Boundaries and Buying
Realigning the publication areas of the CPI with current political and economic geographic realities

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Consumer Price Index

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ABSTRACT

The current geographic breakdown in the CPI publication bears very little resemblance to commonly recognised political and administrative boundaries. In preparation for the reweighting of the CPI, research has been conducted to try and identify the most suitable cities and towns from which to collect price data, and how these should be reported in the publication.

Data such as Census 2001, the Labour Force survey, the Quarterly Employment Survey, distribution of retail chain stores and the Urban Function Index were analysed to identify the urban centres with the biggest potential expenditure in each province.

The changes are not expected to have any significant impact on the levels of reported inflation, but will make the CPI publication more relevant and understandable.

Collection in the new areas will begin in January 2007 with a three month overlap between new and old areas. This will not initially affect the way the CPI is published. Changes to the names of the places in the publication will only be made with the implementation of the reweighted CPI basket.

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1. INTRODUCTION

The Consumer Price Index (CPI) currently publishes data on two geographic levels. There are known as 'historical metropolitan areas' and 'other urban areas'. The 'historical metropolitan areas' are generally the largest towns or cities in each province. These are published either as the city or as a combination of two cities. "Other urban areas' are mid-sized towns in each province. The other urban areas are published in aggregate for each province.

Many changes have taken place in the economic and political geography of South Africa over the past 12 years. The upcoming reweighting of the CPI provides the opportunity to realign the collection and reporting geography of the CPI with the current situation.

The primary criteria for inclusion of an urban area in the CPI should be its potential consumer expenditure. The difficulty in making such a selection is the lack of suitable data. This document relies substantially on Census 2001 as it is the only data collection activity that covers the entire country. Complementary sources such as other Stats SA surveys, lists of chain store outlets and Geyer's 2003 Urban Function Index have also been used.

The document first describes the different variables that have been used to compile a ranking of urban areas. Primary urban areas are assessed first and then the secondary urban areas. The document concludes by reflecting on the limitations of data sources available to the current exercise, and by making final recommendations which also account for logistical considerations. This document is a synthesis of two longer documents that contain the detailed calculations.

2. THE NAMING OF THINGS

The current terminology for the geographic breakdown of the CPI is not congruent with terminology used anywhere else in the country. Traditional terms such as city

and town are no longer in official use in the country. Not every province has a metropolitan area, making it difficult to continue using this term. A new and politically neutral terminology is therefore proposed. The largest town/city in each province will be known as the primary urban area, and the smaller towns as secondary urban areas.

Clearly delineating the boundaries of an area is almost impossible with the current published geography. Who can be sure where the Witwatersrand or the Cape Peninsula starts or ends? Because primary urban areas are published individually, the current municipal boundary will be used to demarcate the collection area. This means that the CPI will, in future, refer to the City of Johannesburg, eThekwini, and the City of Cape Town for example. In certain provinces more than one primary area may be selected. Where these primary areas rank high in the national ranking, they will be reported individually, where they are not significant on a national level individually, they will be reported on together in the CPI.

Secondary urban areas are published as an aggregate per province and the exact boundaries of each place are therefore less important. Data collection in secondary urban areas will focus on the built up area known as a specific name, rather than following the municipal boundaries, which in many cases include substantial rural areas.

3. VARIABLES

The key consideration in identifying urban areas from which to collect price data, should be the estimated contribution of that place to the national expenditure. CPI weights are based on expenditure, but the Income and Expenditure survey does not have a large enough sample to provide detailed expenditure estimate per urban area. For this reason, other data sources should be used to estimates which localities will have the highest expenditure.

The most useful dataset in analysing this problem is Census 2001 because of its detailed geographic data. As this is somewhat outdated, other data sets have been used to update and complement the Census information.

The variables that are considered during the selection of geographical areas, and which are based on Census 2001, are:

- The number of employed people;
- The employment rate; and
- The population

The presence of chain stores in an area is also used as an indicator on the assumption that the more chain stores in an area, the greater the potential expenditure in that area. It is also known that chain stores conduct detailed micro area analysis to gauge potential profitability before taking a decision to open a new branch.

The following sections explain the reason for inclusion of each of the variables and elaborate on the applied methodology.

3.1   Availability of chain stores

The availability of chain stores is regarded as an important variable for two reasons. Firstly it is an indicator of potential consumer expenditure. Secondly, chain store outlets are a key source of price data collected from the field. Hence, it is crucial to ensure that the geographical areas selected include a sufficient number of chain stores and cover the main CPI product groups sufficiently.

A list of 37 chain stores was identified from the current CPI database. For each of these chain stores the number of branches and the location of branches were determined, based on information obtained from chain store websites and the Business Register. The list was filtered down, by keeping all the stores that had more than three branches. These were then allocated to a specific urban area.

