD accounts for highest share of both (42% and 39%, respectively) (Table 2).
- Contracted staff: 8% of officials, mainly in Health and Education, receive 7% of personnel expenditure (Table 3).
- Mostly permanent officials: 74% permanently employed, 9% on probation for permanent posts. 15 800 FTEs on other contracts, including temporary and relief teachers (Table 3).
- In 2020, 21% of all educators in the Western Cape were SGB-appointed, while the average proportion of SGB-appointed educators in all other provinces was 10%, with the next highest proportion in Gauteng which was 15% in 2020. This reality has a significant effect on the Western Cape's personnel composition and should be considered when comparing indicators such as Learner-Educator ratio, expenditure per learner, % of budget spent on Education, etc. (Education Specific Analysis)

COVID and wage freeze:

- Between 2019 and 2022, real personnel expenditure fell by 2%, the real average salary decreased by 6% and the number of personnel in the province increased by 4%. This was the first time since 2006 that real personnel expenditure and the real average salary experienced a decline (Figure 9).

- In 2020 and 2021, the growth in the number of personnel in the province was driven by contract hires in the department of Health to deal with the demands of the COVID pandemic. Additionally, the wage freeze implemented in 2020 had a notable influence on slowing the growth in real personnel expenditure and the real average salary (COVID Period and Beyond in the Western Cape (2019 – 2022)).

Education – Learner to Educator ratio

- The Western Cape has the highest average number of learners per educator (LE ratio) in all South African provinces, with 33.7 learners per educator on PERSAL in 2022. This ratio has increased faster than the national average since 2010. If the SGB teachers are included, the ratio is still high at 32.0, second only to Limpopo province at 33.5 (The Education department relative to Provincial Populations).

Education performance - PIRLS Scores:

- Wide range of provincial scores: Western Cape highest (363 in 2021), Limpopo lowest (244) (Performance of Provincial Education Departments (PIRLS Data))
- Western Cape the only province consistently above other provinces.
- All provinces experienced declining scores between 2016 and 2021, but Western Cape had the smallest drop (3.7%).
- National average scores consistently below the 400 benchmark (reading basic information for simple questions).

Educator age distribution

- The Western Cape has decreased the average age of educators between 2006 and 2022 by hiring many young educators to try and replace the significant proportion of educators reaching retirement age in the province. This contrasts with other Education departments where the average age of educators has increased over the period (Figure 24).

Western Cape Health Expenditure:

- Lower than average real expenditure per patient day (PDE) in district hospitals: R2,690 in 2019 compared to R3,280 average (Performance of Provincial Health Departments).
- Smallest increase in PDE expenditure (8%) across all provinces.
- Higher consolidated and personnel expenditure per uninsured person than the national average.

Western Cape Health Coverage

- Universal Health Coverage (UHC) index slightly above average (57.8 vs. 56.6) but declined by 2% from 2017-2019 (Performance of Provincial Health Departments).
- Only province with a declining UHC index.
- Fourth highest UHC index after Gauteng, KwaZulu Natal, and Mpumalanga.

1.2 Implications of the 2023 Wage agreement on Personnel Expenditure

- The difference between the WC CoE allocation of R42.853 billion (MTBPS) and our projected expenditure of R43.504 billion indicates a shortfall of R200 million in 2023/24 (Western Cape departments and Table 35).
- The wage agreement resulted in an average notch adjustment of 9.4%, significantly higher than the average of 7.5% mentioned in the wage agreement (Effect of wage agreement on salary notchTable 30).
- The notch progression rate (% of personnel who receive annual notch progression) is estimated at 63%, with Western Cape slightly higher at 68%. Additionally, the National Treasury HRBP model uses 100% progression (Table 25 and Table 26).
- The implementation of the wage agreement is expected to lead to a 5% increase in personnel expenditure in both 2023/24 and 2024/25, assuming personnel numbers remain the same (Table 29 and Table 30).
- Year-on-year personnel expenditure growth rates vary among provinces, with national departments exhibiting slightly higher growth rates compared to the provinces. The projected personnel expenditure growth in the Western Cape is slightly higher than the overall provincial growth in 2023/24 (Table 29 and Table 30).

- Personnel expenditure growth in the Western Cape is anticipated to increase between 4.6% and 5.2% in 2023/24 with the Health and Education departments exhibiting the highest growth rates (Table 34)
- The growth projections in the Health department are higher than those exhibited in Education departments. The Western Cape Health department's growth projections closely align with the overall projections, estimated at 5.2% and 5.0% in 2023/24 and 2024/25 (Table 32).
- Personnel expenditure in the Education department in the Western Cape is estimated to grow by 5.2% (the highest among all Education departments) in 2023/24 and 5.0% in 2024/25 (Table 31).

1.3 Estimation of Savings

- As the cost-of-living adjustments (COLA) are determined at a central level, provinces and departments have no control over this driver of personnel expenditure. However, departments do retain control over the headcounts or number of personnel they hire. Therefore, most of these cost saving methods are centred around headcount reduction (Estimation of Savings).
- If only 50% of all personnel who terminated their employment were replaced, R933 million could be saved. If the Health and Education departments were excluded from the hiring freeze, the estimated savings for a 100% freeze would be R179 million, and a 50% freeze would lead to savings of R89 million (Table 40).
- Between 2019 and 2021, the average number of annual appointments was 7 600. Assuming a 100% freeze on appointments, just under R1.9 billion in personnel expenditure could be saved. Furthermore, assuming a 100% freeze on appointments, excluding officials in the Health and Education departments, the estimated saving would be R179 million (Not filling vacancies)
- In 2022, assuming a 30% take-up of retirement for officials aged 60 and older and 80% of them were replaced using scenario three (combination of internal promotion and external recruitment), the projected savings in the Western Cape would be R271 million (Table 42).
- In 2021, 1 980 officials aged 60 and older terminated their employment. If these posts remained vacant, the estimated savings would amount to R745 million. Additionally, there

would be savings of R59 million assuming only officials in the Health and Education department were replaced (Officials aged 60 and older using the Trends Data).

- In 2022, given a 30% take-up of early retirement (55 to 59 years old) and an 80% replacement of these officials using scenario three, the net savings over five years would be R537 million (Table 46).
- In 2021, 709 officials aged 55 to 59 terminated their employment. If these officials weren't replaced, the estimated savings would be R266 million. Furthermore, there would be savings of R40 million if only officials in the Health and Education department were replaced (Officials aged 55 to 59 using the Trends Data).
- Assuming only contracted staff in the Health and Education departments had their contracts renewed in 2022, the potential savings would be R417 million (Table 49).
- Changing the progression policy to a once-off bonus 1.5% of the notch, rather than a permanent increase to the notch, cumulative savings over three years in the Western Cape would amount to R950 million (in 2022 rands) (Possible savings).
- The most effective way to create fiscal space that would not require personnel reduction is to replace the annual notch progression with a once-off bonus, while keeping the notch constant. If the once-off bonus is 3%, the cumulative savings of R11.6 billion could be achieved in 10 years in the Western Cape (Table 58).

2 Introduction

This report, commissioned by the Western Cape Provincial Treasury and conducted by GTAC, delves into an analysis of personnel expenditure across provincial government departments from 2006 to 2022. Notably, over this period, growth in provincial expenditure on personnel has outpaced growth in consolidated expenditure. Subsequently, personnel expenditure has accounted for an increasingly large proportion of consolidated expenditure. This study builds upon previous work in 2019 and 2020 on the Western Cape Provincial Government's (WCPG) wage bill, with a more pronounced focus on positioning the Western Cape in comparison to other provinces on various fronts.

The initial section provides an in-depth exploration of the primary drivers of personnel expenditure in provinces and their evolution from 2006 to 2022. This period encompasses an examination of the impact of events such as the wage freeze and COVID, both of which exerted considerable influence on public service personnel expenditure. Additionally, this section investigates trends in personnel expenditure relative to provincial population sizes and compares the Health and Education departments across provinces.

Identifying shortfalls in their personnel expenditure allocation in the medium term due to the 2023 wage agreement and other contributing factors, the Western Cape requested an analysis of the impact of the wage agreement and its impact on departments. Section 2 of the report scrutinizes the effect of the wage agreement at the departmental level, focusing on the Western Cape and its position relative to other provinces.

The sustained growth of compensation expenditure surpassing the consolidated budget has created strain on budgets, leading to the crowding out of non-compensation spending. Consequently, these have compelled institutions across the public sector to explore options for reducing compensation expenditure. The final section of the report provides estimates for several headcount reduction options that could be implemented by the WCPG. It is crucial to note that managing the number of people employed in the provincial governments remains their primary tool for improving the sustainability of the wage bill, since wage agreements are determined centrally.

3 Problem statement

The WCPG faces a significant challenge in managing personnel expenditure, which constitutes a substantial portion of provincial spending and is a key factor in achieving fiscal consolidation. The recent approval of a 7.5% Cost of Living Adjustment (COLA) further complicates the financial situation, as provinces will have to bear all or a part of the cost. Despite efforts to reduce headcounts, the Western Cape government needs to identify additional measures to effectively manage personnel expenditure and achieve sustainable financial practices.

Objectives:

- Conduct a benchmark analysis of personnel expenditure in the Western Cape compared to other provinces to identify areas for improvement.
- Analyse the potential savings of various cost containment policy options, including not filling vacancies, retirement of officials aged 60 and older, early retirement, changing rules for pay progression, appointing officials on 5/8 and 6/8 contracts, and managing contracts more tightly.
- Quantify the impact of the 2022 and 2023 wage agreements on the WCPG's personnel expenditure.

Data Sources:

- Updated personnel expenditure strategy from the Department of the Premier (DotP).
- Budget Circular 1 (BC1) 2024-25 for parameters on personnel expenditure.
- Government Technical Advisory Centre. 2023. *PERSAL Data.* [Accessed December 2023]
- National Treasury. 2023. *Estimates of Provincial Revenue and Expenditure Data.* [Accessed December 2023]
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- Howie, S.J., Combrinck, C., Roux, K., Tshele, M., Mokoena, G. and McLeod Palane, N., 2017. *PIRLS literacy 2016: South African highlights report (Grade 4)*. Centre for Evaluation and Assessment (CEA).

- Department of Basic Education. 2023. *PIRLS 2021: South African Preliminary Highlights Report*. Department of Basic Education: Pretoria.
- Statistics South Africa. 2023. *Census 2022.*
- Massyn N., Day C., Ndlovu N. and Padayachee T. 2020. District health barometer. *Health Systems Trust*.

Deliverables:

- Report and presentation summarising the findings and recommendations of the analysis.

4 Western Cape Personnel Expenditure Benchmarking Report

This is the initial section of the report which focuses on the primary drivers of personnel expenditure in the Western Cape and the evolution of these drivers between 2006 and 2022. Additionally, this part of the report analyses the influences that COVID and the wage freeze had on public service personnel expenditure. Furthermore, this section investigates the trends in personnel expenditure in relation to provincial population sizes and compares the Health and Education departments across provinces.

4.1 The Establishment and General Trends

According to the EPRE data, real personnel expenditure as a proportion of consolidated expenditure in the Western Cape has grown slightly faster than the real consolidated expenditure in the province growing at 3.5% per year while consolidated expenditure grew at 3.4% per year between 2006 and 2022. As a result, the proportion of consolidated expenditure that personnel expenditure accounts for, increased from 52% in 2006, to 53% in 2022.

In all other provinces the average proportion of consolidated expenditure that was personnel expenditure was 61% in 2022 up from 57% in 2006. Furthermore, the growth in real personnel expenditure over the period was 3.4% per year, compared to growth in consolidated expenditure of 2.9% per year. These results indicate that the Western Cape had the lowest proportion of personnel expenditure in terms of consolidated expenditure.

Additionally, when comparing the growth of the real personnel expenditure between 2006 and 2022 to other provinces, the Western Cape managed to keep the growth in-line with growth in consolidated expenditure. In 2022, the Western Cape Provincial Government (WCPG) had just under 90 000 full-time equivalents (FTEs) across thirteen different departments, personnel expenditure was just under R41.3 billion and officials earned an average salary of R460 000 as evidenced by Table 1 below.

Throughout this report, the variable used to describe the number of officials is FTEs, which represents the personnel headcount for the full financial year. For clarification, an official that received a payment for 12 months is 1 FTE, while an official who only received payments for 6 months is half a FTE. This variable is employed instead of the number of unique PERSAL numbers for two key reasons. Firstly, it limits the variability of the headcount as the number of unique PERSAL numbers can fluctuate significantly between different months. Secondly, it considers how many months an official received a payment over the entire year, providing a more comprehensive measure for comparing different years to each other, rather than relying solely on the headcount for a single month.

Table 1: The Western Cape Provincial Government in 2022

Department	Personnel Expenditure	% of Personnel Exp	FTE	% of FTE	Average Salary
Agriculture	432 745 696	1.0%	992	1.1%	436 162
Community Safety	156 280 553	0.4%	321	0.4%	486 224
Cultural Affairs and Sport	225 574 671	0.5%	553	0.6%	408 157
Economic Development and Tourism	131 019 636	0.3%	218	0.2%	601 928
Education	19 864 273 920	48.1%	44 141	49.2%	450 024
Enviro Affairs and Dev Planning	243 933 453	0.6%	363	0.4%	672 765
Health	16 745 108 593	40.6%	35 811	39.9%	467 599
Human Settlements	238 774 488	0.6%	436	0.5%	547 962
Local Government	196 526 167	0.5%	378	0.4%	519 567
Provincial Treasury	200 188 019	0.5%	320	0.4%	626 240
Social Development	1 032 750 667	2.5%	2 476	2.8%	417 062
The Premier	618 834 859	1.5%	1 047	1.2%	591 243
Transport And Public Works	1 172 530 216	2.8%	2 647	3.0%	443 049
WCG Total	**41 258 540 940**	**100.0%**	**89 701**	**100.0%**	**459 957**

The four biggest departments in terms of FTEs in 2022 were the Education (49%), Health (40%), Transport and Public Works (3%) and Social Development (3%) departments. These departments made up around 95% of the WCPG. Furthermore, in terms of real personnel expenditure, the four largest departments were the same as the four largest departments in terms of FTEs and in the same order.

Understanding how the establishment evolved over between 2006 and 2022 is important to understanding the current state of the provincial government. To do this, the indexed growth in real personnel expenditure and the two key drivers of personnel expenditure, namely the number of FTEs and the real average salary of these officials will be examined.

Over the period, the province experienced real personnel expenditure growth of 76% (3.6% per annum), real average salary growth of 39% (2.1% per annum) and FTEs increased by 27% (1.5% per annum). As evidenced by Figure 1 below, there was a break in the trend after 2019, a detailed discussion about this period can be found later in this report. These results indicate that the growth in real personnel expenditure was driven significantly by an increasing real average salary and increasing FTEs. However, real average salary contributed to more of the growth in real personnel expenditure than FTEs.

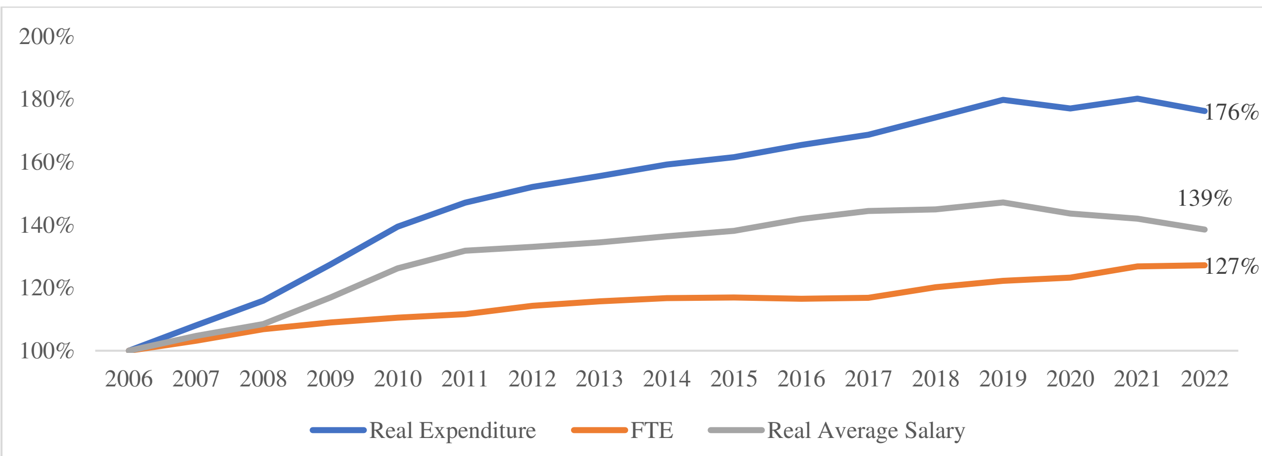

Figure 1: Indexed Growth in Real Personnel Expenditure, FTEs and Real Average Salary in the WCPG

Personnel expenditure consists of several principal components – a basic salary, pension contributions and non-wage benefits, the most significant being the medical and housing allowances. Between 2010 and 2020, there were no significant changes to the composition of personnel expenditure across provincial governments as evidenced by Figure 2 below. Basic salary contributed to between 75% and 76% of total personnel expenditure, pension between 8% and 9%, medical allowances between 4% and 5% and housing allowances contributed to around 2% of total expenditure.

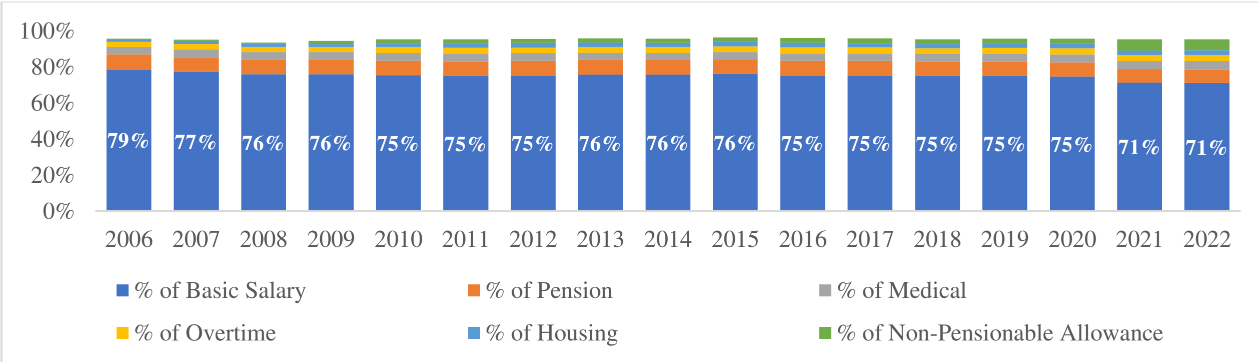

Figure 2: Components of Real Personnel Expenditure in the WCPG

However, in 2021, after the wage freeze and the introduction of a non-pensionable cash allowance for officials there was a change in the composition. Between 2020 and 2021, the proportion of total personnel expenditure that basic salaries contributed to fell from 75% to 71%. Additionally, non-pensionable allowances increased from 3% to 6% of total personnel expenditure, while the proportion of all other allowances did not change significantly. This change was present in other provinces too as the structure of remuneration for public servants is determined centrally.

Furthermore, the indexed growth in these components can be seen in Figure 3 below. Between 2006 and 2022, real basic salaries increased by 60%, pension allowances increased by 56%, medical allowances increased by 99% and housing allowances increased by 247%. The pension allowance is based on basic salary, therefore, the growth in these components is aligned, while housing and medical allowances have their own adjustment criteria.

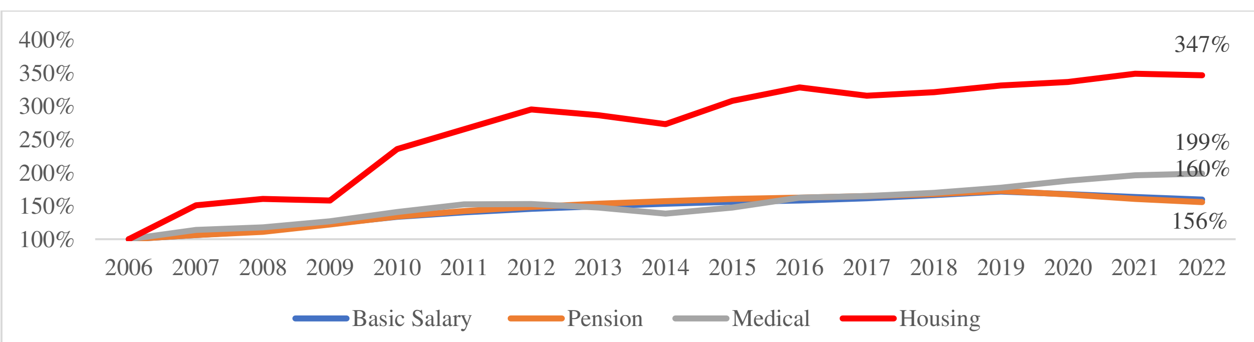

Figure 3: Indexed Growth in Components of Real Personnel Expenditure in the WCPG

4.2 Composition of the Western Cape Provincial Government in 2022

There are several factors that influence the real average salary within an establishment and how it evolves over time. One of the key determinants are the cost-of-living adjustments (COLA) that govern the increases that officials receive and are determined centrally by a bargaining council. A determinant of real average salary that is influenced by provincial departments is the composition of the establishment. Factors like salary levels, the nature of appointment and whether officials are employed to occupation specific dispensation's (OSD's) all meaningfully impact the average salary within a province. Therefore, the composition of the WCPG will be analysed using the factors mentioned above.

The composition of the establishment by salary level group is illustrated by Figure 4 below. Since 2006, the proportion of officials in salary level groups 01 to 04 has decreased from 25% to 20% in 2022. Furthermore, the proportion of officials in salary level group 05 to 08 decreased from 61% to 58% and the proportion of officials in salary level group 09 to 12 increased from 14% to 22%.

The most significant change in composition of the WCPT occurred between 2006 and 2010, a key reason driving this effect was the introduction of OSD's. This led to a significant change in many officials' salary levels over a relatively short period of time. Furthermore, the introduction of OSDs and subsequent changes in the composition of the WCPG by salary level group between 2006 and 2010 meant the period experienced the strongest growth in real average salary, during this period it grew by 6% per year.

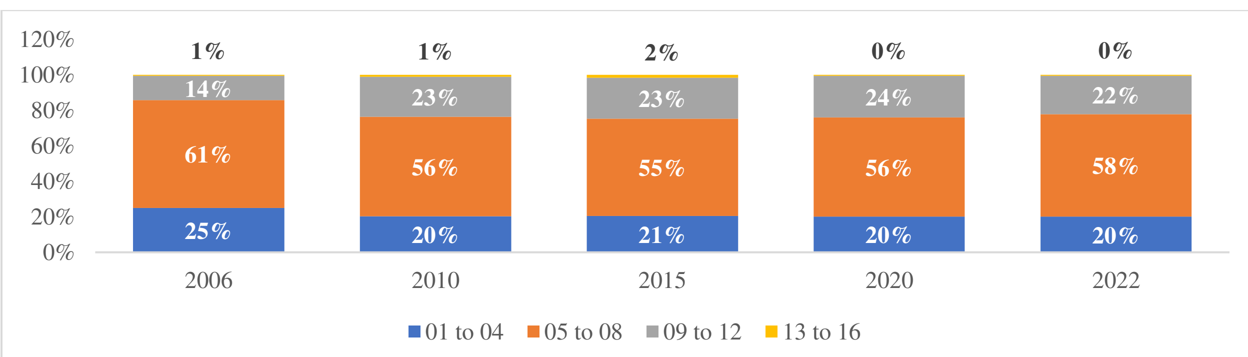

Figure 4: Composition of WCPG by percentage of FTEs per Salary Level Group

When looking at the breakdown of OSD groups in the Western Cape in 2022 as indicated in Table 2 below, 42% of personnel expenditure was accounted for by the Education OSD, 23% by public service officials, 15% by Nursing officials and 14% by the Medical OSD. Moreover, 39% of FTEs were accounted for by the Education OSD, 30% by public service officials, 16% by the Nursing OSD and 7% by the Medical OSD.

Table 2: The WCPG categorised by OSD Groups in 2022

OSD Group	Personnel Expenditure (R)	% of Personnel Exp	FTE	% of FTE	Real Average Salary
EDUCATION	17 186 079 127	41.7%	34 644	38.6%	496 083
PUBLIC SERVICE	9 366 243 128	22.7%	27 352	30.5%	342 433
NURSING	5 989 330 406	14.5%	14 141	15.8%	423 541
MEDICAL	5 921 652 102	14.4%	6 533	7.3%	906 445
SOCIAL SERVICES	1 178 810 752	2.9%	2 058	2.3%	572 841
ALLIED RELATED HEALTH	861 127 497	2.1%	2 060	2.3%	417 972
OTHER	581 213 437	1.4%	869	1.0%	668 894
ENGINEERING	112 764 149	0.3%	1 997	2.2%	56 467
LEGAL	38 566 154	0.1%	36	0.0%	1 059 025
PARLIAMENT	22 754 189	0.1%	11	0.0%	2 084 353
WCPG Total	**41 258 540 940**	**100.0%**	**89 701**	**100.0%**	**459 957**

The OSD groups with the highest average salary in 2022, were the Parliament, Legal and Medical OSDs. These OSD groups had an average salary that was 320%, 113% and 83% higher than the provincial average, respectively. However, the Parliament and Legal OSD groups were small and combined accounted for under 0.2% of total personnel expenditure in 2022. Moreover, even though the Medical OSD group only made up 7% of FTEs, the high average salary received by officials in this group meant that the proportion of expenditure that went to these officials (14%) was double the proportion of FTEs.

Table 3: Nature of Appointment in the WCPG in 2022

Nature of Appointment	Personnel Expenditure (R)	% of Personnel Exp	FTE	% of FTE	Real Average Salary
Contracted staff	3 070 834 625	7.4%	7 564	8.4%	405 994
Officials on fixed appointment	31 132 423 031	75.5%	66 178	73.8%	470 433
Officials on fixed appointment, on probation	3 131 669 689	7.6%	7 669	8.5%	408 377
Others	874 483 072	2.1%	1 457	1.6%	600 023
Temp and relief teachers	3 049 130 523	7.4%	6 833	7.6%	446 236
WCPG Total	**41 258 540 940**	**100.0%**	**89 701**	**100.0%**	**459 957**

Table 4: Contracted staff in the WCPG in 2022, categorised by Department

Provincial Department	Personnel Expenditure (R)	% of Personnel Exp	FTE	% of FTE	Real Average Salary
Agriculture	18 927 170	0.6%	136	1.8%	139 341
Community Safety	12 673 882	0.4%	56	0.7%	228 016
Cultural Affairs And Sport	13 880 759	0.5%	54	0.7%	257 051
Ec Dev and Tourism	7 415 908	0.2%	34	0.4%	220 274
Education	343 698 538	11.2%	1 695	22.4%	202 732
Enviro Affairs and Dev Planning	12 613 033	0.4%	22	0.3%	586 653
Health	2 487 727 261	81.0%	5 076	67.1%	490 056
Human Settlements	17 791 478	0.6%	36	0.5%	488 553
Local Government	10 576 626	0.3%	21	0.3%	503 649
Provincial Treasury	13 706 823	0.4%	46	0.6%	299 058
Social Development	56 043 172	1.8%	140	1.9%	400 308
The Premier	30 831 506	1.0%	162	2.1%	190 809
Transport And Public Works	44 948 468	1.5%	87	1.1%	519 135
WCG Total	**3 070 834 625**	**100.0%**	**7 564**	**100.0%**	**405 994**

In the Western Cape 74% of officials are permanently employed and 9% of officials are on-probation for permanent posts as indicated in **Error! Reference source not found.** below. Therefore, there were around 15 800 FTEs on other types of contracts within the WCG, 7 600 were contract staff and 6 800 were temporary and relief teachers.

As officials on probation tend to be young people at the start of their careers, the average salary for this group was 11% lower than the provincial average, while the average salary for the "Others," group is high due to educational specialists making up part of the group. Additionally, temporary and relief teachers earned around 3% less than the provincial average in 2022 and contracted staff earned 12% less than the provincial average.

In 2022, 8% of officials in the WCG were contracted staff and they received 7% of total personnel expenditure. The overwhelming majority of contracted staff were in the departments of Health, 67% and Education, 22%. Furthermore, the contracted staff in the department of Health received 81% of personnel expenditure on contracted staff and a further 11% went to contracted officials in the department of Education.

Additionally, 60% of personnel expenditure on contracted employees went to officials in the Medical OSD group, officials in the public service group received 18% and 12% went to officials in the Nursing OSD group in 2022. This is an important fact to keep in mind when considering cuts on contract employees.

4.3 Trends in the Western Cape

As discussed earlier in this report, the two key determinants of real personnel expenditure are the number of officials employed by the WCPG and the real average salary that these officials receive. Therefore, this section of the paper analyses the trends in these drivers, first looking at how FTEs have evolved in the WCPG over the period in terms of departmental headcounts and then how the real average salary across the departments evolved between 2006 and 2022.

4.3.1 Trends in Headcounts (FTEs)

Between 2006 and 2022, the size of the WCPG has increased from 70 500 FTEs to 89 700 in 2022 a total growth of 27% and an average growth rate of 1.5% per year. As previously discussed, the largest departments in the WCG were the departments of Education, Health, Transport and Public Works and Social Development.

Table 5: Trends in FTEs by Department in the WCPG

Provincial Department	2006	2019	2022	CAGR 2006-2019	CAGR 2019-2022
Agriculture	837	1 077	992	2.0%	-2.7%
Community Safety	792	339	321	-6.3%	-1.8%
Cultural Affairs and Sport	574	588	553	0.2%	-2.0%
Ec Dev and Tourism	164	231	218	2.6%	-1.9%
Education	38 157	41 998	44 141	0.7%	1.7%
Enviro Affairs and Dev Planning	270	380	363	2.7%	-1.6%
Health	25 185	34 343	35 811	2.4%	1.4%
Human Settlements	671	500	436	-2.2%	-4.5%
Local Government		368	378		0.9%
Provincial Treasury	237	329	320	2.5%	-0.9%
Social Development	1 508	2 342	2 476	3.4%	1.9%
The Premier	580	1 103	1 047	5.1%	-1.7%
Transport And Public Works	1 559	2 576	2 647	3.9%	0.9%
WCG Total	**70 534**	**86 175**	**89 701**	**1.6%**	**1.3%**

Moreover, all these departments experienced significant growth in the number of FTEs over the period. The department of Health grew by 42%, the Education department increased by 16%, the department of Transport and Public Works grew by 70% and the department of Social Development grew by 64%.

However, over the period, there were several transfers between departments within the WCPG. These headcount changes were transfers between departments rather than an increase in the size of the establishment in the Western Cape and are important to keep in mind when discussing the trends in the FTEs of different departments.

Furthermore, between 2019 and 2022, during the COVID pandemic and beyond, the WCPG grew by around 1.3% per year. However, the only departments that experienced significant headcount growth during this period were the Education (1.7% per year), Health (1.4% per year) and Social Development (1.9% per year) departments.

