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# Estimating the Current and Future Skills Demand of Government's National Growth and Development Policies

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LMIP REPORT 33  
2017



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This report is published in 2017 by the Labour Market Intelligence Partnership (LMIP), a research consortium led by the Human Sciences Research Council (HSRC), and funded by the Department of Higher Education and Training (DHET).

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Designed, typeset and proofread by COMPRESS.dsl  
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## ABBREVIATIONS AND ACRONYMS

ASGI-SA	Accelerated and Shared Growth Initiative – South Africa
CCT	City of Cape Town
CJ	City of Johannesburg
CT	City of Tshwane
DED	Department of Economic Development
DHET	Department of Higher Education and Training
DRDLR	Department of Rural Development and Land Reform
DST	Department of Science and Technology
dti	Department of Trade and Industry
ECPC	Eastern Cape Planning Commission
EDD	Economic Development Department
EM	eThekweni Municipality
EPWP	Expanded Public Works Programme
FET	further education and training
GDS	Growth and Development Strategy
HRDS	Human Resource Development Strategy
HRDS-SA	Human Resource Development Strategy for South Africa
HSRC	Human Sciences Research Council
IDP	Integrated Development Plan
IPAP	Industrial Policy Action Plan
KZN	KwaZulu-Natal
KZN PGDS	KwaZulu-Natal Provincial Growth and Development Strategy
LMIP	Labour Market Intelligence Partnership
LPG	Limpopo Provincial Government
MTSF	Medium-Term Strategic Framework
NARYSEC	National Rural Youth Service Corps
NDP	National Development Plan
NDT	National Department of Tourism
NGO	non-governmental organisation
NGP	New Growth Path
NIPF	National Industrial Policy Framework
NPC	National Planning Commission

NSDS	National Skills Development Strategy
NSF	National Skills Fund
NWPC	North West Planning Commission
PARP	Poverty Alleviation and Reduction Policy
PDP	Provincial Development Plan
PSDP	Provincial Skills Development Plan
PSG	Provincial Strategic Goal
PSO	Provincial Strategic Objective
PSP	Provincial Strategic Plan
SAG	South African Government
S&T	science and technology
SDECD	Social Development and Early Childhood Development
SET	science, engineering and technology
SETA	sector education and training authority
SIP	Strategic Integrated Project
SKA	Square Kilometre Array
SMMEs	small, medium and micro-sized enterprises
TDF	Tourism Development Framework
WCG	Western Cape Government

## PREFACE

The 2009 South African government administration, informed by a results-focused philosophy, identified 12 priority outcomes for the country. Government departments are committed to a ‘joined-up’ approach for delivering on each of the outcomes. Outcome 5 refers to ‘a skilled and capable workforce to support an inclusive growth path’ and the delivery of this outcome is led by the Minister of Higher Education and Training.

Delivery Agreement 5 consists of three parts, with Output 5.1 committing the Department of Higher Education and Training (DHET) to the establishment of a credible mechanism for skills planning in collaboration with 20 national and provincial ministries. The DHET commissioned the Human Science Research Council (HSRC) to support the DHET in establishing a credible institutional mechanism for skills planning (Memorandum of Agreement between the DHET and the HSRC, February 2012).

To inform the architecture of the skills planning mechanism, the following reports have been written:

- Marcus Powell & Vijay Reddy (2014) *An Architecture for Skills Planning: Lessons and Options for Reform in South Africa*, Report 9.
- Marcus Powell & Vijay Reddy (2014) *Roadmap for the Implementation of a Skills Planning Unit*, Report 10.
- Marcus Powell, Vijay Reddy & Andrew Paterson (2014) *Approaches and Methods for Understanding What Occupations Are in High Demand and Recommendations for Moving Forward in South Africa*, Report 11.
- Cuen Sharrock & Sybil Chabane (2015) *International Comparative Analysis of Skills Planning Indicator Systems across National Contexts*, Report 12.
- Vijay Reddy & Marcus Powell (2015) *Indicators and Data to Support Skills Planning in South Africa*, Report 13.
- Andrew Paterson, Mariette Visser, Fabian Arends, Menzi Mthethwa, Thembinkosi Twalo & Titus Nampala (2015) *High-Level Audit of Administrative Datasets*, Report 14.
- Fabian Arends, Sybil Chabane & Andrew Paterson (2015) *Investigating Employer Interaction with the Employment Services of South Africa (ESSA)*, Report 15.
- Bongiwane Mncwango (2015) *Public Attitudes towards Work in South Africa*, Report 16.
- Xolani Ngazimbi & Marcus Powell (2015) *Information and Skills Planning for the Workplace: Case Studies of Companies in South Africa*, Report 17.
- Lynn Woolfrey (2013) *South African Labour Market Microdata Scoping Study*, Working Paper 2.
- Andrew Kerr (2013) *Understanding Labour Demand in South Africa and the Importance of Data Sources*, Working Paper 5.



## ABSTRACT

The purpose of this working paper is to assess government's economic-development policies as drivers of demand for skills. The main objective is to generate a broad estimate of the skills demand implications of implementing key development strategies, including programmes that are specifically designed as job-creating projects. Secondary objectives include the following:

- Providing an indication of current and future skills needs emanating from the strategies discussed below;
- Estimating demand according to the three broad skills categories: high-skill, medium-skill and low-skill occupations;
- Where strategy documents estimate the expected size of skills demand that will be created, analysing the implications of the strategy for skills development;
- Where strategy documents estimate the expected size of skills demand that will be created, examining the methodology used to generate these estimations; and
- Suggesting a methodology for calculating skills demand that might be applied to new government programmes or policies as they are created.