3.2 The number of employed people

The number of employed people is included as a variable, since employment is correlated with economic activity and expenditure. The number of people earning between R3200 and R6400 per month as reported in Census 2001 was established for each area. This income band was adopted as the average wage in the formal

sector (as reported in the QES) for November 2001 is R6000. Lower and higher bands were not included as the CPI is interested in tracking the expenditure of an 'average' household.

These 2001 results were adjusted to 2005 estimates, by applying the growth rate in employment per industry, obtained from the Labour Force Survey (LFS, 2005) (refer to Table 3).

Table 1: Growth rates in employment by industry

	Sept 02	Sept 03	Sept 04	Sept 05	Overall
	% change	% change	% change	% change	% change
Agriculture	20.54	-14.65	-12.29	-12.98	-4.85
Mining	0.90	-1.25	-26.63	1.48	-6.38
Manufacturing	0.80	-5.08	10.58	-0.47	1.46
Utilities	-10.64	8.33	8.79	1.01	1.87
Construction	-4.57	9.75	24.10	13.47	10.69
Trade	-10.59	10.71	4.65	18.96	5.93
Transport	5.13	-6.45	4.84	9.41	3.23
Finance	4.73	1.29	4.46	12.99	5.87
Services	2.71	6.71	0.23	0.32	2.49
Private Households	-0.48	4.47	0.00	-0.74	0.81
Unspecified	71.43	-52.78	-23.53	11.54	1.67
Total	1.05	1.11	1.93	5.65	2.44

3.3 Employment rate

The employment rate is considered here in addition to the number of people employed as an area with more of its population employed is likely to see higher levels of expenditure. The employment rate is calculated as:

Employment rate (%) = number of employed persons/labour force*100

The adjusted number of employed people per area from Census 2001, as explained in section 2.2, was used. The labour force (obtained from Census 2001) was adjusted to 2005 estimates by applying annual growth rates in the labour force (obtained from LFS, September 2005).

3.4 Population

The population is used as an indicator of economic activity and to establish the size of an area. Census 2001 results were used and the estimates were adjusted to 2005 by applying the mid-year population estimates published by Stats SA.

4. SELECTION OF PRIMARY AND SECONDARY URBAN AREAS

Primary urban area(s) and secondary urban areas need to be selected for each of the nine provinces in South Africa. Primary urban areas will follow currently defined municipal boundaries. Municipalities were ranked using the variables described above.

All the towns within a province that fall outside the boundaries of the primary urban areas (i.e. outside the corresponding municipal boundaries) are eligible to be selected as secondary urban areas. Secondary urban areas are published in aggregate per province, and therefore do not need to be strictly demarcated. Secondary urban areas are based on the main place found in Census 2001. A main place is an easily recognisable, small area, geographical entity at the local level, and corresponds to the name of the city or town rather than a municipal demarcation. Towns were ranked using the variables described above.

4.1 Ranking and selection of areas

The selection of primary urban areas is based on the demarcation of municipalities at the time of Census 2001, as this is the main data source. The six municipalities in each province with the greatest number of outlets were selected for ranking.

The relative significance of the primary urban areas was determined by ranking the variables. The ranking was ascertained by allocating a score of 1 to 6 to each municipality, based on the ranking of the area according to each variable. A score of 1 is allocated to the area(s) in which the value of variable is the highest; a score of 2 is allocated to the next highest value and so on with a value of 6 allocated to the worst performing area. The scores of all the variables of an area are summed to obtain the total score of the area. The area(s) with the lowest score are regarded as the most suitable for price collection.

As a means of verification, the rankings will be compared to the Urban Function Index (UFI). "The UFI is based on the number of formal businesses, including industries and private and public services that are currently located in each centre." (Geyer, H.S., 2003). The greater the UFI the greater the level of economic activity of the area.

The results of the ranking of the variables; the aggregated scoring; and the UFI are shown in Table 6. The recommended primary urban areas are flagged in red italics.