The increase in FTEs between 2007 and 2021 suggests that there have been more appointments than terminations in the WCPG and the ratio of appointments to terminations supports this as there were 1.18 appointments for every termination over the period. This finding is also true for most individual years, apart from 2016 and 2017 where there were more terminations than appointments in the WCPG. Furthermore, between 2007 and 2021, the cumulative net appointments in the WCPG were 17 000. Additionally, on average between 2007 and 2021, 9% of FTEs in the WCPG were appointed each year on average while 8% of FTEs terminated their employment each year.

Of the net appointments between 2007 and 2021, 54% were appointments in the department of Health and 31% occurred in the department of Education. Furthermore, as displayed in Figure 5 below, of the 111 600 appointments between 2007 and 2022, 46% occurred in the Education department and 41% in the Health department. Moreover, when looking at terminations, 49% were in the department of Education and 38% were in the department of Health.

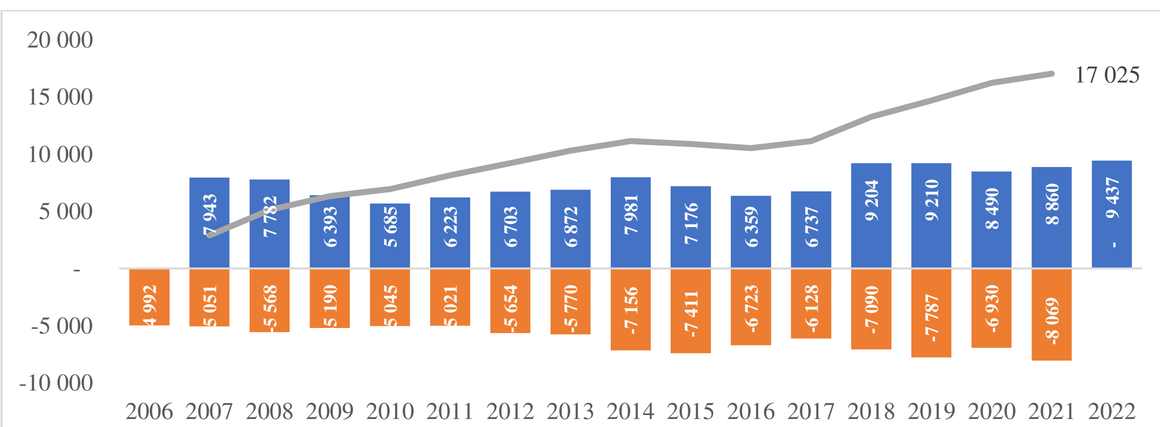

Figure 5: Trends in Appointments and Terminations in the WCPG

Table 6: Appointments and Termination in the WCPG by Department between 2007 and 2021

Provincial Department	Sum of App	Sum of Term	Net Change
Agriculture	1 572	1 441	131
Community Safety	1 003	921	82
Cultural Affairs and Sport	973	961	12
Eco Dev And Tourism	603	482	121
Education	51 574	46 290	5 284
Enviro Affairs and Dev Planning	615	467	148
Health	45 468	36 343	9 125
Human Settlements	701	609	92
Local Government	384	374	10
Provincial Treasury	598	438	160
Social Development	3 282	2 054	1 228
The Premier	1 993	1 709	284
Transport And Public Works	2 852	2 504	348
WCPG Total	**111 618**	**94 593**	**17 025**

Table 7: Number of Appointments, Real Personnel Expenditure and Real Average Salary in the WCPG in 2021

Provincial Department	Sum of App (FTEs)	Real Personnel Expenditure of Appointments (R)	Real Average Salary of Appointments (R)
Agriculture	94	13 381 134	142 732
Community Safety	20	3 944 300	197 215
Cultural Affairs and Sport	13	3 820 877	288 368
Eco Dev And Tourism	23	4 870 786	216 479
Education	1 907	753 797 017	395 193
Enviro Affairs and Dev Planning	11	5 901 683	540 612
Health	1 962	483 353 492	246 399
Human Settlements	4	1 533 840	400 132
Local Government	11	4 442 976	392 027
Provincial Treasury	16	5 241 817	329 329
Social Development	118	33 552 917	284 749
The Premier	87	10 322 624	118 424
Transport And Public Works	90	36 002 521	401 889
WCPG Total	**4 355**	**1 360 165 985**	**312 311**

Table 8: Number of Terminations, Real Personnel Expenditure and Real Average Salary in the WCPG in 2021

Provincial Department	Sum of Term (FTEs)	Real Personnel Expenditure of Terminations (R)	Real Average Salary of Appointments (R)
Agriculture	62	14 911 305	240 182
Community Safety	29	10 396 431	355 434
Cultural Affairs and Sport	42	6 630 409	156 316
Eco Dev And Tourism	21	8 851 173	421 484
Education	1 946	985 055 992	506 217
Enviro Affairs and Dev Planning	12	8 541 102	692 522
Health	2 719	996 776 994	366 563
Human Settlements	20	10 095 054	513 308
Local Government	13	7 088 721	559 636
Provincial Treasury	18	7 540 729	418 929
Social Development	108	51 886 239	481 916
The Premier	56	22 303 061	399 458
Transport And Public Works	107	54 296 895	505 872
WCPG Total	**5 153**	**2 184 374 106**	**423 869**

In 2021, the latest data available for both appointments and terminations, there were 8 860 appointments and 8 069 terminations in the province. Of the appointments, 49% of them occurred in the Education department and 41% occurred in the Health department. Furthermore, of the terminations, 42% occurred in the Education department and 49% occurred in the Health department.

Moreover, the personnel expenditure for appointees in 2021 was R1.4 billion and they received a real average salary of R312 00 and the personnel expenditure of officials who left the public service was R2.2 billion and they received a real average salary of R424 000 as seen in Table 7 and Table 8 above. This indicates that officials leaving the WCPG had a 36% higher real average salary than those joining the establishment. In all other provinces, the real average salary of appointees was R359 000 and the real average salary of people leaving the public service was R526 000, 44% higher than appointees.

4.3.2 Transfers within the Western Cape between 2006 and 2022

From the data, several significant transfers occurred between 2006 and 2022, one of them was the movement of officials from the department of Human Settlements to the Local Government between 2009 and 2010. In 2009, there were 740 FTEs in the department of Human Settlements, this number fell to 410 in 2010 and of the 740 FTEs in 2009, 40% moved to the newly created Local Government department in 2010.

Furthermore, between 2009 and 2010, there was a change in the structure of departments in the WCPG where officials employed in the Human Resource Management, Internal Audit and Enterprise Risk Management functions in some departments were transferred to the department of The Premier.

The transfer of the Human Resource Management function affected all departments apart from the departments of Health, Education and Local Government. Furthermore, the transfer of the Internal Audit functions only affected the Provincial Treasury and the departments of Education and Health. Moreover, the transfer of the Enterprise Risk Management function affected all departments apart from Local Government. Even though this transfer affected most of the departments in the provincial government in some respects, the department that experienced the most significant transfer was the Provincial Treasury where 21% of the FTEs that were employed in the department in 2009 were employed in the department of the Premier in 2010.

An additional significant transfer occurred in 2014 between the departments of Community Safety and Transport and Public Works. In 2013 there were 940 FTEs in the department of Community Safety which fell to 310 in 2014. Of the 940 FTEs in the department in 2013, 63% of them were employed in the department of Transport and Public Works in 2014.

Another department change was the transfer of officials from TVET institutions from provincial departments to the department of Higher Education and Training in the national government and this change occurred in 2015. However, in the Western Cape, this change was not large as the number of FTEs in this department only decreased by 0.5% between 2014 and 2015.

Therefore, a significant proportion of the large increase that occurred in the department of Transport and Public Works between 2006 and 2019 may be attributed to the transfer of officials from the department of Community Safety that occurred in 2014. Furthermore, a sizable proportion of the decrease in FTEs that occurred in the department of Human Settlements and the Provincial Treasury between 2006 and 2019 can be ascribed to the respective transfer of officials that occurred between 2009 and 2010.

4.3.3 Trends in Remuneration (Personnel Expenditure)

In 2022, personnel expenditure in the WCG was R41.3 billion and the average salary in the establishment was just under R460 000 per year. The departments with the highest real average salaries in 2022 were the departments of Environmental Affairs and Development Planning, Provincial Treasury and Economic Development and Tourism.

Table 9: Trends in Real Average Salary by Department in the WCPG

Provincial Department	2006	2019	2022	CAGR 2006-2019	CAGR 2019-2022
Agriculture	349 830	438 474	436 162	1.8%	-0.2%
Community Safety	307 933	523 398	486 224	4.2%	-2.4%
Cultural Affairs and Sport	298 994	416 550	408 157	2.6%	-0.7%
Ec Dev and Tourism	434 459	664 781	601 928	3.3%	-3.3%
Education	335 003	480 113	450 024	2.8%	-2.1%
Enviro Affairs and Dev Planning	452 278	692 441	672 765	3.3%	-1.0%
Health	319 497	495 973	467 599	3.4%	-1.9%
Human Settlements	378 419	543 881	547 962	2.8%	0.2%
Local Government		543 760	519 567		-1.5%
Provincial Treasury	544 855	655 068	626 240	1.4%	-1.5%
Social Development	329 045	433 752	417 062	2.1%	-1.3%
The Premier	583 406	640 554	591 243	0.7%	-2.6%
Transport And Public Works	301 910	458 832	443 049	3.3%	-1.2%
WCG Total	**332 030**	**488 549**	**459 957**	**3.0%**	**-2.0%**

Table 10: Trends in Real Personnel Expenditure by Department in the WCPG

Provincial Department	2006	2019	2022	CAGR 2006-2019	CAGR 2019-2022
Agriculture	292 632 921	472 272 670	432 745 696	3.8%	-2.9%
Community Safety	243 959 822	177 388 174	156 280 553	-2.4%	-4.1%
Cultural Affairs and Sport	171 647 372	244 862 107	225 574 671	2.8%	-2.7%
Ec Dev and Tourism	71 396 043	153 287 411	131 019 636	6.1%	-5.1%
Education	12 782 672 011	20 163 990 833	19 864 273 920	3.6%	-0.5%
Enviro Affairs and Dev Planning	122 077 262	263 416 078	243 933 453	6.1%	-2.5%
Health	8 046 444 880	17 033 194 297	16 745 108 593	5.9%	-0.6%
Human Settlements	253 982 509	272 121 713	238 774 488	0.5%	-4.3%
Local Government		200 103 689	196 526 167		-0.6%
Provincial Treasury	129 312 315	215 408 207	200 188 019	4.0%	-2.4%
Social Development	496 035 015	1 015 738 661	1 032 750 667	5.7%	0.6%
The Premier	338 569 711	706 690 794	618 834 859	5.8%	-4.3%
Transport And Public Works	470 753 883	1 182 103 499	1 172 530 216	7.3%	-0.3%
WCG Total	**23 419 483 743**	**42 100 578 132**	**41 258 540 940**	**4.6%**	**-0.7%**

Between 2006 and 2019, real personnel expenditure increased by 80% (4.6% per year) and real average salary increased by 47% (3.0% per year). The departments that experienced the largest average annual growth rates were the departments of Transport and Public Works (7.3% per year), Economic Development and Tourism and Environmental Affairs (both 6.1% per year).

Between 2019 and 2022, both real personnel expenditure and real average salaries decreased in the WCG by 2% and 6% respectively. Over this period, the only department that saw an increase in personnel expenditure was the department of Social Development where expenditure increased by just under 2%. All other departments experienced decreased personnel expenditure over this period. Similarly, no department in the WCG saw an increase in real average salaries apart from the department of Human Settlements where it increased by 1%.

A key driver of increasing real average salaries until the break in 2019 was the introduction of OSDs between 2007 and 2010. As the OSDs were not created and correctly captured in PERSAL before 2010 in order to isolate the increase in real average salary the occupation of officials will be utilised to see the change for the groups for which OSDs were created. These occupation groups are nurses, medical practitioners and specialists and educators.

Figure 6 below displays the indexed growth in the real average salaries of these groups between 2006 and 2022. As indicated by Figure 6 below, between 2006 and 2010, the real average salary of nurses increased by 31%, the real average salary of medical practitioners and specialists increased by 41% and the real average salary of educators increased by 23%.

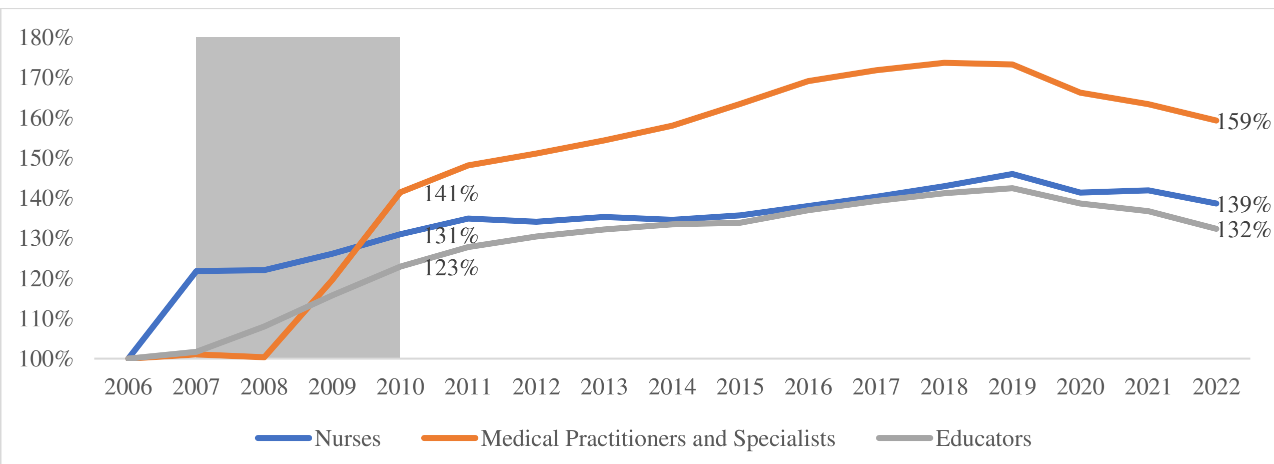

Figure 6: Indexed Growth in the Real Average Salary categorised by Occupation in the WCPG

Furthermore, over the entire period, the real average salaries of these groups only increased by 39% (8% more), 59% (18% more) and 32% (9% more), respectively. This indicates that a significant driver of the increase in the provincial real average salary was due to the introduction of OSDs. Moreover, Figure 7**Error! Not a valid bookmark self-reference.** and Figure 8**Error! Reference source not found.** below display the real average salaries of OSD groups and the indexed growth of these groups after the introduction of OSDs (2010) until 2022. The trends in both figures indicate that even though the different OSD groups have different baselines they have grown at relatively rates similar due to the application of similar COLA-related adjustments between 2010 and 2022.

However, two significant changes occurred between 2018 and 2019. First, the real average salary of the other OSD group fell by 12% and the real average salary of the public service group increased by 7%. These changes occurred due to a change in the composition of these groups as a new OSD called "DEVELOPMENTAL PROGRAMMES" was introduced in 2019. Officials in this OSD group had a low real average salary (91% less than the average) and moved from "PUBLIC SERVICE NON-OSD" to "DEVELOPMENTAL PROGRAMMES" which was part of the other OSD group from 2019 onwards.

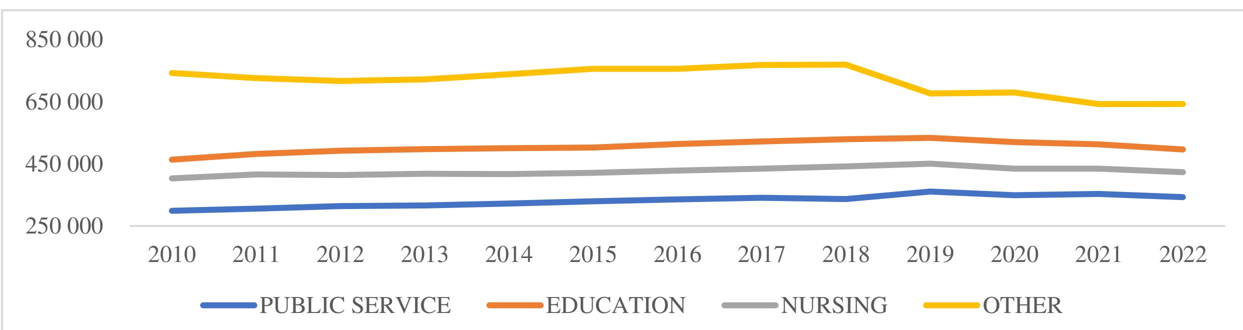

Figure 7: Real Average Salaries categorised by OSD Group in the WCPG

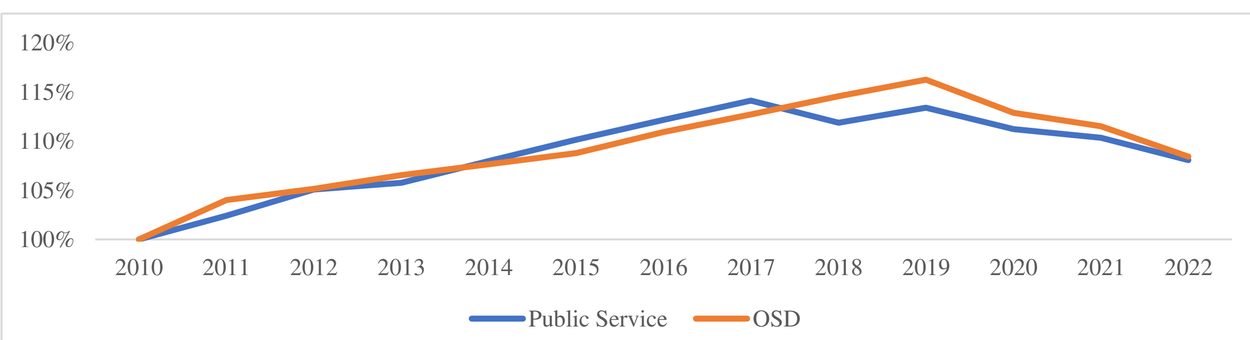

Figure 8: Indexed Growth in Real Average Salaries categorised by non-OSD and OSD in the WCPG

The only differences in indexed growth occurred between 2017 and 2019, where the real average salary for public service officials decreased while there was constant growth in officials who were on OSDs. Additionally, the decrease in real average salaries after 2019 is a result of the wage-freeze that occurred in 2020 among other factors during that period.

4.4 COVID Period and Beyond in the Western Cape (2019 – 2022)

As evidenced by the analysis of the trends in the drivers of compensation expenditure in the WCPG, there was a change in the direction of the growth of real expenditure, FTEs, and the real average salary after 2019 as indicated by Figure 9 below.

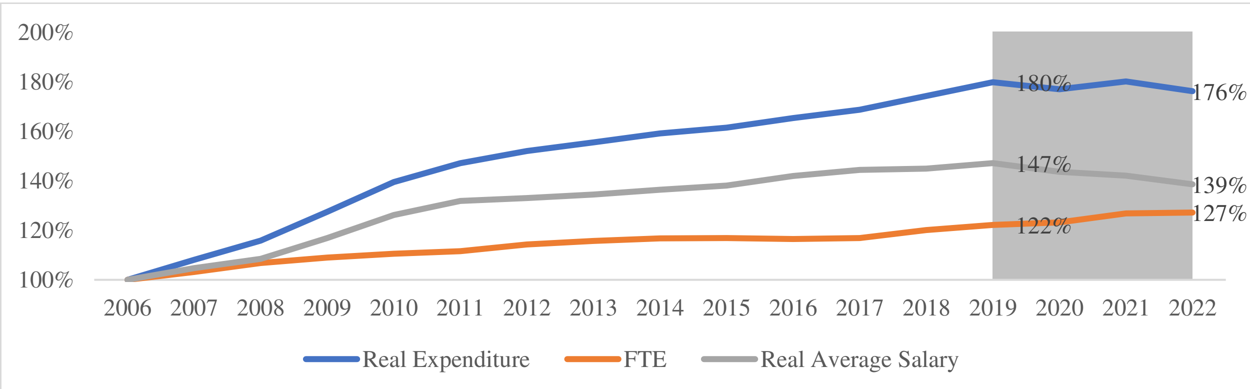

Figure 9: Indexed Growth in Real Personnel Expenditure, FTEs and Real Average Salary in the WCPG

Between 2019 and 2022, real expenditure and real average salaries fell by 2% and 6% respectively, while the number of FTEs in the province increased by 4%. These results are a combination of several factors, two of these factors are the government response to the COVID pandemic in 2020 (Modisenyane, Madikezela, Mngemane, Ramadan, Matlala, McCarthy, Govender, Nemungadi & Silal, 2022:366) and the non-implementation of the third year of the wage agreement in 2020 (wage freeze).

Over the entire period, the only years in which real personnel expenditure fell were 2020 and 2022. In 2020, real personnel expenditure in the Western Cape decreased by 1.5% to R41.4 billion, this was the year of the wage freeze. In 2021, there was a 1.8% increase in real personnel expenditure, however, in 2022 it decreased by 2.2% to R41.3 billion. Even though there was a 4.5% increase in nominal personnel expenditure in 2022, CPI in the same year was just under 7% which led to a real decrease in personnel expenditure.

This suggests that among other factors, the wage freeze implemented in 2020 had a significant effect on slowing the growth of real personnel expenditure in 2020 and the high inflation rate in 2022 meant that the wage adjustment in that year didn't lead to real increases in personnel expenditure.

Another effect of the wage freeze was the decrease in the real average salary in the Western Cape from R489 000 in 2019 to R477 000 in 2020, a 2.4% fall. The real average salary decreased further over the period and was R460 000 in 2022, which represented a total decrease of 6% decrease between 2019 and 2022. The departments that experienced the largest falls in real average salary were Economic Development and Tourism (10%), the Premier (8%) and Community Safety (7%). The only department that experienced an increase in the real average salary over the period was Human Settlements (1%).

From 2006 to 2019, the average growth rate in FTEs was 2% per year and between 2019 and 2022 the average growth rate was 1.3% per year. Even though the trend in overall FTEs was similar, there were many changes in FTE numbers at a departmental level in the Western Cape. Table 11 below looks at the headcount changes at a departmental level between 2006 and 2019 and compares them to changes between 2019 and 2022.

Table 11 indicates that between 2006 and 2019, all departments grew apart from Community Safety and Human Settlements which fell in size by around 6.3% and 2.2% per year, respectively. The departments that experienced the largest growth over this period were The Premier (5.9% per year), Transport and Public Works (3.9% per year) and Social Development (3.4% per year).

Table 11: Changes in FTEs by department in the WCPG between 2006 and 2022

Provincial Department	**2006**	**2019**	**2022**	**CAGR 2006-2019**	**CAGR 2019-2022**
Agriculture	837	1 077	992	2.0%	-2.7%
Community Safety	792	339	321	-6.3%	-1.8%
Cultural Affairs And Sport	574	588	553	0.2%	-2.0%
Eco Dev And Tourism	164	231	218	2.6%	-1.9%
Education	38 157	41 998	44 141	0.7%	1.7%
Enviro Affairs and Dev Planning	270	380	363	2.7%	-1.6%
Health	25 185	34 343	35 811	2.4%	1.4%
Human Settlements	671	500	436	-2.2%	-4.5%
Local Government		368	378		0.9%
Provincial Treasury	237	329	320	2.5%	-0.9%
Social Development	1 508	2 342	2 476	3.4%	1.9%
The Premier	580	1 103	1 047	5.1%	-1.7%
Transport And Public Works	1 559	2 576	2 647	3.9%	0.9%
WCPG Total	**70 534**	**86 175**	**89 701**	**1.6%**	**1.3%**

Between 2019 and 2020, the effect of COVID-19 on the public service can be seen in the change in headcounts, as the number of officials only increased significantly in the Health (3.5%) and Social Development (4.8%) departments. In the Health department, the FTEs increased by 1 196. Of this increase 57% were nurses and 22% were medical practitioners. Additionally, between 2006 and 2019, 28% of the increase in FTEs in the Health department were nurses and 10% were medical practitioners. Moreover, there was a significant increase in administration officials, which contributed to 14% of the increase. This suggests that the growth in FTEs between 2019 and 2020 was driven by nurses and medical practitioners (80% of the increase) to assist with the increased demand for Health services due to the COVID pandemic in 2020.

In 2021, FTEs grew by 3% compared to 2020, this increase was spread more evenly across departments and the most significant FTE increases occurred in the departments of Education which accounted for 53% of the provincial increase (2 100 FTEs), the department of Health which accounted for 39% of the increase (1 000 FTEs) and the department of Social Development which increased by 100 FTEs which was 4% of the increase.

Furthermore, in 2022, there was no notable change in provincial FTEs as there was only 0.3% growth from 2021. However, the composition of the changes across departments in 2022 was interesting, as FTEs in the Education department increased by just under 1 000, while FTEs in the Health department fell by 700. Of this drop, the number of nurses decreased by 200 (28%) and the number of other administrative officials decreased by 520 FTEs, 73% of the total decrease.

The evidence suggests that this decrease came from the non-renewal of contract staff that were hired for the increased demand during the COVID-19 pandemic. In 2020, 72% of the increase in nurses were nurses who were hired on contracts, 93% of the increase in medical practitioners were appointed on contracts and 93% of the increase in other administrative officials were contracted staff. Moreover, nurses appointed to contracts contributed to 97% of the 200 FTE decrease in 2022 and other administrative officials appointed on contracts decreased by 540 FTEs, 102% of the total decrease in other administrative officials. However, the data suggests that medical practitioner's contracts were renewed in 2022 as there was no significant fall in the number of medical practitioners in 2022.

Focusing primarily on FTEs in the Health department between 2019 and 2021 paints an interesting picture. Between 2019 and 2021, FTEs in the Health department increased by 4% at around 1.4%

per year, between 2006 and 2019, FTEs increased by 2.4% per year. During the COVID period, it would be expected that the Health department would increase at a similar or greater rate than it did before 2019. This was somewhat true, in 2020 and 2021 as FTEs increased by just under 4% and 3%, respectively.

However, in 2022, they decreased by 2%. As mentioned earlier, the majority of the growth in the Health department during this period were contract appointments which contributed to 83% and 104% of the growth in the Health department in 2020 and 2021, respectively. In 2022, due to the end of the COVID pandemic, these contracts were not renewed and 98% of the decrease in FTEs occurred to officials on contract.

4.5 Indexed Growth (Benchmarking)

All nine provinces in South Africa have identical mandates and a key component that determines their personnel expenditure, the COLA agreements are determined centrally. Despite these similarities, the trends in real personnel expenditure across the different provinces are markedly different.

Therefore, this section of the paper attempts to compare the trends in real personnel expenditure, real average salary, and FTEs across the different provinces to see how the WCPG compares to other provinces and to understand how the personnel expenditure has evolved concerning other provinces.

The first comparison is the indexed growth in real personnel expenditure, real average salary, and FTEs between 2006 and 2022 in the Western Cape and the average in all other provinces which is plotted below in Figure 10 and Figure 11 below.

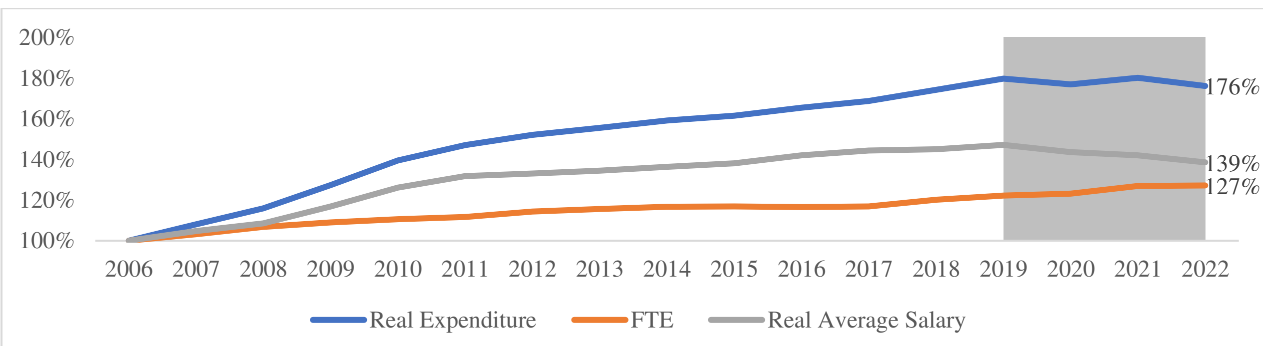

Figure 10: Indexed Growth in Real Personnel Expenditure, FTEs and Real Average Salary in the WCPG

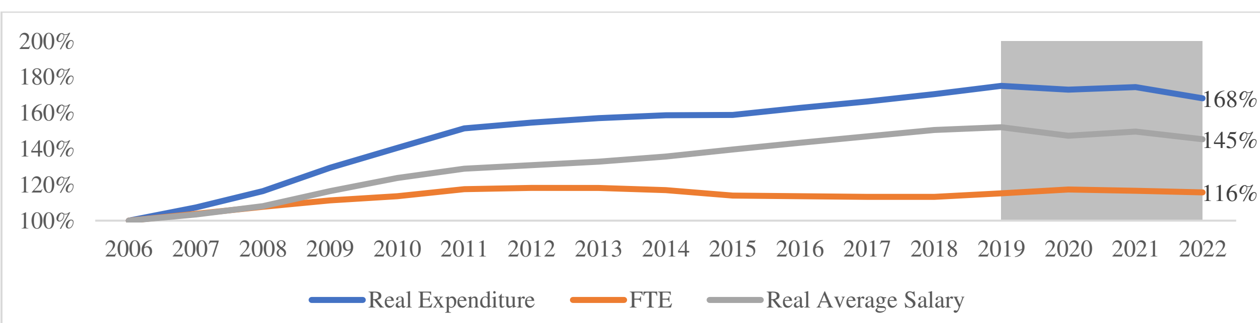

Figure 11: Indexed Growth in Real Personnel Expenditure, FTEs and Real Average Salary in all other provinces

Overall, the Western Cape experienced a larger growth in real personnel expenditure over the period, as it grew by 76% compared to all other provinces where it grew by 68%. The real average salary in the Western Cape grew by 39% while in all other provinces it grew by 45% and FTEs increased by 27% in the Western Cape while it only increased by 16% in all other provinces. This indicates that even though real personnel expenditure increased more in the Western Cape than it did in all other provinces, the increase was more evenly distributed between increasing FTEs and increasing real wages.

To compare the Western Cape to other provinces in the country, the indexed growth in real personnel expenditure, FTEs and real average salary were analysed individually. The four groups included in these comparisons are the Western Cape, the average of all other provinces (excluding the Western Cape) and the provinces that had the highest and the lowest growth in each measure between 2006 and 2022.

