LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA
PROVINCIAL TREASURY

Maximizing the provision of Public Services In Rural Regions Through ICT

PSEF Annual Congress
Kimberly-Kariba Lodge

2019

INTRODUCTION

Globalisation and Fourth Industrial Revolution

Economic structural adjustment – Deindustrialization

Technology and private sector

Benefits of ICT- thereby achieving more with less resources

ICT closing the gap of distance

PRESENTATION LAYOUT

Introduction

Background and objectives

ICT Infrastructure and Governance overview

Trend Analysis

Literature Review

Findings

Policy Recommendations

BACKGROUND

ICT has revolutionized societies, business and government way of doing things

ICT and economic sector development (growth theories)

ICT overall benefits

Geographical spread and fiscal constraints (Service delivery gap)

Position paper on cost of providing public services in rural provinces

How can ICT maximize service delivery given the myriad of constraints

Conduct literature review on ICT orientated public service provision, and provide policy recommendations

ICT INFRASTRUCTURE AND GOVERNANCE

Telecommunications infrastructure is not well developed in Africa

Only 7.3 percent of households in Africa were online in 2011. In Western Europe, by contrast, more than 75 percent of all households had an Internet subscription in 2011.

Cronin et al. (1991) test the causal direction of the relationship between telecommunications investment and economic growth by using data for the U.S. from 1958 to 1988. The authors find significant evidence for bidirectional causal relationships between telecommunications investment and GNP as well as total output.

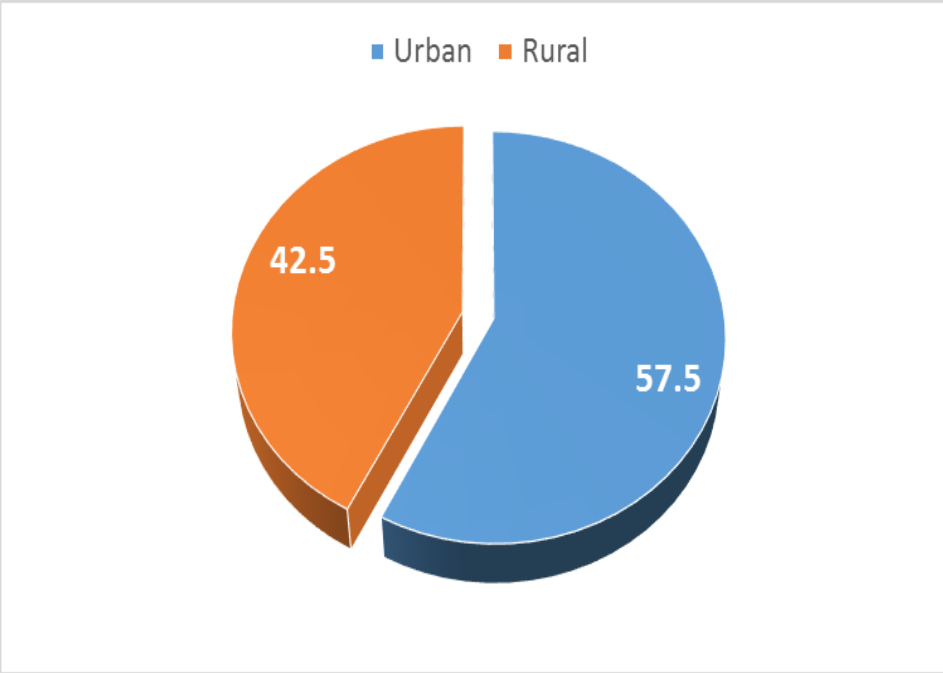
SA not having direct control over country's or international internet

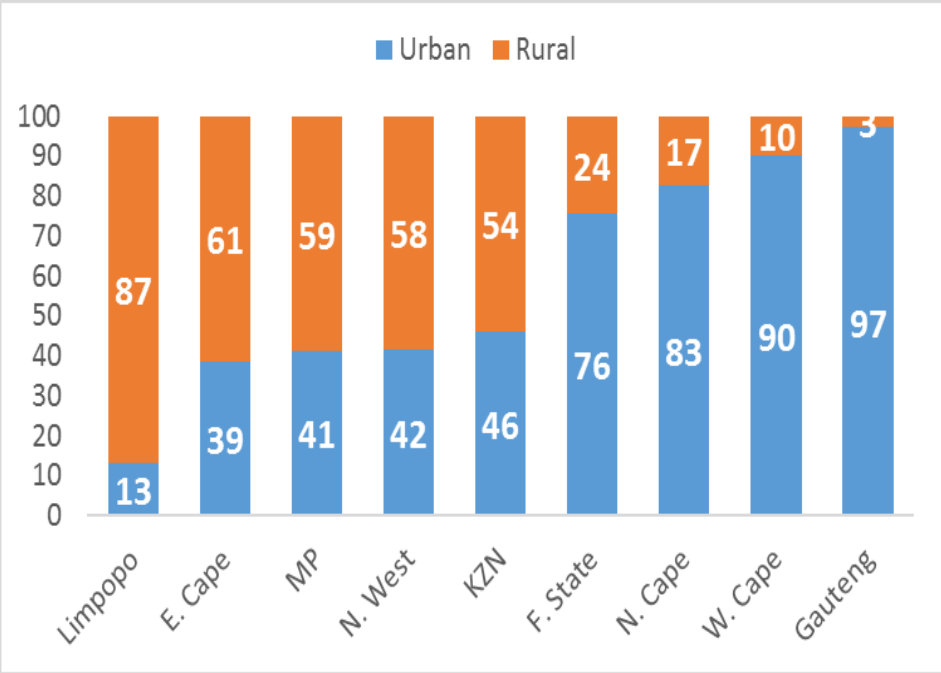
International internet connectivity is facilitated via five undersea cables, SAT-3, SAFE, WACS, EASSy, and SEACOM

South Africa's national fiber networks, including partly state-owned Telkom and privately owned MTN, Vodacom, Neotel, and FibreCo, among others.

