Exploring Regional Data:

Filling the gaps when modelling regional labour statistics

Evan Burger

Sr Research & Data analyst

28 November 2019

Who we are

IHS Markit™

Leading source of

information and **insight**

What we do

Information

+

Analytics

+

Expertise

WHAT

WHY

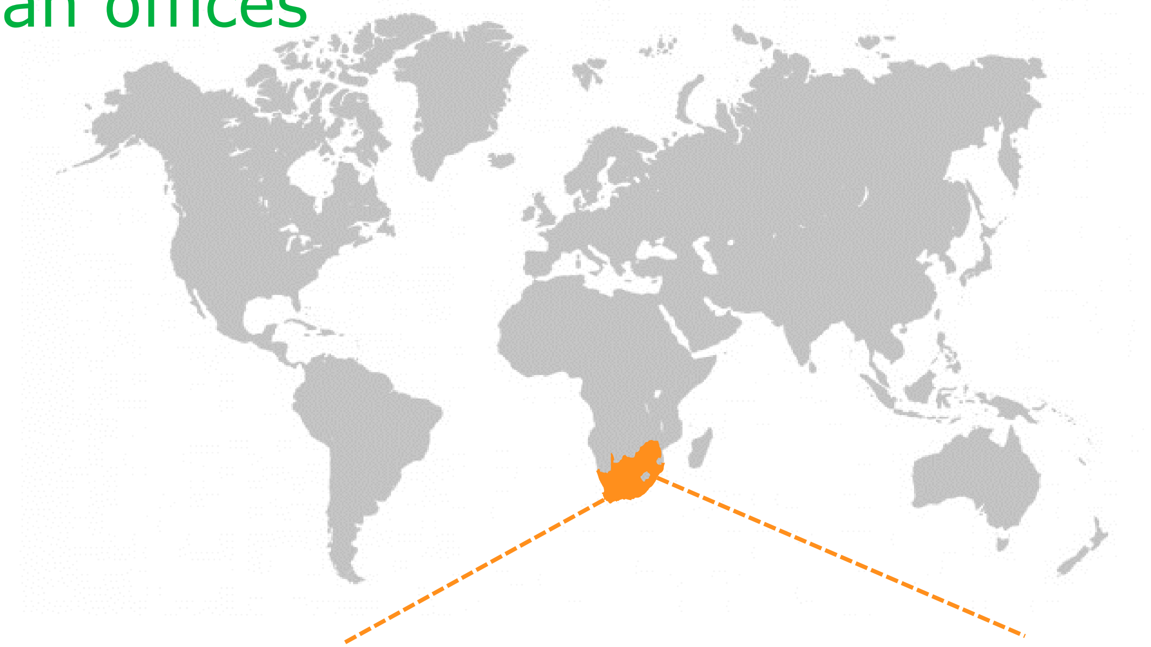
Where we are

50,000

customers in over 130 countries

140+ **offices** in 28 countries

South African offices



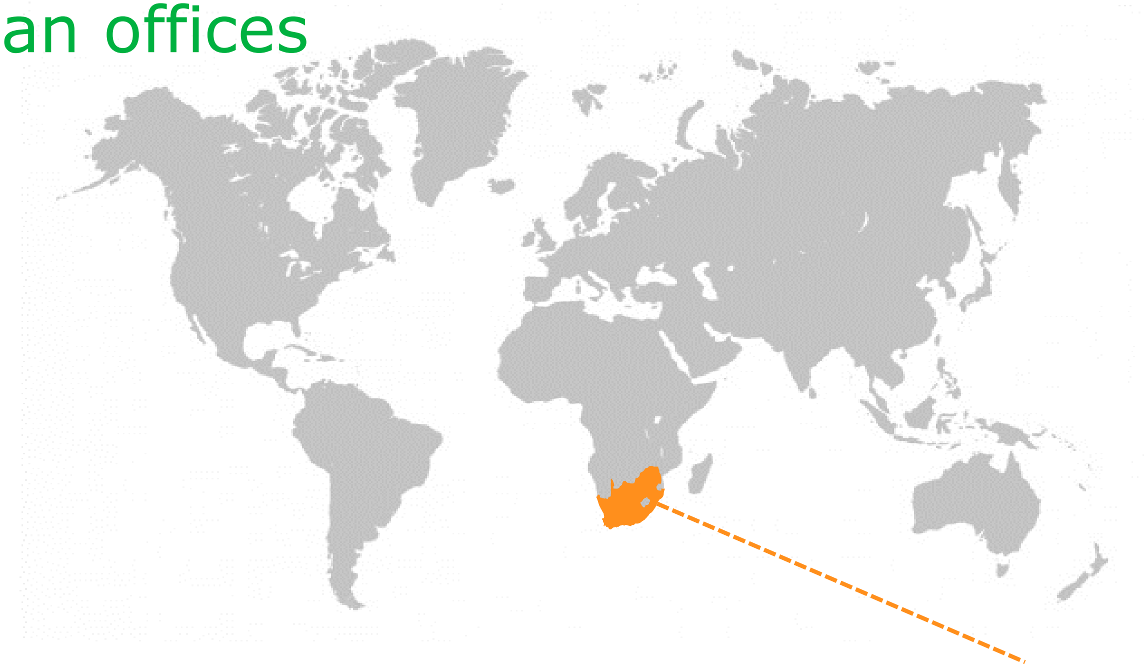
Cape Town
acq. 2018

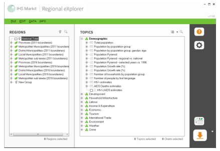
Centurion
est. 1994

FINANCIAL MARKETS
DATA & SERVICES

ECONOMICS &
COUNTRY RISK

South African offices



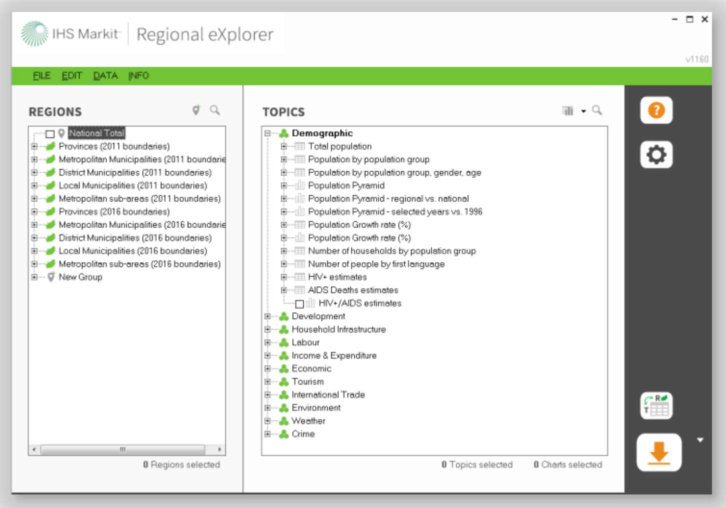


- **Regional eXplorer** (ReX)
- **EconoStat**
- **TradeStat**

Centurion
est. 1994

ECONOMICS &
COUNTRY RISK

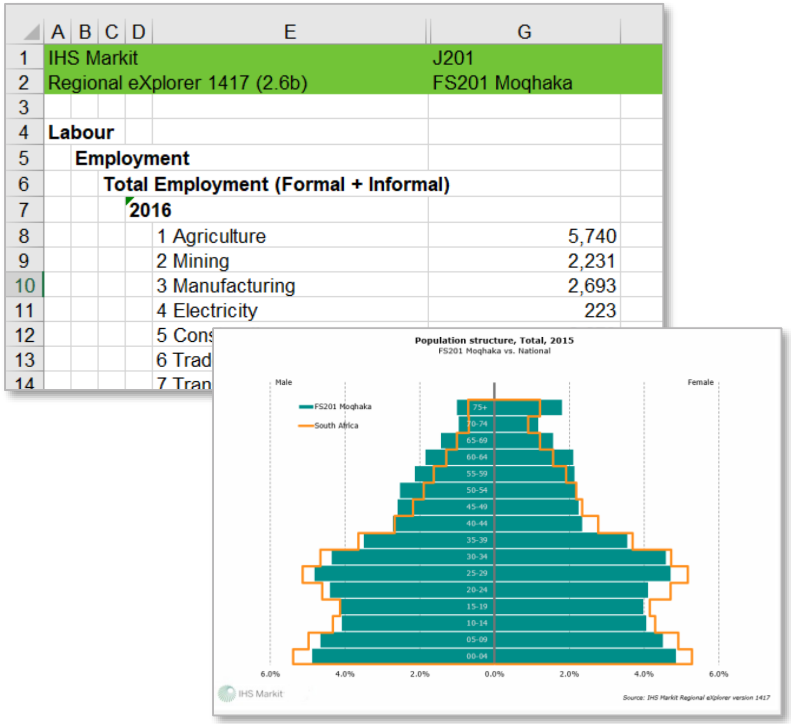
Regional eXplorer


IHS Markit | Regional eXplorer
v1160
FILE EDIT DATA INFO
REGIONS
☐ National Total
Provinces (2011 boundaries)
Metropolitan Municipalities (2011 boundarie
District Municipalities (2011 boundaries)
Local Municipalities (2011 boundaries)
Metropolitan sub-areas (2011 boundaries)
Provinces (2016 boundaries)
Metropolitan Municipalities (2016 boundarie
District Municipalities (2016 boundaries)
Local Municipalities (2016 boundaries)
Metropolitan sub-areas (2016 boundaries)
New Group
0 Regions selected
TOPICS
Demographic
Total population
Population by population group
Population by population group, gender, age
Population Pyramid
Population Pyramid - regional vs. national
Population Pyramid - selected years vs. 1996
Population Growth rate (%)
Population Growth rate (%)
Number of households by population group
Number of people by first language
HIV+ estimates