4.5.1 Trends in Real Personnel Expenditure

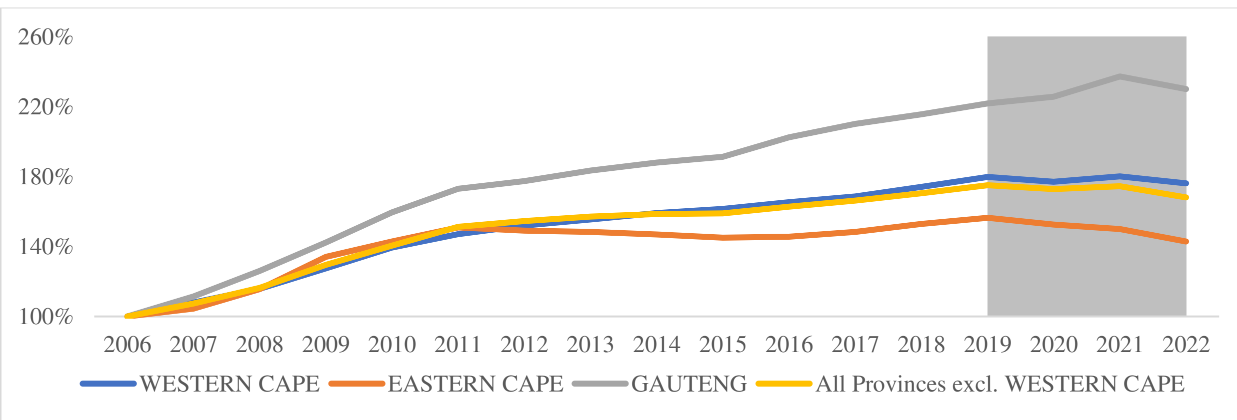

Figure 12: Indexed Growth in Real Personnel Expenditure across different provinces

When looking at real personnel expenditure over the period, the Western Cape grew by 76%, the average growth across other provinces was 68%, the province with the highest growth was Gauteng which grew by 130% and the province with the lowest growth was the Eastern Cape, 43%. These results indicate that real personnel expenditure in the Western Cape grew almost 8% more than the average across all other provinces and the only provinces that experienced larger expenditure growth were Gauteng (130%) and the Northern Cape (98%).

Between 2019 and 2022, there was a break in the trend and personnel expenditure in the Western Cape decreased for the first time over the period by around 2%. This decrease came from a decrease in real average salaries which fell by almost 6% while FTEs increased by 4% over the same period. In has been shown that in the Western Cape, it's possible to increase public service officials while reducing real personnel costs. However, relying solely on hiring junior staff isn't sustainable for maintaining service delivery. Over the same period, the only province that experienced an increase in personnel expenditure was Gauteng, where expenditure grew by almost 4%, while all other groups included in this analysis decreased over the same period.

4.5.2 Trends in Headcounts (FTEs)

Between 2006 and 2022, FTEs in the Western Cape increased by 27%, the provincial average increased by 16%, the province with the largest growth in FTEs was Gauteng where it increased by 64% and the number of FTEs employed in Limpopo fell by 10%.

Furthermore, between 2019 and 2022, only the Western Cape and Gauteng experienced significant growth in FTEs growing by 4% and just under 13% respectively. The growth in FTEs in Gauteng was driven by growth in the health department where FTEs increased by 22%. In the Western Cape, FTEs increased significantly in the Social Development (6%), Education (5%) and Health departments (4%).

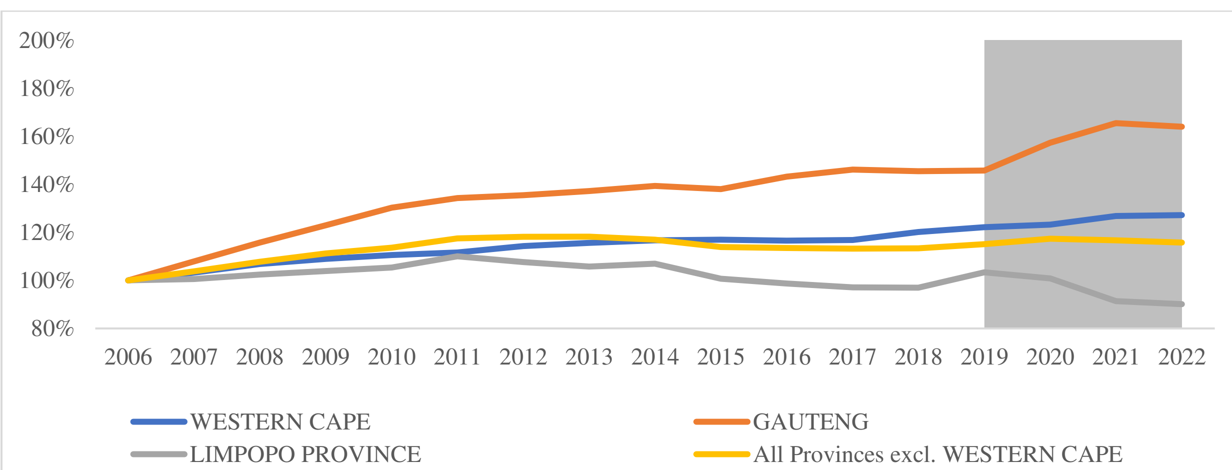

Figure 13: Indexed Growth in FTEs across different provinces

4.5.3 Trends in Real Average *Salary*

Over the period, real average salaries across all provinces grew at a similar rate as the growth in salaries is determined centrally. However, there are differences between provinces due to factors such as the composition of different provincial establishments, appointments and terminations, notch increases and promotions. In the Western Cape, real average salaries grew by 39%, the average growth across other provinces was 45%, the province with the largest growth was Limpopo which grew by 60% and the province with the lowest growth was the Eastern Cape which grew by 38%.

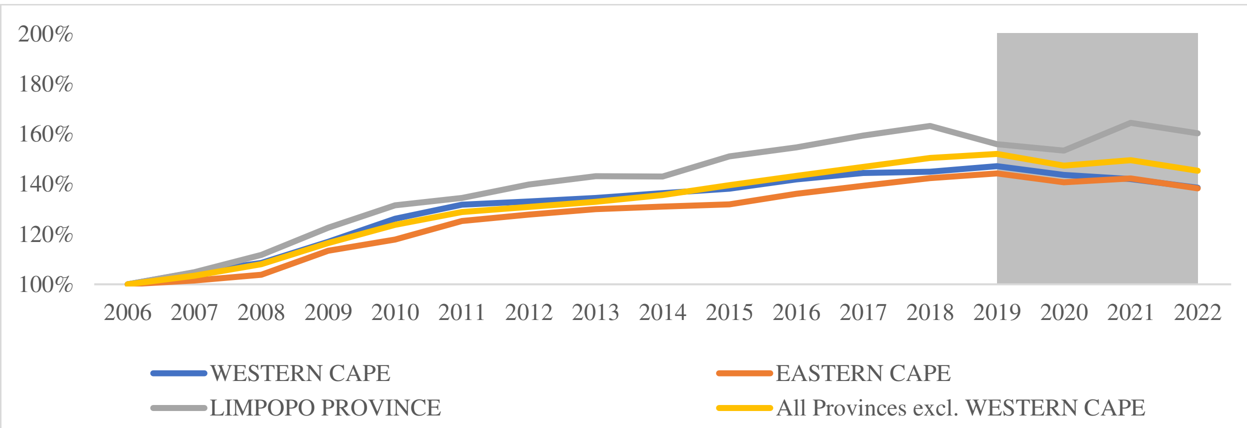

Figure 14: Indexed Growth in Real Average Salary across different provinces

Between 2019 and 2022 there was a decrease in real average salaries across all groups in the analysis apart from Limpopo in part due to the wage freeze that was implemented in 2020. The increase in real average salary over this period in Limpopo was the effect of a considerable number of low-income officials who were added to the PERSAL system in 2019 and subsequently removed in 2020.

The data indicates that compared to other provincial governments, the Western Cape had the second lowest growth rate in real average salaries in the provinces. To understand why this is the case, the composition of the Western Cape establishment in 2022 by salary level group can be analysed. Higher salary level groups earn higher average salaries, and the opposite is true for lower salary groups.

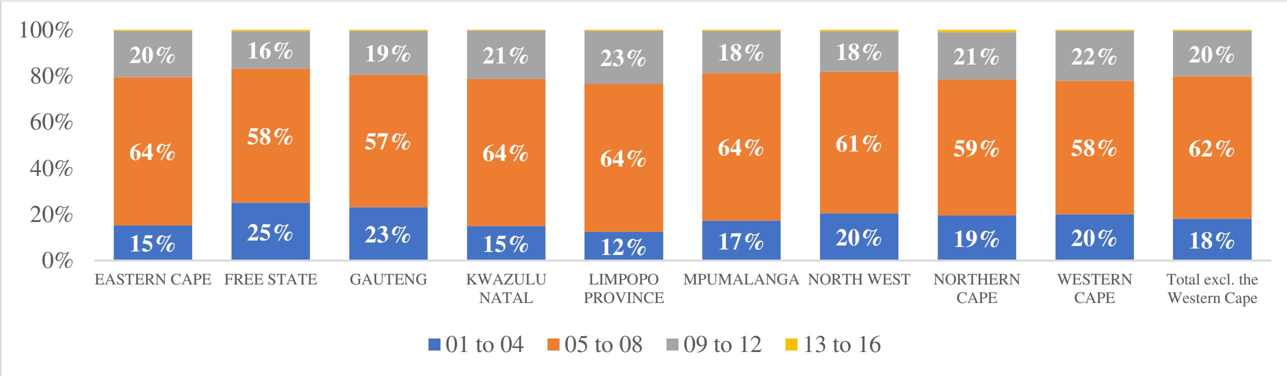

Figure 15: Composition of provincial government by FTEs per salary level group in 2022

The composition of the provincial government by salary level group in 2022 is displayed in Figure 15 above. It indicates that compared to the provincial average excluding the Western Cape, the Western Cape has a larger proportion of officials in salary levels 01 to 04, a smaller proportion of officials in salary levels 05 to 08 and a higher proportion of officials in salary levels 09 to 12.

Additionally, in salary levels 01 to 04 and 05 to 08, which make up almost 80% of the establishment in the Western Cape, the average salaries are 9% and just under 3% lower than the average salaries across all other provinces, respectively. The combination of a larger part of the establishment being employed at lower salary level groups and the lower real average salary for officials in salary level groups 01 to 04 and 05 to 08 resulted in a lower overall real average salary growth in the Western Cape, compared to other provinces.

Another reason behind the slower growth in real average salary in the Western Cape is how FTEs in salary level groups have changed in comparison to all other provinces. Between 2006 and 2022, salary level groups 01 to 04 and 05 to 08 grew by 0.1% and 1.1% per year respectively in the Western Cape, while the same groups in all other provinces decreased by 2.0% and grew by 0.9% per year. Furthermore, in the Western Cape salary level groups 09 to 12 and 13 to 16 grew at a slower rate than the same salary level groups in all other provinces. Moreover, the real average salary growth in all salary level groups was slower in the Western Cape than in all other provinces. Therefore, the stronger growth of FTEs at lower salary level groups in the Western Cape in combination with slower growth at higher salary level groups contributed to slower real average salary growth.

As real average salaries have a smaller variance across provinces, the trends in the absolute value of real average salaries can also be analysed and Figure 16 below displays the trends in the real average salary between 2006 and 2022. Results indicate that in addition to the WCPG having slower growth in real average salary over the period, the province also has a slightly lower real average salary than all other provinces in 2022. However, Figure 16 also indicates that between 2006 and 2014, the WCPG had the highest real average salary across all provinces and until 2020 the real average salary in the province was higher than the real average salary across all other provinces.

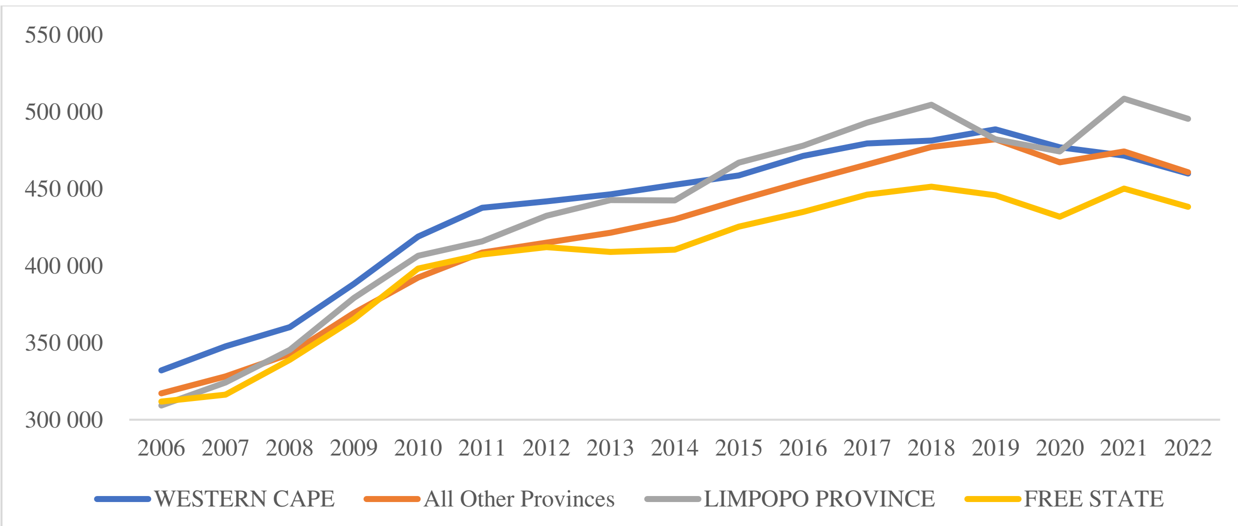

Figure 16: Trends in Real Average Salary categorised by provincial governments

4.6 Changes in Expenditure and FTEs in the context of population growth

When comparing different provinces to each other, it is important to take into consideration the population that resides in each province, as this is a key determinant of the demand for services that the provincial government would need to provide. Because of provincial boundary shifts that occurred pre-2009, the provincial population measures will be between 2010 and 2022.

Between 2010 and 2022, the population in the country increased by 19% and the number of FTEs in provincial governments increased by 3%. Between 2010 and 2022, the population in the Western Cape increased by 27%, in all other provinces the population increased by 19%, the population in Gauteng increased by 34%, the population in the Eastern Cape increased by 3%. Furthermore, Gauteng, the Western Cape and North West (22%) were the only provinces where the growth in the population exceeded the country's population growth rate of 19%. Over the same period, the FTEs in the Western Cape increased by 15%, FTEs in all other provinces increased by 2%, FTEs in Gauteng increased by 26% and FTEs in Limpopo and the Eastern Cape fell by just under 15%.

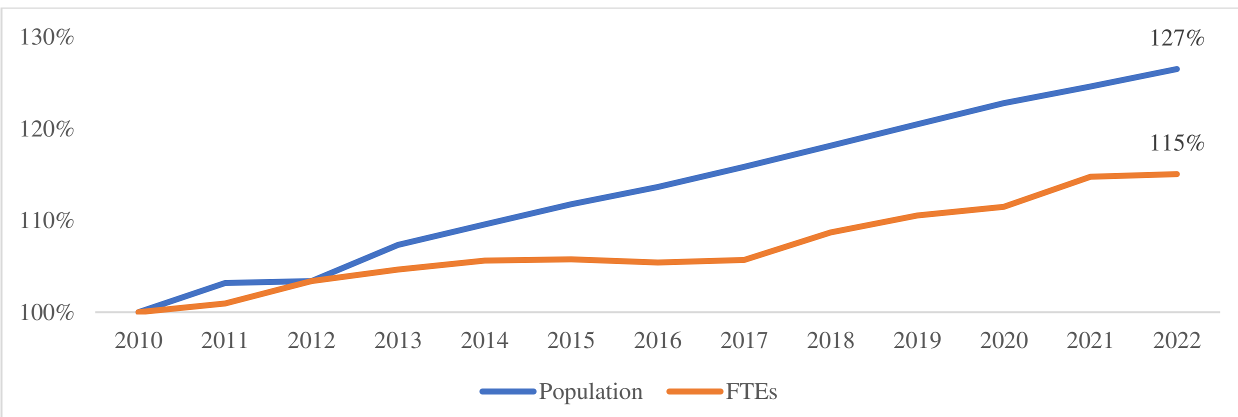

Figure 17: Indexed Growth of FTEs and the Population in the Western Cape

In most provinces, the population grew faster than the number of FTEs in provincial governments between 2010 and 2022. Therefore, the FTEs per 1 000 people decreased because of slow growth in the number of government officials compared to population growth. In 2022, the Western Cape had 12.4 provincial government officials per 1 000 people and since 2010, this measure has decreased by 9%. In 2022, the average in all other provinces was 15.5 FTEs per 1 000 people which had decreased by 14% over the period. Furthermore, the province with the highest ratio in

2022 was the Free State with 20.4 FTEs per 1 000 people and Gauteng had the lowest with 11.8 FTEs per 1 000 people.

Results indicate that the Western Cape has the second lowest number of officials per 1 000 people in the country and lower than the average across all other provinces. This may be one of the reasons behind personnel expenditure accounting for a smaller proportion of consolidated expenditure than the average across other provinces. Furthermore, the number of government officials per 1 000 people in the province has decreased significantly over the period and if all else stayed equal, the capacity to provide services may have declined in the WCPG.

Another key factor to consider is expenditure per person within a province and how that has evolved over the period, as this indicates whether real personnel expenditure has been growing in line with the population. In the Western Cape in 2022, real personnel expenditure was R5 720 per person, this number only fell by 0.1% from 2010 when it was R5 730 per person. In 2022, the average real personnel expenditure per person in other provinces was R7 140, this increased by 1% over the period. The province with the highest relative expenditure was the Free State where it was R8 930, which had grown by 7% over the period and the province with the lowest was Gauteng, where personnel expenditure in 2022 was R5 320, up 7% from 2010.

These results indicate that personnel expenditure in the Western Cape per person was 20% lower than the average personnel expenditure in all other provinces. The only other province that had a lower expenditure per person than the provincial average across all other provinces was Gauteng. Furthermore, as there was no large change in the real personnel expenditure per person in the Western Cape it implies that personnel expenditure has grown in line with the population of the province.

In conclusion, the trends indicate that personnel expenditure in the province has grown at a similar rate to the population. However, the number of officials in the Western Cape has increased slower than the population. Together these trends suggest that even though a significant proportion of growth in real personnel expenditure has come from increasing the number of personnel in the provincial government, it hasn't increased fast enough to keep the same ratio of officials per person in the province. Therefore, in terms of the population in the province, the increase in real personnel expenditure between 2010 and 2022 has been driven by the growth in the real average salary. Real average salary increased by 10% over the period, which was lower than the average increase in all other provinces of 17%. Over the same time, the average in all other provinces, the number of FTEs per 1 000 people fell by 14% compared to 9% in the Western Cape, while the real personnel expenditure per person increased by around 1%, not largely different from the growth in the Western Cape.

4.6.1 Census 2022 Highlights

The results of the 2022 population and housing census were released in October 2023 and the report represents an opportunity to obtain data on key demographic indicators such as the population size and the composition of the population. This section of the report provides a summary of the changes in the population of the Western Cape between the 2011 and 2022 censuses.

Overall, the population of South Africa increased from 51.7 million in 2011 to more than 62 million in 2022, this increase represents an average growth rate of 1.8% per year over the period (StatsSA, 2023:2). Over the same period, the population in the Western Cape increased from 5.8 million to 7.4 million, at an average growth rate of 2.2% per year (StatsSA, 2023:3). These results show that the population in the Western Cape has grown faster than the overall population in the country.

Furthermore, the 2022 Census indicates that the Western Cape overtook the Eastern Cape and became the third most populous province in the country after Gauteng and KwaZulu Natal (StatsSA, 2023:3). Between 2011 and 2022, the proportion of the population that resides in the Western Cape increased from 11% to 12% while the proportion of the population that resides in the Eastern Cape fell from 13% to 12%.

The increase in the number of residents in the Western Cape was partially due to interprovincial migration. Five out of the nine provinces observed positive net-migration, namely, the Western Cape, Northern Cape, North West, Gauteng and Mpumalanga (StatsSA, 2023:26). Furthermore, according to StatsSA (2023), the two provinces that dominated the internal migration stream were Gauteng which received more than a third of internal migrants, followed by the Western Cape which received around 15% of internal migrants between 2011 and 2022.

In summary, the major findings from the census are like other results in this paper regarding population changes across provinces. The findings indicate that the Western Cape has grown significantly in terms of the population since 2011 becoming the third largest province in the country and that it received a significant amount of people from other provinces over the period, increasing the demand for government provided services in the province.

Additionally, even though the Western Cape is the third largest province, according to EFRE data, the province had the fifth highest consolidated budget in 2022, 25% less than Limpopo which had the fourth highest consolidated expenditure. Furthermore, the Western Cape had the fifth highest personnel expenditure budget, 30% less than Limpopo which had the fourth highest personnel expenditure budget.

4.7 Health Specific Analysis

In the Western Cape, the Health department made up 40% of FTEs in the province and 41% of the personnel expenditure in the province. These proportions are higher than the average across all other provinces where Health departments contributed to 35% of FTEs and 35% of personnel expenditure.

When looking at the available EPRE data from 2015 to 2022, the Western Cape spent approximately 37% of consolidated expenditure on the Health department in 2022. In the same year, the average across all other provinces was 34%, the province with the highest proportion was Gauteng where 40% of consolidated expenditure was in the Health department and the lowest proportion was the Northern Cape where it was 30%.

These findings indicate that the Western Cape spends significantly more personnel and consolidated expenditure on the provincial Health department than other provinces, only Gauteng had a higher proportion of personnel expenditure and consolidated expenditure on the Health department in 2022. This disparity is partly due to the unique composition of Western Cape's education sector, where a significant number of teachers are funded by School Governing Bodies rather than the provincial budget.

4.7.1 Composition of Provincial Health Departments

The composition of FTEs in Health departments by salary level group across provinces is displayed by Figure 18 below. Across all provinces, salary levels 05 to 08 are the most significant in terms of size as nurses are employed in this salary level group, accounting for 45% of all Health department FTEs in 2022.

When compared to the provincial average, the Western Cape Health department in 2022 had a lower proportion of officials in salary levels 01 to 04, 30% compared to 32%. Furthermore, the department had a lower proportion of officials in salary levels 05 to 08 than the provincial average (44% vs. 45%) and a higher proportion of officials in salary levels 09 to 12 than the provincial average (26% vs. 23%).

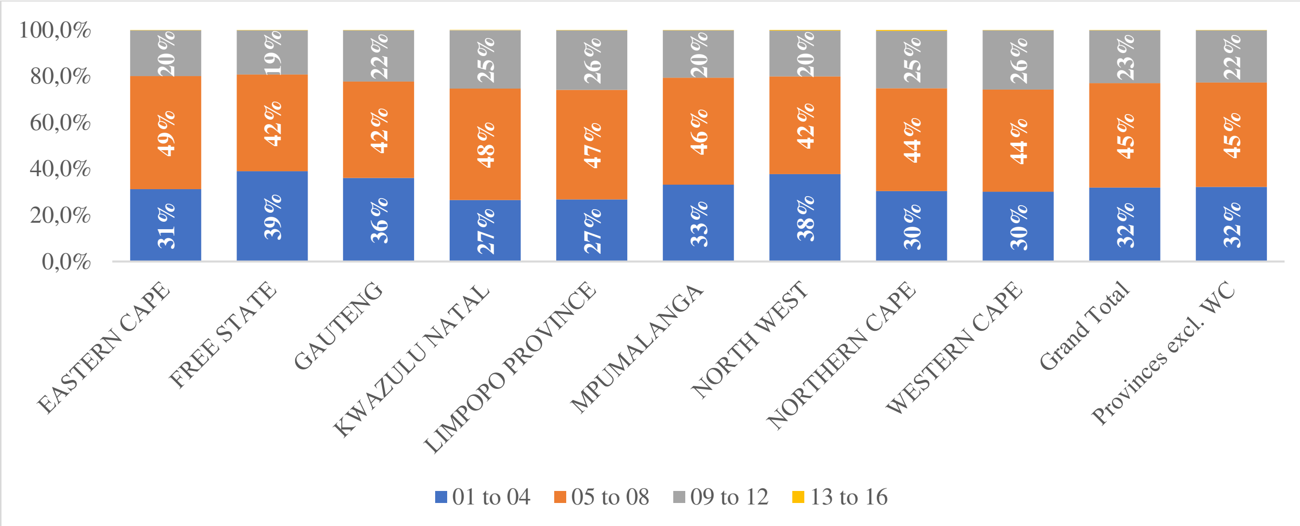

Figure 18: Composition of the WCPG Health Department by FTEs per salary level group

Furthermore, Table 12 and Figure 19 below look at the number of officials per manager across provincial Health departments and plots this on a scatterplot to determine if there are any significant outliers. Management is defined as officials employed in salary levels 13 to 16 and the ratio is the number of officials employed in salary levels 01 to 12 for every official employed in management positions.

Table 12: Ratio of officials per manager in provincial Health Departments in 2022

	Officials per Manager	Manager Real Average Salary	Departmental Average Salary
EASTERN CAPE	473	1 316 562	447 128
FREE STATE	405	1 325 293	432 186
GAUTENG	684	1 341 242	456 607
KWAZULU NATAL	806	1 313 469	467 669
LIMPOPO PROVINCE	452	1 295 998	507 033
MPUMALANGA	450	1 297 357	446 479
NORTH WEST	384	1 292 633	428 721
NORTHERN CAPE	241	1 287 878	481 314
WESTERN CAPE	512	1 328 571	467 452
WCPG Total	**535**	**1 315 363**	**460 124**
Provinces excl. WC	538	1 313 674	459 232

In 2022, the Western Cape had 512 officials per manager. The average of number of officials per manager across other provinces was 538 FTEs per manager, 5% higher than in the Western Cape. Moreover, the average salary of managers in the Western Cape was R1 326 000 and the departmental average salary (excluding managers) was R467 000. When comparing the Western

Cape to all other provinces, the managerial salary was 1% higher than the average and the departmental salary was 2% more than the average. The highest managerial salary was in the Free State where it was R1 325 000 and the province with the highest departmental average salary was Limpopo, where the average was R507 000.

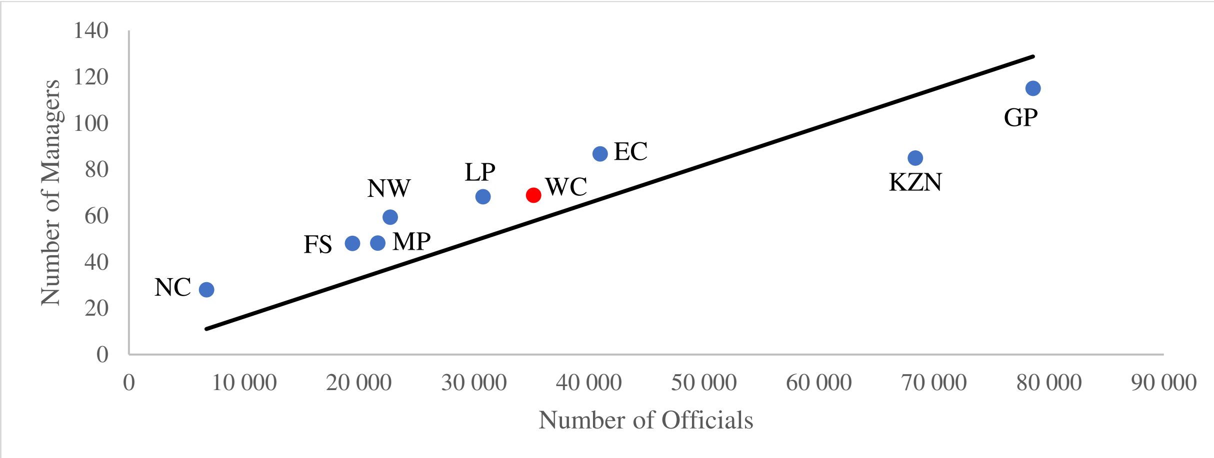

Figure 19: Scatterplot of Number of Managers by Number of Officials across different Provinces

Another interesting comparison to understand is the proportion of front-office to back-office officials in Health departments. To do this, the headcount and personnel expenditure of SHWs (medical practitioners and specialists and nurses) in provincial Health departments will be evaluated.

In 2022, 47% of FTEs and 58% of personnel expenditure in the Western Cape Health department were accounted for by SHWs. The provincial average for these measures in the same year was 52% and 63% respectively. Furthermore, the SHWs in the Western Cape also had an average salary of R578 000, which was 5% higher than the provincial average (R552 000). Only Gauteng and the Northern Cape had higher average salaries for their SHWs in 2022. However, the reason behind this is that medical practitioners and specialists accounted for a higher proportion of SHWs, 21%, compared to the average in all other provinces of 13% and medical practitioners and specialists receive a higher real average salary than nurses.

4.7.2 The Health department relative to Provincial Populations

In the Health and Education departments, the demand for services varies significantly between provinces. Therefore, to properly analyse expenditure in these departments the population who need access to these services need to be included in the analysis. In the Health department, the uninsured population across provinces will be used as a proxy for the demand for Health services.

In 2010, there were 4.4 million uninsured people in the Western Cape, this number grew by 27% to around 5.6 million in 2022. The growth in all provinces excluding the Western Cape over the same period was 21%, the province with the highest growth was Gauteng where the uninsured population grew by 38% and the lowest growth occurred in the Northern Cape, 8%.

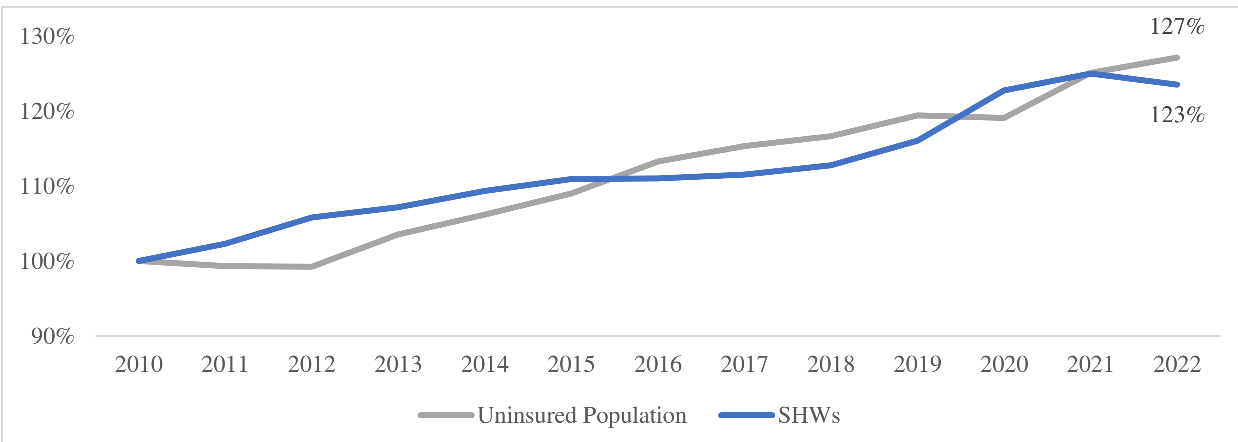

Figure 20: Indexed Growth of SHWs and the Uninsured Population in the Western Cape

In the Western Cape in 2022, the consolidated expenditure per uninsured person was R5 170 and the personnel expenditure per uninsured person was R2 980. In the same year, in all other provinces, the average consolidated expenditure per uninsured person was R4 730 and personnel expenditure per uninsured person was R2 930. The trends in the real personnel expenditure per uninsured person are plotted in Figure 21 below. In addition to a larger proportion of both consolidated and personnel expenditure being spent on the Health department in the Western Cape, the consolidated expenditure per uninsured person was 9% higher than the average in all other provinces and personnel expenditure per uninsured person was 2% higher than in all other provinces in 2022.