ICT TREND ANALYSIS

Figure 1: SA's and Provincial proportion of urban and rural split, 2001 EA classification

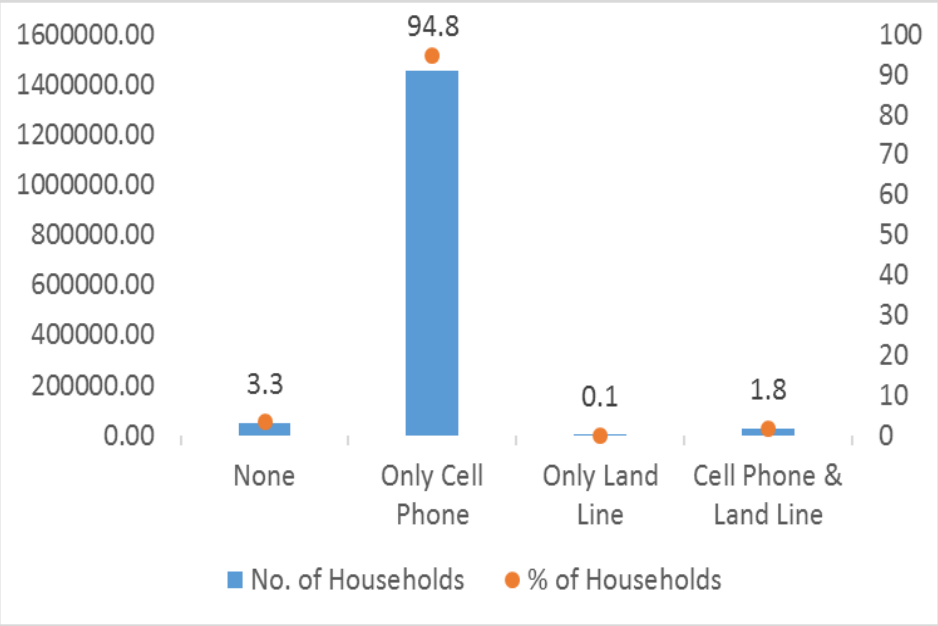


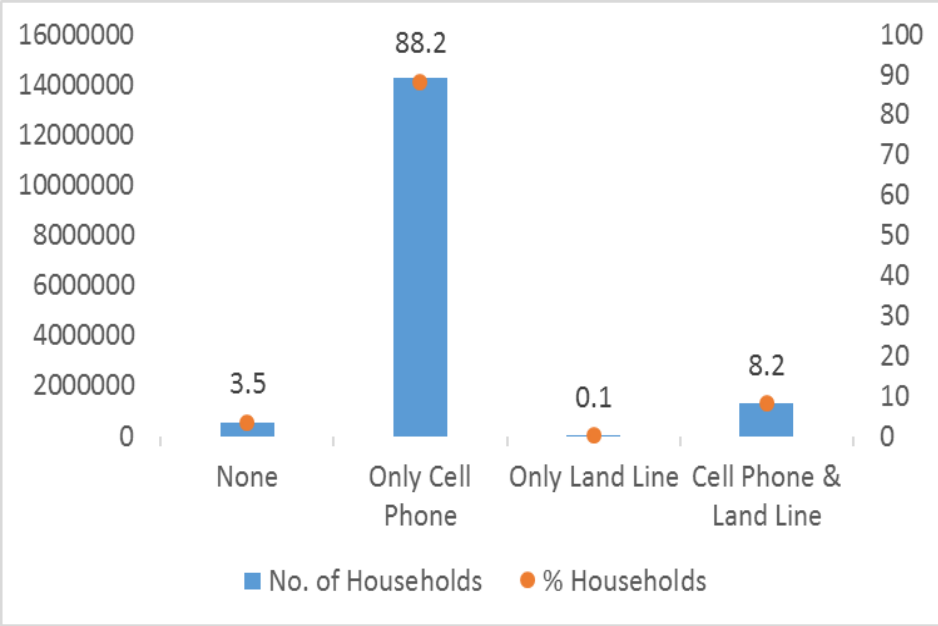


Source: Statistics South Africa, 2001

ICT TREND ANALYSIS

Figure 1: Access to Cell Phone &/OR Land Line in Limpopo and in South Africa





Source: Statistics South Africa, 2016

ICT TREND ANALYSIS

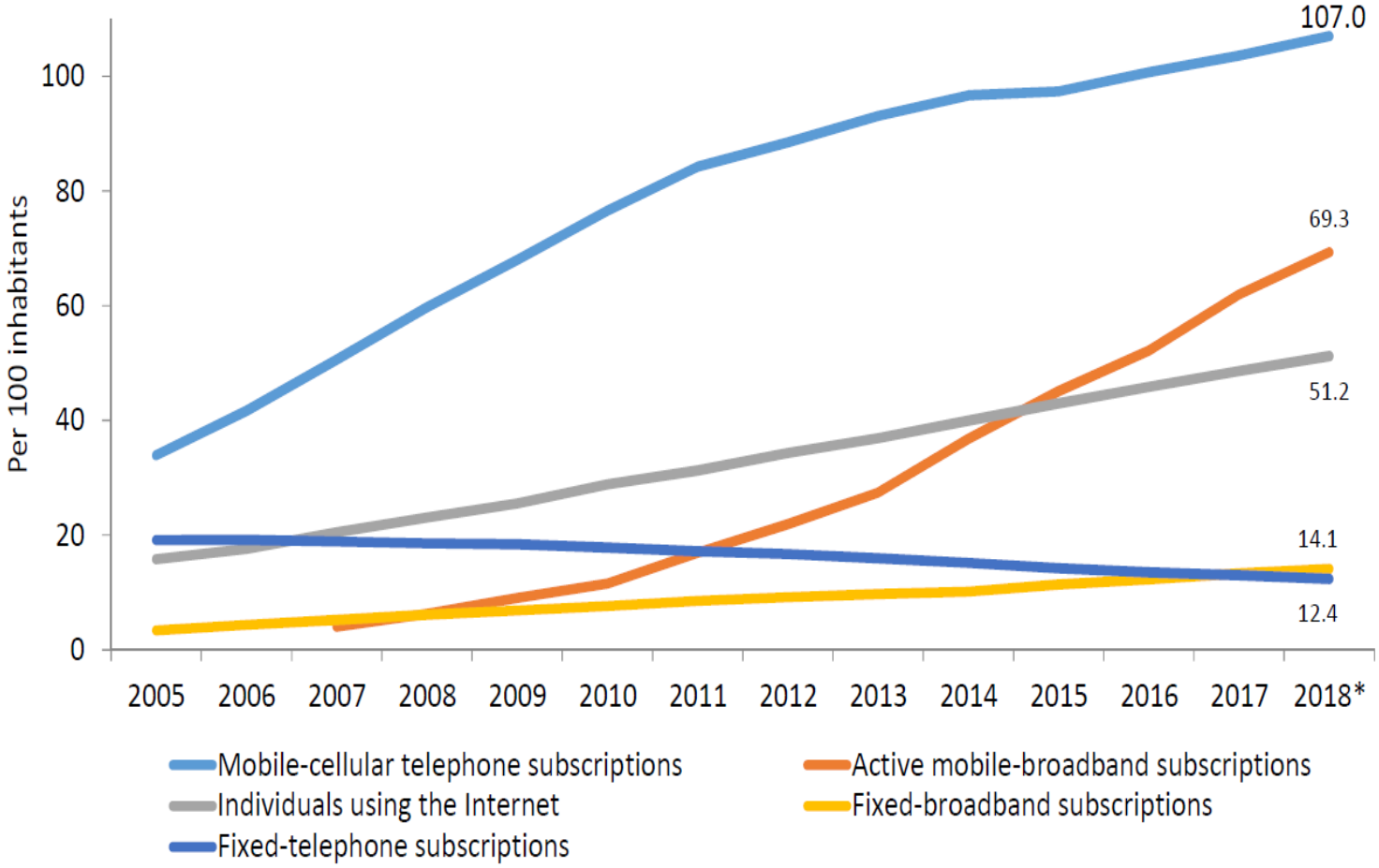
Table 1: Place internets accessed in Urban and Rural regions