AIDS Deaths estimates
☐ HIV+/AIDS estimates
Development
Household Infrastructure
Labour
Income & Expenditure
Economic
Tourism
International Trade
Environment
Weather
Crime
0 Topics selected
0 Charts selected

A consolidated **platform** of various integrated data sources that provides accurate and **up-to-date** statistics down to **municipal level**

Regional eXplorer (ReX)

MICROSOFT EXCEL®
tables & charts



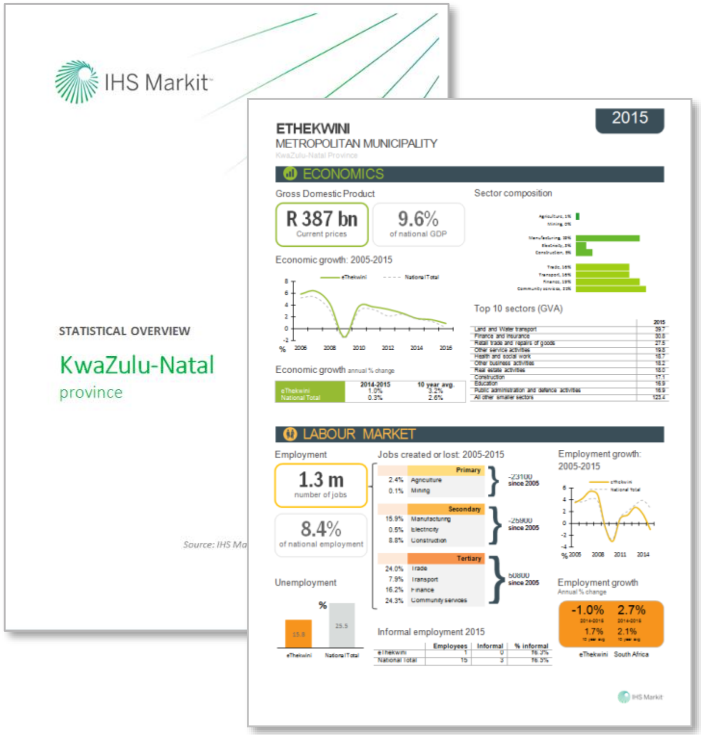
	A	B	C	D	E	G
1	IHS Markit					J201
2	Regional eXplorer 1417 (2.6b)					FS201 Moqhaka
3						
4	**Labour**					
5		**Employment**				
6			**Total Employment (Formal + Informal)**			
7				**2016**		
8					1 Agriculture	5,740
9					2 Mining	2,231
10					3 Manufacturing	2,693
11					4 Electricity	223
12					5 Cons	
13					6 Trad	
14					7 Tran	

Population structure, Total, 2015
FS201 Moqhaka vs. National

Male
Female
FS201 Moqhaka
South Africa
75+
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
05-09
00-04
6.0%
4.0%
2.0%
0.0%
2.0%
4.0%
6.0%
IHS Markit

Source: IHS Markit Regional eXplorer version 1417

MICROSOFT WORD®
reports



IHS Markit

STATISTICAL OVERVIEW

KwaZulu-Natal
province

Source: IHS Ma

2015

ETHEKWINI
METROPOLITAN MUNICIPALITY
KwaZulu-Natal Province

ECONOMICS

Gross Domestic Product

R 387 bn
Current prices

9.6%
of national GDP

Economic growth: 2005-2015

Sector composition

Top 10 sectors (GVA)

	2015
Land and Water transport	39.7
Finance and insurance	30.8
Retail trade and repairs of goods	27.5
Other service activities	19.8
Health and social work	18.7
Other business activities	18.2
Real estate activities	18.0
Construction	17.1
Education	16.9
Public administration and defence activities	16.9
All other smaller sectors	123.4