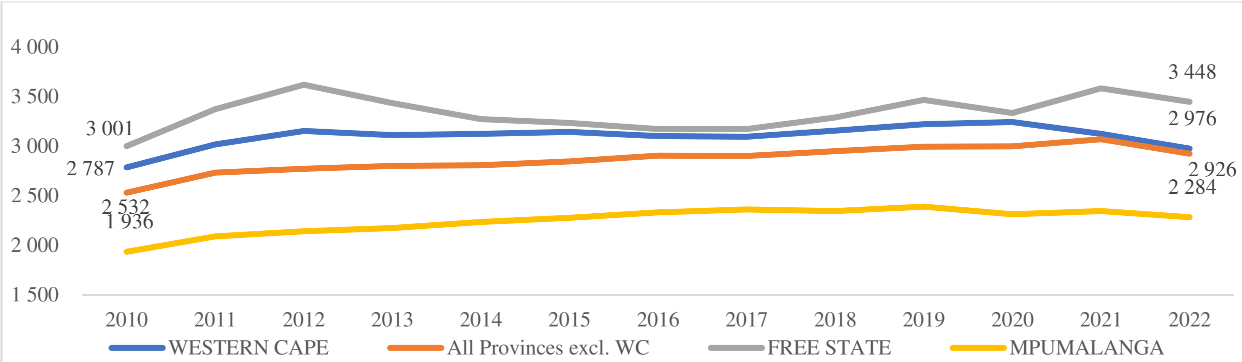

Figure 21: Real Personnel Expenditure per Uninsured Person between 2010 and 2022

Another important measure that can be used to analyse the effectiveness of Health departments is the number of specialised health workers (SHWs) per uninsured person in a province. According to the WHO, SHWs are defined as nurses and doctors and are a key group to look at when it comes to analysing the effectiveness and size of health departments. Furthermore, according to the WHO, a ratio of 4.45 SHWs per 1 000 uninsured people is sufficient to meet their sustainable development goal.

In 2022, the Western Cape had 3.0 SHWs per 1 000 uninsured people in the province the provincial average in the same year was 3.3, 11% higher than in the Western Cape. The trends in the number of SHWs per uninsured person across different provinces is displayed in Figure 22 below. Furthermore, the highest ratio was in the Eastern Cape where there were 3.9 SHWs per 1 000 uninsured people and the lowest was in Mpumalanga where the ratio was 2.7 in 2022. Between 2010 and 2022, the ratio of SHWs to uninsured people in the Western Cape decreased by 3%, while the average number of SHWs per 1 000 uninsured people in all other provinces also decreased by 3%.

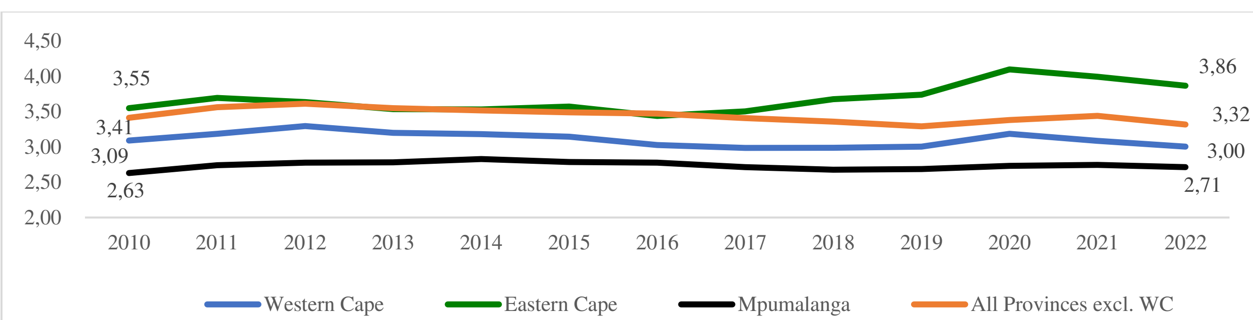

Figure 22: SHWs per 1 000 Uninsured People between 2010 and 2022

The Western Cape had a lower SHW to uninsured population ratio than the provincial average in 2022, even though both consolidated expenditure and personnel expenditure per uninsured person were slightly higher in the Western Cape than the average across all other provinces.

In summary, the real personnel expenditure in the Western Cape's Health department grew faster than the growth in the uninsured population. The number of SHWs in the province increased at a slower rate than the uninsured population which meant that the ratio of SHWs to the uninsured population fell by 3% over the same period. This suggests that the number of SHWS hasn't grown fast enough to keep up with the demand for Health services. Additionally, the increase in real personnel expenditure was driven by the growth in the real average salary received by officials in the department of Health, which increased by 10% over the period (23% in all other provinces). Furthermore, between 2010 and 2022, in all other provinces, the number of SHWs per 1 000 uninsured people fell by 3%, the same rate as the Western Cape and the real expenditure per uninsured person increased by 16%, compared to 7% in the Western Cape.

4.7.3 Performance of Provincial Health Departments

In addition to analysing the expenditure per uninsured person and the trend in the number of SHWs per 1 000 uninsured people, an analysis of the performance of provincial Health departments in relation to their expenditure is useful. This type of analysis can assist in understanding the relationship between expenditure and the effectiveness of Health departments using different performance indicators.

Using the 2019/2020 District Health Barometer (2020) as a reference, two different indicators will be utilised to analyse the performance of provincial Health departments between 2015 and 2019. One of the indicators is the expenditure per patient day equivalent (PDE) in district hospitals across the country. The PDE is a weighted measure that combines inpatient days, day patient headcounts, Outpatient Department (OPD) and emergency casualty headcounts into a measure that approximates the resource requirements of one inpatient day and is a composite indicator that measures how well the resources available to a healthcare facility are being spent (Massyn, *et al.*, 2020:169).

The other measure is the Universal Health Coverage (UHC) index, which is based on four principles (Massyn, *et al.*, 2020:1). First, is the preference for effective service coverage indicators based on the most relevant needs in the country for quality health services. Second, the indicator should include indicators for four different types of services, namely prevention, curative services, rehabilitation and palliation. Third, the index should cover the main health areas of reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases, and injuries. Lastly, the index should be disaggregated by key inequality dimensions. This indicator is an index reported on a scale of 0 to 100, which includes several tracer variables of health service coverage and measures the access to safe, effective, quality and affordable health services (World Health Organisation, 2023).

The real expenditure per PDE in the Western Cape in 2019 was R2 690, which increased by 8% from 2015. Furthermore, the average expenditure per PDE for all other provinces was R3 280, this measure grew by 15% over the period and the provinces with the highest and lowest expenditure per PDE in 2019 were North West (R3 671) and Mpumalanga (R2 911). Over the period, the Western Cape had the lowest real expenditure per PDE across all provinces and the increase in the expenditure per PDE over the period was driven by an increase in expenditure rather than a decrease in the number of patients (Massyn, *et al.*, 2020:169). Furthermore, the increase the real expenditure per PDE in all other provinces was almost double the increase experienced in the Western Cape.

Additionally, the provincial UHC index is available from 2017 to 2019 and in 2019, the Western Cape had a UHC index of 57.8, this was slightly higher than the average UHC index in all other provinces, which was 56.6 in 2019. Furthermore, the Western Cape had the fourth highest UHC index after Gauteng, KwaZulu Natal and Mpumalanga. Moreover, since 2017, the UHC index in the Western Cape had decreased by 2% while in all other provinces the index increased by just over 3% and the Western Cape was the only province that experienced a decrease in this measure over the period.

Between 2015 and 2019 in the Western Cape, the real consolidated expenditure per uninsured person fell by 1% and personnel expenditure per non-insured person increased by around 3% and in 2019 the province had a higher real consolidated expenditure and personnel expenditure per uninsured person than the average across all other provinces. At the same time, the efficiency of expenditure and health coverage in the province has decreased.

4.8 Education Specific Analysis

In the Western Cape, the Education department made up 49% of FTEs in the province and 48% of the personnel expenditure in the province in 2022. These proportions are lower than the average across all other provinces, where Education departments contributed to 52% of FTEs and 53% of personnel expenditure in 2022. However, an important caveat in the Western Cape Education department is the greater deployment of student governing body (SGB) educators in the province. These educators are employed by school governing bodies rather than the Education department and are not captured on PERSAL. According to the department of Basic Education in 2020, 21% of all educators in the province were SGB-appointed, while the average proportion of SGB-appointed educators in all other provinces was 10%, with the next highest proportion in Gauteng which was 15% in 2020. This reality makes comparing the Western Cape's Education department to other province's Education departments difficult as they are fundamentally different.

In the same year, the real average salary in the Western Cape Education department was R450 000, lower than the provincial average excluding the Western Cape which was R463 000. The province with the highest real average salary was Limpopo Province where it was R490 000 and the lowest, Gauteng where it was R444 000.

EPRE data including information on departments within provinces is available from 2015 to 2022. This allows for analysis of the personnel expenditure in the large provincial departments in the context of consolidated expenditure. In 2022, expenditure in the Western Cape Education department made up 36% of consolidated expenditure. In the same year, the average across all other provinces was 42%, the province with the highest proportion of expenditure was Limpopo, 48% and the province with the lowest proportion of expenditure was Gauteng, 39%.

Additionally, personnel expenditure made up 69% of consolidated expenditure in the Western Cape Education department in 2022. The provincial average for the proportion of consolidated expenditure that compensation of employees made up in other departments of Education was 76% in the same year.

These findings indicate that the Western Cape has a proportionally smaller Education department in terms of consolidated expenditure, personnel expenditure, and FTEs than the average in all other provinces. Additionally, the real average salary in the Western Cape was around 3% lower than the provincial average in 2022.

4.8.1 Composition of Provincial Education Departments

Figure 23**Error! Reference source not found.** below displays the composition of FTEs in Education departments by salary level groups across the different provinces in 2022. Across all provinces, salary levels 05 to 08 account for the largest proportion of officials, as educators are employed in these salary levels. In the Western Cape, 70% of officials in the Education department were in salary levels 05 to 08, which is significantly lower than the provincial average excluding the Western Cape which was 74% in 2022. Moreover, the Western Cape had a higher proportion of officials in salary levels 01 to 04 than the provincial average in 2022, it was 13% in the province compared to the average of 8%.

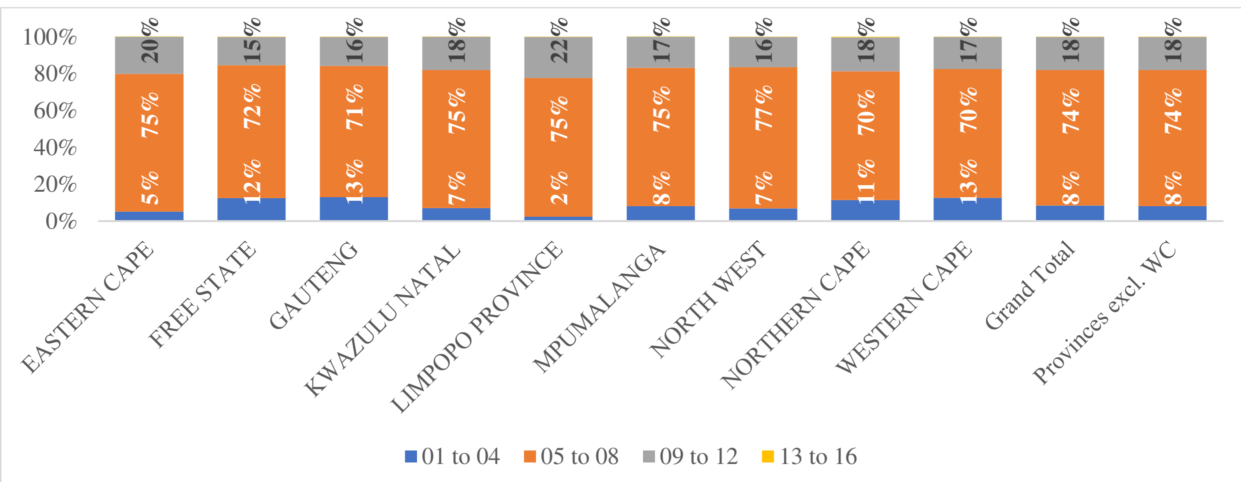

Figure 23: Ratio of officials per manager in provincial Education Departments

Another important issue that has been of interest in recent times is the age distribution of educators in Education departments across the country. Between 2006 and 2022, the average age of Educators in the Western Cape has decreased from 43.4 years old to 42.5 years old, a decrease of 2% over the period. Furthermore, the proportion of educators 55 years and older has increased from 10% in 2006 to 24% in 2022, and the proportion of educators 50 years and older has increased from 25% in 2006 to 41% in 2022.

Moreover, the change in the distribution of the age of Educators in the Western Cape can be seen in Figure 24 below. Figure 24 indicates that between 2006 and 2010, there was a significant rightwards shift meaning that educators were getting older. However, the distributions in 2015 and even more so in 2022 suggest that even though there is a substantial stock of educators who are reaching retirement age, there has been a significant increase in the number of young educators in the province's Education department.

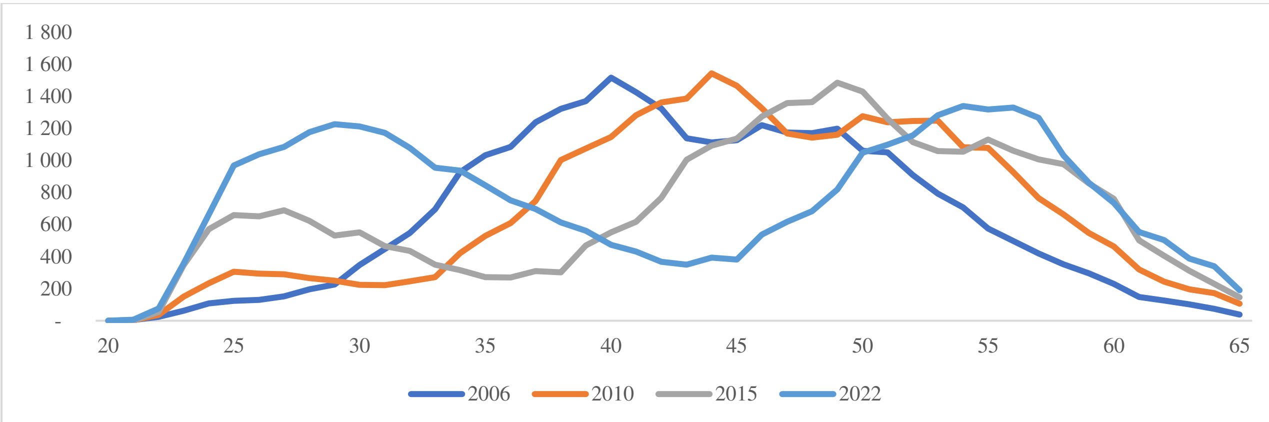

Figure 24: Distribution of Educators by Age in the WCPG

In 2022, the average age of educators across all other provinces was 45.3 years old, 7% more than in the Western Cape. Furthermore, the average age increased by just under 8% from 42.1 years old in 2006. The province where educators had the highest average age in 2022 was Limpopo where it was 47.2 years old, the province with the lowest average age was Free State where it was 43.6 years old. Moreover, in 2006 other provinces had 8% of educators who were 55 years and older, this increased to 26% in 2022. When looking at the proportion of educators who were 50 years and older in other provinces, it was 20% in 2006 and 49% in 2022.

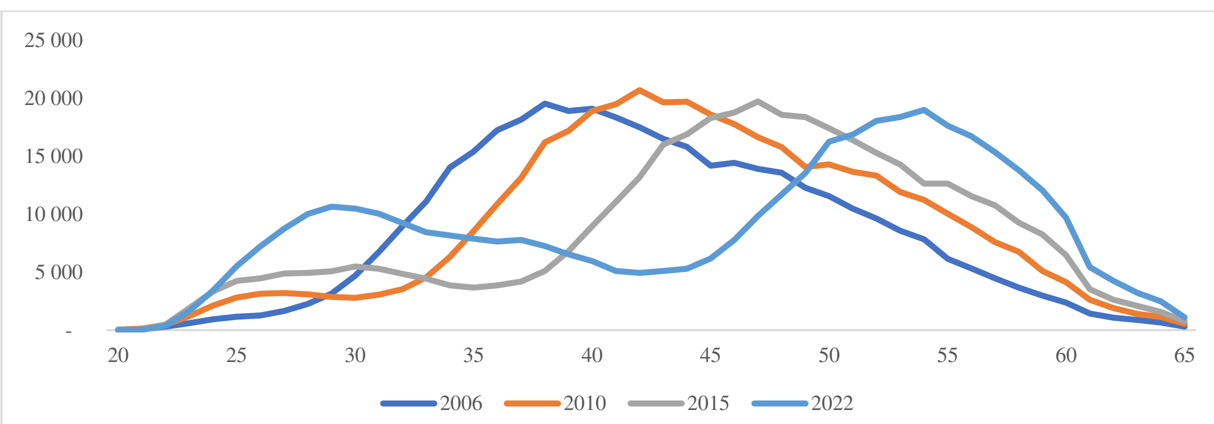

Figure 25: Distribution of Educators by Age in all other Provinces

When comparing the distribution of Educators by age in the Western Cape to all other provinces, the same trend is present as exhibited by Table 13 below. The initial rightwards shift in 2006, 2011 and 2016 was followed by the increase in the stock of younger Educators in 2022. However, unlike the Western Cape, the increase in the number of young Educators was not as strong in 2016 and 2022.

These results suggest that the Western Cape has decreased the average age of educators between 2006 and 2022 by hiring many young educators to try and replace the significant proportion of educators reaching retirement age in the province. This contrasts with other Education departments in the province where the average age of educators has increased over the period.

Table 13: Ratio of officials per manager in provincial Education Departments

	Officials per Manager	**Manager Real Average Salary**	**Departmental Average Salary**
EASTERN CAPE	1 075	1 324 768	481 521
FREE STATE	928	1 373 251	449 741
GAUTENG	906	1 362 085	443 008
KWAZULU NATAL	1 790	1 386 035	472 673
LIMPOPO PROVINCE	893	1 313 393	492 072
MPUMALANGA	1 239	1 325 387	462 736
NORTH WEST	887	1 368 702	459 771
NORTHERN CAPE	335	1 360 690	454 168
WESTERN CAPE	922	1 317 511	450 095
WCPG Total	**1 012**	**1 347 816**	**464 504**
Provinces excl. WC	1 023	1 351 273	465 985

Furthermore, Table 13 above and Figure 26 below look at the number of officials per manager across provincial Education departments and plots this on a scatterplot to determine if there are any significant outliers. Management is defined as officials employed in salary levels 13 to 16 and the ratio is the number of officials employed in salary levels 01 to 12 for every official employed in management positions. In 2022, the Western Cape Education department had 990 FTEs per FTE in management levels. This was 10% less than the average of all other provinces which was 1 020 FTEs for every FTE in the management group in 2022. The province with the lowest ratio was the Northern Cape where there were only 340 FTEs per manager and the province with the highest ratio was KZN where there were 1 790 FTEs per manager.

Moreover, the average salary of managers in the Western Cape was R1 317 000 and the departmental average salary (excluding managers) was R450 000. When compared to the provincial average excluding the Western Cape, the managerial salary was just under 3% lower than the average and the departmental salary was 3% less than the average. The highest managerial salary was in the Eastern Cape where it was R1 324 000 and the province with the highest departmental average salary was Limpopo, where the average was R492 000.

When analysing the relationship between the number of managers and the number of officials across provincial Education departments, Figure 26 below illustrates that as the number of officials increases, so does the number of managers. The data labels for Figure 26 below capture the number of managers in each provincial Education department. Most provinces are clustered along the line of best fit and the Western Cape is highlighted in red, however, there are a few outliers.

The most significant outliers are the Northern Cape (37 managers), Gauteng (103 managers) and KZN (56 managers). In KZN, data suggests that there were not enough managers for the officials in the department, as the number of officials per manager was 75% more than the provincial average excluding the Western Cape. Furthermore, when compared to other provinces, Gauteng had a top-heavy Education department as the number of officials per manager was 11% lower than the provincial average excluding the Western Cape. Lastly, in the Northern Cape, the Education department was also top-heavy with 335 officials per manager, 67% lower than the provincial average excluding the Western Cape.

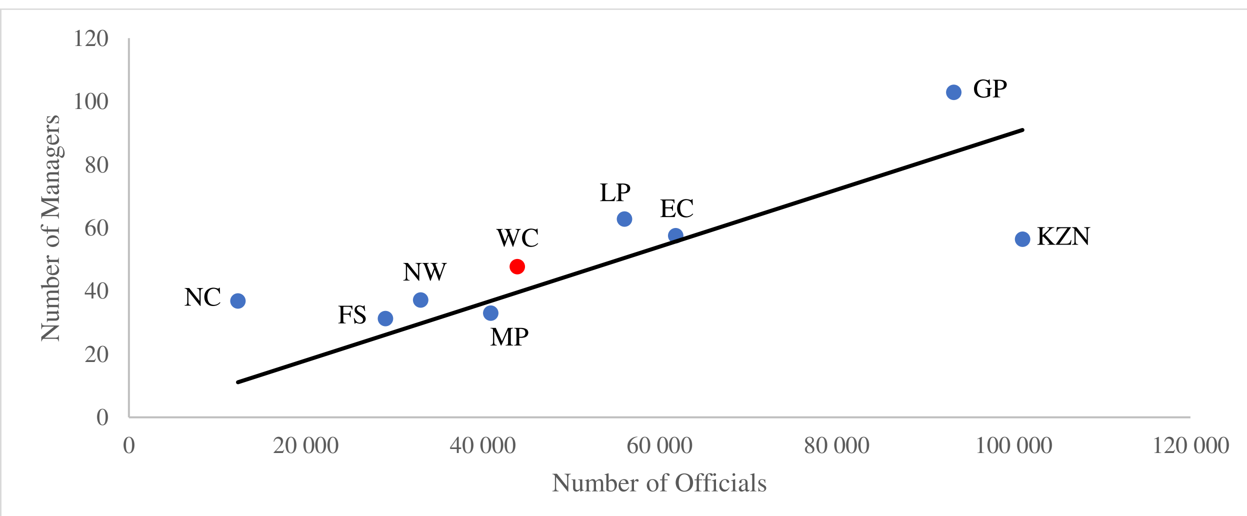

Figure 26: Scatterplot of Number of Managers by Number of Officials across different Provinces

Another interesting comparison to understand is the proportion of front-office to back-office officials in Education departments. For this analysis, front-office officials in Education departments will be defined as educators and all non-educators will be defined as back-office officials.

In 2022, 79% of FTEs in the Western Cape Education department were educators while 21% were non-educators. Furthermore, 88% of personnel expenditure went to educators and the remaining 12% was spent on non-educators. The average proportion of educators across all other provinces was 84% for FTEs and 90% for personnel expenditure. This finding indicates that the Western Cape had a higher proportion of non-educator personnel expenditure and FTEs than other provinces, which could be an effect of the high number of SGB educators in the province.

4.8.2 The Education department relative to Provincial Populations

Due to the different demands for Education departments across provinces, it is important to analyse the personnel expenditure in the context of this demand. To assess the demand for Education across provinces, data from the DBE that captured the number of learners in public ordinary schools between 2010 and 2022 will be used.

In the Western Cape in 2010, there were 960 000 learners in public ordinary schools. The number of learners grew by 23% to just under 1.2 million learners in 2022. This growth was significantly more than the average growth across all other provinces, where the number of students attending public ordinary schools only grew by 6% over the same period. The province that experienced the largest growth over this period was Gauteng, where the number of students grew by 27% and the lowest growth was in the Eastern Cape where the number of students fell by 13%.

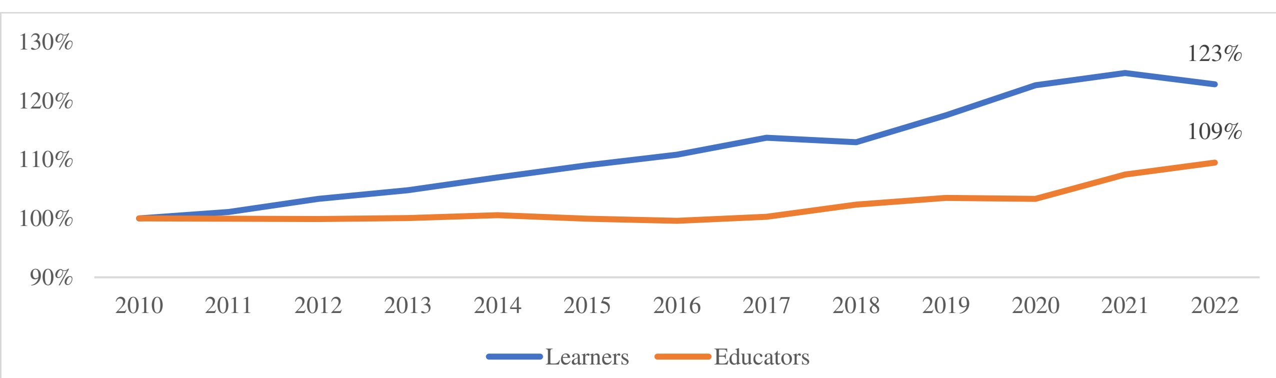

Figure 27: Indexed Growth of the number of Learners and Educators in the Western Cape

These results indicate that the demand for government provided education increased significantly in the Western Cape over the period. The number of learners in public schools in the Western Cape increased by 23% between 2010 and 2022 at an average of 1.7% per annum, personnel expenditure in the department increased by 18% and FTEs and real average salaries in the Education department increased by 9%. Moreover, when focusing on educators, real personnel expenditure increased by 18%, FTEs increased by 9% and real average salaries increased by 8%.

This suggests that the demand for public education has increased faster than personnel expenditure in the Western Cape. This finding is supported by the evidence that in the Western Cape, the real personnel expenditure in the Education department per learner has decreased by 4% between 2010 and 2022. During the same period, the average growth in real personnel expenditure per learner across all other provinces was 3%, the province with the highest growth in expenditure per learner was KwaZulu Natal where it grew by 14% and the province with the lowest growth was Limpopo Province where it fell by 4%.

Furthermore, using the EPRE data, the consolidated expenditure per learner in the Western Cape Education department can be calculated. In 2022, real expenditure per learner was R23 900 in the Western Cape, the provincial average excluding the Western Cape was R23 300, the highest expenditure per learner occurred in Gauteng, R26 600, and the lowest expenditure per learner occurred in KwaZulu Natal where it was R21 400 in 2022. The growth in the real expenditure per learner between 2015 and 2022 in the Western Cape was just under 1%, while the average growth in all other provinces was 4% over the same period.

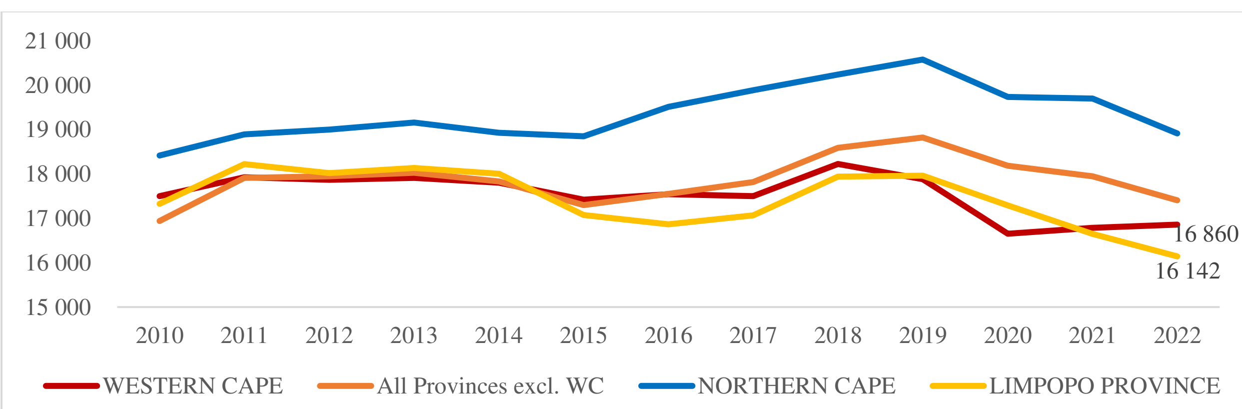

Figure 28: Real Personnel Expenditure per Learner between 2010 and 2022

The results regarding personnel expenditure per learner indicate that personnel expenditure in the Western Cape Education department has not increased at a similar rate to the demand for public education in the province between 2010 and 2022, which can be seen in Figure 28 above. Additionally, the growth in consolidated expenditure per learner has increased by an average of 0.1% per year between 2015 and 2022, which indicates that the consolidated expenditure has kept up with the increase in the demand for Education.

Another measure that can be used to look at how the demand for education has interacted with the number of officials in the Education department is by looking at the learner-educator (LE) ratio. It is important to remember when analysing this measure that there is significant heterogeneity across different schools and school quintiles. To get to the results, PERSAL data was used to count the number of FTE educators in each province, while data from the School Realities report released annually by the DBE was used to get the number of students in public ordinary schools. The PERSAL data does not include SGB-appointed educators.

Regarding policy on the LE ratio in South Africa, the Minister of Basic Education stated that there are no currently legislated norms and standards for learner-to-educator ratio in public schools (Motshekga, 2022). However, a note by Spaull (2022) suggests that returning to the LE ratio to 2012 levels would be a good starting point in improving the LE ratio in the country. When using the PERSAL data and DBE learner numbers, the average LE ratio in 2012 across all provinces was 29.7.

The Western Cape had the highest LE ratio across all provinces in 2022, with an average of 33.7 learners per FTE educator on PERSAL. This ratio has increased by 12% since 2010, when it was 30.1. Notably, the LE ratio in all other provinces in 2022 was 31.8, reflecting a 9% increase since 2010.

Considering the high proportion of SGB educators in the Western Cape, the DBE captured data on the breakdown between the number of public teachers and SGB appointed educators, until 2020. When using this data, the Western Cape had an LE ratio of 32.0 in 2020, when the average in all other provinces was 31.0, the only province with a higher LE ratio was Limpopo where it was 33.5. Additionally, between 2010 and 2020, the LE ratio in the province increased by 6% while the average growth in all other provinces was 2%.

These findings indicate that the Western Cape had a higher LE ratio than the average in all other provinces, regardless of whether SGB educators are included in the calculation. This finding can be explained by the significant growth in the number of learners in the province and the slow growth in personnel expenditure over the same period.

In essence, the number of learners attending public ordinary schools in the Western Cape increased faster than the real personnel expenditure in the Education department and the number of FTE educators employed by the provincial government between 2010 and 2022. This suggests that the real personnel expenditure and number of educators in the province didn't increase fast enough to satisfy the increasing demand for public education in the province. In contrast, at the same time, in all other provinces, the real personnel expenditure increased by 3% and the LE ratio increased at a slower rate than in the Western Cape (9%).