Table 6: Ranking results, UFI, CPI$_1$ and recommended primary urban areas

Municipality	Main town	Nr of chain outlets	Nr of chain outlets (Ranking)	Employment Rate	Employment Rate (Ranking)	Employed persons (in band)	Employed persons (Ranking)	Population	Population (Ranking)	Total Score	UFI
Western Cape											
City of Cape Town	*Cape Town*	*216*	*1*	*46.15*	*5*	*158 053*	*1*	*2 892 243*	*1*	*8*	*91.3*
Drakenstein	Paarl	53	2	47.59	4	6 963	2	194 417	2	10	3.24
Stellenbosch	Stellenbosch	34	4	50.32	2	4 309	4	118 709	5	15	4.28
George	George	48	3	45.51	6	4 756	3	135 409	4	16	4.73
Breede Valley	Worcester	33	5	47.33	3	4 058	5	146 028	3	16	2.15
Theewaterskloof	Caledon	6	6	51.45	1	1 875	6	93 276	6	19	0.46
Eastern Cape											
Nelson Mandela Metro	*Port Elizabeth*	*102*	*1*	*31.78*	*1*	*37 695*	*1*	*1 005 779*	*1*	*4*	*19.1*
Buffalo City	*East London*	*100*	*2*	*28.39*	*2*	*2 043*	*2*	*695 278*	*2*	*8*	*7.97*
Lukanji	Queenstown	41	4	20.78	4	3 725	4	184 542	4	16	1.19
King Sabata Dalindyebo	Umtata	33	5	16.58	5	6 570	3	416 348	3	16	1.48
Makana	Grahamstown	24	6	28.2	3	-	5	75 302	5	19	1.07
Inxuba Yethemba	Cradock	54	3	-	6	1 288	6	60 296	6	21	0.45
Northern Cape											
Sol Plaatje	*Kimberley*	*63*	*1*	*33.7*	*5*	*8*	*1*	*201 465*	*1*	*8*	*3.84*
Khara Hais	*Upington*	*29*	*2*	*36.97*	*3*	*2 238*	*2*	*75 671*	*2*	*9*	*1.38*
Nama Khoi	Sprinbok	15	3	36.92	4	1 970	3	44 750	3	13	0.74
Hantam	Calvinia	1	5	41.18	1	404	4	19 813	5	15	0.22
Kareeberg	Carnarvon	1	5	37.87	2	115	5	9 488	6	18	0.09
Magareng	Warenton	2	4	24.46	6	340	6	21 733	4	20	0.16
Free State											
Mangaung	*Bloemfontein*	*98*	*1*	*35.31*	*4*	*20 221*	*1*	*645 440*	*1*	*7*	*10.4*
Matjihabeng	*Welkom*	*89*	*2*	*32.28*	*5*	*9 713*	*2*	*408 170*	*2*	*11*	*3.27*

Municipality	Main town	Nr of chain outlets	Nr of chain outlets (Ranking)	Employment Rate	Employment Rate (Ranking)	Employed persons (in band)	Employed persons (Ranking)	Population	Population (Ranking)	Total Score	UFI
Moqhaka	Kroonstad	39	4	35.88	2	4 032	4	167 892	3	13	1.45
Metsimaholo	Sasolburg	30	6	37.93	1	4 171	3	115 955	5	15	1.67
Dihlabeng	Bethlehem	33	5	35.43	3	2 572	5	128 929	4	17	1.57
Phumelela	Vrede	49	3	-	6	543	6	50 906	6	21	0.24
Kwa Zulu Natal											
Ethekwini	*Durban*	*234*	*1*	*36.02*	*1*	*120 935*	*1*	*3 090 122*	*1*	*4*	*58.3*
Msunduzi	*Pietermaritzburg*	*63*	*3*	*31.95*	*3*	*18 188*	*2*	*552 837*	*2*	*10*	*9.19*
uMhlathuze	Richards Bay	83	2	-	2	10 660	3	289 190	4	11	2.8
Newcastle	Newcastle	55	4	26.63	5	7 822	4	332 981	3	16	2.62
Emnambithi/Ladysmith	Ladysmith	37	5	29.19	4	4 590	5	225 459	5	19	1.72
Abaqulusi	Vryheid	34	6	18.72	6	2 643	6	191 019	6	24	1.29
North West											
Rustenburg	*Rustenburg*	*74*	*2*	*43.73*	*1*	*14 832*	*1*	*387 096*	*1*	*5*	*3.79*
City Council of Klerksdorp	*Klerksdorp*	*75*	*1*	*36.16*	*3*	*10 635*	*2*	*359 202*	*2*	*8*	*4.41*
Madibeng	Brits	42	3	63.21	2	6 888	4	346 675	3	12	1.95
Mafikeng	Mafikeng	36	4	27.89	5	7 731	3	259 478	4	16	1.46
Ditsobotla	Lichtenburg	26	5	29.23	4	2 406	5	147 599	5	19	0.99
Naledi	Vryburg	25	6	-	6	1 221	6	58 104	6	24	0.9
Gauteng											
City of Johannesburg	*Johannesburg*	*171*	*3*	*44.77*	*2*	*150 172*	*1*	*3 225 309*	*1*	*7*	*100*
Ekurhuleni Metro	*East Rand*	*209*	*1*	*41.41*	*3*	*144 066*	*2*	*2 581 750*	*2*	*8*	*-*
City of Tshwane Metro	*Pretoria*	*177*	*2*	*48.84*	*1*	*95 704*	*3*	*1 589 497*	*3*	*9*	*47.1*
Emfuleni	Vereeniging	87	5	32.25	4	22 874	4	658 420	4	17	4.89
Lesedi	Heidleburg	94	4	-	6	2 201	6	73 692	5	21	-
Midvaal	Meyerton	61	6	-	6	3 159	5	64 642	6	23	1.21
Mpumalanga											
Emalahleni	*Witbank*	*69*	*2*	*38.31*	*2*	*11 484*	*1*	*276 413*	*2*	*7*	*3.34*
Mbombela	*Nelspruit*	*71*	*1*	*35.62*	*5*	*10 068*	*2*	*476 593*	*1*	*9*	*4.86*
Middelburg	Middelburg	43	3	41.49	1	5 711	4	142 772	4	12	2.38
Goven Mbeki Municipality	Secunda	43	3	38.15	4	7 127	3	221 747	3	13	-
Lekwa	Standerton	30	5	38.22	3	2 377	6	103 265	5	19	0.88
Msukaligwa	Ermelo	29	6	34.79	6	2 481	5	124 812	6	23	1.21
Limpopo											
Polokwane	*Polokwane*	*45*	*2*	*30.15*	*2*	*13 806*	*1*	*508 277*	*2*	*7*	*3.66*
Greater Tzaneen	Tzaneen	46	1	27.94	3	4 501	5	375 586	4	13	2.82
Makhado	Makhado	35	3	21.32	5	7 340	3	495 261	3	14	1.14
Ba - Phalaborwa	Phalaborwa	33	4	35.1	1	4 000	6	131 091	4	15	0.77
Thulamela	Hazeyview	20	6	17.25	6	8 981	2	580 829	1	15	0.51
Mogalakwena	Mokopane	31	5	21.68	4	4 605	4	298 439	5	18	0.92