Economic growth annual % change

	2014-2015	10 year avg.
eThekwini	1.0%	3.2%
National Total	0.3%	2.6%

LABOUR MARKET

Employment

1.3 m
number of jobs

8.4%
of national employment

Unemployment

Jobs created or lost: 2005-2015

	Primary	
2.4%	Agriculture	-23100 since 2005
0.1%	Mining	
	Secondary	
15.9%	Manufacturing	-25900 since 2005
0.5%	Electricity	
8.8%	Construction	
	Tertiary	
24.0%	Trade	50800 since 2005
7.9%	Transport	
16.2%	Finance	
24.3%	Community services	

Informal employment 2015

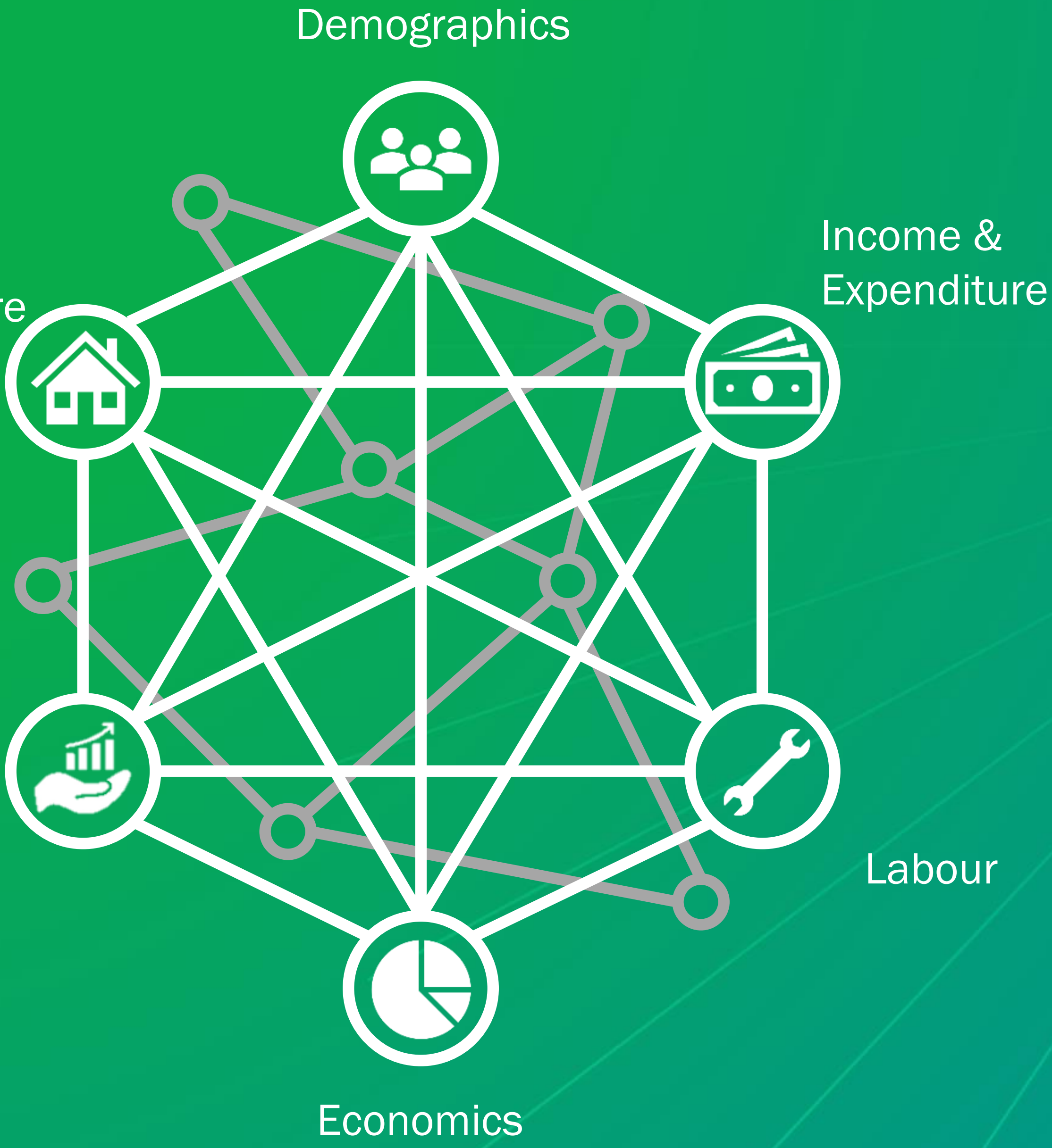
	Employees	Informal	% informal
eThekwini	1	0	16.3%
National Total	15	3	16.3%

Employment growth: 2005-2015

Employment growth
Annual % change

eThekwini	South Africa
-1.0%	2.7%
1.7%	2.1%

eThekwini
National Total
15.8
25.5
%
IHS Markit


Demographics
Income & Expenditure
Household Infrastructure
Development
Labour
Economics

Satellite Modules

Tourism

Crime

Intl Trade

Fiscal

Demographics

↓

Working Age Population:

Race, Age, Gender

Labour

↓

Economically
Active
Population

Employed

Unemployed

Economics

↓

Economic Activity

and

Labour
Remuneration

by Sector

Labour

How did the unemployment rate in the Northern Cape change between 1996 and 2016?

- ✗The population census 1996 was **not the official instrument** to measure labour variables.
- ✗Census 1996 published an unemployment rate similar to the **expanded definition** only.
- ✗The Community Survey 2016 did not publish any Labour data.
- ✗NB: Many regions have changed boundaries between 1996 & 2016.

Unemployment Data Sources:

OHS, LFS, QLFS, Pop Census, Community Survey

stats sa
Department:
Statistics South Africa
REPUBLIC OF SOUTH AFRICA

Statistics South Africa
Statistical release
P0317

Dipolopolo tsa Aforika Borwa • Statistieke Suid-Afrika • Tsitatistiki ta Afrika-Dzonga • Ukuqokelelwa kwamanani eNingizimu Afrika

October household survey
1997

Co-operation between Statistics South Africa (Stats SA), the citizens of the country, the private sector and government institutions is essential for a successful statistical system. Without continued co-operation and goodwill, the timely release of relevant and reliable official statistics will not be possible.