To address these objectives, the paper examines 26 major development strategy documents from both the national and provincial governments, as well as from the major metropolitan municipalities. From

this analysis, it is difficult to provide an indication of current and future skills needs for the state, because few of the strategies provide assessments to match their needs. Where plans do provide some indication of their skills requirements, gaps largely exist in low-skill occupations, like those required in the productive industries, or in high-skill applications, like those required by the science, engineering and technology (SET) industries or within the knowledge-based economy. However, most plans included in the study are so vague regarding their skills requirements that it is difficult to disaggregate their needs into even so broad a skills classification as high, medium and low.

Evaluating the skills assessment methodology of the included strategies posed a particular challenge because none of the documents contained any methodological guidelines demonstrating how their estimates might have been reached. However, further examination of the Eastern Cape Provincial Development Plan (PDP) and Provincial Skills Development Plan (PSDP) processes shed some light on how skills demand might be estimated. Finally, a number of strategies, particularly at the provincial or municipal level, explicitly note the absence of any credible skills planning mechanism. This conforms to a broad consensus within the documents that the lack of a credible and replicable skills planning mechanism in South Africa is a significant barrier in addressing the skills mismatch that exists in the labour market.



# 1. INTRODUCTION

This Human Sciences Research Council (HSRC) working paper is part of the Labour Market Intelligence Partnership (LMIP), a project commissioned by the Department of Higher Education and Training (DHET) and funded through the National Skills Fund (NSF). The central objective of the LMIP is to develop ‘a credible institutional mechanism for skills planning’. The challenge for any government is to anticipate the skills that are needed for the current and future economy. This information can be used to plan the size and shape of the post-school education and training system.

The purpose of this working paper is to assess government’s economic-development policies as drivers of demand for skills. The main objective is to generate a broad estimate of the skills demand implications of implementing key national, provincial and metropolitan-municipality development strategies, including programmes that are specifically designed as job-creating projects. To

complete this objective, the paper focuses on the following points:

- Providing an indication of current and future skills needs emanating from the strategies discussed below;
- Estimating demand according to the three broad skills categories: high-skill, medium-skill and low-skill occupations;
- Where strategy documents estimate the expected size of skills demand that will be created, analysing the implications of the strategy for skills development;
- Where strategy documents estimate the expected size of skills demand that will be created, examining the methodology used to generate these estimations; and
- Suggesting a methodology for calculating skills demand that might be applied to new government programmes or policies as they are created.

## 2. NATIONAL DEVELOPMENT STRATEGIES

### **Department of Rural Development and Land Reform Strategic Plan 2015–2020**

The purpose of the Department of Rural Development and Land Reform Strategic Plan 2015–2020 is to outline policy and guidelines designed to stimulate rural revitalisation and rural employment, while fostering social cohesion, prosperity, full employment, shared growth and relative income equality (DRDLR, 2015). Primary interventions in terms of the strategic plan include: administrative measures to improve departmental efficiency; the provision of geospatial and cadastral services; the implementation of a comprehensive rural-development programme through the implementation of the rural-livelihoods strategy; the restitution of land claims; and initiating sustainable land-reform programmes.

Skills development in rural communities accounts for a significant component of the Department's mandate, and, consequently, its strategic plan. According to the document, since the inception of the 2011 to 2014 Strategic Plan, 1 273 youths have participated in skills training through the National Rural Youth Service Corps (NARYSEC) programme initiative, while an additional 1 262 farmers have received occupational training (DRDLR, 2015). The strategy does not explicitly state the skills requirements needed to realise its development objective. It simply notes that the National Skills Development Strategy (NSDS) III and the Human Resource Development Strategy (HRDS) are followed in order to identify the priority skills needed (DRDLR, 2015). One exception is the recognition that a geomatics or spatial-planning skills base in the country is insufficient to meet the Strategy's goal of providing geospatial and cadastral services for rural clients. In order

to overcome this shortcoming, the Strategy advocates that the Department maintain its current bursary scheme within the spatial-planning and geomatics disciplines and awareness programmes in order to attract young people to the profession. However, no specific geomatics skills requirements or training targets are provided, and there are no additional details regarding current bursary schemes (DRDLR, 2015).

### **Department of Trade and Industry Strategic Plan**

The Department of Trade and Industry's (dti) Strategic Plan outlines a number of strategic objectives to be pursued between 2015 and 2020 for the purpose of realising the Department's goals of economic transformation, industrialisation, inclusive growth and job creation, and the creation of a fair regulatory environment (dti, 2015). A number of interventions planned for this period include: strengthening administrative support and institutional capacity within the dti; stimulating and incentivising enterprise development; fostering trade relations; forging equitable transformation of industrial assets; and bolstering manufacturing within the economy in order to create job growth. The deployment of technologies and skills development programmes is key to the Department's goal of economic transformation. However, skills requirements for the various programmes envisioned by the Strategic Plan are not provided. Yet, the Strategic Plan does note a number of strategic risks to the dti's objectives, among which is a lack of international competitiveness due to a skills shortage within the South African economy. Nevertheless, it is not clear what types of skills are lacking in particular.

## **Human Resource Development Strategy for South Africa (HRDS-SA) 2010–2030**

The purpose of the Human Resource Development Strategy for South Africa (HRDS-SA) 2010–2030 is to provide a unified and purposeful framework for skills development activities in the country. It seeks to meet this objective through the promotion of a formulated skills development agenda which will be put into place over the years 2010 to 2030. To implement this agenda, a number of strategic priorities have been identified, including: ensuring universal access to early-childhood development; eradicating adult illiteracy; ensuring access to employment-focused education and training; providing investment for education and training systems; and ensuring equitable outcomes across the board.