4.8.3 Performance of Provincial Education Departments (PIRLS Data)

Understanding the relationship between education outcomes and expenditure on Education in provinces is important. To do this, data from the Progress in International Reading Literacy Study (PIRLS) assessment can be used. It is a study that assesses the reading comprehension of students and monitors trends and indicators of growth in literacy at five-year intervals (Department of Basic Education, 2023:1).

In South Africa, learners in grades four and six were assessed. Grade four learners were assessed in all eleven official languages and learners in grade six were assessed in only English and Afrikaans. The PIRLS international scale is set from 0 to 1 000 points, with a centre point of 500 and a low benchmark which is described as able to read to locate and retrieve explicit information set at 400 points.

For this report, data from the 2011, 2016 and 2021 PIRLS reports will be utilised to look at the trends in expenditure, expenditure per learner and performance across different provinces. Only the 2016 and 2021 PIRLS data were categorised by province. The data from the PIRLS is rich, however, for this analysis, only the mean scores across different provinces in the different years for the grade four assessment are used. Additionally, it is important to note that the data is created using a sample of both private and government schools in the country.

Table 14 below looks at the average score achieved by learners in each province in addition to South Africa as a whole. There was a slight decrease in the average country-wide score between 2011 and 2016 from 323 to 320, however, the decrease was not statistically significant (Howie, Combrinck, Roux, Tshele, M., Mokoena, G. & McLeod-Palane, 2017:83).

Table 14: PIRLS Scores across different Provinces between 2011 and 2021

	pre-PIRLS or PIRLS Literacy			
National Province	**2011**	**2016**	**2021**	**Growth 2016-2021**
Eastern Cape		290	271	*-6.6%*
Free State		347	285	*-17.9%*
Gauteng		343	320	*-6.7%*
KwaZulu-Natal		316	297	*-6.0%*
Limpopo		285	244	*-14.4%*
Mpumalanga		313	264	*-15.7%*
North West		326	232	*-28.8%*
Northern Cape		306	284	*-7.2%*
Western Cape		377	363	*-3.7%*
South Africa	**323**	**320**	**288**	***-10.0%***

In 2016, the highest achieving province was the Western Cape, with a mean score of 377 while the province with the lowest score was Limpopo. Furthermore, according to Combrinck *et al.* (2017), the only province where learner achievement was significantly different from the other provinces was the Western Cape, where achievement was significantly higher than all other provinces, apart from Gauteng.

Moreover, in all three editions, the average scores that the country as a whole and all provinces achieved were below the lowest benchmark of 400 points. This means learners are unable to retrieve basic information from the text to answer simple questions (Department of Education, 2023:6).

Preliminary results from the 2021 PIRLS assessments suggest that South Africa experienced learning losses as there was a statistically significant decrease of 10% from 2016 which was significantly driven by the learning losses experienced during the COVID pandemic (Department of Basic Education, 2023: 8). Furthermore, the Western Cape had the highest average score in 2021 of 363 a decrease of just under 4% over the five years, this was the smallest decrease over the period.

4.9 Conclusion

Between 2006 and 2022, real personnel expenditure experienced an annual increase of 3.5%, slightly higher than the 3.4% growth observed in the real consolidated budget. This has led to the real personnel expenditure increasing from 52% of the consolidated budget in 2006 to 53% in 2022. However, this proportion remains notably lower (61%) compared to the average across all other provinces.

In the Western Cape, between 2019 and 2022 (COVID period and beyond), there was a decline of 2% in real personnel expenditure and a 6% decrease in the real average salary. Notably, this is the first time such a decline has occurred since 2006, despite a 4% increase in the number of personnel. A key reason behind this was the wage freeze in 2020, which affected the real average salary. Another important factor was the increased demand for Health services due to the COVID-19 pandemic, which led to an increase in the number of nurses, medical practitioners and specialists and other administrative workers hired on contract in the Health department.

Analysis of real personnel expenditure relative to the population reveals parallel growth trends, however, the number of personnel has grown slower than the population. Therefore, in terms of the population in the province, the increase in real personnel expenditure between 2010 and 2022 has been driven by the growth in the real average salary.

In the Health department, real personnel expenditure grew faster than the growth in the uninsured population. Nevertheless, the number of SHWs in the province increased at a slower rate than the uninsured population which suggests that the number of SHWS hasn't grown fast enough to keep up with the demand for Health services. Once more, the increase in real personnel expenditure was driven by the growth in the real average salary received by officials in the Health department.

In the Education department in 2020, 21% of all educators in the province were SGB-appointed, while the average proportion of SGB-appointed educators in all other provinces was 10% which makes the Education department in the Western Cape fundamentally different to the departments in all other provinces. Furthermore, the expenditure per learner decreased by 4% and the LE ratio increased by 12% over the period between 2010 and 2022 in the province which suggests that the real personnel expenditure and number of educators in the province didn't increase fast enough to match the demand for public education.

In conclusion, the number of officials responsible for providing services in relation to their relevant population group has decreased in the entire government, the Health department and the Education department which may have a negative effect on service provision. Furthermore, when looking at these measures, the growth in real personnel expenditure primarily stemmed from increases in the real average salary.

5 Implications of the 2023 Wage agreement on Personnel Expenditure

The model used to estimate the wage agreement's impact, including notch progression, is detailed in the first five sections before presenting the actual outcome. For readers solely interested in the result, refer to the last section on provincial personnel expenditure growth projections.

5.1 Wage Agreement

The wage agreement is the result of negotiations between the employer and organised labour, and it specifies the annual cost-of-living adjustments (COLAs) to be applied to public service salaries. This section provides the terms of the 2023 wage agreement, with examples showing how to implement it and how it affects different salary levels. The 2023 wage agreement stands out in the South African context due to its unique combination of a percentage increase and the inclusion of the cash gratuity into the notch. This departure from the norm is noteworthy, as previous notch adjustments were characterised by a straightforward percentage increase, which varied across different salary level groupings.

The Public Service Coordinating Bargaining Council (PSCBC) Resolution 2 of 2023 (wage agreement) states: "On the 30 March 2023, the employer and majority of Labour Unions in the PSCBC agreed upon a wage settlement for the 2023/24 and 2024/25 financial year. The two-year wage agreement is detailed as follows:

- For the 2023/24 Financial Year, the employer shall pay employees on salary levels 1 to 12 including those remunerated in terms of OSDs in the Public Service, an average increase of 7.5% which encompasses a translation of the current non-pensionable cash allowance into a pensionable salary, estimated at an average of 4.2%; and an additional 3.3% pensionable salary increase.
- For the 2024/25 Financial Year, the employer shall pay employees on salary levels 1 to 12 including those remunerated in terms of OSDs in the Public Service, a pensionable salary increases of a projected CPI (by National Treasury at time of 2024 budget tabling) for the 2024/25 financial year.

The Minister of Finance has further concurred with the Minister of Public Service and Administration (MPSA) to adjust the SMS salary scales by translating the current non-pensionable cash allowance into a pensionable salary increase, estimated at an average of 4.2% and an additional 3.3% pensionable salary increase to be effective from 01 April 2023."

5.1.1 Example of notch adjustment

An example of the translation of the 2022/23 salary notch to the 2023/24 notch is provided in an update on the implementation of PSCBC Resolution 2 of 2023 issued by the DPSA on 13 April 2023 which states that: "The salary scales that applied up to 31 March 2023 are adjusted by 3.3% across all levels with effect from 1 April 2023. Furthermore, the payment of non-pensionable allowance is translated into a pensionable salary estimated at an average of 4.2% with effect from 1 April 2023. This is calculated as follows:

Salary Level 1: 99 513 + 3.3% = 102 798 + 14 640 (R1 220 monthly non pensionable allowance computed over 12 months) = 117 438 (new notch as at 1 April 2023).

The above example is clarified further in the table below:

Table 15: Salary Notch Adjustment

Salary notch as at 31 March 2023	**Salary notch plus 3.3%**	**Non-pensionable allowance (NPA) * 12 months**	**New notch as at 1 April 2023**
99 513	99 513 + 3.3% = 102 798	1 220 x 12 = 14 640	117 438

It can be seen in this case that the increase in salary notch is 18%. The following paragraph extends this example to all salary levels and indicates that the notch increase ranges between 18.0% at salary level 1 and 4.4% at level 16.

5.1.2 Effect of wage agreement on salary notch

Each salary level consists of a range of consecutive salary notches 1.5% apart. For conciseness, the table shows the implementation of the wage agreement for only one selected salary notch at each salary level.

Table 16: Effect of 2023 notch adjustments on Notches

Salary level	Notch 2022/23 (median)[1]	Cash gratuity	Notch 2023/24 (wage agmt)	% Notch incr
1	99 513	14 640	117 437	18.01%
2	112 098	14 640	130 437	16.36%
3	140 145	14 640	159 410	13.75%
4	163 974	14 640	184 025	12.23%
5	197 880	14 640	219 050	10.70%
6	246 690	16 224	271 055	9.88%
7	297 156	16 224	323 186	8.76%
8	364 599	17 400	394 031	8.07%
9	434 118	17 400	465 844	7.31%
10	535 140	19 680	572 480	6.98%
11	739 605	19 680	783 692	5.96%
12	1 023 417	20 340	1 077 530	5.29%
13	1 155 891	20 340	1 214 375	5.06%
14	1 367 811	20 340	1 433 289	4.79%
15	1 663 422	20 340	1 738 655	4.52%
16	1 938 961	21 816	2 024 763	4.43%

The statement in the wage agreement that the notch increase is an average of 7.5% is an underestimation of the impact of the wage agreement. *An analysis of PERSAL data shows that the average notch increase in 2023/24 across all salary levels was 9.4%. This average is based on 758 000 personnel who only received the notch adjustment and no additional increase e.g. notch progression.*

[1] Median salary notch taken over the whole public service using 2022/23 PERSAL data.

While the notch increase is high – especially at lower salary levels, measuring the actual increase in salaries should take into consideration the cash gratuity as part of the baseline salary in 2022/23. With this comparison, the increase ranges from 2.9% to 3.3%, with higher relative increases at higher salary levels:

Table 17: Effect of 2023 notch adjustments on Salaries

Salary level	Notch 2022/23 (median)	Cash gratuity	2022/23 notch plus gratuity	Notch 2023/24 (wage agmt)	% Salary incr
1	99 513	14 640	114 153	117 437	2.88%
2	112 098	14 640	126 738	130 437	2.92%
3	140 145	14 640	154 785	159 410	2.99%
4	163 974	14 640	178 614	184 025	3.03%
5	197 880	14 640	212 520	219 050	3.07%
6	246 690	16 224	262 914	271 055	3.10%
7	297 156	16 224	313 380	323 186	3.13%
8	364 599	17 400	381 999	394 031	3.15%
9	434 118	17 400	451 518	465 844	3.17%
10	535 140	19 680	554 820	572 480	3.18%
11	739 605	19 680	759 285	783 692	3.21%
12	1 023 417	20 340	1 043 757	1 077 530	3.24%
13	1 155 891	20 340	1 176 231	1 214 375	3.24%
14	1 367 811	20 340	1 388 151	1 433 289	3.25%
15	1 663 422	20 340	1 683 762	1 738 655	3.26%
16	1 938 961	21 816	1 960 777	2 024 763	3.26%

The actual gain experienced by employees is the change of the cash gratuity from non-pensionable to pensionable which has a permanent effect on future salary and pension benefits.

A further effect of the wage agreement is that the difference between consecutive notches on the salary scale decreased from the 1.5% of previous years, with the decrease more pronounced at lower salary levels. The implication is that the value of a notch progression has decreased from previous levels.

Table 18: Example of effect of 2023 notch adjustments on notch progression value: Public Service non-OSD

Salary level		Full-time notch 2022/23	Notch increase 2022/23	Full-time notch 2023/24	Notch increase 2023/24
1	1	99 513		117 438	
	2	100 995	1.49%	118 968	1.30%
	3	102 519	1.51%	120 543	1.32%
	4	104 049	1.49%	122 124	1.31%
	5	105 615	1.51%	123 741	1.32%
2	1	107 196	1.50%	125 373	1.32%
	2	108 810	1.51%	127 041	1.33%
	3	110 439	1.50%	128 724	1.32%
	4	112 098	1.50%	130 437	1.33%
	5	113 784	1.50%	132 180	1.34%
	6	115 485	1.49%	133 935	1.33%
	7	117 222	1.50%	135 729	1.34%
	8	118 974	1.49%	137 541	1.34%

To comprehensively assess the impact of notch changes on salaries and total personnel expenditure, it is essential to grasp the fundamental relationship between salary notches and earnings (salaries). Furthermore, one must consider adjustments to other benefits and allowances that constitute a portion of total personnel expenditure. These factors collectively contribute to the growth of the personnel expenditure from one year to the next, a topic that will be explored in detail in the following section.

5.1.3 How salaries are affected by notch adjustments

A South African public service employee's salary consists mainly of a basic salary and the employer's contribution to the pension fund. Additionally, an employee can receive a range of benefits and allowances, of which the most significant are usually the medical and housing benefits. The focus in this section is on the basic salary including the pension.

While there are key differences in the salary composition between the two main salary groups - Levels 1 to 10 and Levels 11 to 16 (total cost to employer package) - it does not change the fact that a change in the salary notch will apply equally to the main elements of all salaries.

In Levels 1 to 10, the basic salary is identical to the notch and to this the employer's contribution to the pension fund is added, which is 16% of the notch.

In Levels 11 to 16, the notch incorporates the employer's pension fund contribution and is the sum of the employer's contribution to pension and the basic salary, which is split into a basic salary and a non-pensionable allowance. These three elements of the notch (pension, basic and non-pensionable allowance) are all multiples of the notch and will therefore increase by the same percentage at the notch. This is shown in more detail in Annexure 3.

The significance of this is that a notch increase applies to a significant portion of an employee's total salary and in addition to that, if this notch increase is a type that is universally applied (COLA) it affects all salaries. Therefore, COLA is the key driver of total personnel expenditure growth.

The only two significant allowances that are not notch-based are the employer's contribution to medical aid and housing allowances. The breakdown of total personnel expenditure in terms of salary groups and main salary components for 2022/23 gives an idea of the key areas of focus in costing the effect of the wage agreement.

Table 19: Contribution of Salary level groups to total personnel expenditure 2022/23

Salary Group	% Personnel Expenditure
1-10	85%
11-16	15%
Total	100%

Table 20: Salary levels 1 to 10: Contribution of Basic Salary, Pension, Medical and Housing to total personnel expenditure 2022/23

Item	% Personnel Expenditure	Escalation type
Basic Salary	73%	Notch
Pension	9%	Notch
Medical	6%	Medical inflation
Non-pensionable allowance	5%	Mixed
Housing	4%	Consumer Price Inflation
Other	4%	Mixed
Total	**100%**	

Table 21: Salary levels 11 to 16: Contribution of Basic Salary, Pension, non-pensionable allowance to total personnel expenditure 2022/23

Item	% Personnel Expenditure	Escalation type
Basic Salary	66%	Notch
Non-pensionable	15%	Notch
Overtime	9%	Notch
Pension	7%	Notch
Other	3%	Mixed
Total	**100%**	

Salary levels 1 to 10 accounted for 85% of total personnel expenditure in 2022/23. Additionally, as indicated in Table 20 and Table 21, for both salary groups, relatively few salary items make up a large portion of the total personnel expenditure. Therefore, for estimating the impact of the wage agreement, effort will be focused on these significant categories. The escalation or growth factor to be applied to calculate the annual increase is mostly the same as the notch increase, medical and housing are determined by the DPSA and are inflation based.

The most significant pronouncement in the wage agreement is the COLA as it affects the basic salaries of employees. As a first rough approximation, the personnel expenditure growth should be aligned to COLA. Other factors that determine personnel expenditure growth are adjustments to medical aid and housing allowances, notch progression, promotion and the staff turnover rate.

5.2 A model for projecting total personnel expenditure growth

In this section a basic model is proposed for projecting personnel expenditure growth. The basic concept of factoring the total personnel expenditure into the number of employees and cost per employee is explained, then demonstrated with examples that build up in complexity, starting from a stable establishment (no changes in personnel numbers) to including the possibility to cost the combined effect of the wage agreement and changes in personnel. The next section looks at the effect of notch progression and expands the model to cater for different notch progression rates.

The model is built on 2022/23 PERSAL expenditure data, which is structured from its raw form into an efficient format to allow credible estimates at the highest possible summary level that allows differentiation required to apply the correct escalation factors. The fields required by the model are the salary level, allowance type, escalation factor that applies to that allowance type and salary level combination, the total expenditure, and FTE counts at the lowest level of analysis required. For this report the lowest unit of analysis is department.

To project the growth in personnel expenditure from a base year to the next year, the 2022/23 expenditure data is broken down into subgroups based on the allowance and salary level. For 16 salary levels and 200 allowances, the total number of sub-groups is the product of 16 and 200, which is 3 200. The number of subgroups can be reduced substantially by grouping together allowances with the same escalation factors. For example, basic salary, employer's contribution to pension fund and non-pensionable cash gratuity for MMS and SMS members are all notch-based and apply to the same number of individuals. Therefore, these allowances can be grouped together as the escalation factor applying to the notch at a specific salary level is the same.

For each sub-group, the total personnel expenditure in the base year is determined, together with the FTEs associated with the expenditure in the base year which is utilised to determine a unit cost (or average personnel expenditure per FTE). The next years' unit cost is determined by increasing the base year unit cost according to an escalation factor that is determined by the wage agreement, directives on CPI and medical allowance increases applicable to the relevant allowance and salary level.

The model uses the median salary notch in a specific salary level as a representative of all the notches in that level. The notch escalation factor is based on the median notch for all individuals at that level. The benefit of this approach is that the size of the data on which the model is based, is reduced by 10 to 20-fold – depending on the number of unique notches per level that are replaced by the median. A second benefit is that anomalies which sometimes occur in the data such as zero notch values are avoided.

The total personnel expenditure for 2023/24 is obtained by combining all the subcategories' projections. The key idea is to determine the percentage growth in personnel expenditure, not necessarily the absolute change. This estimated growth should apply to datasets that largely overlap but are not entirely identical. The revised personnel expenditure budget estimates for 2022/23 differ slightly from the PERSAL expenditure data. This difference could be due to different criteria used for the inclusion of personnel expenditure in the data. Given the overlap between the datasets used for this model and the budget data, the percentage growth derived from the two datasets using the same method should be similar.

A key difference between this model and the HRBP tool issued by National Treasury for departments to plan their personnel expenditure budgets is the use of allowance as a basis for escalation as opposed to the HRBP which uses the item. Allowances are preferred in this model as the item is a grouping of allowances, which may have different escalation factors. It would be inaccurate to apply a single escalation factor to an item that includes several allowances that grow at different rates. An example is the item including non-pensionable cash allowances included both notch-based allowances and the non-pensionable cash gratuity. More detail on the HRBP tool is provided in the Annexure 2.

5.2.1 Example: Stable personnel numbers and no notch progression

This example indicates how to estimate the 2023/24 personnel expenditure for salary level 7 using the 2022/23 PERSAL data as baseline. The notch escalation factor for this salary level is 1.088 (notch increase at salary level 7) which was applied to all notch-based allowances. Medical and housing allowances are escalated by 4.7% and 5.2% as by the direction of National Treasury. An escalation factor of 0 was used for the non-pensionable cash allowance as it is included in the notch and therefore, discontinued as a separate allowance in 2023/24.

Table 22: Model calculations for Salary level 7 – no change in personnel numbers

Allowance	**Esc Factor 23**	**personnel expenditure 22 (R m)**	**% personnel expenditure**	**FTE 22 (th)**	**Ave 22 R**	**Ave 23 R**	**FTE23 (th)**	**personnel expenditure 23 (R m)**
BASIC SALARY	1.0876	93 861	67.76%	313.5	299 359	325 582	313.5	102 083
PENSION EMPLOYER CONTRIBUTION	1.0876	12 157	8.78%	295.3	41 168	44 774	295.3	13 222
SERVICE BONUS	1.0876	7 120	5.14%	25.2	282 706	307 470	25.2	7 744
MEDICAL EMPLOYER CONTRIBUTIONS	1.0474	6 637	4.79%	182.1	36 441	38 168	182.1	6 952
NON-PENSIONABLE CASH ALLOWANCE	0.0000	5 120	3.70%	308.7	16 583	-	308.7	
HOUSING ALLOWANCE : HOME-OWNER (RES 7 OF 2015)	1.0520	3 279	2.37%	173.6	18 886	19 868	173.6	3 450
BASIC SALARY: BACKDATED	1.0876	2 472	1.78%	43.4	56 997	61 990	43.4	2 688
37% SERVICE BENEFITS (CONTRACT EMPLOYEES)	1.0876	1 847	1.33%	15.4	119 860	130 359	15.4	2 009
OVERTIME	1.0876	861	0.62%	14.9	57 924	62 998	14.9	936
TOTAL top 96%		**133 354**						**139 084**
Y-o-Y growth in top 96%								**4.30%**
Other allowances combined		5 169	3.73%					5 454

Allowance	Esc Factor 23	personnel expenditure 22 (R m)	% personnel expenditure	FTE 22 (th)	Ave 22 R	Ave 23 R	FTE23 (th)	personnel expenditure 23 (R m)
Y-o-Y growth other								5.51%
Grand Total		138 523						144 538
Y-o-Y growth in personnel expenditure								4.34%

The year-on-year personnel expenditure growth for level 7 is 4.34%. For the top items (96% of expenditure) the personnel expenditure growth is 4.30%.

- Personnel expenditure 22 and FTE 22 are calculated from 2022/23 PERSAL expenditure data.
- Ave 22 (Column 3) is the unit cost (personnel expenditure 22/FTE 22).
- The escalation factors are based on the 2023 wage agreement as it applies to salary level 7 (1.0876), CPI (5.2%) and medical allowance growth (4.7%).
- The escalation factor for non-pensionable cash allowance is 0, as it was absorbed into the notch.
- Ave 23 is obtained by multiplying Ave 22 with the escalation factor.
- FTE was kept constant, therefore FTE 23 is the same as FTE 22.
- Personnel expenditure 23 is the product of Ave 23 and FTE 23.

The FTE can be adjusted according to different scenarios on personnel growth from the base year to the next. The product of the FTE and the unit cost gives the total personnel expenditure per allowance in the next year. This approach allows us to quantify the effect of changes to personnel numbers together with the implementation of the wage agreement.

5.2.2 Example: Decreasing personnel numbers and no notch progression

The same dataset used in the previous example is used to demonstrate the effect of a reduction of personnel numbers by 1% in 2023/24 on personnel expenditure growth. The FTE 23 is obtained by reducing FTE 22 by 1% while using the same estimated average or unit cost per allowance as in the previous example. With this combination of factors, the total personnel expenditure growth for 23/24 is 3.30%, down from 4.34%. The 1% drop in personnel numbers caused a comparable drop in total personnel expenditure growth.

Table 23: Model calculations for Salary level 7 – 1% decline in personnel numbers

Allowance	Esc Factor 23	personnel expenditure 22 (R m)	% personnel expenditure	FTE 22 (th)	Ave 22 R	Ave 23 R	FTE23 (th)	personnel expenditure 23 (R m)
BASIC SALARY	1.0876	93 861	67.76%	314	299 359	325 582	310.4	101 062
PENSION EMPLOYER CONTRIBUTION	1.0876	12 157	8.78%	295	41 168	44 774	292.4	13 090
SERVICE BONUS	1.0876	7 120	5.14%	25	282 706	307 470	24.9	7 666
MEDICAL EMPLOYER CONTRIBUTIONS	1.0470	6 637	4.79%	182	36 441	38 154	180.3	6 882
NON-PENSIONABLE CASH ALLOWANCE	-	5 120	3.70%	309	16 583	-	305.6	
HOUSING ALLOWANCE : HOME-OWNER (RES 7 OF 2015)	1.0520	3 279	2.37%	174	18 886	19 868	171.9	3 415
BASIC SALARY: BACKDATED	1.0876	2 472	1.78%	43	56 997	61 990	42.9	2 661
37% SERVICE BENEFITS (CONTRACT EMPLOYEES)	1.0876	1 847	1.33%	15	119 860	130 359	15.3	1 989
OVERTIME	1.0876	861	0.62%	15	57 924	62 998	14.7	927
TOTAL		133 354	96.27%					137 693
Y-o-Y growth in top 96%								3.25%
Other allowances combined		5 169	3.73%					5 399
Grand Total		138 523	100.00%					143 092
Y-o-Y growth in personnel expenditure								3.30%

The two examples demonstrate how the COLA, other escalation factors and personnel changes impact the overall growth of personnel expenditure. However, it's important to note that notch progression, set at 1.5%, also significantly contributes to the year-to-year increase in personnel expenditure. When forecasting personnel expenditure for future years, it is crucial to account for notch progression.

5.3 Notch progression

Notch progression is regulated by the "2019 Incentive Policy Framework for Employees in the Public Service". Rules are determined by the appointment act and occupational dispensation, but in the main, annual notch progression is perceived as almost an automatic consequence of satisfactory performance. Notch progression does not apply to employees who have reached the maximum notch at a specific salary level or is still on probation. In most cases notch progression increases the notch by 1.5%.

The perception that progression applies almost universally every year can be tested using PERSAL data.

5.3.1 Notch progression patterns

The progression rate (% personnel progressing to a higher salary notch) was analysed using PERSAL records from 2018 to 2023. PERSAL data was structured in terms of the trajectory of notch positions at the person level from 2018 to 2023. To elucidate this data structure, Table xx presents a select number of cases randomly extracted from PERSAL data pertaining to the public service non-OSD salary scale.

The table illustrates instances such as Person 1, who progressed from notch 74 to notch 75 in 2019, then advanced to notch 76 in 2020 and notch 77 in 2021. Subsequently, no further progressions were recorded. Conversely, Persons 5 and 10 remained at notch 65 throughout the entire period, showing no progression. Person 6, on the other hand, experienced a single progression in 2021.

Table 24: Examples of trajectories of notch positions between 2018 and 2023

Person	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**Number of notches progr**
1	74	75	76	77	77	77	3
2	78	78	79	80	80	81	3
3	78	78	79	80	80	81	3
4	72	73	74	75	75	76	4
5	65	65	65	65	65	65	0
6	42	42	42	43	43	43	1
7	62	63	64	65	65	65	3
8	78	78	79	80	80	81	3
9	74	75	76	77	77	77	3
10	65	65	65	65	65	65	0
11	46	47	48	49	49	50	4
12	73	73	74	75	75	76	3
13	66	67	68	69	69	70	4

In 2019, 6 out of the 13 people considered progressed, while in 2020, 10 people progressed. In this small sample, nobody progressed in 2022.

Notch progression rates are estimated by averaging over several cycles. The number of notch progressions between 2018/19 and 2023/24 were counted and a weighted average calculated. This approach smooths out the effect of more than one notch progressed or delays in implementation.

Table 25: Number of notch progressions between 2018/19 and 2023/24: full dataset

Notches progressed in 5 cycles	Progression rate: Notches progressed/5	Personnel	%	Progr rate* weight (%)
0	0%	30 461	9.74%	-
1	20%	18 893	6.04%	0.0121
2	40%	34 081	10.89%	0.0436
3	60%	61 777	19.75%	0.1185
4	80%	144 097	46.06%	0.3685
5	100%	11 895	3.80%	0.0380
6	120%	5 225	1.67%	0.0200
7	140%	3 215	1.03%	0.0144
8	160%	3 229	1.03%	0.0165
Total		**312 873**	**100.00%**	**0.6316**

Personnel included were only people who were present over the period 2018/19 to 2023/24 and were on the same salary scale in 2018/19 and 2023/24. Over 5 performance cycles, 50% progressed 4 or 5 notches. Keeping in mind that some progressions were more than one notch, the average annual progression rate over the period is estimated at 63.16%. (Weighted average of progression rates).

5.3.2 *Western Cape notch progression rate*

The estimated mean progression rate for the Western Cape is 68.4%, which is 5% higher than the combined number.

Table 26: Number of notch progressions between 2018/19 and 2023/24: Western Cape Province

Notches progressed in 5 cycles	Progression rate: Notches progressed/5	Personnel	%	Progr rate* weight (%)
0	0%	2 244	11.22%	-
1	20%	1 113	5.57%	0.0111
2	40%	1 837	9.19%	0.0368
3	60%	3 102	15.52%	0.0931
4	80%	7 419	37.11%	0.2969
5	100%	2 618	13.10%	0.1310
6	120%	563	2.82%	0.0338
7	140%	671	3.36%	0.0470
8	160%	425	2.13%	0.0341
Total		**19 992**	**100.00%**	**0.6839**

5.4 Extending the model to account for notch progression

Notch progression applies to all allowances that are notch-based. These allowances are escalated by the notch increase (usually 1.5% per single notch). If we assume that notch progression is implemented for all personnel, all notch-based allowances are escalated by an additional 1.5%. If notch progression applies to a proportion of personnel only, this is accounted for by the model. The calculation is provided in Annexure 6.

5.4.1 *Example: Applying notch progression to 65% of personnel*

This example builds on the previous example where FTE numbers were reduced by 1%.

Table 27: Model calculations for Salary level 7 – 65% of personnel progressed

Allowance	Esc Factor 23	Esc factor 23 (notch progr)	personnel expenditure 22 (R m)	personnel expenditure 23 (R m)	personnel expenditure 23 with progr (R m)
BASIC SALARY	1.0876	1.015	93 861	101 062	102 048
PENSION EMPLOYER CONTRIBUTION	1.0876	1.015	12 157	13 090	13 218
SERVICE BONUS	1.0876	1.015	7 120	7 666	7 741
MEDICAL EMPLOYER CONTRIBUTIONS	1.0470	1	6 637	6 882	6 882
NON-PENSIONABLE CASH ALLOWANCE	-	1	5 120		

Allowance	**Esc Factor 23**	**Esc factor 23 (notch progr)**	**personnel expenditure 22 (R m)**	**personnel expenditure 23 (R m)**	**personnel expenditure 23 with progr (R m)**
HOUSING ALLOWANCE : HOME-OWNER (RES 7 OF 2015)	1.0520	1	3 279	3 415	3 415
BASIC SALARY: BACKDATED	1.0876	1.015	2 472	2 661	2 687
37% SERVICE BENEFITS (CONTRACT EMPLOYEES)	1.0876	1.015	1 847	1 989	2 008
OVERTIME	1.0876	1.015	861	927	102 048
TOTAL			**133 354**	**137 693**	**137 999**
Y-o-Y growth in top 96%				**3.25%**	
Other allowances combined			**5 169**	5 399	**6 340**
Grand Total			**138 523**	**143 092**	**144 339**
Y-o-Y growth in personnel expenditure				**3.30%**	**4.20%**

When implementing notch progression of 65% of FTEs and reducing FTEs by 1% the year-on-year personnel expenditure growth is 4.20%. Adding 1.5% notch progression to 65% of personnel caused an increase of 0.9% in the year-on-year growth.

5.5 Extending the model to project 2024/25 personnel expenditure growth

When costing the effect of the wage agreement, the principles illustrated in the examples above, namely, the adjustments to the allowances from the wage agreement, changes in the number of personnel, and notch progression are extended to all salary levels and including all allowances.