Stats SA publishes approximately three hundred different releases each year. It is not economically viable to produce them in more than one of South Africa's eleven official languages. Since the releases are used extensively,
internationa
communitie
English only

Embargo: 09:30
Date: 4 November 1999

Private Bag X
Users en
E-mail addre

Statistics South Africa
Preferred supplier of quality statistics

Statistical release
P0210

Labour force survey

March 2007

Embarg
26 Septe
1

Quarterly Labour Force Survey
Q3:2019
Risenga Maluleke
Statistician-General
#StatsSA

stats sa
Department:
Statistics South Africa
REPUBLIC OF SOUTH AFRICA

NDP

COUNT US IN

Statistics South Africa
CENSUS 2001

Primary tables Northern Cape
Census '96 and 2001 compared

Statistics South Africa

Community Survey 2007

BASIC RESULTS:
NORTH WEST

Statistics South Africa

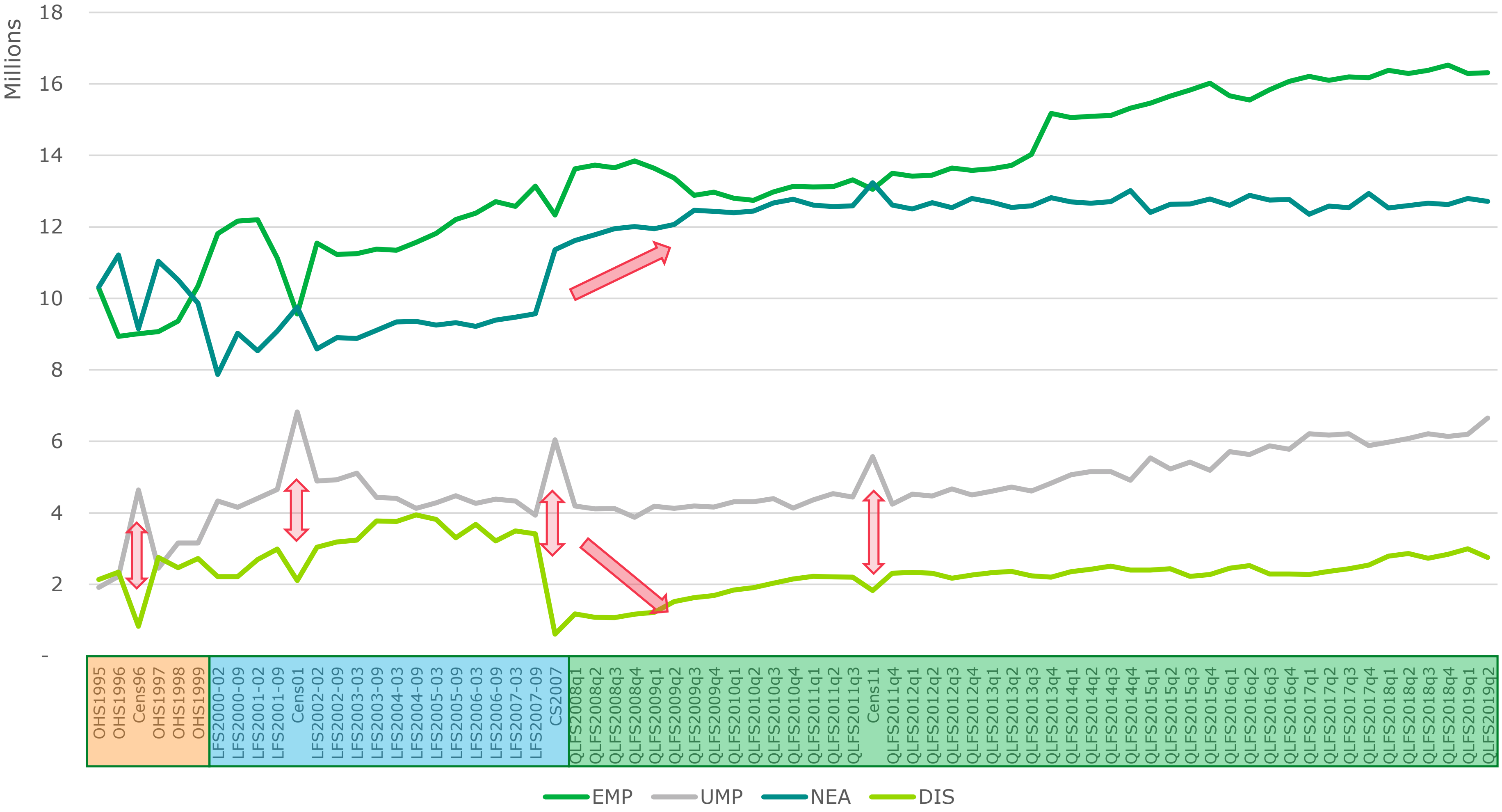
Census 2011 Municipal report
Northern Cape