Place internets accessed	**Geotype**	**LP**	**RSA**
At home	Urban	6.8	8.4
At home	Rural	0.8	1.7
At work	Urban	17.7	16.6
At work	Rural	2.5	4.1
Using mobile devices	Urban	53.3	61.5
Using mobile devices	Rural	33.5	39.6
At internet Cafes or educational facilities	Urban	7	9.2
At internet Cafes or educational facilities	Rural	3.5	4.5

Source: Statistics South Africa, 2016

ICT TREND ANALYSIS

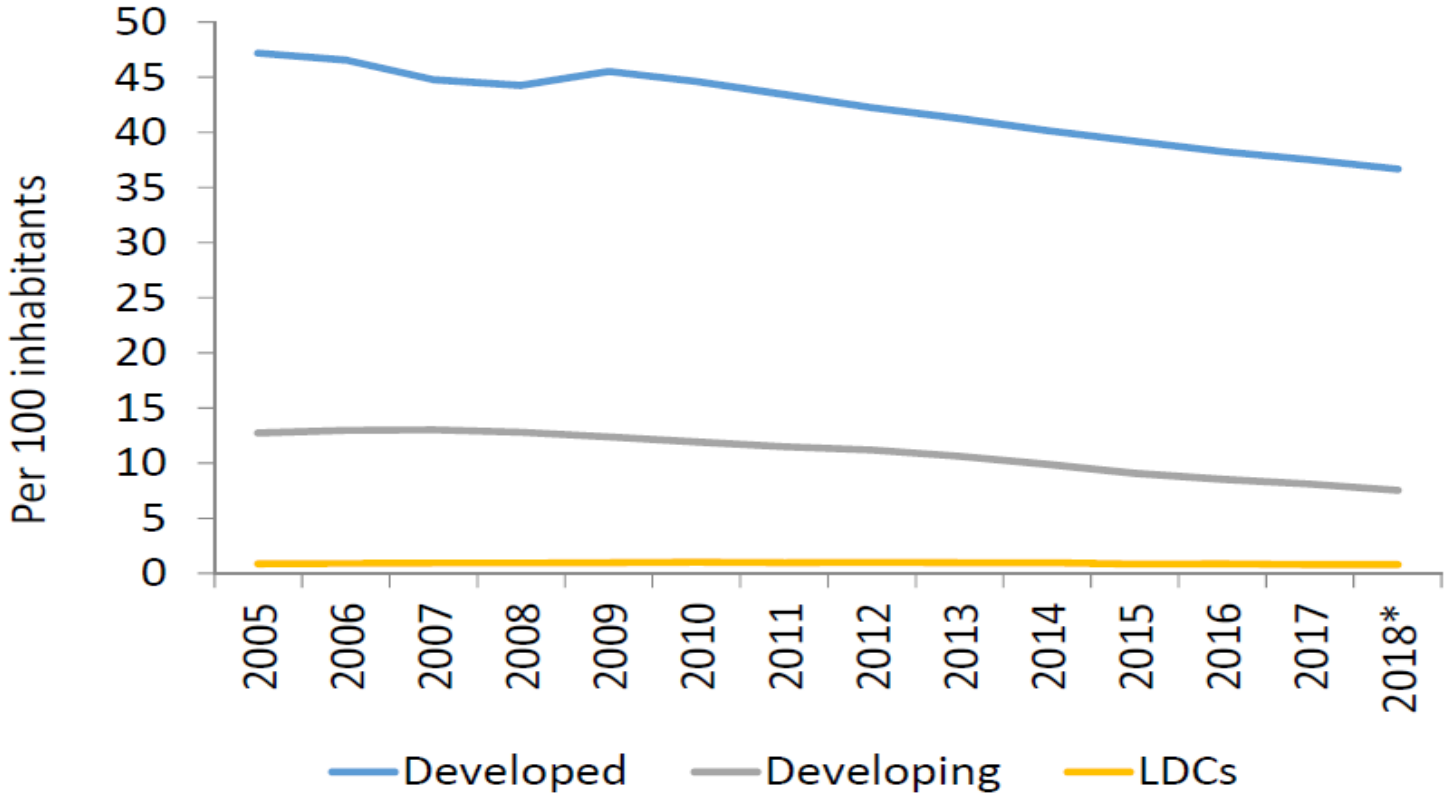
Figure 1: Global ICT developments, 2005–2018*