To project personnel expenditure in 2024/25, the principles explained in the previous sections are applied using the 2023/24 projected values as the baseline and updating the escalation factors as per the wage agreement. In the resolution, the final agreement was to adjust all notches by CPI inflation in 2024/25. According to the NT guidelines the 2024/25 CPI should be 4.8% for the purposes of planning. Additionally, medical allowances should be adjusted by medical price inflation (MPI) which is taken as CPI plus 4% (8.8%).

The nature of the notch adjustment (simple CPI increase applied uniformly) agreed to for 2024/25 is simpler to cost, since the same proportion applies to all notches. This is different from the 2023/24 adjustment where the addition of a constant resulted in disproportionate increases across salary levels, the lower the notch, the higher the increase.

5.5.1 *Example: Projecting 2024/25 personnel expenditure growth*

This example projects the 2024/25 personnel expenditure for salary level 7, using the 2023/24 projection from the previous example as baseline. The notch escalation factors are adjusted by using a CPI of 4.8% as the COLA and for all CPI based allowances. Additionally, MPI is taken as CPI plus 4%. For the 2024/25 projection an additional 1% decrease in personnel numbers and a progression rate of 65% was used. With these assumptions the personnel expenditure growth for salary level 7 from 2023/24 to 2024/25 is estimated to be 3.9%.

Table 28: Projecting 2024/25 personnel expenditure for Salary level 7, with 1% reduction in FTE and 65% progression

Allowance	Escfac 24	escfac _prog	personnel expenditure 22 (R m)	personnel expenditure 23	personnel expenditure 24	FTE 22 (th)	FTE 23	FTE 24	Ave 22 (R th)	Ave 23	Ave 24
BASIC SALARY	1.048	1.015	93 861	102 048	105 876	314	310	307	299	329	345
PENSION EMPLOYER CONTRIBUTION	1.048	1.015	12 157	13 218	13 714	295	292	289	41	45	47
SERVICE BONUS	1.048	1.015	7 120	7 741	8 031	25	25	25	283	310	325
MEDICAL EMPLOYER CONTRIBUTIONS	1.088	1	6 637	6 882	7 413	182	180	179	36	38	42
NON-PENSIONABLE CASH ALLOWANCE	0.000	1	5 120			309	306	303	17		
HOUSING ALLOWANCE : HOME-OWNER (RES 7 OF 2015)	1.048	1	3 279	3 415	3 543	174	172	170	19	20	21
BASIC SALARY: BACKDATED	1.048	1.015	2 472	2 687	2 788	43	43	43	57	63	66
37% SERVICE BENEFITS (CONTRACT EMPLOYEES)	1.048	1.015	1 847	2 008	2 084	15	15	15	120	132	138
OVERTIME	1.048	1.015	861	936	971	15	15	15	58	64	67
TOTAL			**133 354**	**138 935**	**144 420**						
Y-o-Y growth in top 96%				**4.19%**	**3.95%**						
Other allowances combined			5 169	5 404	5 607						
Grand Total			**138 523**	**144 339**	**150 027**						
Y-o-Y growth in personnel expenditure				**4.20%**	**3.94%**						

Personnel expenditure growth projections can be compared to the growth accommodated within the budget allocations. If projected growth rates surpass the budgetary limits, implementing savings measures becomes crucial to prevent expenditure overruns. Savings measures available to provincial governments have been analysed in this project. In the next section the budget and model projections are brought together and compared. It is shown how the model can be used to analyse the impact of personnel reduction strategies, while implementing the wage agreement.

In the second part of the report, the principles applied in the examples are applied to the full 2022/23 PERSAL expenditure dataset. A tool was developed in Excel to project total personnel expenditure for 2023/24 and 2024/25 based on the 2022/23 baseline. The effect on personnel expenditure growth of different assumptions on personnel growth and progression rate can be calculated with the ability to differentiate the assumptions for different salary levels. The results are available at an aggregate level, per provincial government, national government, and individual departments.

5.6 Provincial personnel expenditure growth projections

The model is used to estimate 2023/24 and 2024/25 total personnel expenditure based on the wage agreement and the accompanying year-on-year growth, using 2022/23 PERSAL data as the baseline. The scenario used for the model assumes a 65% progression rate and no changes in the number of personnel. The reason for this scenario is to isolate the effect of the wage agreement and not conflate the numbers with other key factors that determine personnel expenditure growth, namely changes in personnel. In the current state of personnel expenditure consolidation, where departments were requested to manage personnel numbers, a zero growth in personnel scenario should provide an upper limit for the total personnel expenditure growth. Under this scenario a 100% replacement of personnel who leave is assumed.

More detailed results focussing on provinces, provincial Education and Health departments and Western Cape's departments are provided in the next sections.

5.6.1 Provinces

Table 29 provides the projected personnel expenditure totals per province and national when the wage agreement is implemented with no personnel changes and 65% of personnel receives notch progression.

Table 29: Personnel expenditure projections with no personnel reduction and 65% progression rate

Province	**Personnel expenditure 22 (R m)**	**Personnel expenditure 23 (R m) projected**	**Personnel expenditure 24 (R m) projected**	**Y-o-Y 23**	**Y-o-Y 24**
EASTERN CAPE	57 277	60 191	63 204	5.09%	5.01%
FREE STATE	26 310	27 659	29 055	5.13%	5.05%
GAUTENG	86 622	91 075	95 644	5.14%	5.02%
KWAZULU-NATAL	91 499	96 167	100 979	5.10%	5.00%
LIMPOPO	50 293	52 847	55 490	5.08%	5.00%
MPUMALANGA	33 835	35 562	37 350	5.11%	5.03%
NORTHERN CAPE	11 431	12 005	12 605	5.03%	5.00%
NORTH WEST	30 186	31 735	33 326	5.13%	5.01%
WESTERN CAPE	41 224	43 343	45 504	5.14%	4.99%
Prov Total	**428 677**	**450 585**	**473 157**	**5.11%**	**5.01%**
National	151 492	159 489	167 376	5.28%	4.95%

Province	Personnel expenditure 22 (R m)	Personnel expenditure 23 (R m) projected	Personnel expenditure 24 (R m) projected	Y-o-Y 23	Y-o-Y 24
Total	**580 169**	**610 073**	**640 533**	**5.15%**	**4.99%**

The PERSAL dataset includes salary level 0 – a level used for community health workers, early childhood development practitioners and other community type services. Table 30 below shows that the difference in percentage growth is negligible when they are excluded from the analysis. In this report this category is included for completeness as it is part of personnel expenditure budgets.

Table 30: Personnel expenditure projections with no personnel reduction and 65% progression rate (Salary level 0 excluded)

Province	personnel expenditure 22 (R m)	personnel expenditure 23 (R m) projected	personnel expenditure 24 (R m) projected	Y-o-Y 23	Y-o-Y 24
EASTERN CAPE	55 995	58 834	61 781	5.07%	5.01%
FREE STATE	25 883	27 209	28 584	5.12%	5.05%
GAUTENG	85 116	89 490	93 982	5.14%	5.02%
KWAZULU-NATAL	87 243	91 685	96 281	5.09%	5.01%
LIMPOPO	49 323	51 826	54 420	5.07%	5.00%
MPUMALANGA	33 102	34 789	36 539	5.10%	5.03%
NORTH WEST	29 641	31 160	32 724	5.13%	5.02%
NORTHERN CAPE	11 136	11 695	12 280	5.02%	5.00%
WESTERN CAPE	40 881	42 981	45 126	5.14%	4.99%
Prov Total	**418 320**	**439 668**	**461 717**	**5.10%**	**5.01%**
NATIONAL	147 726	155 500	163 197	5.26%	4.95%
Grand Total	**566 047**	**595 168**	**624 914**	**5.14%**	**5.00%**

Overall, the provincial personnel expenditure growth is estimated at 5.1% in 2023/24 and 5.0% in 2024/25, with the Western Cape at 5.1% and 5.0% respectively. If we compare the growth projection to the corresponding budget numbers, the budget did not make provision for the wage agreement.

The next two sections consider the implications of the wage agreement and budget shortfall in provincial Education and Health departments.

5.6.2 Education departments

The projected growth of all provincial departments of Education is 5.1% in 2023/24 and 5.0% in 2024/25. Western Cape education department's growth is estimated at 5.2% (the highest of all education departments) in 2023/24 and 5.0% in 2024/25.

Table 31: Education departments personnel expenditure projections with no personnel reduction and 65% progression rate

Department	Personnel expenditure 22 (R m)	Personnel expenditure 23 (R m) projected	Personnel expenditure 24 (R m) projected	Y-o-Y 23	Y-o-Y 24
EASTERN CAPE	30 362	31 896	33 495	5.05%	5.01%
FREE STATE	13 192	13 857	14 557	5.04%	5.04%
GAUTENG	41 886	44 020	46 229	5.10%	5.02%
KWAZULU-NATAL	50 557	53 124	55 788	5.08%	5.01%
MPUMALANGA	18 995	19 959	20 961	5.08%	5.02%
NORTHERN CAPE	5 730	6 021	6 321	5.07%	4.99%
LIMPOPO	27 616	28 999	30 445	5.01%	4.99%
NORTH WEST	15 186	15 950	16 748	5.03%	5.01%
WESTERN CAPE	19 929	20 956	22 000	5.15%	4.98%
Total	**223 454**	**234 782**	**246 543**	**5.07%**	**5.01%**

5.6.3 Health departments

Provincial Health departments growth projections are higher than education departments. The projected personnel expenditure growth for 2023/24 and 2024/25 are 5.21% and 5.00% respectively.

Table 32: Health departments personnel expenditure projections with no personnel reduction and 65% progression rate

Department	Personnel expenditure 22 (R m)	Personnel expenditure 23 (R m) projected	Personnel expenditure 24 (R m) projected	Y-o-Y 23	Y-o-Y 24
EASTERN CAPE	18 753	19 721	20 705	5.16%	4.99%
FREE STATE	8 704	9 166	9 627	5.31%	5.03%
GAUTENG	36 683	38 607	40 543	5.25%	5.01%
KWAZULU-NATAL	32 726	34 410	36 126	5.15%	4.99%

Department	Personnel expenditure 22 (R m)	Personnel expenditure 23 (R m) projected	Personnel expenditure 24 (R m) projected	Y-o-Y 23	Y-o-Y 24
MPUMALANGA	10 145	10 672	11 208	5.20%	5.02%
NORTHERN CAPE	3 433	3 610	3 790	5.15%	4.98%
LIMPOPO	16 172	17 011	17 862	5.19%	5.01%
NORTH WEST	10 142	10 682	11 216	5.32%	5.01%
WESTERN CAPE	16 667	17 534	18 408	5.20%	4.98%
Total	**153 424**	**161 413**	**169 485**	**5.21%**	**5.00%**

Furthermore, the Western Cape's Health department growth projections are close to the overall projections at 5.2% and 5.0%. These estimates indicate that the differential between budget and personnel requirements were larger for provincial Health departments.

The wage agreement had a larger impact on Health departments when compared to the Education departments. A reason for this could be that Health departments have a higher proportion of personnel at lower salary levels which experienced a higher estimated growth in salaries with the inclusion of the non-pensionable cash gratuity as part of their notch.

Table 33: Personnel expenditure projections per Salary Level with no personnel reduction and 65% progression rate

Salary level	Y-o-Y23	Y-o-Y24
1	6.72%	5.00%
2	6.20%	5.24%
3	5.94%	5.17%
4	5.84%	5.18%
5	5.39%	5.16%
6	5.21%	5.06%
7	5.18%	5.01%
8	4.99%	5.04%
10	4.96%	4.97%
16	4.93%	4.67%
9	4.92%	5.00%
12	4.72%	4.83%
11	4.58%	4.84%
15	4.37%	4.82%
14	4.28%	4.83%

Salary level	Y-o-Y23	Y-o-Y24
13	4.20%	4.84%
Total	**5.10%**	**5.01%**

5.6.4 Western Cape departments

Table 34 shows the Western Cape provincial departments sorted by the severity of the impact of the wage agreement in 2023/24. The estimated increase in personnel expenditure in departments ranged between 4.6% and 5.2% in 2023/24, with the Health and Education departments at the top of the list. Total personnel expenditure in the Western Cape is estimated to increase by 5.1% in 2023/24.

Please note that Mobility and Infrastructure were classified together to enable consistent comparisons across the years between PERSAL and the EPRE data. In the PERSAL data the departments of Housing and Transport were combined to create the department of Mobility and Infrastructure, as found in the EPRE data.

Table 34: Western Cape departments personnel expenditure projections with no personnel reduction and 65% progression rate

Department	Personnel expenditure 22 (R m)	Personnel expenditure 23 (R m) projected	Personnel expenditure 24 (R m) projected	Y-o-Y 23	Y-o-Y 24
HEALTH	16 667	17 534	18 408	5.20%	4.98%
EDUCATION	19 929	20 956	22 000	5.15%	4.98%
CULTURAL AFFAIRS AND SPORT	224	236	248	5.09%	5.05%
AGRICULTURE	429	450	473	5.00%	5.04%
SOCIAL DEVELOPMENT	1 031	1 082	1 136	4.98%	5.01%
COMMUNITY SAFETY	156	164	172	4.95%	5.01%
MOBILITY&INFRASTRUCTURE	1 403	1 472	1 546	4.90%	5.03%
LOCAL GOVERNMENT	196	206	216	4.82%	5.01%
PREMIER	618	647	679	4.72%	4.95%
ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING	242	253	266	4.67%	4.95%
ECONOMIC DEVELOPMENT AND TOURISM	130	136	143	4.65%	4.93%
PROVINCIAL TREASURY	199	208	218	4.63%	4.96%
Total	**41 224**	**43 343**	**45 504**	**5.14%**	**4.99%**

Table 35: Western Cape departments personnel expenditure budgets

Department	2022/23 Revised estimate (R m)	2023/24 Revised baseline	2024/25 Revised baseline	Y-o-Y23	Y-o-Y24
AGRICULTURE	439	436	456	-0.68%	4.50%
COMMUNITY SAFETY	161	165	168	2.73%	1.53%
CULTURAL AFFAIRS AND SPORT	232	236	248	1.62%	5.13%
ECONOMIC DEVELOPMENT AND TOURISM	129	130	134	0.63%	3.03%
EDUCATION	19 507	19 918	20 198	2.11%	1.41%
ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING	245	241	249	-1.66%	3.20%
HEALTH	16 832	16 511	16 686	-1.91%	1.06%
LOCAL GOVERNMENT	199	212	220	6.78%	3.60%
MOBILITY & INFRASTRUCTURE	1 350	1 445	1 477	7.06%	2.20%
PREMIER	634	640	649	0.95%	1.35%
PROVINCIAL PARLIAMENT	130	138	143	5.93%	3.52%
PROVINCIAL TREASURY	200	212	220	5.76%	4.14%
SOCIAL DEVELOPMENT	1 032	1 064	1 074	3.01%	0.95%
Total	**41 091**	**41 348**	**41 921**	**0.63%**	**1.39%**

Originally, the Western Cape's personnel expenditure budget remained relatively stable with a slight increase of 0.6%. The Health department's budget was cut by 1.9%. However, Table 36 shows the adjustments to the budgets for 2023/24 and 2024/25 which were implemented during 2023. The medium-term adjustment mainly impacted the budget in 2023/24 and only significantly affected the departments of Education and Health. Additionally, apart from the departments of Education and Health, all departments' budgets for 2024/25 were reduced from what they were previously.

Overall growth in personnel expenditure according to the budget data has been adjusted from 0.6% to 4.6% in 2023/24 and from 1.4% to 1.0% in 2024/25. The Education and Health departments budgets were increased so that the growth from the 2022/23 baseline was 6.8% and 2.4% respectively in 2023/24. In 2024/25 an increase of 4.0% was provided for the Health department while the Education department's budget will fall by almost 1.0%. Table 36 shows budget increases (not included in EPRE data at the time of this report) affecting Health and Education departments.

Table 36: Western Cape departments personnel expenditure budgets (revised)

Department	2022/23 Revised estimate (R m)	2023/24 Revised baseline	2024/25 Revised baseline	Y-o-Y23	Y-o-Y24
AGRICULTURE	439	436	439	-0.68%	0.73%
COMMUNITY SAFETY	161	165	161	2.73%	-2.21%
CULTURAL AFFAIRS AND SPORT	232	236	240	1.62%	1.58%
ECONOMIC DEVELOPMENT AND TOURISM	129	130	129	0.63%	-0.77%
EDUCATION	19 507	20 832	20 628	6.80%	-0.98%
ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING	245	241	240	-1.66%	-0.60%
HEALTH	16 832	17 240	17 923	2.42%	3.97%
LOCAL GOVERNMENT	199	212	212	6.78%	-0.22%
MOBILITY&INFRASTRUCTURE	1 350	1 445	1 423	7.06%	-1.57%
PREMIER	634	640	625	0.95%	-2.39%
PROVINCIAL TREASURY	200	212	212	5.76%	0.30%
SOCIAL DEVELOPMENT	1 032	1 064	1 058	3.01%	-0.48%
Total	**40 960**	**42 853**	**43 291**	**4.62%**	**1.02%**

Table 37: Western Cape personnel reduction required to stay within personnel expenditure budget constraints (updated budget numbers)

Department	Personnel expenditure 22 (Rm)	Personnel expenditure 23 (Rm)	Personnel expenditure 24 (Rm)	Y-o-Y23	Y-o-Y24	Budgt 22 (Rm)	Budgt 23 (Rm)	Budgt 24 (Rm)	Y-o-Y23	Y-o-Y24	Y-o-Y pers 23	Y-o-Y pers 24
AGRICULTURE	429	450	473	5.00%	5.04%	439	436	439	-0.68%	0.73%	-5.40%	-4.11%
COMMUNITY SAFETY	156	164	172	4.95%	5.01%	161	165	161	2.73%	-2.21%	-2.12%	-6.88%
CULTURAL & SPORT	224	236	248	5.09%	5.05%	232	236	240	1.62%	1.58%	-3.30%	-3.30%
ECON & TOURISM	130	136	143	4.65%	4.93%	129	130	129	0.63%	-0.77%	-3.85%	-5.43%
EDUCATION	19 929	20 956	22 000	5.15%	4.98%	19 507	20 832	20 628	6.80%	-0.98%	1.57%	-5.68%
ENVIRON & DEVELOP	242	253	266	4.67%	4.95%	245	241	240	-1.66%	-0.60%	-6.04%	-5.29%
HEALTH	16 667	17 534	18 408	5.20%	4.98%	16 832	17 240	17 923	2.42%	3.97%	-2.64%	-0.97%
LOCAL GMENT	196	206	216	4.82%	5.01%	199	212	212	6.78%	-0.22%	1.87%	-4.98%
MOBILITY&INFRAS	1 403	1 472	1 546	4.90%	5.03%	1 350	1 445	1 423	7.06%	-1.57%	2.06%	-6.29%
PREMIER	618	647	679	4.72%	4.95%	634	640	625	0.95%	-2.39%	-3.61%	-7.00%
TREASURY	199	208	218	4.63%	4.96%	200	212	212	5.76%	0.30%	1.08%	-4.44%
SOCIAL DEVELOP	1 031	1 082	1 136	4.98%	5.01%	1 032	1 064	1 058	3.01%	-0.48%	-1.88%	-5.23%

Department	Personnel expenditure 22 (Rm)	Personnel expenditure 23 (Rm)	Personnel expenditure 24 (Rm)	Y-o-Y23	Y-o-Y24	Budgt 22 (Rm)	Budgt 23 (Rm)	Budgt 24 (Rm)	Y-o-Y23	Y-o-Y24	Y-o-Y pers 23	Y-o-Y pers 24
Total	**41 224**	**43 343**	**45 504**	**5.14%**	**4.99%**	**40 960**	**42 853**	**43 291**	**4.62%**	**1.02%**	**-0.50%**	**-3.78%**

Overall, a personnel reduction of 0.5% in the WCPG will enable the implementation of the wage agreement while staying within the personnel expenditure budget in 2023/24, followed by another reduction of 3.8% in 2024/25. The situations differ across departments, with the Health department having to decrease the number of personnel by 2.6%, while the Education department has room to increase the number of personnel by 1.6% in 2023/24 and then in 2024/25 a reduction of 5.7% is required. Table 37 shows how personnel numbers can be used by departments to balance shortfalls between the wage agreement and budget allocations.

Table 38 provides more detail per Salary level for the Health department. The growth in personnel expenditure in Western Cape Health is driven by lower salary levels in 2023/24. Salary levels 5 and 6 have relatively high expenditure combined with high growth at 5.4% and 5.3% respectively.

Table 38: Western Cape Health personnel expenditure projections per salary level with no personnel reduction and 65% progression rate (ranked by year-on-year growth)

Salary level	Personnel expenditure 22 (R m)	Personnel expenditure 23 (R m) projected	Personnel expenditure 24 (R m) projected	Y-o-Y 23	Y-o-Y 24
4	831	884	930	6.30%	5.17%
2	603	641	675	6.23%	5.27%
3	831	883	928	6.21%	5.17%
0	209	222	233	6.11%	4.80%
5	2 099	2 212	2 325	5.39%	5.14%
6	1 044	1 099	1 155	5.30%	5.05%
7	1 743	1 831	1 922	5.06%	5.01%
10	1 614	1 695	1 779	5.03%	4.96%
12	2 844	2 985	3 128	4.96%	4.81%
8	814	855	898	4.95%	5.04%
9	1 595	1 673	1 757	4.90%	5.00%
16	4	5	5	4.86%	4.82%
11	2 350	2 462	2 580	4.77%	4.81%
15	7	7	8	4.22%	4.80%
13	65	68	71	4.15%	4.84%
14	14	14	15	4.09%	4.81%
Total	**16 667**	**17 534**	**18 408**	**5.20%**	**4.98%**

6 Estimation of Savings

Since 2006, the growth in personnel expenditure has consistently outpaced the growth of the consolidated budget in South Africa. This has placed a strain on budgets and resulted in the crowding out of important non-personnel expenditure. Therefore, departments across the public sector need to explore options to try and curtail the growth in personnel expenditure. This section of the report outlines various headcount reduction methods aimed at reducing personnel expenditure, along with estimates of potential savings if these measures were implemented by the WCPG.

6.1 Overall Establishment

As of March 2023, there were 85 853 FTEs in the WCPG, 50.1% of them were employed in the Education department and just under 39.2% were employed in the Health department. For the same period, the total estimated notch was R28.6 billion, 48.8% of the expenditure was accounted for by the Education department and 39.3% occurred in the department of Health.

Table 39: The WCPG as of March 2023

Department	Number of Personnel	Total Estimated Notch (R)
Vote 01: The Premier	1 016	505 223 442
Vote 03: Provincial Treasury	315	159 016 320
Vote 04: Community Safety	314	118 120 828
Vote 05: Education	45 152	13 982 355 429
Vote 06: Health	35 338	11 256 695 626
Vote 07: Social Development	2 454	698 411 442
Vote 08: Human Settlements	414	168 661 042
Vote 09: Environmental Affairs And Development Planning	354	197 677 871
Vote 10: Transport And Public Works	2 674	847 846 017
Vote 11: Agriculture	917	298 864 348
Vote 12: Economic Development And Tourism	206	103 921 537
Vote 13: Cultural Affairs And Sport	538	157 963 791
Vote 14: Local Government	371	146 461 891
WCPG Total	**90 063**	**28 641 219 584**

6.1.1 The 2023 Wage Agreement

The cost of implementing the 2023 wage agreement has been estimated by GTAC utilising the latest PERSAL data available and in 2022, the total WCPG wage bill amounted to R42.2 billion. Using the GTAC model and the escalation factors from the 2023 wage agreement, personnel expenditure for the WCPG is estimated to be R43.3 billion in 2023. This represents a nominal increase of 5.11%. Furthermore, the latest budget data tabled in the 2023 MTBPS, set the revised personnel expenditure baseline for the WCPG at R42.9 billion for 2023/24. The revised estimate for the personnel expenditure budget in 2022 was just under R41.0 billion, which represents a nominal increase of 4.6% in 2023 (Table 36).

Therefore, if the 2022 personnel expenditure in the Western Cape increased by our prediction of 5.11%, the 2023 personnel expenditure would be R43.053 billion. Therefore, the difference between the allocation of R42.853 billion and the estimated wage bill of R43.053 billion indicates a shortfall of R200 million or 0.5% of personnel expenditure in the Western Cape in 2023/24.

Even though the estimated shortfall in 2023 may not be a worrying one, the estimated shortfall in 2024 is an issue. GTAC estimates that in 2024, the personnel expenditure is expected to grow by 5.0%, while the budget is expected to grow by 1.0%. Therefore, assuming these estimates are accurate, there will be an estimated budget shortfall of R1.7 billion or 3.8% of the estimated 2023 WCPG wage bill (Table 38).

6.1.2 The Three Scenarios

All the savings methods discussed in this report are headcount related and to maintain the same level of output or capacity it would be beneficial to replace all or some of the officials who leave the public service in the different scenarios. Therefore, three different replacement scenarios that aim to generate savings are described below.

In the first scenario, every eligible official who leaves the public service is replaced by someone who was previously not in the WCPG. Their replacement enters the public service at the lowest notch of the salary level of the departer. The savings accrued in this scenario are the difference between the salary of the departer and the salary of an official on the lowest notch of the relevant salary level.

In Scenario 2, the basic dynamics are the same as for scenario one, external appointees replace departing officials on the lowest notch of the relevant salary level. However, instead of replacing all departers, only half of the departers from all departments except Health, Education and Social Development are replaced, on the assumption that these departments' service delivery obligations are not affected by the decrease in headcounts.

The third scenario estimates what happens if all eligible officials leave but instead of being replaced by external appointees, they are replaced by existing staff who receive a promotion equivalent to going up one salary level. It is assumed that all promoted staff were on the highest notch of the salary level immediately below the retiree who they replaced. Then, the promoted officials are themselves replaced by appointees from outside the WCPG who are employed on the lowest notch of the rank from which the promoted officials were promoted. These assumptions create two distinct sources of saving: the gap between the notch at which the early departer was and the lowest notch on their salary level into which the promoted official moves, and the gap between the highest notch of the salary level from which the promoted official is promoted, and the lowest notch in that level into which the new appointee is appointed. These savings are partially offset by the higher salary that the promoted official receives.

6.2 Not filling vacancies

One way to reduce compensation spending is to slow (or, at the extreme, halt the replacement of staff as they exit the department). In Table 40 below, the potential savings are estimated if officials who left the WCPG were not replaced. To calculate the savings, average departures over three years (2019-2021) were calculated and the individual remuneration of each departing person was used to provide an annual estimate of their salary.

Using this methodology, savings would have been significant – R1.87 billion or about 4.9% of the average compensation spending between 2019 and 2021. A 100% freeze on appointments would not be sustainable as it would lead to significant capacity issues within the WCPG. These issues are especially significant as 89.6% of the average terminations occurred in the Health and Education departments. As a total freeze on appointments may not be achievable or desirable, a 50% replacement rate would still lead to substantial savings that amount to R933 million or 2.5% of the average annual compensation spending between 2019 and 2021.

If the Health and Education departments were excluded from the hiring freeze, the estimated savings for a 100% freeze would be R179 million, and a 50% freeze would lead to savings of R89 million.

Table 40: Estimation of savings by implementing a hiring freeze in the WCPG

Department	Average Terminations	Amount of Terminations	Total Amount	% of Terminations Amount	Savings from 50% Freeze
Vote 01: The Premier	107	23 312 295	598 446 306	*3.9%*	11 656 148
Vote 03: Provincial Treasury	36	10 827 161	188 233 756	*5.8%*	5 413 580
Vote 04: Community Safety	38	9 047 164	152 939 091	*5.9%*	4 523 582
Vote 05: Education	3 460	887 279 946	17 938 226 960	*4.9%*	443 639 973
Vote 06: Health	3 345	799 506 606	15 420 455 267	*5.2%*	399 753 303
Vote 07: Social Development	154	36 664 632	939 884 402	*3.9%*	18 332 316
Vote 08: Human Settlements	37	9 597 240	231 963 718	*4.1%*	4 798 620
Vote 09: Enviro Affairs And Dev Planning	23	8 597 152	231 939 768	*3.7%*	4 298 576
Vote 10: Transport And Public Works	166	43 066 749	1 056 480 303	*4.1%*	21 533 374
Vote 11: Agriculture	132	16 475 606	410 643 026	*4.0%*	8 237 803
Vote 12: Ec Dev and Tourism	29	7 210 111	130 849 041	*5.5%*	3 605 055
Vote 13: Cultural Affairs And Sport	47	7 182 974	209 096 407	*3.4%*	3 591 487
Vote 14: Local Government	21	6 519 276	181 740 099	*3.6%*	3 259 638
WCPG Total	**7 595**	**1 865 286 913**	**37 690 898 143**	***4.9%***	**932 643 457**

6.3 Retirement of all officials over the age of 60

Another savings method is retiring officials who were 60 years and older, as there would be no penalty incurred on their pension. In March 2023, the WCPG had just under 5 100 officials in this age group. Their estimated notch accounted for 5.7% of the total establishment. Additionally, the average notch received by these officials was R392 000, which was 23.3% more than the average notch for the entire establishment.

Table 41: Estimation of savings for retirement of officials aged sixty and older in the WCPG

Department	Personnel 60 and over	Estimated Notch (R)	Average Estimated Notch	Sc1 Saving	Sc2 Saving	Sc3 Saving	% of Sc1 Saving	% of Sc2 Saving	% of Sc3 Saving
Vote 01: The Premier	53	40 382 277	761 930	4 148 334	22 265 305	12 219 534	*10.3%*	*55.1%*	*30.3%*
Vote 03: Provincial Treasury	7	4 247 687	606 812	312 083	2 279 885	937 469	*7.3%*	*53.7%*	*22.1%*
Vote 04: Community Safety	20	10 258 996	512 950	563 728	5 411 362	2 073 517	*5.5%*	*52.7%*	*20.2%*
Vote 05: Education	3 101	1 132 412 930	365 177	123 395 876	123 395 876	299 072 807	*10.9%*	*10.9%*	*26.4%*
Vote 06: Health	1 569	638 976 125	407 251	135 266 198	135 266 198	263 896 310	*21.2%*	*21.2%*	*41.3%*
Vote 07: Social Development	92	48 195 678	523 866	5 893 816	5 893 816	14 610 368	*12.2%*	*12.2%*	*30.3%*
Vote 08: Human Settlements	16	6 916 932	432 308	798 882	3 857 907	2 532 231	*11.5%*	*55.8%*	*36.6%*
Vote 09: Enviro Affairs And Dev Planning	12	10 944 627	912 052	1 978 089	6 461 358	4 979 658	*18.1%*	*59.0%*	*45.5%*
Vote 10: Transport And Public Works	93	39 860 054	428 603	5 526 071	22 693 062	12 526 124	*13.9%*	*56.9%*	*31.4%*
Vote 11: Agriculture	52	29 995 089	576 829	3 924 676	16 959 882	8 936 036	*13.1%*	*56.5%*	*29.8%*
Vote 12: Ec Dev and Tourism	4	3 908 844	977 211	150 750	2 029 797	719 286	*3.9%*	*51.9%*	*18.4%*
Vote 13: Cultural Affairs And Sport	52	20 783 489	399 682	2 059 779	11 421 634	4 923 643	*9.9%*	*55.0%*	*23.7%*
Vote 14: Local Government	18	8 120 076	451 115	565 590	4 342 833	1 817 490	*7.0%*	*53.5%*	*22.4%*
WCPG Total	**5 089**	**1 995 002 802**	**392 023**	**284 583 870**	**362 278 914**	**629 244 471**	***14.3%***	***18.2%***	***31.5%***

The estimated savings for this method are recorded in Table 41**Error! Reference source not found.** above. If scenario one was implemented, and all the eligible officials retired the estimated savings would be R284.6 million, which is 14.3% of the original estimated notch of officials aged sixty and over and 1.0% of the total estimated notch of the WCPG. Furthermore, if scenario two was utilised, the estimated savings would amount to R362.3 million, which accounted for 18.2% of the estimated notch of officials aged 60 and over and 1.3% of the total estimated notch. Lastly, utilising scenario three would result in estimated savings of R629.2 million, this saving represents 31.5% of the total estimated notch of the cohort of interest and 2.2% of the total establishment's estimated notch.