Report No. 03-01-51

Statistics South Africa

Pali Lehohla
Statistician-General

Labour Force Status - Various Data sources



Source: Stats SA

Reconciling data sources

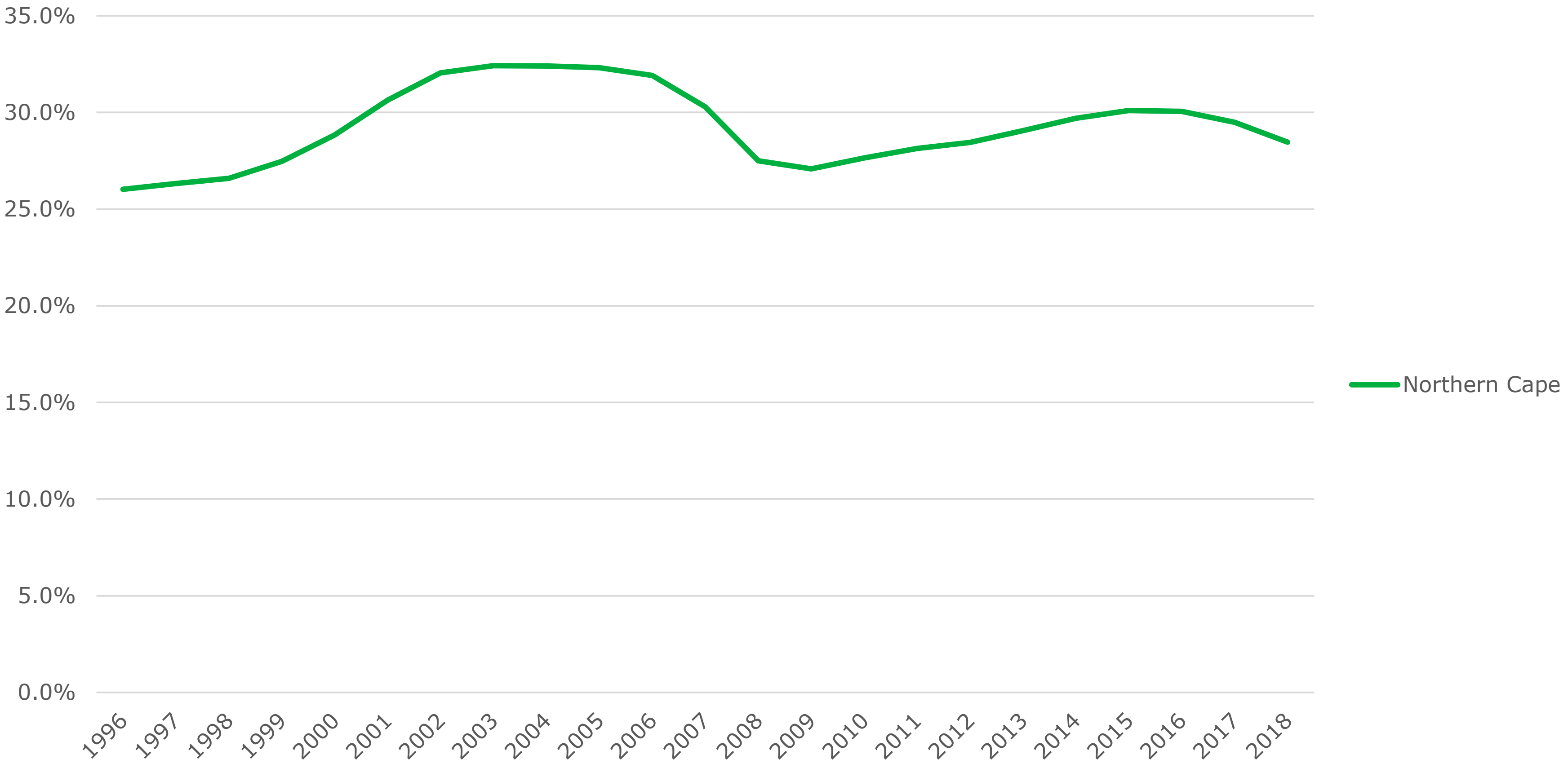
- No single dataset is flawless – not even a full population census
- Need to know the strengths and weaknesses of each datasets
- Typically the more inputs considered, the better the results
- Needs continuous updating as new sources becomes available

Data from ReX

Regional eXplorer
IHS Markit

Unemployment rate, official definition (%)

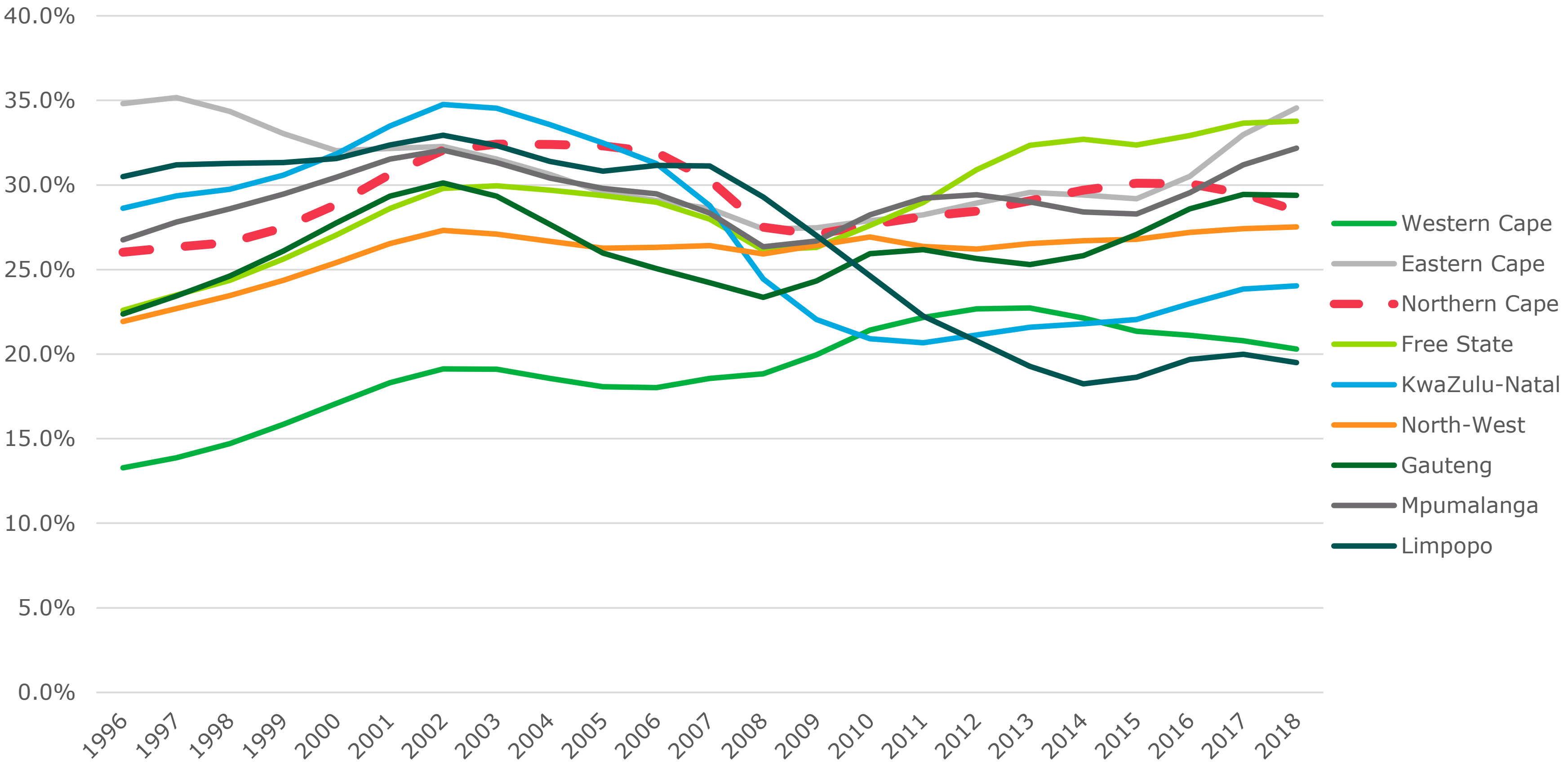
Northern Cape, Total



Source: *IHS Markit Regional eXplorer version 1823*

Unemployment rate, official definition (%)