Source: International Telecommunication Union 2018

ICT TREND ANALYSIS

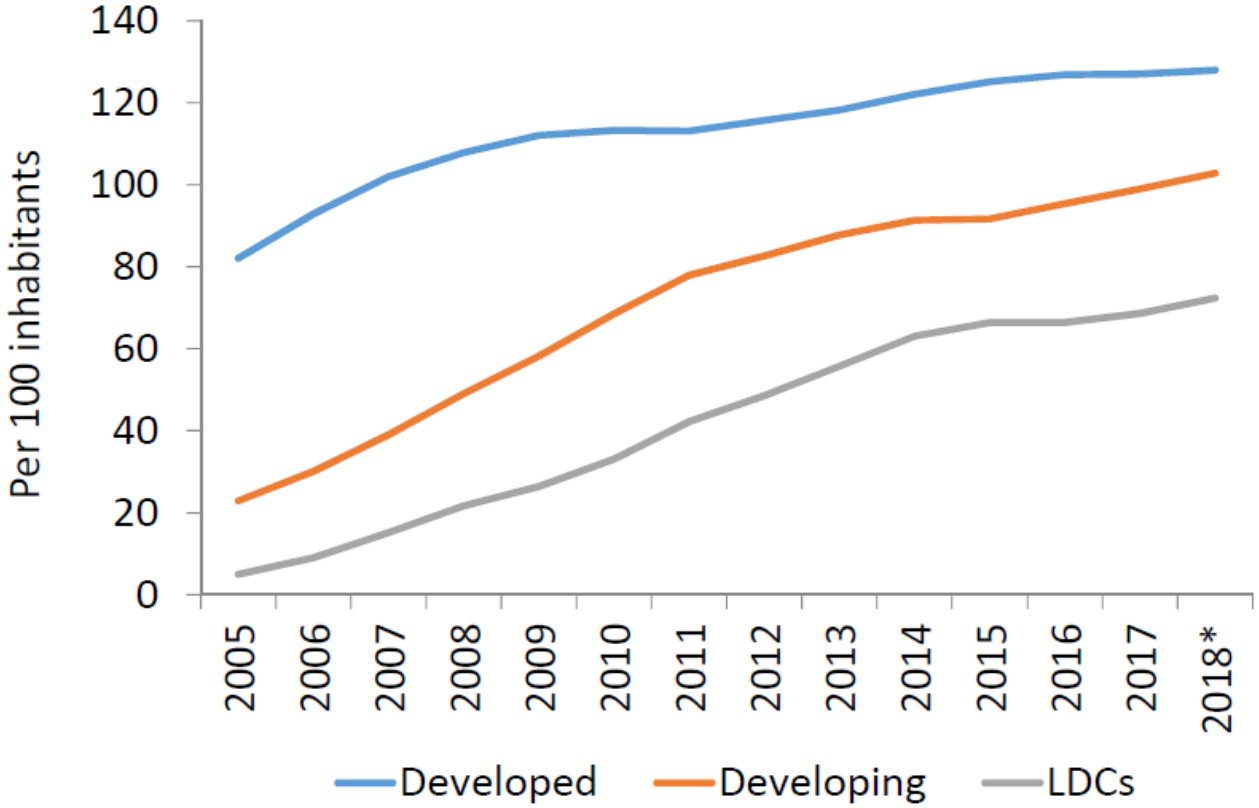
Figure 1: Fixed-telephone subscriptions per 100 inhabitants, by level of development, 2005–2018*