The primary urban areas recommended for Western Cape, Eastern Cape, Northern Cape, Free State, KwaZulu-Natal, Gauteng, Limpopo and Mpumalanga based on the ranking also show significantly higher UFI than the excluded primary urban areas.

In North West, Rustenburg is recommended, but the UFI is the higher for Klerksdorp. It is therefore proposed to include both Rustenburg and Klerksdorp as a combined primary urban area.

4.2 Ranking and selection of secondary urban areas

The ranking of secondary urban areas follows the same process as the primary towns. The results of the ranking of the variables; the aggregated scoring and the UFI are shown in Table 7. The recommended secondary urban areas are flagged in red italics.   Three secondary urban areas have been selected by province as it is felt that this will provide a more representative picture than the current two per province.

Table 7: Ranking results, UFI and recommended secondary urban areas

Towns	Nr of chain outlets	Nr of chain outlets (Ranking)	Number of Employed (in band)	Number of Employed (Ranking)	Employment Rate	Employment Rate (Ranking)	Population	Population (Ranking)	Total Score	UFI
Western Cape										
George	*20*	*1*	*3 848*	*2*	*53.5*	*1*	*88 021*	*2*	*6*	*4.73*
Paarl	*24*	*3*	*3 949*	*1*	*50.7*	*3*	*93 157*	*1*	*8*	*3.24*
Worcester	*23*	*2*	*3 220*	*3*	*48.8*	*4*	*74 725*	*3*	*12*	*2.15*
Mosselbay	20	4	1 566	4	51.75	2	42 383	5	15	2.08
Knysa	20	4	1 175	5	48.37	5	55 247	4	18	2.19
Oudtshoorn	12	n/a	1 918	n/a	41.64	n/a	58 880	n/a	n/a	1.42
Eastern Cape										
Queenstown	*22*	*1*	*1 734*	*2*	*44.5*	*1*	*25 920*	*2*	*6*	*1.19*
Umtata	*17*	*3*	*4 909*	*1*	*38.4*	*2*	*98 652*	*1*	*7*	*1.48*
Grahamstown	*19*	*2*	*907*	*3*	*35.5*	*3*	*22 283*	*3*	*11*	*1.07*
Craddock	9	n/a	601	n/a	65.98	n/a	12 828	n/a	n/a	0.45
Northern Cape										
Springbok	*11*	*2*	*31*	*3*	*60.8*	*1*	*10 259*	*1*	*7*	*0.74*
Kuruman	*16*	*1*	*600*	*2*	*47.6*	*2*	*10 226*	*2*	*7*	*0.7*
De Aar	*11*	*2*	*607*	*1*	*44.4*	*3*	*6 766*	*3*	*9*	*0.44*