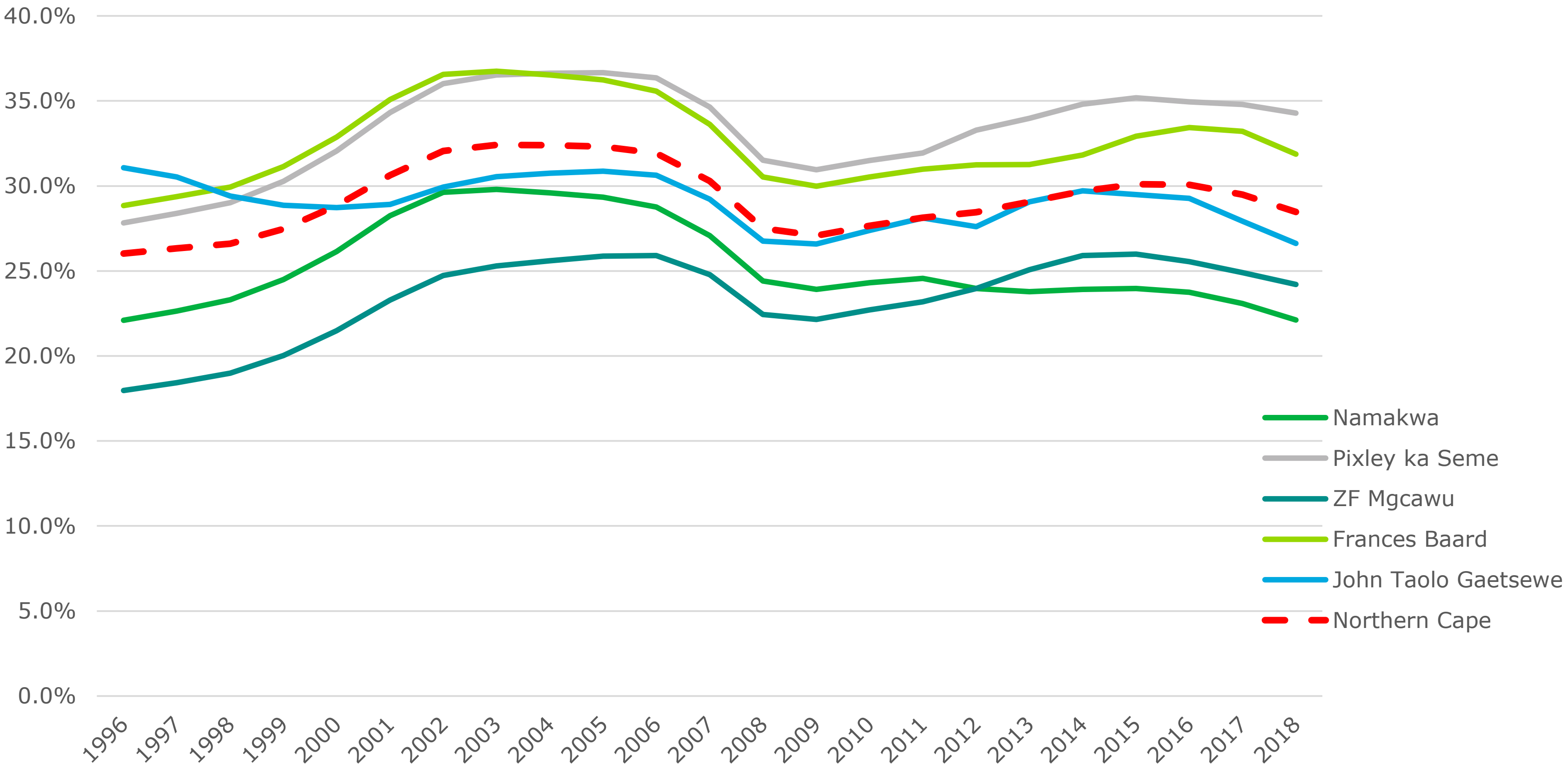
Northern Cape vs Other provinces



Source: IHS Markit Regional eXplorer version 1823

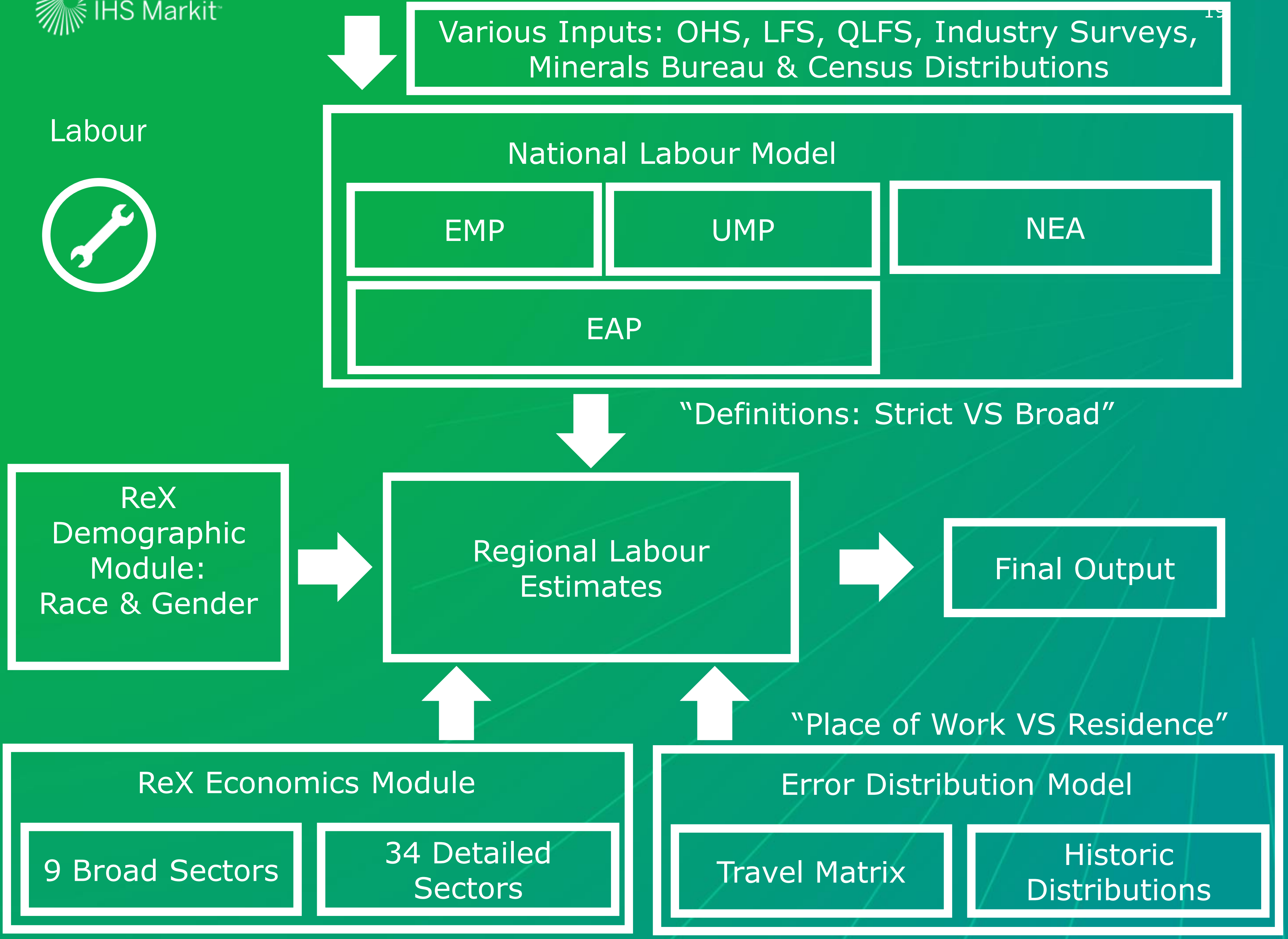
Unemployment rate, official definition (%)