The Strategy notes that there is both anecdotal and empirical evidence of skills shortages in a number of occupations and economic sectors within South Africa. As a consequence, it recognises a need for credible capability to identify the demand for priority skills as a prerequisite for formulating effective strategies to ensure supply (SAG, 2009). Although the plan does not spell out specific skills requirements, it does identify a number of key sectors where demand for skills outstrips supply. These include high-skills occupations in the priority areas of design, engineering and artisanship that are critical to the manufacturing, construction and cultural industries. It also notes a need for skills in the priority economic sectors identified in the Accelerated and Shared Growth Initiative – South Africa (ASGISA), the National Industrial Policy Framework (NIPF) and the Industrial Policy Action Plan (IPAP). These sectors include: tourism; agriculture and agroprocessing; chemicals; metals beneficiation; creative industries; clothing and textiles; durable consumer goods; and wood pulp and paper processing (dti, 2007; Office of the Presidency, 2006).

## **Industrial Policy Action Plan**

The purpose of the Industrial Policy Action Plan (IPAP) is to provide for a number of interventions

designed to secure industrial development in South Africa. As Kaplan (2013) notes, although the IPAP contains a number of objectives, employment creation appears to be the most important, as all proposed policies and support programmes are weighed according to their ability to create jobs. The IPAP sets a number of quantified targets and performance indicators in respect of a number of objectives in addition to employment, including an aggregate target for employment growth in manufacturing – 350 000 additional jobs by 2020 and a further 2.1 million indirect jobs (Kaplan, 2013). Skills requirements are not spelled out specifically by the IPAP. However, priority sectors are identified, consistent with those mentioned in the HRDS-SA, ASGISA and the NIPF. Beyond this broad identification of priority sectors, the IPAP does focus on a number of specific industries where future skills needs should be expected. These include technical and high-level design skills needed for a variety of manufacturing jobs, as well as medium and low skills needed across manufacturing value chains and in the sawmilling industry (dti, 2012).

## **Innovation towards a Knowledge-Based Economy, Ten-Year Plan for South Africa (2008–2018)**

Broadly, the purpose of the Ten-Year Plan is to help drive South Africa's transformation towards a knowledge-based economy (DST, 2008). As the Plan notes, transformation towards a knowledge-based economy will shift the proportion of national income derived from knowledge-based industries, the percentage of the workforce employed in knowledge-based jobs, and the ratio of firms using technology in order to innovate (DST, 2008). The Plan outlines five strategy areas for concentration and investment. These include: strengthening the bio-economy; contributing to space-science technology; energy security; a focus on global climate-change science; and understanding human and social dynamics.

Within each of these strategy areas, the Plan acknowledges a shortage of highly skilled workers. This, in turn, means that the average annual human-capital pipeline outputs – made up of 26 000 Higher Grade maths and science matriculants, 33 500

science, engineering and technology (SET) undergraduates, and 3 200 honours, 2 900 master's and 561 SET PhD graduates – will have to be improved qualitatively and quantitatively (DST, 2008). Although the Plan does not give an exact indication of the current and future skills needs required to achieve its goals, it does note that, in order to compete in the global science and technology arena, South Africa's PhD production must grow fivefold, to about 3 000 SET PhDs (DST, 2008). This target aligns the Ten-Year Plan with the National Development Plan (NDP), which seeks to increase the number of South African doctoral graduates to more than 100 per million by the year 2030 (NPC, 2011).

### **Medium-Term Strategic Framework**

The Medium-Term Strategic Framework (MTSF) is the government's strategic plan for the 2014 to 2019 electoral term. The MTSF sets out the actions government will take and the targets to be achieved, while providing a framework for other plans at a national, provincial or municipal level. Although it includes a number of commitments, its overriding goal is the continued implementation of the NDP. Priorities under the MTSF include: support for a competitive economy; creation of decent work opportunities; and encouragement of investment (Office of the Presidency, 2014).

The MTSF acknowledges that skills shortages within South Africa impede progress towards transforming the economy. The plan states that targeted measures will be put in place in order to attract and develop the skills needed. Key skills where shortcomings are forecasted include: engineering skills in infrastructure, mining, industry and logistics; doctors, nurses and health professionals; and researchers and innovators to stimulate product design (Office of the Presidency, 2014). Moreover, the MTSF sets a number of skills requirements necessary to meet the needs of South Africa's economy, as projected under the plan. Roughly, these correlate with the NDP's goal of boosting South Africa's PhD production fivefold (NPC, 2011). Targets set by the MTSF include: an increase in artisans from 18 110 in 2013 to 24 000 per annum by 2019; an increase in PhD graduates from 1 870 per year in 2013 to 2 400 per year by

2019 ; increased graduate numbers in engineering science (i.e. 57 000 over the five-year period – 9 974 were produced in 2012), human and animal health (i.e. 45 000 over the five-year period – 8 015 were produced in 2012), the natural and physical sciences (i.e. 36 000 over the five-year period – 6 366 were produced in 2012); and 20 000 teacher graduates per year by 2019, an increase from 13 740 in 2012 (Office of the Presidency, 2014). Thus, the demand in various areas falls in the high-skill, or possibly medium-skill, occupations.

### **National Department of Tourism Strategic Plan**

The purpose of the National Department of Tourism (NDT) Strategic Plan for 2015/16–2019/20 is to outline the role of tourism in helping the government achieve the objectives of the NDP (NDT, 2015). Thus, the role of tourism in contributing to economic growth and job creation is central to the document's strategies. Programme 2 in the Plan sets strategic objectives to both improve the breadth of tourism offerings through expanded services and to improve the quality of existing offerings through capacity-building programmes. However, the Plan does not explicitly state employment targets or skills requirements for these objectives.