Towns	Nr of chain outlets	Nr of chain outlets (Ranking)	Number of Employed (in band)	Number of Employed (Ranking)	Employment Rate	Employment Rate (Ranking)	Population	Population (Ranking)	Total Score	UFI
Free State										
Sasolsburg	*22*	*2*	*2 501*	*1*	*54.3*	*3*	*25 573*	*1*	*7*	*1.67*
Bethlehem	*18*	*3*	*1 104*	*3*	*54.7*	*2*	*12 298*	*3*	*11*	*1.57*
Kroonstad	*22*	*1*	*2 104*	*2*	*45.3*	*4*	*24 983*	*2*	*9*	*1.45*
Harrismith	16	4	621	4	55.95	1	6 601	4	13	0.89
KwaZulu-Natal										
Newcastle	*25*	*1*	*4 568*	*1*	*48*	*4*	*59 931*	*1*	*7*	*2.62*
Richards Bay	*20*	*3*	*4 112*	*2*	*55.3*	*2*	*46 698*	*2*	*9*	*2.8*
Ladysmith	24	2	2 839	3	49.26	3	43 129	3	11	1.72
Empangeni	*22*	*4*	*1 466*	*4*	*65.1*	*1*	*13 857*	*4*	*13*	*3.08*
Stanger	18	n/a	2 399	n/a	35.42	n/a	102 310	n/a	n/a	1.52
North West										-
Brits	*15*	*2*	*1 269*	*2*	*62.9*	*1*	*12 893*	*2*	*7*	*1.95*
Mafikeng	*16*	*1*	*1 636*	*1*	*50.9*	*3*	*24 630*	*1*	*6*	*1.46*
Lichtenburg	*16*	*1*	*969*	*3*	*59.9*	*2*	*12 415*	*3*	*9*	*0.99*
Gauteng										
Krugersdorp	*13*	*3*	*7 571*	*1*	*54.3*	*1*	*90 164*	*1*	*6*	*3.39*
Vereeniging	*16*	*2*	*7 433*	*2*	*50.9*	*2*	*76 287*	*3*	*9*	*3.52*
Vanderbiljpark	*18*	*1*	*5 466*	*3*	*50.9*	*2*	*83 480*	*2*	*8*	*5.5*
Heidelberg	6	n/a	1 262	n/a	52.38	n/a	12 089	n/a	n/a	1.05
Mpumalanga										
Middelburg	*23*	*1*	*3 136*	*1*	*45.8*	*4*	*92 015*	*1*	*7*	*3.78*
Secunda	*21*	*2*	*1 920*	*2*	*62.7*	*1*	*26 233*	*3*	*8*	*-*
Standerton	16	4	989	3	45.56	3	29 425	2	12	1.71
Ermelo	*19*	*3*	*761*	*4*	*53.9*	*2*	*13 067*	*4*	*13*	*1.97*
Limpopo										
Tzaneen	*22*	*1*	*692*	*2*	*65*	*1*	*7 248*	*3*	*7*	*-*
Phalarborwa	*19*	*2*	*1 521*	*1*	*50.6*	*3*	*18 216*	*1*	*7*	*1.57*
Makhado	*19*	*2*	*397*	*3*	*61*	*2*	*11 470*	*2*	*9*	*0.77*

In general, the recommended secondary urban areas are in line with the findings of the UFI.

4.2.1 Special issues

Two towns, namely Empangeni and Ermelo were chosen as secondary urban areas, although they did not have the lowest scores. These towns were chosen because

have higher UFI's than those with lower scores and they are both nearer to Statistics South Africa's regional offices, than the towns with lower scores.

5. SUMMARY OF RECOMMENDATIONS

Table 8 shows the recommended primary urban area(s) and secondary urban areas for each province. The primary urban areas and secondary urban areas that are currently covered by the CPI are also indicated, to provide an indication of the number of new areas that will be introduced by implementing the recommended areas. Also, it is important to keep in mind that the boundaries of the recommended primary urban areas will coincide with the municipal boundaries, which is not the case in the current coverage.