Source: International Telecommunication Union 2018

ICT TREND ANALYSIS

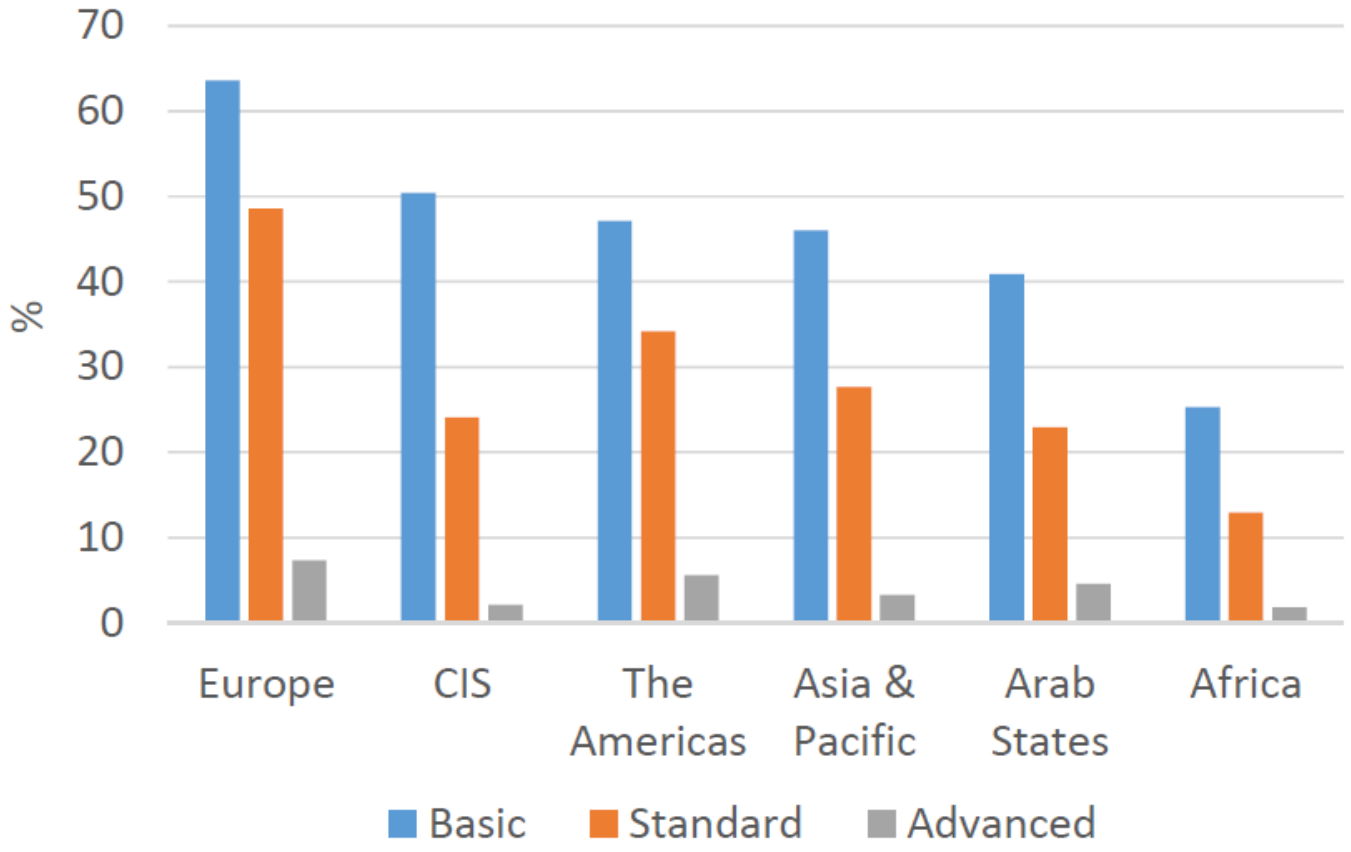
Figure 1: Mobile-cellular subscriptions per 100 inhabitants, by level of development, 2005–2018*



Source: International Telecommunication Union 2018

ICT TREND ANALYSIS

Figure 1: Percentage of individuals with ICT skills, by region, 2017



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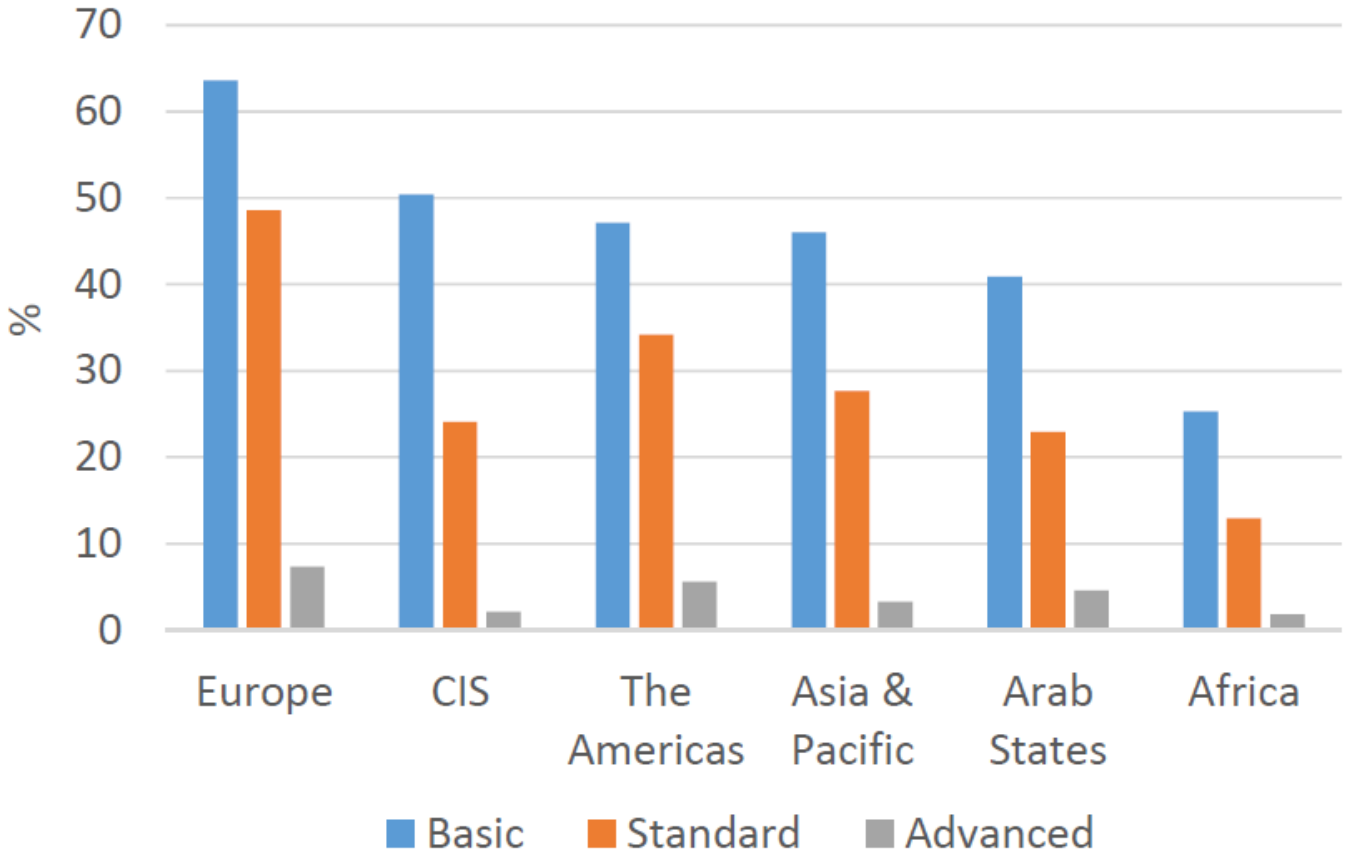