### **National Development Plan**

The purpose of the National Development Plan (NDP) is to provide a broad strategic framework to guide the South African state's development choices and actions. As such, the NDP sets out a number of measures of economic success, with a strong emphasis on job creation. As Kaplan (2013) notes, the NDP examines the current trajectory of the South African economy and then sets a number of defined economic goals to be realised by 2030, many of which are premised on the trends achieved during the period of rapid economic growth between 2004 and 2007.

The NDP targets 5.9 million new jobs by 2020 and 11 million by 2030 (from a current labour market of 15 million) (NPC, 2011). Although the document acknowledges the nation's skills shortage, it does not specifically outline skills requirements for these

5.9 million jobs. However, as Kaplan (2013) notes, under the NDP, the largest share of employment growth will occur in small, labour-intensive service firms primarily oriented to the domestic market. These are firms that employ a lot of medium-skilled and low-skilled workers. Thus, it can be inferred that the largest demand will naturally be for those groups. However, the Plan does not specifically spell out the implications for the nation's skills base. The focus on low- and medium-skilled work in the NDP stands in contrast to the bulk of the documents included in this paper which predict the largest amount of demand to be in highly skilled applications where South Africa faces existing skills shortages.

### **National Skills Development Strategy III**

The National Skills Development Strategy (NSDS) III is the overarching strategic guide for skills development in South Africa. The key driving force of the Strategy is to improve the effectiveness and efficiency of the skills development system (DHET, 2011). The NSDS is informed by an awareness of continuing skills shortages in the artisanal, technical and professional fields, occupations that are essential to the growth of the South African economy. It also greatly emphasises inequality within existing economic structures, aiming to enable effective participation in the economy and society by all South Africans and to reduce inequalities between population groups (DHET, 2011). The NSDS includes eight broad goals for achieving this aim, which include: establishing a credible institutional mechanism for skills planning; increasing access to occupationally directed programmes; promoting the growth of a public further education and training (FET) college system that is responsive to sector, local, regional and national skills needs and priorities; addressing the low level of youth and adult language and numeracy skills in order to enable additional training; encouraging better use of workplace-based skills development; encouraging and supporting training initiatives by cooperatives, small enterprises, workers, non-governmental organisations (NGOs) and communities; increasing public-sector capacity for improved service delivery and for supporting the building of a developmental state; and building career and vocational guidance (DHET, 2011).

The NSDS does not provide numbers or explicitly spell out skills requirements associated with its goals. However, it acknowledges that, at the time of its formulation, no institutional mechanism existed to provide credible information and analysis with regard to the supply of and demand for skills (DHET, 2011). In response to this situation, the NSDS outlines the creation of the National Skills Fund (NSF), a 'catalytic' fund which allows the state to drive key skills strategies and fund research initiatives like the Labour Market Intelligence Partnership (LMIP) programme. As a consequence, the NSDS seeks to drive the creation of a credible institutional mechanism for skills planning in South Africa.

### **New Growth Path**

As Kaplan (2013) notes, the central purpose of the New Growth Path (NGP) is to create jobs. Although it encompasses a number of broad objectives – including employment creation, a reduction in income inequality, faster economic growth, and the development of a green economy – it is clear that the overriding goal is to reduce South Africa's chronic unemployment (EDD, 2011). The NGP expects to create roughly five million jobs by 2020, mostly in infrastructure and in the productive sectors, namely manufacturing, agriculture, mining, tourism, the green economy, the knowledge economy, and goods exported to the region (Kaplan, 2013). Where services are considered at all, it is high-level business services or services related to the knowledge economy, the green economy or government services (EDD, 2011). These would require highly skilled workers who are well versed in finance, public administration, and business management.

Acknowledging the skills shortage that exists within the South African economy, Accord 1 to the NGP addresses skills training. According to Kaplan's (2013) analysis, the targets set by the NGP suggest that, by 2020, there will be a skills shortage of 1.2 million jobs. These include 330 000 low-skilled, 860 000 medium-skilled, and 13 000 high-skilled openings. These shortages will be almost entirely accounted for by the manufacturing industry if the sector's employment and growth targets are met

(Kaplan, 2013). This reflects the NGP's alignment with the NDP, which targets 5.9 million new jobs by 2020 and 11 million by 2030, largely in small, labour-intensive service firms primarily oriented to the domestic market.

## **South African National Infrastructure Plan**

The driving thrust of the South African National Infrastructure Plan is the set of 18 Strategic Integrated Projects (SIPs) which integrate more than 150 individual infrastructure interventions into a coherent package for broad-based infrastructural change. The 18 SIPs include investment in transport infrastructure, energy, water and sanitation, social infrastructure, and communication, as well as a number of regional spatial-development initiatives (SAG, 2012). A key dimension of the Plan is job creation, the bulk of which is predicted to be in low-skill construction, operation, maintenance, and supply-side applications. The Plan also predicts job-creation impacts in sectors which depend on reliable infrastructure (e.g. mining and other productive industries) (SAG, 2012).

The Plan acknowledges a skills deficit in highly skilled applications related to infrastructure development, including professions such as engineering, architecture and planning (SAG, 2012). According to the Plan, there is also a general shortage of public-administration skills at local-government level. Furthermore, this skills shortage has been exacerbated by the neglect of state training facilities, which has led to a shortage of technical instructors, workplace assessors, and mentors (SAG, 2012). In order to address this skills shortage, the Plan proposes a number of interventions, including: placing a national emphasis on engineering training; supporting the development of key tradespeople and artisan skills; dedicated project training; the development of a shared pool of scarce skills across and between public entities; and the development of an integrated skills plan across the SIPs for use in informing educational institutes on current skills demands (SAG, 2012).