Table 8: Current and recommended primary urban areas and secondary urban areas

Province	Current CPI Areas	Recommended CPI Areas
Western Cape		
Primary urban areas	Cape Peninsula	City of Cape Town
Secondary urban areas	George, Paarl & Oudtshoorn	George, Paarl & Wocester
Eastern Cape		
Primary urban areas	Port Elizabeth/Uitenhage , East London	Nelson Mandela (Port Elizabeth), Buffalo City (East London)
Secondary urban areas	Queenstown, Craddock	Queenstown, Grahamstown & Umtata
Northern Cape		
Primary urban areas	Kimberley	Sol Plaaitjie (Kimberley)
Secondary urban areas	De Aar, Kuruman	De Aar, Kuruman & Upington
Free State		
Primary urban areas	Bloemfontein, Free State Goldfields	Mangaung (Bloemfontein), Matjhabeng (Welkom) [combined]
Secondary urban areas	Bethlehem, Kroonstad, Ficksburg	Sasolburg, Bethlehem & Kroonstad
KwaZulu-Natal		
Primary urban areas	Durban/Pinetown, Pietermaritzburg	Ethekwini (Durban/Pinetown), Msunduzi (Pietermaritzburg)
Secondary urban areas	Richards Bay, Newcastle and Stanger	Newcastle, Richards Bay & Empangeni
North West		
Primary urban areas	All urban areas are published as an aggregate for North West	Rustenburg , City Council of Klerksdorp [combined]
Secondary urban areas	Klerksdorp, Vryburg, Lichtenburg	Lichtenburg, Brits & Mafikeng
Gauteng		
Primary urban areas	Pretoria/Centurion/Akasia & Witwatersrand (WWR)	City of Johannesburg Metro City of Tshwane Metro Ekurhuleni Metro
Secondary urban areas	Vereeniging, Vanderbijlpark & Heidelberg	Vanderbijlpark, Vereeniging & Krugersdorp

Province	Current CPI Areas	Recommended CPI Areas
Mpumalanga		
Primary urban areas	Witbank/ Nelspruit	Emalahleni (Witbank) & Mbombela (Nelspruit) [combined]
Secondary urban areas	Ermelo, Standerton	Middelburg, Secunda & Ermelo
Limpopo		
Primary urban areas	Polokwane	Polokwane
Secondary urban areas	Phalaborwa, Mokopane	Tzaneen, Phalaborwa & Makhado

6. IMPLEMENTATION ISSUES

The full implementation of the new geographic areas will be timed to coincide with the publication of the reweighted CPI basket. Collection in these areas will, however, begin in January 2007. Most of the changes which affect the collection process relate to the secondary urban areas. These will feed into the CPI from the March 2007 publication. There will be a three month overlap period where data is collected from old and new towns to ensure continuity of the index.

Experience in starting up field operations indicates that it takes four to five months of collection experience to get data collection quality close to target levels. Although data collection in the new areas will start in January 2007, the new price collectors will be twinned with existing teams for the last two months of 2007 to gain additional experience.

7. FURTHER WORK

This document forms the basis on which weights for different areas in the CPI will be derived. This will be guided by the provincial and rural/urban expenditure weights derived from the IES. It is also expected that an updated version of the Urban Function Index will be available early in the new year. This should also provide insight in determining weights for specific urban areas.

Appendix 1: Overall ranking for primary urban areas

Table A: Overall ranking of primary urban areas

Municipalities	Main town	Province	Nr of outlets	Employment Rate	Number of Employed (in band)	Population	Nr of outlets (Rank)	Employment Rate (Rank)	Number of Employed (Rank)	Population (Rank)	Total Score		UFI
City of Cape Town	*Cape Town*	*WC*	*216*	*46.15*	*158 053*	*2 892 243*	*2*	*6*	*1*	*3*	*12*		*91.3*
City of Johannesburg	*Johannesburg*	*GP*	*171*	*44.77*	*150 172*	*3 225 309*	*5*	*8*	*2*	*1*	*16*		*100.*
City of Tshwane	*Pretoria*	*GP*	*177*	*48.84*	*95 704*	*1 589 497*	*4*	*3*	*5*	*5*	*17*		*47.1*
Ekurhuleni Metro	*East Rand*	*GP*	*209*	*41.41*	*114 066*	*2 581 750*	*3*	*11*	*4*	*4*	*22*		*-*
Ethekwini	*Durban*	*KZN*	*234*	*36.02*	*120 935*	*3 090 122*	*1*	*22*	*3*	*2*	*28*		*58.3*
Nelson Mandela	*Port Elizabeth*	*EC*	*102*	*31.78*	*37 695*	*1 005 779*	*6*	*33*	*6*	*6*	*51*		*19.1*
Rustenburg	*Rustenburg*	*NW*	*74*	*43.73*	*14 832*	*387 096*	*14*	*9*	*11*	*17*	*51*		*3.79*
Mangaung	*Bloemfontein*	*FS*	*98*	*35.31*	*20 221*	*645 440*	*8*	*26*	*9*	*9*	*52*		*10.4*
Emfuleni	Vereeniging	GP	87	32.25	22 874	658 420	11	31	7	8	57		4.89
Buffalo City	*East London*	*EC*	*100*	*28.39*	*20 434*	*695 278*	*7*	*37*	*8*	*7*	*59*		7.97
Emalahleni	*Witbank*	*MP*	*69*	*38.31*	*11 484*	*276 413*	*16*	*13*	*13*	*24*	*66*		3.34