Northern Cape vs NC Districts



Source: IHS Markit Regional eXplorer version 1823

Labour



Various Inputs: OHS, LFS, QLFS, Industry Surveys, Minerals Bureau & Census Distributions

National Labour Model

- EMP
- UMP
- NEA
- EAP

"Definitions: Strict VS Broad"

ReX Demographic Module: Race & Gender

Regional Labour Estimates

Final Output

"Place of Work VS Residence"

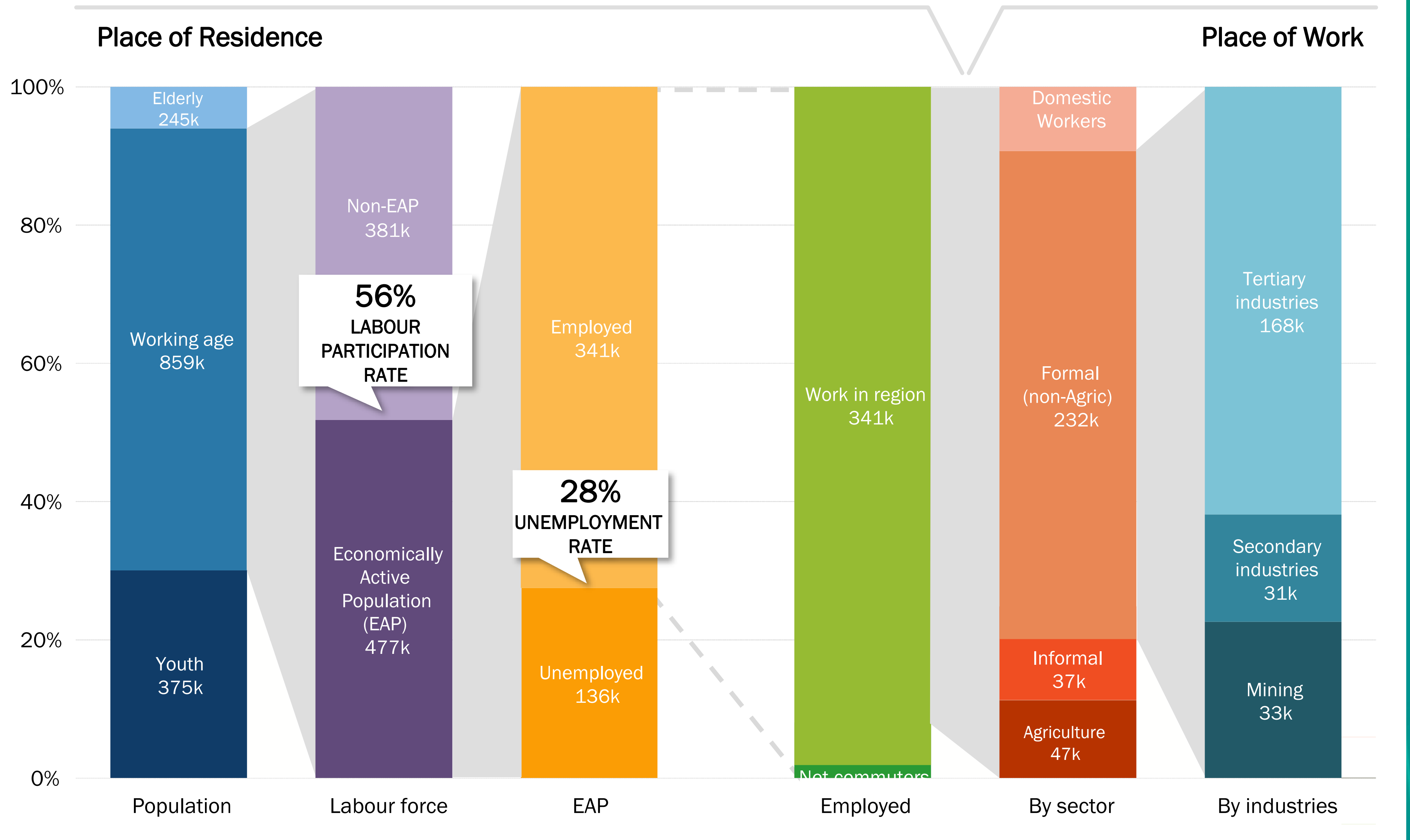
ReX Economics Module

- 9 Broad Sectors
- 34 Detailed Sectors

Error Distribution Model

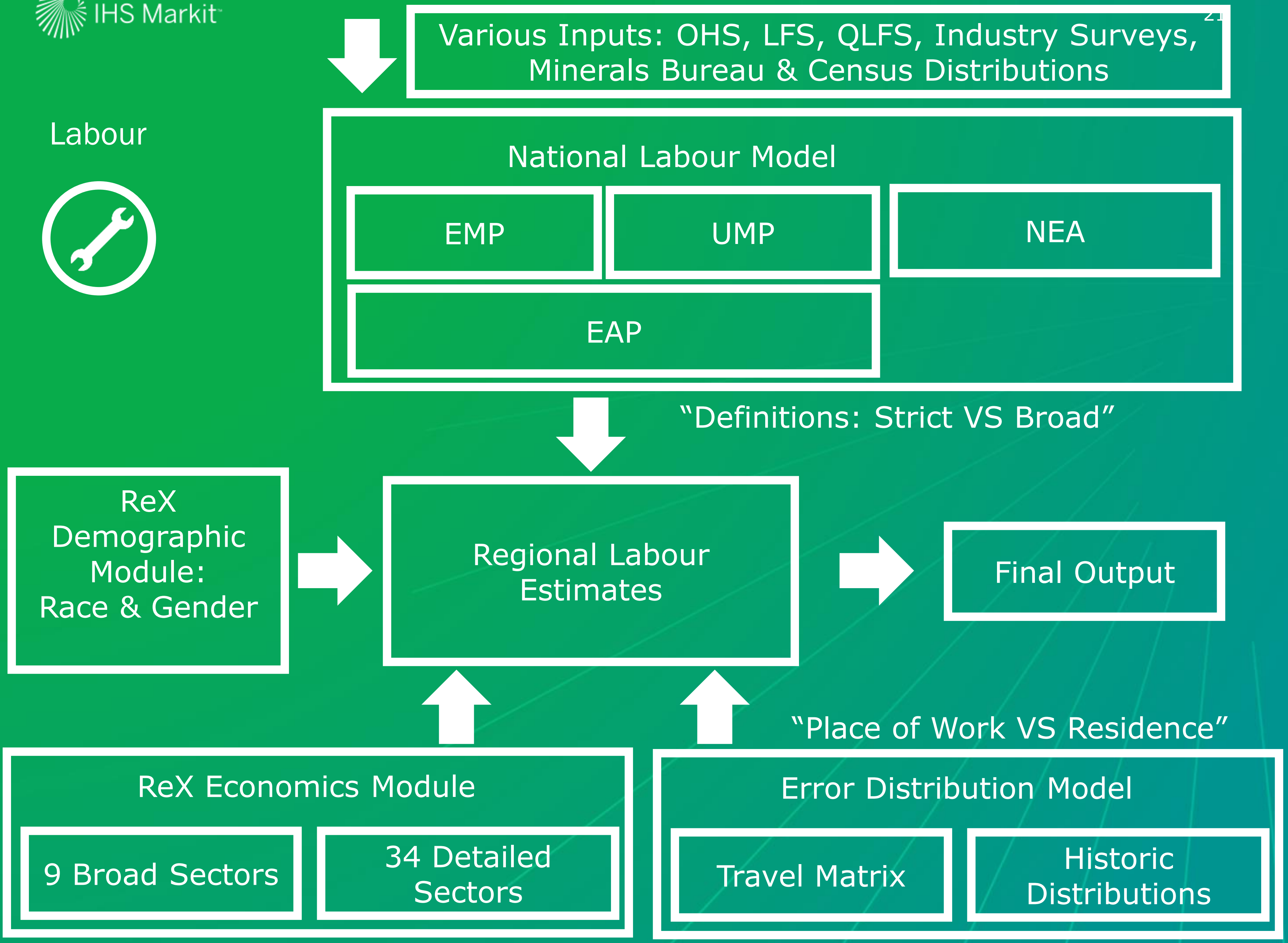
- Travel Matrix
- Historic Distributions