## **South African Tourism Strategic Plan**

The South African Tourism (SA Tourism) Board is the principal national body responsible for tourism promotion in South Africa. The Strategic Plan for 2015 to 2020 outlines the organisation's plans for transforming South Africa into a top tourism destination while maximising the economic potential of the tourism industry (SA Tourism, 2015). One of the strategic objectives of the Plan is to engage with stakeholders within the tourism industry. Within this objective, a key goal is skills development and capacity-building of employees engaged in tourism within South Africa. However, no employment goals or skills requirements are explicitly discussed.

## **Support for Astronomy and the SKA Facility**

The aim of the Support for Astronomy and the SKA Facility report by the Human Sciences Research Council (HSRC) is to investigate the support for astronomical research in South Africa, with specific reference to the availability of human resources necessary to support the SKA Project. The Square Kilometre Array or SKA is a technologically cutting-edge radio telescope to be built in South Africa and Australia. When completed, the telescope will have a total collecting area of approximately one square kilometre and will be able to survey the sky more than ten thousand times faster than previous radio-telescope designs. Construction of the SKA is scheduled to begin in 2018 in order to start observations by 2020. The main installation in South Africa will be located in the Karoo area of the Northern Cape and is expected to stimulate growth and development in the area, encourage scientific research in South Africa, and create a number of employment opportunities. According to the report, the SKA Project will generate broad demand for human capital in the domain of high-level science and technology (S&T) skills. The skills needed will include those applicable to: the planning, development and installation of the physical facilities at the telescope sites; the design, prototyping and manufacturing of the antennae



for the telescope array as well as a wide range of artefacts, components and materials related to the SKA infrastructure; the design, development and installation of various software systems, components and utilities; the supply of services associated with the ongoing operation and maintenance of the installation; and astronomy research at the SKA facility (HSRC, 2005). Graduates will be required in the disciplines of astronomy, mathematics, engineering, physics and computer sciences. The report does not specify the number of highly skilled individuals required to fill the necessary positions. However, it notes that, although current rates of PhD graduations in South Africa are encouraging, they may not be enough to meet demand domestically, particularly in the field of astronomy (HSRC, 2005). Finally, the report notes that current programmes necessary for generating required graduates depend critically on further financing, as the infrastructure and expertise on which they rely may instead be mobilised to support the SKA programme.

## **Youth Enterprise Development Strategy**

The purpose of the Youth Enterprise Development Strategy for 2013 to 2023 of the dti is to provide support schemes for young entrepreneurs with the objective of creating and managing sustainable and efficient businesses (probably small and microenterprises) capable of providing decent, permanent jobs and employment growth (dti, 2014). The Strategy operates from the context of South Africa's high, persistent youth unemployment, a challenge that contributes to young people not acquiring the skills and work experience they need to contribute to a growing economy. In order to drive youth involvement in entrepreneurship, the strategic framework articulates a number of support programmes designed to create sustainable youth-owned businesses. The Strategy notes that a major challenge remains a lack of entrepreneurial skills among the youth. The Strategy does not provide employment targets. However, it estimates that nearly two-thirds of small-business owners have an education lower than Grade 12 and thus lack the skills needed to run their businesses efficiently.

### 3. PROVINCIAL DEVELOPMENT STRATEGIES

#### **Eastern Cape Vision 2030 Provincial Development Plan**

The Provincial Development Plan (PDP) for the province of the Eastern Cape outlines the province's development strategy for the next 15 years. The Plan is grounded in the National Development Plan (NDP), but is also shaped by critical priorities specific to the Eastern Cape (ECPC, 2014). Of the five major objectives outlined in the Plan, the first seeks to promote economic development and create jobs, while the second focuses on improving education and narrowing the province's skills gap. There are seven sectors targeted under the Plan: agriculture, mining and energy, construction, manufacturing, tourism, the social economy, and knowledge-based services – all of which are also included under the NDP. Under the Plan, employment in the province is supposed to increase by 900 000 jobs, from 1.3 million to 2.2 million – presumably, this will be part of the 5.9 million. This figure is aligned with the NDP. However, unlike with the NDP, the employment gains are projected to be spread more evenly among the seven sectors mentioned above and include a likely mix of low-skill, medium-skill and high-skill positions. This includes expected gains of 113 000 jobs in agriculture, 166 000 in manufacturing, 149 000 in construction, 130 000 in tourism, 70 000 in social-economy employment, and 140 000 in knowledge-based services. The Plan does not explicitly spell out skills requirements, but notes that existing skills shortages are a challenge in meeting these targets. As a contributor to the PDP notes, during the process, skills implications were discussed in broad terms only, with the first full engagement with skills issues only occurring during a follow-up Provincial Skills Development Plan (PSDP) (John Reynolds, personal communication, 25 January 2016). The PSDP engaged a variety of stakeholders, including

the sector education and training authorities (SETAs), in considering skills issues across a variety of sectors (Office of the Premier, 2011). However, although the PSDP process was completed, the Plan was never implemented (John Reynolds, personal communication, 25 January 2016).

#### **Gauteng Province Department of Economic Development Strategic Plan**

The Strategic Plan for 2014 to 2019 of the Gauteng Department of Economic Development (DED) outlines the province's approach to fostering economic growth. The Plan adopts the theme of radical economic transformation in order to address the triple challenges of poverty, inequality and unemployment (DED, 2015). In adopting its objectives, it draws heavily on both the NDP and the Medium-Term Strategic Framework (MTSF). The five major programmes that the Plan intends to carry out include: improvements to provincial administration; expansion of integrated economic-development services; trade and sector development; changes to business regulation and governance; and improved economic planning. Specific employment targets or skills requirements are not provided in the Plan. However, the DED has contributed to the Gauteng Masters Skills Plan in regard to re-industrialisation. Interventions include training with respect to body-repair shops, a simulator training academy, foundry and tooling training, tourism training, reskilling, and technical training (DED, 2015).