Source: International Telecommunication Union 2018

LITERATURE REVIEW

Abdullah and Ahmad (2001) asserts that even though the public agencies are in a monopolistic position, there are many areas where they have to contend with the private sector. The private hospitals, the private schools, private road operators, private trusts and banks, etc. are used as competitive benchmarks against which their performances are evaluated both by the central agencies and customers.

The OECD (2019) articulates that new digitally enabled approaches, supported by the necessary changes in the public sector culture, need to be implemented if governments are to successfully meet citizens' and businesses' needs and demands. This will in essence require the digital transformation of governments. Governments need to understand that becoming fully digital is no longer an option.

In regard to service delivery in business organizations, Information Communication Technology (ICT) has been employed to facilitate the service provision, even though it involves substantial portion of investment. The objective of such investments is to create business value by offering timely and reliable goods and services (Muriithi 2013).

LITERATURE REVIEW

Dhakal and Jamil (2010) provided an overview on the challenges of ICT use and their effects on the service delivery in Nepal. Data revealed that the majority of the respondents viewed much improvement in terms of easier to know information in time (70 percent); easier to make complaints (59 percent); and service delivery in time (52 percent).

Agriculture

The common problems in adoption of ICT in rural segments are ICT illiteracy, availability of relevant and localize contents in their own languages, easy and affordable accessibility and other issues as awareness and willingness for adoption of new technologies among the rural peoples etc.

Other barriers are transaction costs that explains why markets are missing or do not function well. Smallholders are not well integrated into markets due to high transport costs and their lack of ability to timely deliver consistent, quality and large volumes of produce.

KEY FINDINGS

- Developing economies have less ICT infrastructure footprint than Developed economies.

- There is a shift from wireline ICT infrastructure to wireless infrastructure
- Literature suggest that there is correlation between ICT Infrastructure and accelerated public service provision

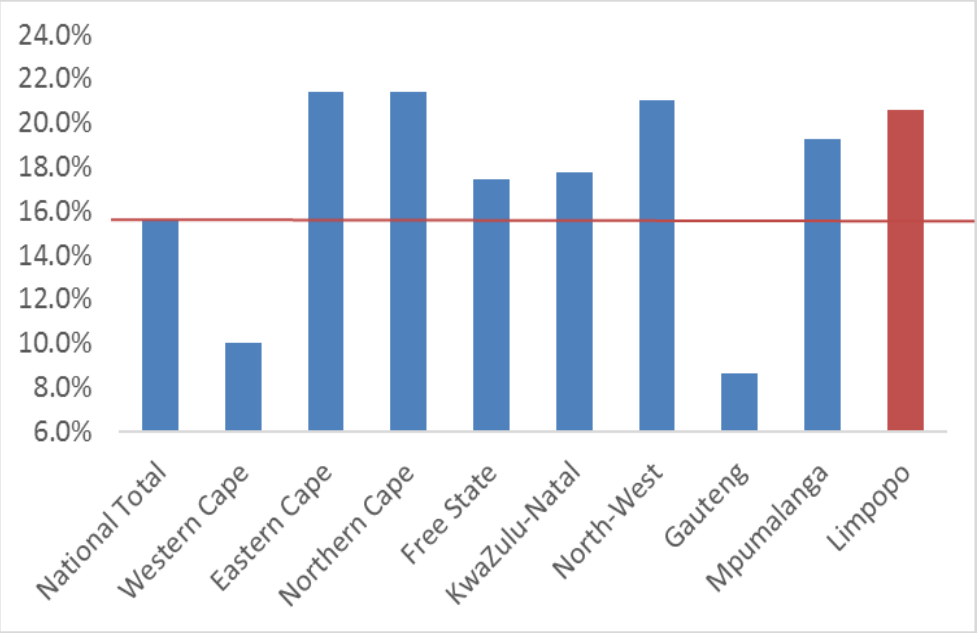
- There is a sizable accumulation of ICT skills in developed economies as compared to Developing economies (Africa)