Municipalities	Main town	Province	Nr of outlets	Employment Rate	Number of Employed (in band)	Population	Nr of outlets (Rank)	Employment Rate (Rank)	Number of Employed (Rank)	Population (Rank)	Total Score		UFI
City of Klerksdorp	Kleksdorp	NW	75	36.16	10 635	359 202	13	21	15	19	68		4.41
Mbombela	Nelspruit	MP	71	35.62	10 068	476 593	15	24	16	14	69		4.86
Msunduzi	Pietermaritzburg	KZN	63	31.95	18 188	552 837	17	32	10	11	70		9.19
Matjhabeng	Welkom	FS	89	32.28	9 713	408 170	10	30	17	16	73		3.27
Drakenstein	Paarl	WC	53	47.59	6 963	194 417	22	4	24	29	79		3.24
Polokwane	Polokwane	LP	45	30.15	13 806	508 277	26	34	12	12	84		3.66
Govan Mbeki	Secunda	MP	43	38.15	7 127	221 747	27	15	23	27	92		-
Sol Plaatje	Kimberley	NC	63	33.7	8 230	201 465	17	29	19	28	93		3.84
Madibeng	Brits	NW	42	36.21	6 888	346 675	29	20	25	20	94		1.95
George	George	WC	48	45.51	4 756	135 409	24	7	28	36	95		4.73
Middelburg	Middelburg	MP	43	41.49	5 711	142 772	27	10	27	35	99		2.38
Newcastle	Newcastle	KZN	55	26.63	7 822	332 981	20	41	20	21	102		2.62
uMhlathuze	Richards Bay	KZN	83	-	10 660	289 190	12	55	14	23	104		2.80
Stellenbosch	Stellenbosch	WC	34	50.32	4 309	118 709	35	2	32	40	109		4.28
Breede Valley	Worcester	WC	33	47.33	4 058	146 028	37	5	34	34	110		2.15
Greater Tzaneen	Tzaneen	LP	46	27.94	4 501	375 586	25	39	31	18	113		2.82

Municipalities	Main town	Province	Nr of outlets	Employment Rate	Number of Employed (in band)	Population	Nr of outlets (Rank)	Employment Rate (Rank)	Number of Employed (Rank)	Population (Rank)	Total Score		UFI
Makhado	Makhado	LP	35	21.32	7 340	495 261	34	44	22	13	113		1.14
Mafikeng	Mafikeng	NW	36	27.89	7 731	259 478	33	40	21	25	119		1.46
Moqhaka	Kroonstad	FS	39	35.88	4 032	167 892	31	23	35	32	121		1.45
Emnambithi/Ladysmith	Ladysmith	KZN	37	29.19	4 590	225 459	32	36	30	26	124		1.72
Thulamela	Hazyview	LP	20	17.25	8 981	580 829	49	47	18	10	124		0.51
King Sabata Dalindyebo	Umtata	EC	33	16.58	6 570	416 348	37	48	26	15	126		1.48
Metsimaholo	Sasolburg	FS	30	37.93	4 171	115 955	42	16	33	41	132		1.67
Mogalakwena	Mokopane	LP	31	21.68	4 605	298 439	41	43	29	22	135		0.92
Ba-Phalaborwa	Phalaborwa	LP	33	35.1	4 000	131 091	37	27	36	37	137		0.77
Dihlabeng	Bethlehem	FS	33	35.43	2 572	128 929	37	25	40	38	140		1.57
Lekwa	Standerton	MP	30	38.22	2 377	103 265	42	14	43	42	141		0.88
Theewaterskloof	Caledon	WC	6	51.45	1 875	93 276	51	1	47	43	142		0.46
Lukanji	Queenstown	EC	41	20.78	3 725	184 542	30	45	37	31	143		1.19
Abaqulusi	Vryheid	KZN	34	18.72	2 643	191 019	35	46	39	30	150		1.29
Khara Hais	*Upington*	*NC*	*29*	*36.97*	*2 238*	*75 671*	*44*	*18*	*44*	*44*	*150*		1.38

Municipalities	Main town	Province	Nr of outlets	Employment Rate	Number of Employed (in band)	Population	Nr of outlets (Rank)	Employment Rate (Rank)	Number of Employed (Rank)	Population (Rank)	Total Score		UFI
Msukaligwa	Ermelo	MP	29	34.79	2 481	124 812	44	28	41	39	152		1.21
Lesedi	Heidelburg	GP	94	-	2 201	73 692	9	55	45	46	155		-
Ditsobotla	Lichtenburg	NW	26	29.23	2 406	147 599	46	35	42	33	156		0.99
Midvaal	Meyerton	GP	61	-	3 159	64 642	19	55	38	47	159		1.21
Nama Khoi	Springbok	NC	15	36.92	1 970	44 750	50	19	46	51	166		0.74
Hantam	Calvinia	NC	1	41.18	404	19 813	53	12	52	53	170		0.22
Inxuba Yethemba	Cradock	EC	54	-	1 288	60 296	21	55	49	48	173		0.45
Kareeberg	Carnarvon	NC	1	37.87	115	9 488	53	17	54	54	178		0.09
Makana	Grahamstown	EC	24	28.2	1 605	75 302	48	38	48	45	179		1.07
Phumelela	Vrede	FS	49	-	543	50 906	23	55	51	50	179		0.24
Magareng	Warenton	NC	2	24.46	340	21 733	52	42	53	52	199		0.16
Naledi	Vryburg	NW	25	-	1 221	58 104	47	55	50	49	201		0.90