#### **KwaZulu-Natal Provincial Growth and Development Strategy**

The 2011 KwaZulu-Natal Provincial Growth and Development Strategy (KZN PGDS) outlines the direction of economic growth and the quality-

of-life improvements within the province. Of the Plan's seven strategic goals, the number-one goal is job creation. Within this goal, the five strategic objectives include: unleashing agricultural potential; enhancing industrial development; expanding government-led job-creation programmes; promoting SMMEs (small, medium and micro-sized enterprises), entrepreneurial and youth development; and enhancing the knowledge economy. This is a broad-based approach encompassing high-, medium- and low-skill occupations, yet no indication of employment expectations or skills requirements is provided in the Plan. However, the Plan does acknowledge that a lack of skills in business management, finance and entrepreneurship are a serious constraint on the expansion of SMMEs and youth enterprises. Finally, the Plan notes that the Human Resources Development Strategy for the province will allow for sounder economic planning by researching and mapping demand, supply, and scarce and critical skills per district municipality and industrial sector.

### **Limpopo Development Plan 2015–2019**

In line with national documents like the NDP, the New Growth Path (NGP) and the MTSF, the Limpopo Development Plan for 2015 to 2019 outlines the province's development strategy for the next five years. Of its 14 listed outcomes, four entail bolstering decent employment through inclusive growth, while the fifth is to nurture a skilled and capable workforce. Although the document does not include specific employment targets, it places emphasis on the low-skill productive sectors like agriculture, mining, and logistics (LPG, 2015). The document also does not list skills requirements. However, it notes that skills gaps currently exist in high-skill sectors like healthcare, research and development, and social development. The Plan also notes that the province will need an infusion of highly skilled engineers in order to deliver on proposed infrastructure programmes.

### **North West Provincial Development Plan**

Like other provincial development plans, the North West Provincial Development Plan builds on

national documents like the NDP, NGP and MTSF in order to chart the province's development course over the next 15 years. The Plan does not estimate skills requirements, and, indeed, one of the principal actions recommended is a skills estimate within the province so as to outline skills sets required in order to implement planned programmes. Despite this lack of awareness regarding the province's skills gap, one sector in particular is recognised as experiencing a significant challenge. Over the past 20 years, the agricultural sector in the province has shed more than 15 000 jobs due to increased mechanisation of production (NWPC, 2013). The Plan notes that mechanisation requires certain skills – with which training in the sector did not keep pace – and, as a consequence, a lack of skills development is one of the main challenges for employment in the agricultural sector.

### **Western Cape Government Provincial Strategic Plan**

The Provincial Strategic Plan (PSP) for 2014 to 2019 for the Western Cape constitutes the province's policy agenda and roadmap to guide development interventions. The PSP streamlines and reprioritises the 11 former Provincial Strategic Objectives (PSOs) outlined in the previous PSP into five overarching Provincial Strategic Goals (PSGs), while leaving the Plan in alignment with national documents like the NDP, NGP and MTSF. The first PSO is to create opportunities for growth and jobs, while the second aims to improve education outcomes and opportunities for youth development (WCG, 2014). To achieve the PSO with respect to growth and job creation, the PSP targets three specific 'game-changer' sectors: tourism, agroprocessing, and oil and natural gas exploitation (WCG, 2014). Of these three 'game-changers', skills shortages are recognised as critical challenges for implementation in both agroprocessing and oil and gas exploitation. For agroprocessing, the Plan intends to create 100 000 jobs, with skilled employees lacking at all skills levels. While for oil and gas exploitation, a sector in which the Plan hopes to create 60 000 jobs, there is a critical shortage of highly skilled individuals. As a consequence, the Plan advocates for investment in education and training, as well as the recruitment of skilled individuals abroad.

## 4. METROPOLITAN-MUNICIPALITY DEVELOPMENT STRATEGIES

### **City of Cape Town Poverty Alleviation and Reduction Policy**

The overarching outcome of the City of Cape Town Poverty Alleviation and Reduction Policy (PARP) is to direct the work of the Directorate of Social Development and Early Childhood Development (SDECD) in addressing the plight of the very poor through programmes and projects intended to improve the quality of life (CCT, 2013a). In regard to job creation, the PARP focuses on increasing opportunities within the Expanded Public Works Programme (EPWP) for the unemployed. The Policy does not include specific employment targets or skills requirements. However, because most jobs are meant to be created through the EPWP, the demand will likely be for low-skill workers.

### **eThekweni Economic Development and Job Creation Strategy**

Unsurprisingly, economic-development and job-creation strategies are the major thrust of the eThekweni Municipality Economic Development and Job Creation Strategy. Most of the focus of the Strategy is on infrastructure development to drive growth and create jobs. Although specific targets for employment and skills requirements are not set, it is expected that the bulk of the demand will be in low-skill work in construction, as well as high-skill work for engineers.

### **eThekweni Integrated Development Plan**

The Integrated Development Plan (IDP) for eThekweni Municipality is a tool used to plan future development within the metropolitan municipality. It is guided by relevant national

and provincial documents like the NDP, NGP, MTSF, and the KwaZulu-Natal Provincial Growth and Development Strategy (KZN PGDS). The IDP does not spell out specific targets for employment or describe skills requirements. However, it does acknowledge the presence of a skills gap and notes that the successful assessment of relevant skills within the municipality is a necessary precursor to development (EM, 2014). As a consequence, the IDP intends to establish a credible mechanism for skills planning. The programme aims to gather information on market skills needs and training provision. This information will be used to put plans in place to meet the municipal skills needs and to guide investment in skills development (EM, 2014).