The estimates displayed in Table 41**Error! Reference source not found.** assume that there is 100% take-up, which means that all officials 60 years and older will retire and a 100% replacement rate. In Table 42 below, the estimated savings for different take-up and replacement rates for scenario 3 are displayed. Using scenario 3, if an 80% replacement rate and 100% take-up were assumed, the estimated savings would be R902 million. Furthermore, if a more realistic 80% replacement rate and 30% take-up rate were assumed the estimated savings would be reduced to R271 million. Moreover, if the Health and Education departments were excluded from the scenario above, estimated savings would amount to R29 million.

Table 42: Estimation of savings for retirement of officials aged sixty and older in the WCPG with different scenarios

Department	Personnel 60 and over	Estimated Notch (R)	Sc3 Saving (R)	80% replacement, 100% take-up	80% replacement, 30% take-up
Vote 01: The Premier	53	40 382 277	12 219 534	17 852 082	5 355 625
Vote 03: Provincial Treasury	7	4 247 687	937 469	1 599 512	479 854
Vote 04: Community Safety	20	10 258 996	2 073 517	3 710 612	1 113 184
Vote 05: Education	3 101	1 132 412 930	299 072 807	465 740 832	139 722 250
Vote 06: Health	1 569	638 976 125	263 896 310	338 912 273	101 673 682
Vote 07: Social Development	92	48 195 678	14 610 368	21 327 430	6 398 229
Vote 08: Human Settlements	16	6 916 932	2 532 231	3 409 171	1 022 751
Vote 09: Enviro Affairs And Dev Planning	12	10 944 627	4 979 658	6 172 651	1 851 795
Vote 10: Transport And Public Works	93	39 860 054	12 526 124	17 992 910	5 397 873
Vote 11: Agriculture	52	29 995 089	8 936 036	13 147 846	3 944 354
Vote 12: Ec Dev and Tourism	4	3 908 844	719 286	1 357 198	407 159
Vote 13: Cultural Affairs And Sport	52	20 783 489	4 923 643	8 095 613	2 428 684
Vote 14: Local Government	18	8 120 076	1 817 490	3 078 007	923 402
WCPG Total	**5 089**	**1 995 002 802**	**629 244 471**	**902 396 137**	**270 718 841**

6.3.1 Officials aged 60 and older using the Trends Data

With available data, the number of officials who were over 60 in 2021 and left the public service can be analysed. It is important to note that for this part of the analysis, the data being used is the same data used in the trends analysis. The structure of the trends data is one row per PERSAL number per provincial department and financial year. Whereas the savings data, utilised in most of this analysis is structured in a way where each row represents a PERSAL number, provincial department, and month as it only looks at one year of data. This means that the trends data tries to capture the average over a financial year while the savings data displays a snapshot of the data at a specific time.

Therefore, the expenditure and personnel numbers in this section of the analysis will be different to the values in the previous section which utilises the savings data. The main differences will occur in the number of officials and that the personnel expenditure for this section is the total amount received by officials and not just their estimated notch.

In 2021, there were 6 800 officials in the Western Cape who collectively received R3.42 billion in compensation in 2021, the real average salary for this cohort was R500 000. In the same year, 1 980 officials left the public service, which accounted for 28.9% of the cohort.

Additionally, the total salary received by the officials leaving the public service in 2021 in this cohort was R744.7 million, which is around 22% of the total salary that the entire cohort earned. Therefore, if there was no replacement of these officials that entire amount could be saved by the Western Cape. However, it is important to note that 63.6% and 29.5% of these terminations occurred in the Education and Health departments, respectively and the effects of hiring freezes in these departments could have significant effects on service delivery. If the Education and Health departments were excluded from this method, estimated savings of R59 million could be realised.

6.4 Early Retirement

In March 2023, there were just under 8 700 officials employed across the WCPG between the ages of 55 and 59 who were eligible for early retirement as indicated in Table 43 below. If all the eligible officials left the public service, the savings on their estimated notch would amount to R3.4 billion, which was 11.9% of the entire WCPG's estimated notch in 2022. Furthermore, the average estimated notch received by the eligible officials was R391 400, this was 20.6% more than the average notch of the entire WCPG.

Table 43: Officials eligible for Early Retirement as of March 2023 in the WCPG

Department	Personnel aged 55-59	Estimated Notch (R)	Average Notch (R)
Vote 01: The Premier	98	65 654 001	669 939
Vote 03: Provincial Treasury	18	13 559 360	753 298
Vote 04: Community Safety	35	17 000 213	485 720
Vote 05: Education	5 034	2 001 000 482	397 497
Vote 06: Health	2 834	1 026 953 226	362 369
Vote 07: Social Development	195	77 068 867	395 225
Vote 08: Human Settlements	45	20 499 679	455 548
Vote 09: Environmental Affairs And Development Planning	29	21 985 456	758 119
Vote 10: Transport And Public Works	214	75 062 795	350 761
Vote 11: Agriculture	90	44 088 819	489 876
Vote 12: Economic Development And Tourism	14	10 938 402	781 314
Vote 13: Cultural Affairs And Sport	69	19 923 954	288 753
Vote 14: Local Government	24	10 941 580	455 899
WCPG Total	**8 699**	**3 404 676 834**	**391 387**

However, it is unlikely that a considerable proportion of this cohort would take up early retirement as it entails them incurring a penalty on their pensions, in addition to the gratuity and annuity portions of their pensions being reduced due to the decreased number of contributions. To incentivise this savings method, the National Treasury covered the penalty costs of taking early retirement to persuade eligible officials to take up the option for a limited period.

Therefore, a critical question for the WCPG is whether the costs of making early retirees' pensions whole will fall on the WCPG or the National Treasury. For obvious reasons, if these costs are covered by the National Treasury, the savings accruing to the WCPG will be larger.

Unsurprisingly, as mentioned earlier near-retirement officials earn more than the average in the establishment. This creates the possibility that savings may be achieved by replacing these officials with younger, less-expensive officials. There are important operational considerations that might mitigate against this – experienced officials are important for ensuring the efficient and effective functioning of government departments, so serious consideration must be given to the question of whether a less-experienced, albeit cheaper official may "cost" departments more if the lack of experience leads to avoidable declines in operational performance.

That said, replacing high-earning staff with staff who earn less does lead to lower personnel expenditure. To understand how this may play out, three different scenarios are estimated. These estimates assume that the savings are estimated for the first full year after retirement and replacement. Over time, the numbers will change as newly appointed/promoted officials see their salaries rise.

Table 44: Estimates of savings for different Early Retirement Scenarios in the WCPG

Department	Personnel aged 55-59	Estimated Notch (R)	Sc1 Notch Saving	Sc2 Notch Saving	Sc3 Notch Saving	% of Sc1 Saving	% of Sc2 Saving	% of Sc3 Saving
Vote 01: The Premier	98	65 654 001	8 263 659	36 958 830	22 246 719	*12.6%*	*56.3%*	*33.9%*
Vote 03: Provincial Treasury	18	13 559 360	1 260 617	7 409 989	3 321 521	*9.3%*	*54.6%*	*24.5%*
Vote 04: Community Safety	35	17 000 213	1 208 729	9 104 471	3 668 126	*7.1%*	*53.6%*	*21.6%*
Vote 05: Education	5 034	2 001 000 482	212 717 297	212 717 297	518 868 233	*10.6%*	*10.6%*	*25.9%*
Vote 06: Health	2 834	1 026 953 226	185 997 513	185 997 513	365 302 725	*18.1%*	*18.1%*	*35.6%*
Vote 07: Social Development	195	77 068 867	8 090 467	8 090 467	20 384 764	*10.5%*	*10.5%*	*26.5%*
Vote 08: Human Settlements	45	20 499 679	1 774 627	11 137 153	5 183 593	*8.7%*	*54.3%*	*25.3%*
Vote 09: Enviro Affairs And Dev Planning	29	21 985 456	3 514 468	12 749 962	8 216 071	*16.0%*	*58.0%*	*37.4%*
Vote 10: Transport And Public Works	214	75 062 795	6 589 244	40 826 020	17 932 919	*8.8%*	*54.4%*	*23.9%*
Vote 11: Agriculture	90	44 088 819	5 725 629	24 907 224	13 498 467	*13.0%*	*56.5%*	*30.6%*
Vote 12: Ec Dev and Tourism	14	10 938 402	995 622	5 967 012	2 550 225	*9.1%*	*54.6%*	*23.3%*
Vote 13: Cultural Affairs And Sport	69	19 923 954	1 525 362	10 724 658	4 279 728	*7.7%*	*53.8%*	*21.5%*
Vote 14: Local Government	24	10 941 580	1 013 407	5 977 493	2 564 920	*9.3%*	*54.6%*	*23.4%*
WCPG Total	**8 699**	**3 404 676 834**	**438 676 641**	**572 568 088**	**988 018 011**	***12.9%***	***16.8%***	***29.0%***

The estimated savings from the three scenarios in the WCPG are displayed in Table 44 above. If scenario one was implemented, the notch savings are estimated to be R438.7 million, 12.6% of the total estimated notch of the early retirement cohort and an average saving of R50 400 per official. Additionally, the largest savings occurred in the Education and Health departments, where the savings were 10.6% and 18.1% of the total estimated notch in the respective departments. Furthermore, the savings in the Education and Health departments accounted for 48% and 42% of the total estimated savings in the WCPG (91% combined).

The savings for scenario two would be R572.6 million, 16.8% of the total estimated notch and an average saving of R65 800 per official. Because of the scenario and the 100% replacement in the

Education, Health and Social Development departments, the estimated savings in those departments are the same as for scenario one.

Moreover, the estimated savings for scenario three was R988.1 million, 63% more than the estimated savings from scenario 2 and 125% more than the savings for scenario one. The estimated savings represent 29.0% of the estimated notch for the early retirement cohort and an average saving of R113 500 per official. Additionally, for scenario three, estimated savings in the Education department contributed to 53% and savings in the Health department contributed to 37% of total savings.

6.4.1 Estimating the Penalty Costs for Early Retirement

If officials retire before their 60th birthday, they incur penalties on their pensions and the main driver of the magnitude of the penalty is the number of months an official is away from the age of sixty. The savings above did not take into consideration the penalties that would need to be covered. Therefore, to make the early retirement programme attractive to employees, these penalties would need to be covered by the employer.

Table 45**Error! Reference source not found.** below indicates that if the early retirement scenario with the highest potential savings (scenario three) was implemented and the WCPG covered the penalties, it would take 2.82 years to break-even.

Table 45: Estimation of penalty costs for Early Retirement by Age in the WCPG

Age	Number of Personnel aged 55-59	Estimated Total Notch (R)	Total Employer Liability (R)	Scenario 3 Savings (R)	Net Savings (R)	Penalty per official (R)	Years to Break-even
55	1 907	712 982 565	930 068 003	196 918 983	-733 149 020	487 713	4.72
56	1 948	769 536 885	803 086 773	228 337 065	-574 749 709	412 262	3.52
57	1 815	703 982 986	559 049 772	202 882 648	-356 167 124	308 016	2.76
58	1 625	654 662 370	341 472 199	193 640 490	-147 831 709	210 137	1.76
59	1 404	563 512 029	149 803 140	166 238 826	16 435 686	106 697	0.90
WCPG Total	**8 699**	**3 404 676 834**	**2 783 479 887**	**988 018 011**	**-1 795 461 876**	**319 977**	**2.82**

Furthermore, the results show that there is a significant difference in the average penalty per official by age. Therefore, the program could be more cost-effective if it were implemented with a more nuanced approach. For example, if only officials aged 59 years old were to take up early retirement, the policy would only take 0.90 years to break-even, and the total penalty would only be R150 million.

The first estimates of savings for the early retirement method looked at three different scenarios over one year, excluding the penalty that early retirement officials would incur (Table 44). The second estimate included how long it would take the annual savings to cover the total early retirement penalty (Table 45). The third estimate forecasts the savings over five years with different replacement scenarios as seen in Table 46 below. For example, if an official is 55 years old, the difference between their estimated notch and the replacement notch until they were 59 years old will be the gross savings for that official.

Using this methodology for scenario three, the gross savings in the WCPG with a 100% replacement rate, which excludes the employer liability is estimated at R3.1 billion. Furthermore, at an 80% replacement rate, the gross savings would amount to R4.6 billion over a five-year period.

Additionally, looking at the net savings over five years which includes the employer liability, when a 100% replacement rate is used, there would be a saving of R277 million and when an 80% replacement rate is utilised, the estimated savings would be R1.8 billion. Furthermore, a more realistic scenario of an 80% replacement rate and 30% take-up rate was estimated. For this scenario, the estimated savings were R537 million. Moreover, if the Health and Education departments were excluded from the above scenario, estimated savings would be R55 million.

Table 46: Estimation of net-savings from Early Retirement using Scenario 3 in the WCPG

Department	Personnel aged 55-59	Estimated Notch (R)	Sc3 Replacement Notch	Sc3 Notch Saving	Employer Liability	Net Savings (100% replacement)	Net Savings (80% replacement)
Vote 01: The Premier	98	65 654 001	43 407 282	22 246 719	58 678 752	16 609 200	45 446 432
Vote 03: Provincial Treasury	18	13 559 360	10 237 839	3 321 521	14 569 583	-2 203 360	5 469 651
Vote 04: Community Safety	35	17 000 213	13 332 087	3 668 126	16 250 351	-3 047 213	6 251 272
Vote 05: Education	5 034	2 001 000 482	1 482 132 249	518 868 233	1 655 628 692	-27 241 766	907 574 603
Vote 06: Health	2 834	1 026 953 226	661 650 501	365 302 725	808 297 539	295 430 060	699 152 285
Vote 07: Social Development	195	77 068 867	56 684 103	20 384 764	61 396 962	881 425	37 266 823
Vote 08: Human Settlements	45	20 499 679	15 316 086	5 183 593	16 378 129	-966 968	8 149 846
Vote 09: Enviro Affairs And Dev Planning	29	21 985 456	13 769 385	8 216 071	17 428 121	7 556 288	16 583 933
Vote 10: Transport And Public Works	214	75 062 795	57 129 876	17 932 919	63 903 928	-8 503 207	26 391 705
Vote 11: Agriculture	90	44 088 819	30 590 352	13 498 467	35 403 962	4 059 844	22 858 459
Vote 12: Ec Dev and Tourism	14	10 938 402	8 388 177	2 550 225	9 243 603	107 239	6 394 409
Vote 13: Cultural Affairs And Sport	69	19 923 954	15 644 226	4 279 728	18 169 426	-4 723 146	5 007 140
Vote 14: Local Government	24	10 941 580	8 376 660	2 564 920	8 130 837	-768 746	4 190 125
WCPG Total	**8 699**	**3 404 676 834**	**2 416 658 823**	**988 018 011**	**2 783 479 887**	**277 189 648**	**1 790 736 682**

6.4.2 Officials aged 55 to 59 using the Trends Data

With the data available, the number of officials between the ages of 55 and 59 who had more than 10 years of service in 2021 and left the public service can be analysed. It is important to note as mentioned earlier in the report that the data in this section is the trends data which results in different amounts for personnel expenditure and the number of personnel in different departments.

In 2021, in the Western Cape, there were 8 900 officials who were between 55 and 59 years old with more than 10 years of service. Collectively, this group received R5.0 billion in compensation and the real average salary was R560 000. In 2021, 709 officials left the public service and the total salary received by this group was R265.9 million.

Therefore, if there was no replacement of the officials leaving the WCPG could save an estimated R266 million. Additionally, the officials who left the public service in 2021 only made up 8% of the entire group and therefore, not replacing these officials may not have as significant an effect on service delivery. Moreover, if officials from the Health and Education departments were excluded from this savings method, estimated savings would total R39 million.

6.5 Appointing officials on 5/8 and 6/8 contracts

Another way in which the WCPG could reduce compensation expenditure is by appointing officials on part-time contracts instead of full-time contracts. The savings for this method were calculated similarly to not filling vacancies. The average number of appointments and personnel expenditure between 2019 and 2021 was calculated and used to estimate the savings that are displayed in Table 47 below.

Over the period, the average number of appointments per year was 8 900 and these officials earned R1.16 billion per year, 3.1% of total compensation expenditure. If all these officials were hired on 5/8 contracts, the WCPG would save an estimated R435 million and if they were hired on 6/8 contracts the estimated savings would amount to R290 million.

Table 47: Estimation of savings hiring appointees on 5/8 or 6/8 contracts in the WCPG

Department	Average Appointments	Amount of Appointments	Total Amount	% of Appointments Amount	Savings from 5/8 Contract Appointments	Savings from 6/8 Contract Appointments
Vote 01: The Premier	113	11 989 138	598 446 306	*2.0%*	4 495 927	2 997 284
Vote 03: Provincial Treasury	33	4 985 758	188 233 756	*2.6%*	1 869 659	1 246 440
Vote 04: Community Safety	32	3 235 221	152 939 091	*2.1%*	1 213 208	808 805
Vote 05: Education	4 002	587 520 584	17 938 226 960	*3.3%*	220 320 219	146 880 146
Vote 06: Health	3 944	459 328 374	15 420 455 267	*3.0%*	172 248 140	114 832 093
Vote 07: Social Development	269	31 521 386	939 884 402	*3.4%*	11 820 520	7 880 346
Vote 08: Human Settlements	27	4 197 509	231 963 718	*1.8%*	1 574 066	1 049 377
Vote 09: Enviro Affairs And Dev Planning	20	3 949 253	231 939 768	*1.7%*	1 480 970	987 313
Vote 10: Transport And Public Works	212	32 730 700	1 056 480 303	*3.1%*	12 274 013	8 182 675
Vote 11: Agriculture	108	8 690 190	410 643 026	*2.1%*	3 258 821	2 172 547
Vote 12: Ec Dev and Tourism	36	4 431 116	130 849 041	*3.4%*	1 661 669	1 107 779
Vote 13: Cultural Affairs And Sport	35	2 619 069	209 096 407	*1.3%*	982 151	654 767
Vote 14: Local Government	21	3 897 672	181 740 099	*2.1%*	1 461 627	974 418
WCPG Total	**8 853**	**1 159 095 970**	**37 690 898 143**	***3.1%***	**434 660 989**	**289 773 992**

6.6 Contract Appointments

Another possible method that could be implemented to reduce personnel expenditure is not renewing the contracts of officials that are hired on contract. At the end of the calendar year in the Western Cape (December 2022), there were 7 900 officials who were appointed on contract and received an estimated notch of R2.23 billion as displayed in Table 48 below.

Table 48: Officials appointed on contract in the WCPG as of December 2022

Department	Number of Personnel	% of Personnel	Estimated Notch (R)	% of Estimated Notch
Vote 01: The Premier	161	*2.0%*	19 951 013	*0.9%*
Vote 03: Provincial Treasury	44	*0.6%*	9 531 618	*0.4%*
Vote 04: Community Safety	51	*0.6%*	8 781 516	*0.4%*
Vote 05: Education	1 890	*23.9%*	244 896 470	*11.0%*
Vote 06: Health	5 253	*66.4%*	1 818 784 050	*81.4%*
Vote 07: Social Development	132	*1.7%*	38 942 081	*1.7%*
Vote 08: Human Settlements	35	*0.4%*	14 812 416	*0.7%*
Vote 09: Enviro Affairs And Dev Planning	23	*0.3%*	11 357 862	*0.5%*
Vote 10: Transport And Public Works	83	*1.0%*	36 873 356	*1.6%*
Vote 11: Agriculture	135	*1.7%*	8 471 681	*0.4%*
Vote 12: Ec Dev and Tourism	32	*0.4%*	4 106 235	*0.2%*
Vote 13: Cultural Affairs And Sport	56	*0.7%*	10 367 442	*0.5%*
Vote 14: Local Government	18	*0.2%*	8 830 161	*0.4%*
WCPG Total	**7 913**	***100.0%***	**2 235 705 900**	***100.0%***

The information indicates that if none of the contracts were renewed at the end of 2022, the WCPG could save around R2.23 billion, however, implementing this method of savings could have a significant negative impact on the performance of key departments. In the WCPG 90.3% of contract officials were employed in the Health (66.4%) and Education (23.9%) departments. Furthermore, 92.3% of the estimated notch of contract officials was accounted for by officials in the Health (81.4%) and Education (11.0%) departments.

In addition to contributing to a significant proportion of contract officials, contract officials in the Health department account for a substantial proportion of the department as a whole. Officials hired on contract in the Health department accounted for 14.8% of the total number of officials in the department and their estimated notch was 16.1% of the total departmental estimated notch.

Therefore, not renewing contract officials, especially in the Health and Education departments would have a detrimental impact on service delivery. If contract officials not in the Health and Education department’s contracts were not renewed, the estimated notch saving would be R172 million, which accounts for around 9.2% of the estimated shortfall. Furthermore, if only contracts in the Health department were renewed the estimated notch saving would be R417 million.

Moreover, it is important to look at the different scenarios for replacement and take-up rates and the estimated savings from these scenarios. The estimated savings for different replacement and take-up rates for scenario three are displayed in Table 49 below.

Table 49: Estimated savings for officials on contract for different scenarios

Department	Number of Personnel	Estimated Notch (R)	100% replacement, 100% take-up	80% replacement, 100% take-up	80% replacement, 30% take-up
Vote 01: The Premier	161	19 951 013	3 857 204	7 075 966	2 122 790
Vote 03: Provincial Treasury	44	9 531 618	1 752 690	3 308 476	992 543
Vote 04: Community Safety	51	8 781 516	1 647 660	3 074 431	922 329
Vote 05: Education	1 890	244 896 470	32 947 823	75 337 552	22 601 266
Vote 06: Health	5 253	1 818 784 050	1 650 833 649	1 684 423 729	505 327 119
Vote 07: Social Development	132	38 942 081	9 135 410	15 096 744	4 529 023
Vote 08: Human Settlements	35	14 812 416	5 240 256	7 154 688	2 146 406
Vote 09: Enviro Affairs And Dev Planning	23	11 357 862	3 530 601	5 096 053	1 528 816
Vote 10: Transport And Public Works	83	36 873 356	21 141 458	24 287 838	7 286 351
Vote 11: Agriculture	135	8 471 681	2 799 371	3 933 833	1 180 150
Vote 12: Ec Dev and Tourism	32	4 106 235	701 748	1 382 645	414 794
Vote 13: Cultural Affairs And Sport	56	10 367 442	2 071 587	3 730 758	1 119 227
Vote 14: Local Government	18	8 830 161	2 237 448	3 555 991	1 066 797
WCPG Total	**7 913**	**2 235 705 900**	**1 737 896 904**	**1 837 458 704**	**551 237 611**

6.7 Creating fiscal space through a revised performance incentive system

Salary notches are increased through two primary mechanisms: annual COLA and the pay progression and promotion system. This discussion is about the latter, guided by the DPSA's "2019 Incentive Policy Framework for Employees in the Public Service."

Under this framework, recognising an employee's performance each year triggers a 1.5% salary notch increase in the subsequent year. The impact, however, extends far beyond an immediate increase. It institutes a permanent notch increase, effectively continuing to reward the employee throughout their career based on that year's performance, irrespective of future achievements. This prompts a crucial question: should we not examine whether the magnitude of this reward aligns proportionally with the expected performance at the "at least satisfactory" level? Is it time to consider the potential savings if we transform this incentive from a permanent notch inclusion to a performance bonus, paid separately from the notch and effective for one year only?

Let's delve into an example for clarity. Assume a person on a salary notch of R100 000 in a reference year receives a 1.5% notch increase, raising it to R101 500, which remains constant for 10 years. The cumulative value of the performance in the reference year is R1 500 multiplied by 10, resulting in R15 000, irrespective of subsequent performance. Alternatively, consider a scenario where we add 1.5% to the salary in the next year as an incentive, keeping the notch constant. This results in a salary increase for one year only, not permanently. After 10 years, the difference between the two reward systems would be R13 500, or 1.35%.

Table 50: Difference between permanent notch increase and once-off incentive (applied once)

Year	Notch (R)	Notch increase	Non-permanent award system (notch + incentive) R	Difference (R)	% saving after n years
Reference year	100 000	1.50%			
1	101 500	0	101 500	-	0.00%
2	101 500	0	100 000	1 500	0.74%
3	101 500	0	100 000	1 500	1.00%
4	101 500	0	100 000	1 500	1.12%
5	101 500	0	100 000	1 500	1.20%
6	101 500	0	100 000	1 500	1.25%
7	101 500	0	100 000	1 500	1.28%
8	101 500	0	100 000	1 500	1.31%
9	101 500	0	100 000	1 500	1.33%
10	101 500	0	100 000	1 500	1.35%
Total (Year 1 to 10)	**1 015 000**		**1 001 500**	**13 500**	

Additionally, consider the case of an employee who qualifies for pay progression every year. After 10 years the difference between the permanent notch increases and annual incentive increases to 7.03%.

Table 51: Difference between permanent notch increase and once-off incentive applied over 10 years

Year	Notch (R)	Notch increase	Non-permanent award system (notch + incentive) R	Difference (R)	% difference in year n	% difference after n years
Reference year	100 000	1.50%				
1	101 500	1.50%	101 500	-	0.00%	0.00%
2	103 023	1.50%	101 500	1 522	1.50%	0.75%
3	104 568	1.50%	101 500	3 068	3.02%	1.51%
4	106 136	1.50%	101 500	4 636	4.57%	2.27%
5	107 728	1.50%	101 500	6 228	6.14%	3.05%
6	109 344	1.50%	101 500	7 844	7.73%	3.83%
7	110 984	1.50%	101 500	9 484	9.34%	4.61%
8	112 649	1.50%	101 500	11 149	10.98%	5.41%
9	114 339	1.50%	101 500	12 839	12.65%	6.21%
10	116 054	1.50%	101 500	14 554	14.34%	7.03%
Total (Year 1 to 10)	**1 086 326**		**1 015 000**	**71 326**		

As time progresses the saving in a specific year increase, due to the compounding effect of the notch increases.

6.7.1 *Possible savings*

In 2022 the additional expenditure on all pay progression categories (all provinces and national) was R4.1 billion (Table 54). Assuming a fixed notch increase of 1.5%, this translates to an initial notch amount of x = R276.2 billion.[2] Table 52 gives the savings that can be achieved by implementing a once-off payment against a permanent salary adjustment. In the first year there will be no savings, in the second year the savings would be R 4.2 billion, increasing to R 8.5 billion in the third year. These savings will continue to increase if the size of the establishment remains stable. In the 10th year the savings will be over R 40 billion (in 2022 Rands) and the accumulated savings over the 10 years would be close to R200 billion.

Table 52: Annual savings from a base amount of R276.2 billion

Year	**% annual savings**	**Cum % annual savings**	**Annual savings (Rbn)**	**Cum annual savings (R bn)**
1	0.00%	0.00%	-	-
2	1.52%	1.52%	4.21	4.21
3	3.07%	4.59%	8.47	12.68
4	4.64%	9.23%	12.81	25.48
5	6.23%	15.46%	17.20	42.69
6	7.84%	23.30%	21.67	64.35
7	9.48%	32.78%	26.20	90.55
8	11.15%	43.93%	30.79	121.34
9	12.84%	56.77%	35.46	156.80
10	14.55%	71.33%	40.20	197.00

Please note that this calculation is done independent of the effect of COLA – the savings would be more if expressed in nominal rand value if the notches are CPI adjusted.

[2] $1.015x - x = 4.143\ bn \Rightarrow x = 276.2\ bn$

The Western Cape's total notch increase due to progression in 2022 was R310 million (Table 55). This is 1.5% on a total notch amount of R 20.7 billion. The difference between permanent notch increases and once-off incentives increases with time. In year one there will be no saving, in the second year, the saving will be R310 million, increasing to 630 million in the third year. The cumulative savings over three years will be R950 million (in R2022 rands).

Table 53: Western Cape annual savings from a base amount of R20.67 bn

Year	% annual savings	Cum % annual savings	Annual savings (Rbn)	Cum annual savings (R bn)
1	0.00%	0.00%	-	-
2	1.52%	1.52%	0.31	0.31
3	3.07%	4.59%	0.63	0.95
4	4.64%	9.23%	0.96	1.91
5	6.23%	15.46%	1.29	3.19
6	7.84%	23.30%	1.62	4.82
7	9.48%	32.78%	1.96	6.78
8	11.15%	43.93%	2.30	9.08
9	12.84%	56.77%	2.65	11.73
10	14.55%	71.33%	3.01	14.74

The values used for the calculations are based on PERSAL data. Table 54 and

Table 55 provide the increase in notch value and number of recipients for all categories of progression and promotion. In this analysis the focus is on progression. The five most recent consecutive years of data are provided to give an idea of typical trends, since 2020 and 2021 were not typical due to the wage freeze and the effect of the wage agreement.

Table 54: Notch increase and recipients of progression and promotion 2018/19 to 2022/23 (PERSAL)

		Notch increase (R million)					**Distinct PERSAL numbers (thousands)**				
		2018	**2019**	**2020**	**2021**	**2022**	**2018**	**2019**	**2020**	**2021**	**2022**
Progression	AWARDING OF A NOTCH ITO THE PAY PROGRESSION SYSTEM	2 235	2 560	2 822	135	3 012	612	621	624	34	686
	PAY PROG/ADJUSTMENT 2021				4 458	1				1 098	
	LEG/GRADE PROGRESSION: OSD	234	495	175	317	311	8	18	4	9	9
	ADJUSTMENT (NOTCH)	406	611	75	48	63	299	291	9	13	8
	GRADE PROGRESSION: NON-OSD	18	550	12	310	267	1	20	1	12	10
	PAY PROGRESSION MMS	281	300	232	7	303	20	20	16		20
	PAY PROG SMS/MMS/ADJUSTMENT 2021				964	1				65	
	PAY PROGRESSION SMS	90	88	60	8	74	5	5	3		4
	ACCELERATED GRADE PROGRESSION: OSD	42	61	14	100	55	1	2		3	1
	AWARDING HIGHER NOTCH ITO PSR CHAPTER 4/1/44	76	89	21	7	42	13	13	3		6
	ACCELERATED PAY PROGRESSION	29	7	5	1	5	3				
	AWARDING OF A HIGHER NOTCH ITO PS ACT SEC 37(2)(C)	6	6	1	2	3		1			
	ACCELERATED GRADE PROGRESSION: NON-OSD	1	3	5	4	5					
	GRADE PROGRESSION EDUCATION										
Total Prog		**3 418**	**4 771**	**3 420**	**6 359**	**4 143**	**677**	**707**	**662**	**1 167**	**744**
Promotion	PROMOTION	1 347	1 560	674	1 079	2 369	21	22	11	19	27
	PROMOTION: PACKAGE: SENIOR/MIDDLE MANAGEMENT	440	421	285	492	563	2	2	1	2	2
	PROMOTION(LEG)		1			1					
	PROMOTION BEFORE GRADING	1				1					
	REVISED SALARY DISPENSATION RANK CHANGE										
Total Prom		**1 789**	**1 981**	**959**	**1 571**	**2 934**	**23**	**24**	**13**	**21**	**29**
Total		**5 207**	**6 752**	**4 379**	**7 931**	**7 077**	**693**	**723**	**669**	**1 167**	**762**

- In 2022/23, R7.1 billion was spent on all categories of promotion and progression and 762 000 personnel received promotion or progression.
- R4.1 billion was spent on progression in 2022/23.
- 2020/21 was affected by the wage freeze, where pay progression was still applied, but other categories were scaled down.
- 2021/22 was different from other years, with a 1.5% non-pensionable allowance uniformly applied.