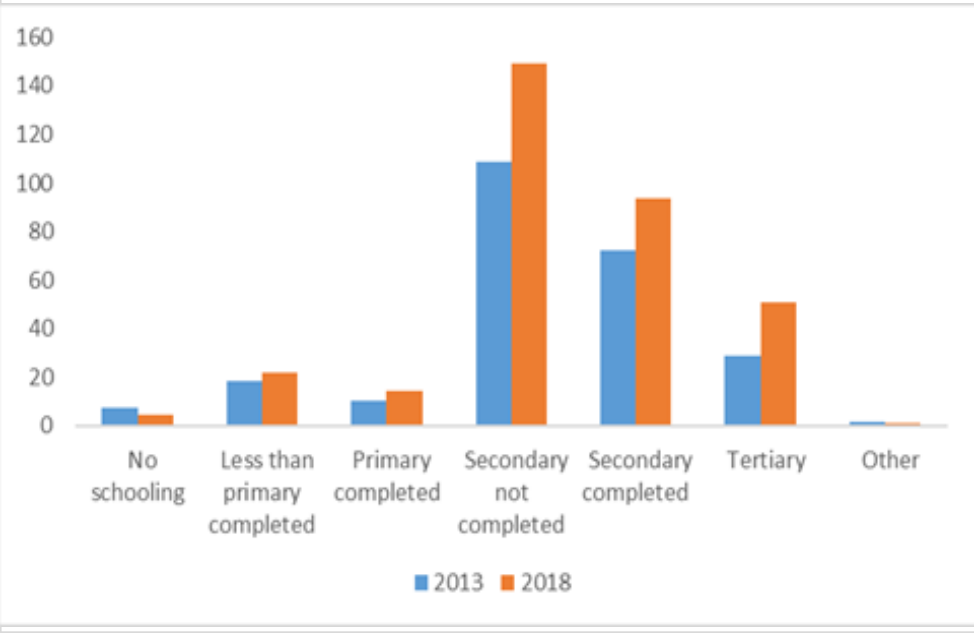
- Penetration of ICT in rural areas is constrained by Illiteracy, Access to Smartphones, Access to connectivity, Access to Data.

POLICY RECOMMENDATIONS: BROAD BASED

- Increase ICT literacy in the province

Figure 1: Illiteracy rate per province and per district in Limpopo





Source: IHSmarkit Regional Explorer 2018

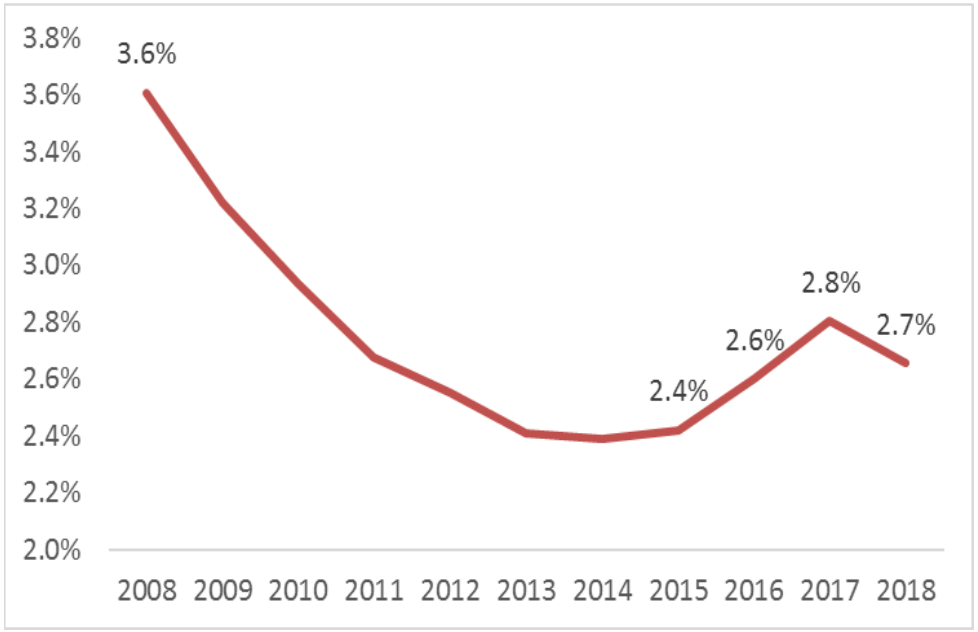
POLICY RECOMMENDATIONS: BROAD BASED

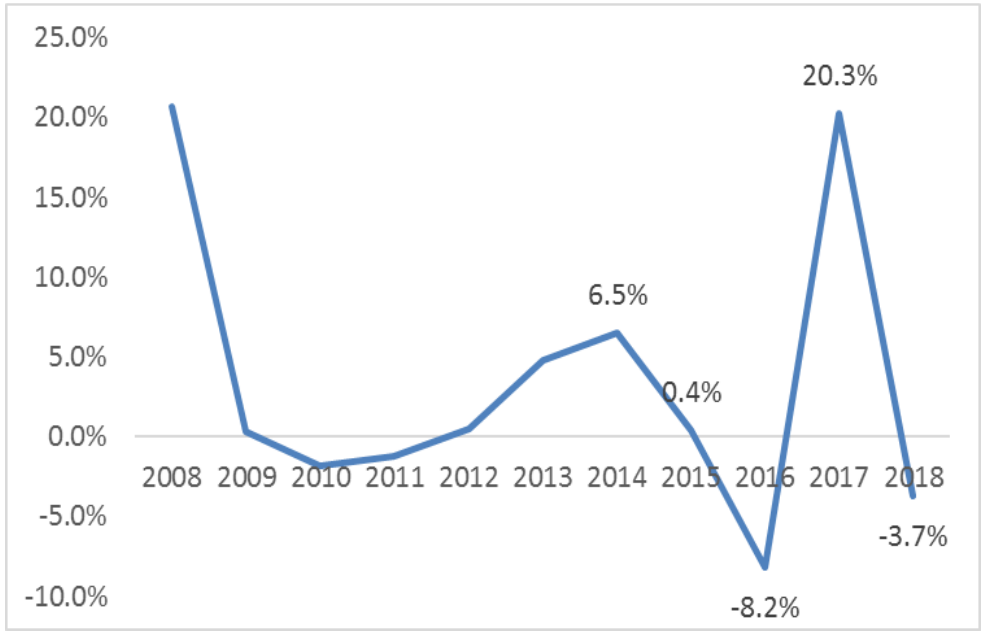
- Develop a provincial ICT or fourth industrial revolution strategy
- Strengthen and increase the scope of the Limpopo Connection (Entity)
- Increase ICT (Broadband) Infrastructure to remote rural regions (Smart provinces)
- Subsidize data costs
- Promote access to low cost smart phones