### **Joburg 2040 Growth and Development Strategy**

The Joburg 2040 Growth and Development Strategy (GDS) is not a spatial vision or statutory plan, but rather an aspirational strategy that defines the type of society that the city aspires to achieve by 2040. The Joburg 2040 GDS intends to serve as a prerequisite for medium-term, strategic, spatially oriented plans for the infrastructure, housing and transportation sectors (CJ, 2011). It provides a set of defined strategic directions that frame the five-year Integrated Development Plan (IDP) and other medium-term plans. The GDS does not spell out specific employment targets or skills requirements. However, it acknowledges that a lack of critical skills (as described in the NDP), as well as a significant proportion of the population with no skills whatsoever, is a serious challenge to reducing unemployment (CJ, 2011).

## **Tourism Development Framework for the City of Cape Town**

The Tourism Development Framework (TDF) for the City of Cape Town identifies constraints to growth and job creation in the tourism sector. In addition, it provides details on current and prospective trends, opportunities, and constraints within the industry in order to provide a solid basis from which tourism planning can take place (CCT, 2013b). The TDF does not spell out specific employment targets or skills requirements. However, it notes that, within the tourism industry, human-resource capacity and skills levels remain a weakness. According to the TDF, the Travel and Tourism Competitiveness Index indicates that South Africa scores low in terms of the availability of qualified labour for the

tourism industry. Thus the Framework identifies skills training and capacity-building as a critical area requiring further development (CCT, 2013b).

## **Tshwane Vision 2055**

Tshwane Vision 2055 provides the metropolitan municipality of Tshwane with a broad logic to guide growth and development, as well as with a programme of action on how to prioritise quality-of-life interventions (CT, 2013). Of the six outcomes outlined in the Vision, Outcome 2 explicitly deals with economic growth and job creation. The Vision does not outline specific employment targets or skills requirements. However, it includes an understanding that skills mismatch in the labour market is a significant contributor to the city's high unemployment.

## 5. METHODOLOGIES USED TO ESTIMATE SKILLS

Few of the documents included in this survey provide skills estimates to match the job-creation measures proposed. Moreover, none of the documents include any methodological guidelines demonstrating how their estimates might have been reached. However, a number of strategies, particularly at the provincial or municipal level (like the eThekweni Integrated Development Plan (IDP), for example), explicitly note the absence of any credible skills planning mechanism. In the instance of the Eastern Cape Provincial Development Plan (PDP), a separate research process was designed in order to deal explicitly with skills issues arising from the Plan. The result of this process, the Eastern Cape Provincial Skills Development Plan (PSDP), involved a broad range of stakeholders, including the sector education and training authorities (SETAs) and the training arm of the Coega Development Corporation. The process began with a background document that drew on work that the Human Sciences Research Council (HSRC) had done in the province, as well as on national documents like the Human Resource Development Strategy

for South Africa (HRDS-SA) and the PSDP (Office of the Premier, 2011). From this start, a number of working groups were established in order to examine the latest available information on sector employment, skills levels, skills needs and training plans. The contributions in the working groups were pulled together and presented at a large workshop in which all of the working groups participated, including all but one of the SETAs (Office of the Premier, 2011). Unfortunately, despite this lengthy process, the PSDP, despite being developed under the auspices of the Office of the Premier of the Eastern Cape, was never implemented. Moreover, the government of the Eastern Cape has expressed interest in formulating another skills development plan (John Reynolds, personal communication, 25 January 2016). Thus, although the Eastern Cape PSDP is an example which reflects a robust process of skills assessment, there has been a failure to implement, which has diminished the value of the Plan. It is unclear if the experience with regard to the Eastern Cape PSDP reflects similar processes conducted in other provinces.

## 6. CONCLUSIONS

The purpose of this working paper has been to assess government's economic-development policies as drivers of demand for skills. To this end, key national, provincial and metropolitan-municipality development strategies have been examined in order to generate a broad estimate of their skills demand implications. When possible, demand has been aggregated according to the three broad skills categories: high-skill, medium-skill and low-skill occupations, while the implications for such demand have been analysed. Finally, this paper has examined the methodologies used to generate these estimations, including additional insight into the Provincial Development Plan (PDP) and the Provincial Skills Development Plan (PSDP) process in the Eastern Cape.

However, after reviewing the large number of policy documents included in this study, it has proven difficult to provide an indication of current and future skills needs for the state, because few of the strategies provide assessments to match their needs. Where plans do provide some indication of their skills requirements, gaps largely exist in

low-skill occupations, like those required in the productive industries, or in high-skill applications, like those required by science, engineering and technology (SET) industries or within the knowledge-based economy. Yet, most of the included plans are so vague regarding their skills requirements that it is difficult to disaggregate their needs into even so broad a skills classification as high, medium and low.

In addition to a lack of skills indicators, few of the plans reviewed in this paper analyse the implications of their interventions on the existing or forecasted skills base within the labour market. Thus, there seems to be a disconnect between job-creation goals, available skills, and government efforts to address skills shortages, like those outlined in the White Paper for Post-School Education and Training and the National Skills Development Strategy (NSDS). Finally, there exists a broad consensus that South Africa lacks a credible and replicable skills planning mechanism at national, regional and local levels, which is a significant barrier in addressing the skills mismatch that exists in the labour market.