Table 55: Western Cape Notch increase and recipients of progression and promotion 2018/19 to 2022/23

		Notch increase (R million)					Distinct PERSAL numbers (thousands)				
		2018	**2019**	**2020**	**2021**	**2022**	**2018**	**2019**	**2020**	**2021**	**2022**
Progression	AWARDING OF A NOTCH ITO THE PAY PROGRESSION SYSTEM	163	178	223	18	217	46	46	47	5	50
	PAY PROG/ADJUSTMENT 2021				330					81	
	LEG/GRADE PROGRESSION: OSD	30	34	29	35	34	1	1	1	1	1
	ADJUSTMENT (NOTCH)	39	56	10	6	9	24	25	1	1	1
	PAY PROGRESSION MMS	28	30	30		31	2	2	2		2
	PAY PROG SMS/MMS/ADJUSTMENT 2021				82					6	
	ACCELERATED GRADE PROGRESSION: OSD	10	9	6	9	8					
	ACCELERATED PAY PROGRESSION	18	5	4		3	2				
	PAY PROGRESSION SMS	5	5	5		5					
	GRADE PROGRESSION: NON-OSD	1	1	1	1	2					
	AWARDING HIGHER NOTCH ITO PSR CHAPTER 4/1/44	1									
	ACCELERATED GRADE PROGRESSION: NON-OSD										
	AWARDING OF A HIGHER NOTCH ITO PS ACT SEC 37(2)(C)										
Total Prog		**293**	**317**	**307**	**483**	**310**	**52**	**51**	**51**	**87**	**54**
Promotion	PROMOTION	75	89	61	81	84	1	2	1	1	1
	PROMOTION: PACKAGE: SENIOR/MIDDLE MANAGEMENT	34	29	20	28	26					
	PROMOTION BEFORE GRADING										
	PROMOTION(LEG)										
	REVISED SALARY DISPENSATION RANK CHANGE										
Total Prom		**109**	**118**	**82**	**109**	**110**	**2**	**2**	**1**	**1**	**1**
Total		**403**	**435**	**389**	**592**	**420**	**53**	**52**	**52**	**87**	**55**

6.7.2 How to make this approach attractive?

Given that the new approach will mean a reduction in employee income, how can it be made more attractive? One scenario could be to increase the value of the once-off incentive. Consider the example where the incentive is increased from 1.5% to 3%. An annual notch increase of 1.5% is compared to an annual performance incentive of 3% which is not included in the notch.

Table 56: Difference between notch increase of 1.5% and incentive of 3% applied over 10 years

Year	Notch (R)	Notch increase	Non-permanent award system (notch + incentive) R	Difference (R)	% difference in year n	% difference after n years
Reference year	100 000	1.50%				
1	101 500	1.50%	103 000	-1 500	-1.46%	-1.46%
2	103 023	1.50%	103 000	22	0.02%	-0.72%
3	104 568	1.50%	103 000	1 568	1.52%	0.03%
4	106 136	1.50%	103 000	3 136	3.05%	0.78%
5	107 728	1.50%	103 000	4 728	4.59%	1.54%
6	109 344	1.50%	103 000	6 344	6.16%	2.31%
7	110 984	1.50%	103 000	7 984	7.75%	3.09%
8	112 649	1.50%	103 000	9 649	9.37%	3.88%
9	114 339	1.50%	103 000	11 339	11.01%	4.67%
10	116 054	1.50%	103 000	13 054	12.67%	5.47%
Total (Year 1 to 10)	**1 086 326**		**1 030 000**	**56 326**		

After 10 years the cumulative savings on the notch of R 100 000 is R 56 300. From the third year of application the initial losses were recovered, and savings increase every year. Consider the values for the once-off percentage that will only become profitable after several years. If, for example the performance bonus p = 3%, then from year four the difference between the current system and the once-off annual incentive will be positive.

Table 57: Maximum value of p to break even after n years and be profitable after that

Number of years (n)	p	Cumulative saving after n years for p=3%	Cumulative annual savings from Year 1 to year n from base amount R276.2 bn if p=3% (Rbn)
1	1.50%	-1.46%	-4.14
2	2.26%	-0.72%	-4.08
3	3.03%	0.03%	0.25
4	3.81%	0.78%	8.91
5	4.59%	1.54%	21.97
6	5.38%	2.31%	39.49
7	6.18%	3.09%	61.55
8	6.99%	3.88%	88.20
9	7.81%	4.67%	119.52
10	8.63%	5.47%	155.57

Across all national and provincial departments if the once-off incentive is increased from 1.5% to 3%, profits will be realised from the third year onwards as indicated in Table 57. In the third year, the net savings from year one to year three will be R250 million, in year four, the net savings between year one and year four will be 8.9 billion and increasing steadily with a total savings of R 155.6 bn over the first 10 years.

Table 58: Western Cape: Cumulative annual savings from Year 1 to Year 10 if incentive is 3%

Number of years (n)	**Cumulative annual savings from Year 1 to year n from base amount R20.67 bn if p=3% (Rbn)**
1	-0.310
2	-0.305
3	0.019
4	0.667
5	1.644
6	2.956
7	4.606
8	6.601
9	8.944
10	11.643

If this scenario was applied in the Western Cape, in the first year of implementation there would be a loss of R310 million and the cumulative loss after the first two years of implementation will be R305 million. In the third year the loss will be turned into a net profit of R19 million, which will increase exponentially with a cumulative saving of R11.6 billion after 10 years as indicated by Table 58.

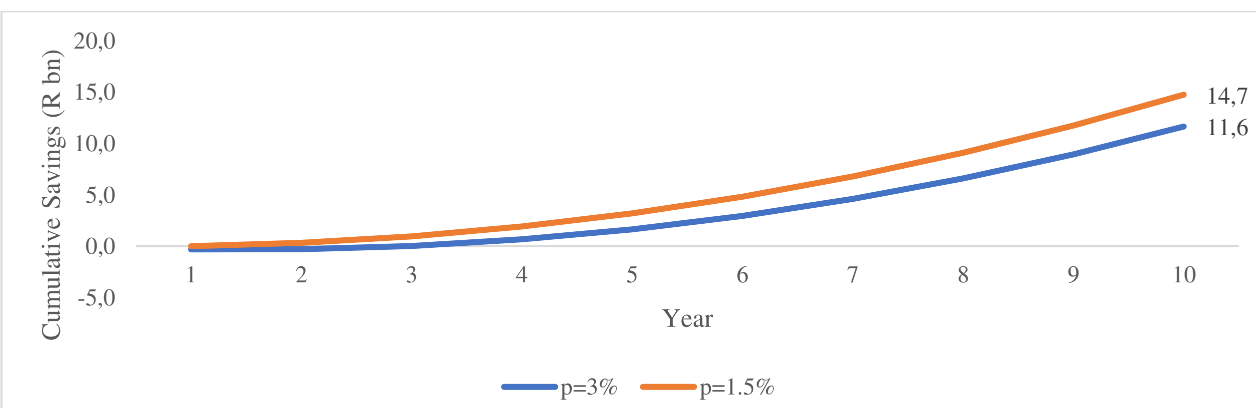

Figure 29: Western Cape cumulative savings for different performance incentive percentages

6.8 Savings summary

This table summarizes the most impactful and achievable cost-saving scenarios identified in the report's savings estimation section. Notably, it includes a category that estimates the potential savings had the headcount reduction methods not been applied to the Health and Education departments.

Table 59: Western Cape: Summary of savings options

Savings option	All departments	Excluding Education and Health
Replacing 80% of terminated posts	R373 million	R36 million
Retirement of 30% officials over 60 and replacing 80% of them	R271 million	R29 million
Early retirement of 30% eligible, replacing 80% of them, penalty on government	R329 million	R32 million
Part-time contracts (5/8) for 30% new appointees	R130 million	R13 million
30% contract appointments terminated with 80% replacement of terminated contracts	R551 million	R23 million

Table 59 shows estimated savings in the WCPG ranging from R13 million to R373 million, depending on the assumptions made and savings method employed. The largest potential saving, of R373 million, would result from filling only 80% of positions that become vacant through termination (resignation, retirement, etc.).

A more sustainable approach to create fiscal space that would not require personnel reduction is to review the progression policy. The option considered in this report is to replace the annual notch progression with a once-off bonus, while keeping the notch constant. If the once-off bonus is 3%, the cumulative savings of R11.6 billion could be achieved in 10 years in the Western Cape.

7 Annexures

7.1 Annexure 1: Western Cape Personnel Expenditure Benchmarking Report 2023

7.1.1 Performance of Provincial Health Departments

The two other measures considered are included in the World Health Organisation's (WHO) Universal Health Coverage (UHC) index based on the Sustainable Development Goals (SDGs). The SDGS are a universal call to action to solve several problems, one of which is focused on ensuring healthy lives and promoting well-being for all people (Massyn, Day, Ndlovu & Padayachee T, 2020:1). These measures are the antenatal 1st visit coverage and the drug-susceptible (DS) tuberculosis (TB) treatment success rate and look at the coverage of these health interventions across the different provinces.

In 2019, the Western Cape had an antenatal 1st visit before 20 weeks rate of 71.9%, this measure had increased by 6.2% since 2015. The average across all other provinces for this measure in 2019 was 69.1%, which had increased by 13.9% since 2015. Furthermore, the province with the highest coverage was Mpumalanga where it was 77.4% in 2019, up by 17.5% since 2015 and the province with the lowest coverage was the Eastern Cape where it was 62.5% and had increased by 4.7% over the period.

The data for TB data was only available between 2015 and 2018. In 2018, the Western Cape had a treatment success rate of 77.1%, which had decreased by 4.1% since 2015. This was lower than the average across all other provinces which was 79.2% and had increased by 0.8% since 2015. The province with the highest treatment success rate was Gauteng where it was 82.0%, down by 3.4% from 2015 and the province with the lowest treatment success rate was the Northern Cape, where it was 76.5%, up 6.5% from 2015.

In summary, the Western Cape experienced an average increase of real expenditure per PDE of 2.0% per year, this suggests a decrease in the efficiency of expenditure over the period. However, the average increase was smaller than it was in all other provinces and over the period the province had the lowest real expenditure per PDE which indicates greater efficiency of expenditure. Additionally, the rate of antenatal first visits before 20 weeks increased by 1.5% per year on average, which indicates an increase in performance over the period for this measure. However, this increase was smaller than the average increase in all other provinces. Regarding the DS-TB treatment success rate in the Western Cape, it decreased by 1.4% per year between 2015 and 2018, which suggests a decrease in the effectiveness of TB treatment in the province and this decrease was larger than the decrease in all other provinces.

Over the same period, when the growth in expenditure per person is compared to the antenatal 1st visit before 20 weeks it suggests that performance in this field improved at a faster rate per year. However, when the growth in expenditure per person is compared to the DS-TB treatment success rate, the results suggest that expenditure has increased while performance has decreased over the same period.

Service area category	Tracer area	Tracer indicator	Type	Index calculation
RMNCH	UHC1: Family planning (FP)	Couple year protection rate (index)	Proxy	RMNCH = (FP * ANC * Imm * Pneum)1/4
	UHC2: Pregnancy and delivery care (ANC)	Antenatal 1st visit coverage before 20 weeks (index)	Effective service coverage	
	UHC3: Child immunisation (Imm)	Immunisation under 1 year coverage (index)	Service coverage	
	UHC4: Child treatment (Pneum)	Pneumonia case survival under 5 years rate (rescaled)	Proxy	
Infectious	UHC5: Tuberculosis (TB) treatment	TB effective treatment coverage	Effective service coverage	Infectious = (TB * HIV * WASH)1/3
	UHC6: Human Immunodeficiency Virus (HIV) treatment	Antiretroviral effective coverage	Effective service coverage	
	UHC7: Malaria	Excluded	-	
	UHC8: Water and sanitation (WASH)	Percentage of households with access to improved sanitation (index)	Service coverage	
NCDs	UHC9: Prevention of cardiovascular disease - blood pressure (BP)	Age-standardised prevalence of non-raised blood pressure (index)	Proxy	NCD = (BP * Diab * CervCA * Tobacco)1/4
	UHC10: Management of diabetes (Diab)	Diabetes treatment coverage	Service coverage	
	UHC11: Cancer detection - cervical cancer (CervCA)	Cervical cancer screening coverage (index)	Service coverage	
	UHC12: Tobacco control (Tobacco)	Tobacco non-smoking prevalence (index)	Proxy	
Capacity	UHC13: Facility access (Beds)	Hospital beds per 10 000 target population (rescaled)	Proxy	Capacity = (Beds * HWD * Meds * IHR)1/4
	UHC14: Health worker density (HWD)	Health worker density (rescaled)	Proxy	
	UHC15: Access to essential medicines (Meds)	Proportion of health facilities with essential medicines	Proxy	
	UHC16: Health security - International Health Regulations (IHR)	Environmental health services compliance rate	Proxy	
Index	UHC service coverage index	-	-	UHC index = (RMNCH * Infectious * NCDs * Capacity)1/4

7.2 Annexure 2: NT Guidelines (HRBP)

The National Treasury "Guidelines for costing and budgeting for compensation of employees" for the preparation of expenditure estimates for the 2024 medium term expenditure estimates provides escalation factors for Cost-of-living adjustments, housing and medical benefits as well as progression escalation factors. (2024 MTEF Guidelines for Costing and Budgeting for Compensation of Employees.pdf (treasury.gov.za)). The factors are prepopulated in the Human Resource Budget Plan (HRBP) - a tool to assist departments in the preparation of compensation budgets and headcount management. (2024 MTEF HRBP Tool - Version 1.0.xlsm (live.com)).

The escalation factors as stipulated in the wage agreement are applied to compensation item and the salary level. The factors below are the product of COLA and progression escalation factors.

Table 60: Escalation factors applied to items as per 2024 MTEF HRBP Tool

Sal group	itemdesc	Factor23 =COLA23*Progression[3]	Factor24	Factor25	Factor26
1-10,other	EMPL CONTR:BARGAIN COUNCIL(RES)	1.05200	1.04800	1.04700	1.04600
	EMPL CONTR:INSURANCE (RES)	1.05200	1.04800	1.04700	1.04600
	EMPL CONTR:MEDICAL (RES)	1.04740	1.04800	1.04700	1.04600
	EMPL CONTR:OFF UNIONS&ASS(RES)	1.05200	1.04800	1.04700	1.04600
	EMPL CONTR:PENSION (RES)	1.04849	1.06372	1.06270	1.06169
	EMPL CONTR:UIF (RES)	1.05200	1.04800	1.04700	1.04600
	S&W: PERIODIC PAYMENTS OTH (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:BASIC SALARY (RES)	1.04849	1.06372	1.06270	1.06169
	S&W:CAPITAL REMUNERATION (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:CMPNS/CIRCM (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:FORGN ALL OFF:COL ALL	1.05200	1.04800	1.04700	1.04600
	S&W:HOUSING ALLOWANCE (RES)	1.05200	1.04800	1.04700	1.04600
	S&W:LEAVE DISCOUNTING (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:LNRSP18.2/INTRN(RES)	1.05200	1.04800	1.04700	1.04600
	S&W:NON PENSIONABLE ALL OTH(RES	1.06778	1.06372	1.06270	1.06169
	S&W:OVERTIME (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:PERF AWARD OTHER (RES)	1.05200	1.04800	1.04700	1.04600
	S&W:PERFORMANCE BONUS (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:SERV BASED OTHER (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:SERVICE BONUS (RES)	1.04849	1.06372	1.06270	1.06169
	SAL:GEHS REFUND CONTROL ACC:CL	1.05200	1.04800	1.04700	1.04600
11-16	EMPL CONTR:BARGAIN COUNCIL(RES)	1.05200	1.04800	1.04700	1.04600
	EMPL CONTR:INSURANCE (RES)	1.05200	1.04800	1.04700	1.04600

[3] Progression factor=1.015 if progression applies, otherwise it is 1.

Sal group	itemdesc	Factor23 =COLA23*Progression[3]	Factor24	Factor25	Factor26
	EMPL CONTR:MEDICAL (RES)	1.03300	1.04800	1.04700	1.04600
	EMPL CONTR:OFF UNIONS&ASS(RES)	1.05200	1.04800	1.04700	1.04600
	EMPL CONTR:PENSION (RES)	1.04849	1.06372	1.06270	1.06169
	EMPL CONTR:UIF (RES)	1.05200	1.04800	1.04700	1.04600
	S&W: PERIODIC PAYMENTS OTH (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:BASIC SALARY (RES)	1.04849	1.06372	1.06270	1.06169
	S&W:CAPITAL REMUNERATION (RES)	1.04849	1.06372	1.06270	1.06169
	S&W:CMPNS/CIRCM (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:FORGN ALL OFF:COL ALL	1.05200	1.04800	1.04700	1.04600
	S&W:HOUSING ALLOWANCE (RES)	1.03300	1.04800	1.04700	1.04600
	S&W:LEAVE DISCOUNTING (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:NON PENSIONABLE ALL OTH(RES	1.04849	1.06372	1.06270	1.06169
	S&W:OVERTIME (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:PERF AWARD OTHER (RES)	1.05200	1.04800	1.04700	1.04600
	S&W:PERFORMANCE BONUS (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:SERV BASED OTHER (RES)	1.06778	1.06372	1.06270	1.06169
	S&W:SERVICE BONUS (RES)	1.04849	1.06372	1.06270	1.06169
	SAL:GEHS REFUND CONTROL ACC:CL	1.05200	1.04800	1.04700	1.04600

7.2.1 Item vs allowance

Items are broader categories than allowances – in other words, there is a many-to-one relationship between allowance and item. It is expected that the prediction results will be more accurate when using allowances, rather than items since the allowances follow the wage agreement terms more directly. Different escalation factors may apply to allowances with each item, so a degree of accuracy is lost when using the most important allowance's escalation factor for the whole if the item. Consider, for example the item "S&W:NON PENSIONABLE ALL OTH(RES" which made up 7.52% of total personnel expenditure in 2022/23. The non-pensionable cash allowance (top allowance) should fall away in 2023/24, since the wage agreement directed that it is added to the notch for all salary levels in 2023/24. The second allowance applies to MMS and SMS members only, is notch-based and therefore always grows at the same rate as the notch.

The HRBP tool applies CPI and notch progression to this item – the escalation factor for the lower salary group was 6.788% and for the top group it was 4.849%.

Table 61: Escalation of allowances in the item "S&W:NON PENSIONABLE ALL OTHERS"

Allowance	% total personnel expenditure 2022	Escalation type
NON-PENSIONABLE CASH ALLOWANCE	3,55%	No escalation
NON PENSIONABLE CASH ALLOWANCE (SMS/MMS)	1,78%	Notch
EARLY CHILDHOOD DEVELOPMENT PRACTITIONERS	0,78%	Determined annually
37% SERVICE BENEFITS (CONTRACT EMPLOYEES)	0,63%	Notch
MOTOR CAR ALLOWANCE (SMS/MMS)	0,18%	CPI
COMMUNITY HEALTH WORKER ALLOWANCE	0,16%	Determined annually
SERVICE ALLOWANCE (SAPS)	0,10%	Determined annually
COMMUNITY CARE GIVER ALLOWANCE (KZN)	0,10%	Determined annually
REMUNERATION: PUBLIC HOLIDAYS	0,10%	Notch
TRADITIONAL LEADERS ROYAL ALLOWANCE	0,04%	
SUPERVISORS ALLOWANCE (LEVEL III)	0,03%	
SCARCITY FACTOR ALLOWANCE	0,01%	
SUPERVISOR ALLOWANCE (LEVEL II)	0,01%	
MEDICAL PROVISION (SMS/MMS)	0,01%	
NON PENSIONABLE CASH ALLOWANCE (MMS/SMS)	0,01%	Notch
10% NON PENSIONABLE ALLOWANCE (SMS-HEAD OF DEPART)	0,01%	
Other allowances in S&W:NON PENSIONABLE ALL OTH(RES <0.00%	0,00%	
Total	**7,52%**	

The downside of working at the allowance level is that there are many small allowances, and you need to define escalation factors for all of them included in the prediction. The pareto principle is useful here – focus on the top allowances which make up 95% of the total. The remaining 5% allowances should not have any significant effect on the estimated increase derived from the few that determine 95%.

7.3 Annexure 3: Relationship between salary notch, basic salary and employer's contribution to pension

In Levels 1 to 10, the basic annual salary is identical to the notch and to this is added the employer's contribution to the pension fund, which is 16% of the notch. This can be expressed by two basic equations:

Notch = Basic Salary

Employer contribution to pension = 0.16 times Notch

Any percentage change in the notch applies to both the basic salary and the pension contribution. This principle remains consistent for Levels 11 to 16, as illustrated below.

In Levels 11 to 16, the notch incorporates the employer's pension fund contribution, calculated as follows:

Notch = Gross Salary + employer contribution to pension

The Gross Salary is divided into a pensionable part (Basic Salary) and a non-pensionable allowance:

Gross Salary=Basic Salary + non-pensionable allowance

Combining these equations, we get:

Notch = Basic Salary + non-pensionable allowance + employer contribution to pension

This division between Basic Salary and non-pensionable allowance is in the proportion p : 1 - p where p represents the percentage of the Notch that is pensionable (ranging from 60% to 70% based on employee choice). Mathematically:

Basic Salary = p times Notch

Furthermore, the employer contribution to the pension is then 13% of the Basic Salary:

employer contribution to pension = 0.13 times Basic Salary

Solving further with substitution gives:

Notch = p times Notch + (1 - 1.13 times p) times Notch + 0.13 times p times Notch

This equation shows that basic salary, non-pensionable allowance and employer contribution to pension are all multiples of the Notch and with therefore increase by the same percentage at the Notch.

7.4 Annexure 4: Relationship between overall personnel expenditure growth, personnel growth and salary adjustments

To determine the personnel reduction required to stay within the budget allocation, consider the following reasoning:

Consider that total personnel expenditure (*T*) can be expressed as the sum of remuneration of employees:

$$T = \sum_{i=1}^{N} R_i = N\bar{R} \qquad (1)$$

where *N* is the number of employees, *Ri* is the remuneration associated with employee *i* and $\bar{R}$ is the average remuneration or unit cost per employee.

Considering average remuneration and personnel numbers separately, their relative contributions to overall wage bill growth become clear. If the number of employees increases by p_N% and the average remuneration grows by p_R%, it follows from Equation 1 that:

$$\left(1+\frac{p_N}{100}\right)N\left(1+\frac{p_R}{100}\right)\bar{R} = \left(1+\frac{p_N}{100}\right)\left(1+\frac{p_R}{100}\right)T = \left(1+\frac{p_N+p_R}{100}+\frac{p_N p_R}{100^2}\right)T = \left(1+\frac{p_T}{100}\right)T \qquad (2)$$

where:

$$p_T = p_N + p_R + \frac{p_N p_R}{100} \qquad (3)$$

is the wage bill growth expressed in terms of personnel and remuneration growth. The effect on the overall wage bill due to changes in personnel numbers and average remuneration is given by equation 3. Note that the product $\frac{p_N p_R}{100}$ is often negligible within the context of public service personnel and remuneration growth.

Effective wage bill management is dependent on the successful control of equation (3). In a constrained fiscal environment, total growth is often fixed by capping the budget allocation and if either of the two other elements (p_N or p_R) is predetermined, the remaining element will have to be managed to fit within the constraint:

$$p_N + p_R + \frac{p_N p_R}{100} \leq p_T \quad (4)$$

For example, if wage bill growth is capped at p_T, and average remuneration growth is fixed at p_R, then personnel growth should be at most:

$$p_N \leq \frac{p_T - p_R}{1 + \frac{p_R}{100}} \tag{5}$$

7.5 Annexure 5: Personnel reduction required to balance budget

If the budget growth is fixed at $p_T\%$, and the average salary growth according to the wage agreement is $p_R\%$, it can be shown mathematically (see Annexure 4) that personnel growth, p_N, should be lower than or equal to $\frac{f_T}{f_R} - 1$ or

$$p_N \leq \frac{f_T}{f_R} - 1$$

with $f_T = 1 + p_T/100$ and $f_R = 1 + p_R/100$

to stay within the budget growth allocation.

To show this, consider that in 2023/24 provincial personnel expenditure growth is capped at 1.1% and the model projected 5.11% (0% personnel growth). According to the formula, personnel growth should be less or equal to

1.01143/1.0511-1 = -0.03774 or -3.8%

to stay within the budget while implementing the wage agreement. In other words, personnel have to be reduced by at least 3.8% in provincial establishments combined for the total provincial expenditure to be within the allocated budget in 2023/24.

7.6 Annexure 6: Notch progression

Suppose that X1, X2, XN are notch based allowance paid to N individuals. The total expenditure on this allowance is the sum of X1 to XN or T=X1+X2+…+XN

The effect of a 1.5% notch progression applied to all N individuals is:

T_adj = 1.015*T.

If the notch adjustment applies to a proportion p of the N individuals,

T_adj = 1.015*p*T+(1-p)*T

7.7 Annexure 7: More on allowances

In 2022/23 there were 197 allowance codes on PERSAL. The top allowances, covering close to 98% of the total are listed in the table below with a note on the escalation factors used on an annual basis. It can be seen that many of the escalation factors are notch based – so they will increase at the same rate as the notch increase (COLA in wage agreement). It was indicated in the previous paragraph that Basic Salary, Pension contribution and non-pensionable cash allowance (SMS and MMS) are notch based. The same applies to Service bonus (13th cheque), Overtime and shift work.

Medical allowances are fixed amounts (independent of the salary level, and applying only to salary levels 1 to 10). The only reason for differences between employees is because the number of dependants covered may differ up to a maximum of four. The Medical allowance are increased annually by medical inflation – normally CPI+4%, except in 2023/24 when the increase was fixed at 4.47%.

Housing allowances are increased at the rate of CPI. There are two main types of housing allowances, depending whether the employee is a home owner or renting. Homeowners receive a single fixed amount captured as "HOUSING ALLOWANCE : HOME-OWNER (RES 7 OF 2015)". The other group's allowance is the same, and it is split into a rental part and a savings part. The rental allowance has been fixed at R900 with no annual escalation ("HOUSING ALL : RENTAL"). The savings part is a contribution to the Government Employees Housing Scheme ("GEHS INDIVIDUAL SAVE"). The total allowance is escalated by (CPI). R900 is deducted for the rental allowance and the remainder is saved. The savings portion's growth rate is therefore higher than CPI.

Table 62: Personnel expenditure per Allowance 2022/23

Allowance	**personnel expenditure R mill 2022/23**	**%**	**Cum %**	**Esc factor**
BASIC SALARY	122 720	65.78	65.78	Notch
PENSION EMPLOYER CONTRIBUTION	15 663	8.40	74.17	Notch
MEDICAL EMPLOYER CONTRIBUTIONS	9 214	4.94	79.11	Med
SERVICE BONUS	8 885	4.76	83.87	Notch
NON-PENSIONABLE CASH ALLOWANCE	6 626	3.55	87.42	0
HOUSING ALLOWANCE : HOME-OWNER (RES 7 OF 2015)	4 369	2.34	89.77	House
NON PENSIONABLE CASH ALLOWANCE (SMS/MMS)	3 330	1.78	91.55	Notch
FIXED OVERTIME (DENTISTS/MEDICAL/OTHER PERSONNEL)	2 353	1.26	92.81	Notch
EARLY CHILDHOOD DEVELOPMENT PRACTITIONERS	1 456	0.78	93.59	No esc
OVERTIME	1 331	0.71	94.31	Notch
37% SERVICE BENEFITS (CONTRACT EMPLOYEES)	1 175	0.63	94.94	Notch
GEHS INDIVIDUAL SAVE	644	0.35	95.28	House +
INTERNSHIP/LEARNERSHIP 18.2	596	0.32	95.60	No esc
HOUSING ALL : RENTAL	541	0.29	95.89	No esc
PERIODICAL PAYMENTS	517	0.28	96.17	? CPI
INDIVIDUAL LINKED SAVINGS FACILITY PAYMENT	507	0.27	96.44	House
SHIFT WORK : SUNDAYS	505	0.27	96.71	Notch

7.8 Annexure 8: Early Retirement

Table 63: Calculating the Employer Liability in the Western Cape Health Department

Age Health Department	Number of Personnel aged 55-59	Estimated Total Notch (R)	Total Employer Liability (R)	Scenario 3 Savings	Net Savings	Penalty per official	Years to Break-even
55	613	203 507 456	319 638 040	67 567 217	-252 070 823	521 432	4.73
56	597	220 171 805	284 570 999	83 430 416	-201 140 584	476 668	3.41
57	586	207 714 487	210 396 224	71 294 392	-139 101 832	359 038	2.95
58	546	205 411 289	133 358 555	75 275 975	- 58 082 580	244 246	1.77
59	492	190 148 190	62 066 788	67 734 726	5 667 938	126 152	0.92
WCPG Total	**2 834**	**1 026 953 226**	**1 010 030 606**	**365 302 725**	**-644 727 881**	**356 398**	**2.76**

Table 64: Calculating the Employer Liability in the Western Cape Education Department

Age Education Department	Number of Personnel aged 55-59	Estimated Total Notch (R)	Total Employer Liability (R)	Scenario 3 Savings	Net Savings	Penalty per official	Years to Break-even
55	1 089	419 840 361	665 712 263	106 511 088	-559 201 175	611 306	6.25
56	1 167	458 216 755	601 915 274	119 069 212	-482 846 062	515 780	5.06
57	1 092	438 804 974	443 776 308	114 729 317	-329 046 991	406 389	3.87
58	906	369 846 630	248 327 238	96 808 071	-151 519 167	274 092	2.57
59	780	314 291 763	108 075 383	81 750 546	- 26 324 837	138 558	1.32
WCPG Total	**5 034**	**2 001 000 482**	**2 067 806 465**	**518 868 233**	**-1 548 938 232**	**410 768**	**3.99**

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