Appendix 2: Overall ranking of secondary urban areas

Table B: Overall ranking of secondary urban areas

Towns	Province	Outlets	Employed persons (in band)	Employment Rate	Population	Outlets (Rank)	Employed persons (Rank)	Employment Rate (Rank)	Population (Rank)	Total Score		UFI
Krugersdorp	*GP*	*13*	*7 571*	*54.3*	*90 164*	13	1	12	4	30		3.39
Paarl	*WC*	*24*	*3 949*	*50.72*	*93 157*	2	7	19	2	30		3.24
Richards Bay	*KZN*	*20*	*4 112*	*55.29*	*46 698*	6	6	9	11	32		2.80
George	*WC*	*20*	*3 848*	*53.47*	*88 021*	6	8	14	5	33		4.73
Vanderbijlpark	*GP*	*18*	*5 466*	*50.88*	*83 480*	8	3	17	6	34		5.50
Vereeniging	*GP*	*16*	*7 433*	*50.88*	*76 287*	11	2	18	7	38		3.52
Secunda	*MP*	*21*	*1 920*	*62.68*	*26 233*	5	14	4	15	38		-
Newcastle	*KZN*	*25*	*4 568*	*47.95*	*59 931*	1	5	24	9	39		2.62
Worcester	*WC*	*23*	*3 220*	*48.77*	*74 725*	3	9	22	8	42		2.15
Middelburg	*MP*	*23*	*3 136*	*45.77*	*92 015*	3	10	27	3	43		3.78
Sasolburg	*FS*	*22*	*2 501*	*54.33*	*25 573*	4	12	11	17	44		1.67
Umtata	*EC*	*17*	*4 909*	*38.42*	*98 652*	9	4	31	1	45		1.48
Ladysmith	KZN	24	2 839	49.26	43 129	2	11	21	12	46		1.72
Empangeni	*KZN*	*22*	*1 466*	*65.09*	*13 857*	4	19	1	22	46		
Mosselbay	WC	20	1 566	51.75	42 383	6	17	15	13	51		2.08
Brits	*NW*	*15*	*1 269*	*62.91*	*12 893*	12	20	3	24	59		1.95

Towns	Province	Outlets	Employed persons (in band)	Employment Rate	Population	Outlets (Rank)	Employed persons (Rank)	Employment Rate (Rank)	Population (Rank)	Total Score		UFI
Knysna	WC	20	1 175	48.37	55 247	6	21	23	10	60		2.19
Mafikeng	*NW*	*16*	*1 636*	*50.92*	*24 630*	10	16	16	19	61		1.46
Kroonstad	*FS*	*22*	*2 104*	*45.25*	*24 983*	4	13	28	18	63		1.45
Tzaneen	*LP*	*22*	*692*	*64.95*	*7 248*	4	27	2	30	63		-
Queenstown	*EC*	*22*	*1 734*	*44.45*	*25 920*	4	15	29	16	64		1.19
Phalaborwa	*LP*	*19*	*1 521*	*50.64*	*18 216*	7	18	20	21	66		1.57
Bethlehem	*FS*	*18*	*1 104*	*54.68*	*12 298*	8	22	10	26	66		1.57
Lichtenburg	*NW*	*16*	*969*	*59.89*	*12 415*	10	24	7	25	66		0.99
Ermelo	*MP*	*19*	*761*	*53.91*	*13 067*	7	26	13	23	69		1.97
Makhado	*LP*	*19*	*397*	*60.96*	*11 470*	7	31	5	27	70		0.77
Standerton	MP	16	989	46.56	29 425	10	23	26	14	73		1.71
Harrismith	FS	16	621	55.95	6 601	10	28	8	32	78		0.89
Springbok	*NC*	*11*	*28*	*60.8*	*10 295*	14	32	6	28	80		0.74
Grahamstown	*EC*	*19*	*907*	*35.49*	*22 283*	7	25	32	20	84		1.07
Kuruman	*NC*	*16*	*600*	*47.59*	*10 226*	11	30	25	29	95		0.70
De Aar	*NC*	*11*	*607*	*44.36*	*6 766*	14	29	30	31	104		0.44

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