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## APPENDIX: DOCUMENT TABLE

Policy document	Type of skills required	Skills category	Skills requirements
<i>City of Cape Town Poverty Alleviation and Reduction Policy</i>	Skills relevant to the Expanded Public Works Programme (EPWP)	Low	Unspecified
<i>Department of Rural Development and Land Reform Strategic Plan 2015–2020</i>	Geomatic- and spatial-planning skills	High	Unspecified
<i>Department of Trade and Industry Strategic Plan</i>	Unspecified	Unspecified	Unspecified
<i>Eastern Cape Vision 2030 Provincial Development Plan</i>	Agriculture, manufacturing, construction, tourism, the social economy, knowledge-based services	High, medium, low	113 000 jobs in agriculture, 166 000 in manufacturing, 149 000 in construction, 130 000 in tourism, 70 000 in social-economy employment, and 140 000 in knowledge-based services
<i>eThekweni Economic Development and Job Creation Strategy</i>	Construction, engineering	Low, high	Unspecified
<i>eThekweni Integrated Development Plan</i>	Unspecified	Unspecified	Unspecified
<i>Gauteng Province Department of Economic Development Strategic Plan</i>	Unspecified	Unspecified	Unspecified
<i>Human Resource Development Strategy for South Africa (HRDS-SA) 2010–2030</i>	Skills in the priority areas of design, engineering and artisanship, particularly those that are critical to the manufacturing, construction and cultural industries	High	Unspecified
<i>Industrial Policy Action Plan</i>	Technical and high-level design skills for manufacturing. Skills across the plastics value chain. Broad-based skills within the sawmilling industry	High, medium, low	Unspecified
<i>Innovation towards a Knowledge-Based Economy, Ten-Year Plan for South Africa (2008–2018)</i>	Science, engineering and technology (SET)	High	3 000 SET PhDs graduated in South Africa per year
<i>Joburg 2040 Growth and Development Strategy</i>	Unspecified	Unspecified	Unspecified
<i>KwaZulu-Natal Provincial Growth and Development Strategy</i>	Business management, finance, and entrepreneurship for small, medium and micro-sized enterprises (SMMEs)	Low	Unspecified
<i>Limpopo Development Plan 2015–2019</i>	Engineering, health care, social development, research and development	High	Unspecified
<i>Medium-Term Strategic Framework</i>	Artisans	Medium	18 110 in 2013 to 24 000 per annum by 2019
	PhD graduates	High	From 1 870 per year in 2013 to 2 400 per year by 2019
	Engineering science	High	57 000 over the five-year period – 9 974 were produced in 2012
	Human and animal health	High	45 000 over the five-year period – 8 015 were produced in 2012
	Natural and physical sciences	High	36 000 over the five-year period – 6 366 were produced in 2012
	Teacher graduates	Medium	20 000 by 2019, an increase from 13 740 in 2012
<i>National Department of Tourism Strategic Plan</i>	Unspecified	Unspecified	Unspecified

<i>National Development Plan</i>	Labour-intensive services and industry	Predominantly low, but also some medium and high skills	5.9 million by 2020 and 11 million by 2030
<i>National Skills Development Strategy III</i>	Unspecified	Unspecified	Unspecified
<i>New Growth Path</i>	Positions within the manufacturing industry. Otherwise unspecified. Some demand in the services sector for finance, public administration, and business management skills	High, medium, low	330 000 low-skilled, 860 000 medium-skilled, and 13 000 high-skilled openings
<i>North West Provincial Development Plan</i>	Advanced agricultural	Unspecified	Unspecified
<i>South African National Infrastructure Plan</i>	Job creation in the construction, supply and productive sectors. Skills demand in engineering, planning, architecture, and public administration	Low, high, medium	Unspecified
<i>South African Tourism Strategic Plan</i>	Unspecified	Unspecified	Unspecified
<i>Support for Astronomy and the SKA Facility</i>	Job creation at the SKA facility in the areas of planning, construction, installation of technical equipment, software development, maintenance, and astronomical research	High	Unspecified
<i>Tourism Development Framework for the City of Cape Town</i>	Tourism, SMME management	Unspecified	Unspecified
<i>Tshwane Vision 2055</i>	Unspecified	Unspecified	Unspecified
<i>Western Cape Government Provincial Strategic Plan</i>	Agroprocessing skills; engineering and technical skills for oil and gas exploitation	High, medium and low for agroprocessing. High for oil and gas	100 000 jobs across all skill levels in agroprocessing. 60 000 high-skill jobs in oil and gas exploitation
<i>Youth Enterprise Development Strategy</i>	Entrepreneurial skills, business management	Medium, low	Unspecified











LABOUR MARKET  
INTELLIGENCE PARTNERSHIP

### **Estimating the Current and Future Skills Demand of Government's National Growth and Development Policies**

The skills demand implications of South Africa's economic-development policies are often overlooked in favour of their impacts on poverty, inequality, and unemployment. In response, this HSRC paper assesses government's economic-development policies as drivers of demand for skills. Key national, provincial and metropolitan municipality development strategies have been examined in order to generate a broad estimate of their skills demand implications. Its findings suggest that few economic-development plans analyse the implications of their interventions on the existing or forecasted skills base within the labour market. This has resulted in a disconnect between job-creation goals, available skills, and government efforts to address skills shortages, like those outlined in the White Paper for Post-School Education and Training and the National Skills Development Strategy (NSDS). These findings contribute to a broad consensus that South Africa lacks a credible and replicable skills planning mechanism at national, regional and local levels, which is a significant barrier in addressing the skills mismatch that exists in the labour market.

#### **About the LMIP**

The Labour Market Intelligence Partnership (LMIP) is a collaboration between the Department of Higher Education and Training, and a Human Sciences Research Council-led national research consortium. It aims to provide research to support the development of a credible institutional mechanism for skills planning in South Africa. For further information and resources on skills planning and the South African post-school sector and labour market, visit <http://www.lmip.org.za>.