POLICY RECOMMENDATIONS: SECTOR SPECIFIC

- Establishment of Agriculture Network Information Centre

Figure 1: Agricultural sector's share of regional total GVA (%) and Average annual growth (%, Constant 2010 prices)

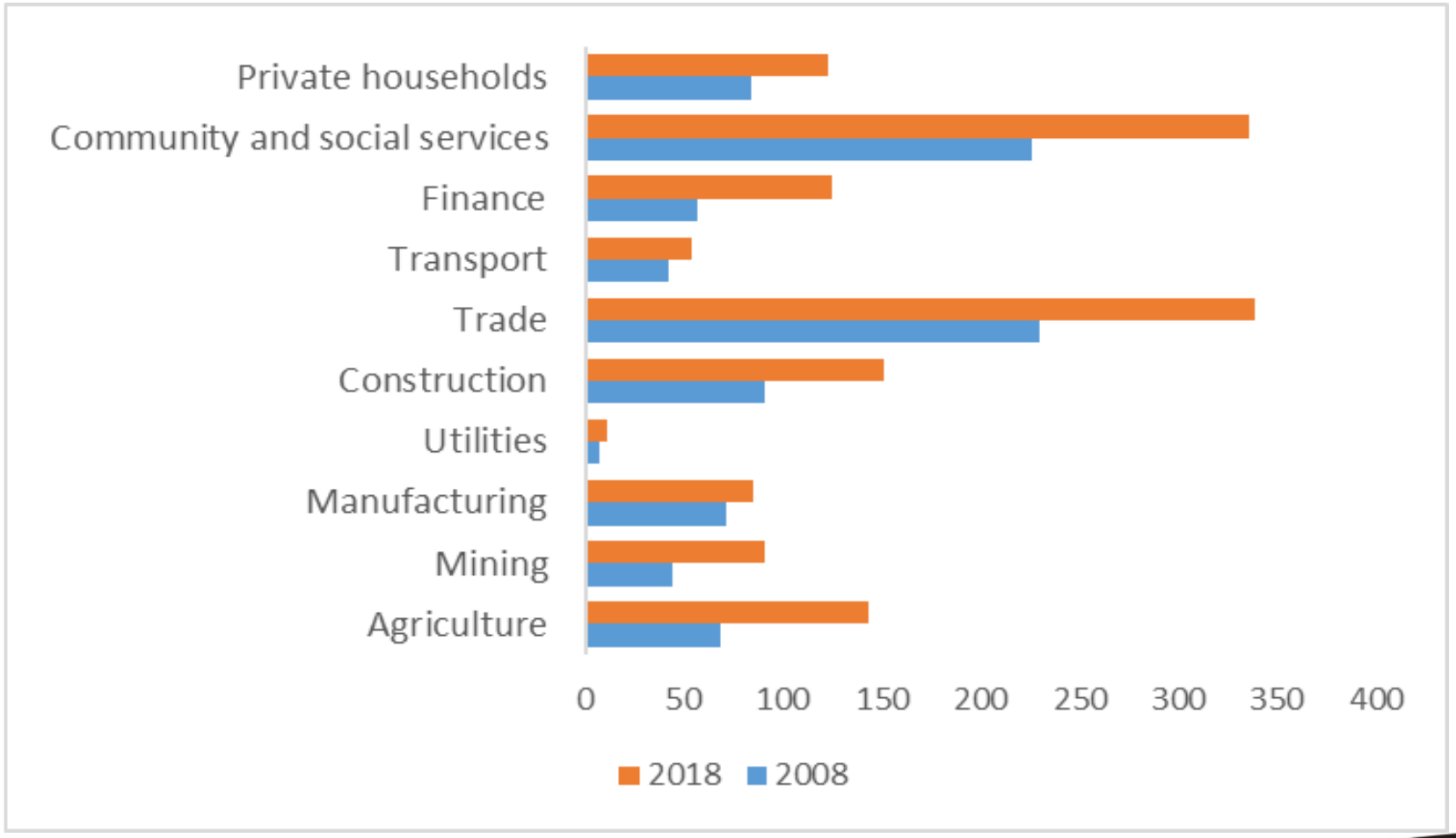




Source: IHSmarkit Regional Explorer 2018

POLICY RECOMMENDATIONS: SECTOR SPECIFIC

Figure 1: Number of people employed by sector



Source: StatsSA QLFS 2019

POLICY RECOMMENDATIONS: SECTOR SPECIFIC

- 1. It can strengthen agriculture research and accelerate technology transfer through establishing regional network on agriculture, particularly among agriculture research and extensions centers, professionals, policy advisors and stakeholders.

- 2. To provide inputs for developing regional policies, strategies and programmers, primarily through developing networks in the crop, livestock and fisheries sectors and or efficient utilization/management of soil, water and other resources.

- 3. To promote new and innovative techniques and systems in agriculture include production, post-harvest and food processing.

- 4. To facilitate collaborative studies on agriculture marketing and distribution systems, harmonization of agriculture related standards, promotion of agricultural trade, food security, and risk and disaster management agriculture.

- 5. To facilitate and undertake collaborative capacity building programs in agriculture.

CLOSING REMARKS

1. Fiscal constraints are eminent and fiscal consolidation is unavoidable
2. Government needs to adopt new ways of doing things- Embracing technological solutions
3. Limpopo and other rural provinces suffer historical backlogs and increased costs of providing a unit of public service
4. Technology will not only increase productivity, reducing operational costs, communication efficiencies

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THANK YOU

Limpopo Provincial Treasury

Macro-Economic Analysis