Northern Cape- Labour Dynamics, 2018



Source: IHS Markit Regional eXplorer version 1765

Labour



Various Inputs: OHS, LFS, QLFS, Industry Surveys, Minerals Bureau & Census Distributions

National Labour Model

EMP

UMP

NEA

EAP

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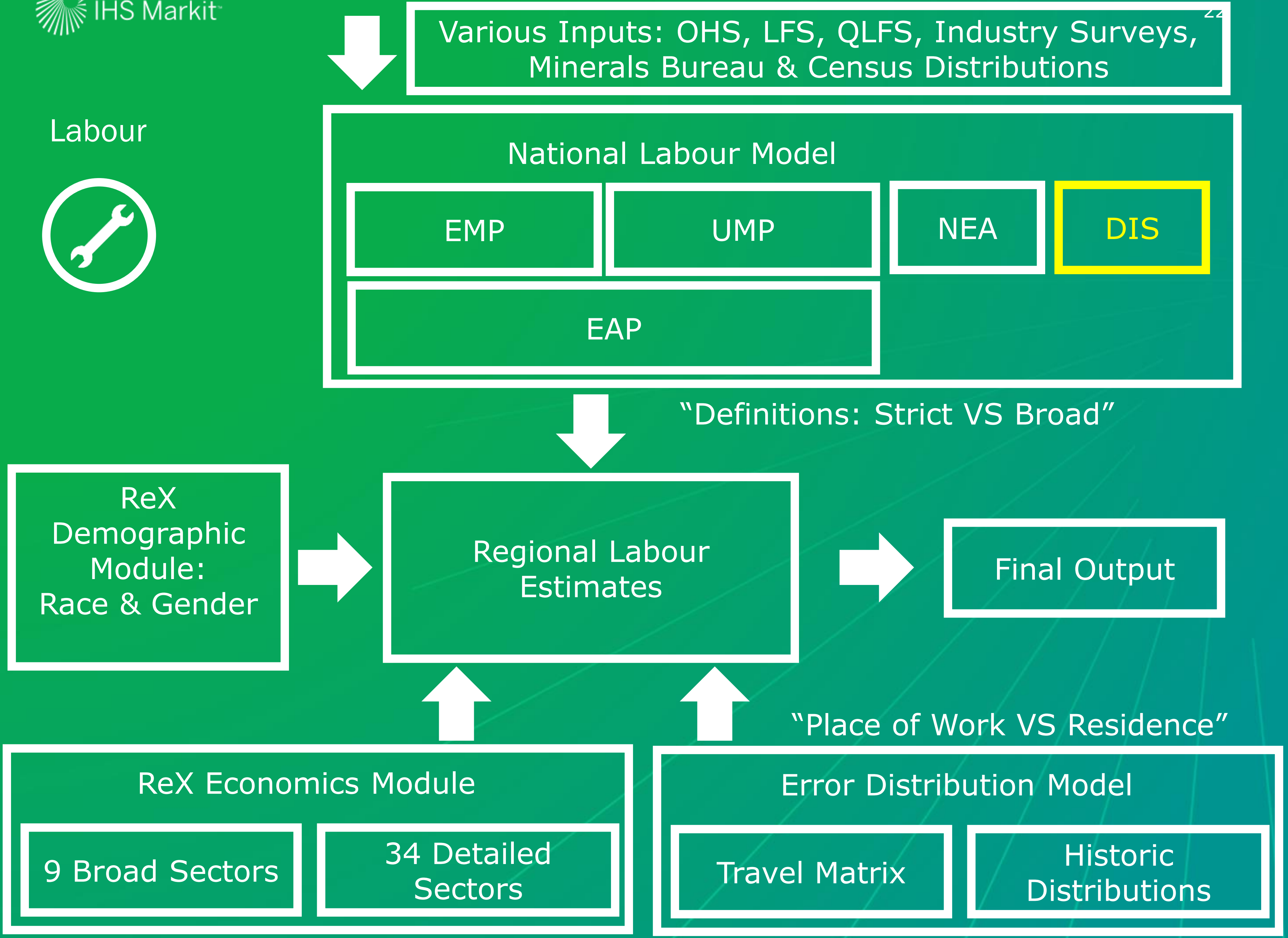
Labour



Various Inputs: OHS, LFS, QLFS, Industry Surveys, Minerals Bureau & Census Distributions

National Labour Model

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NEA

DIS

EAP

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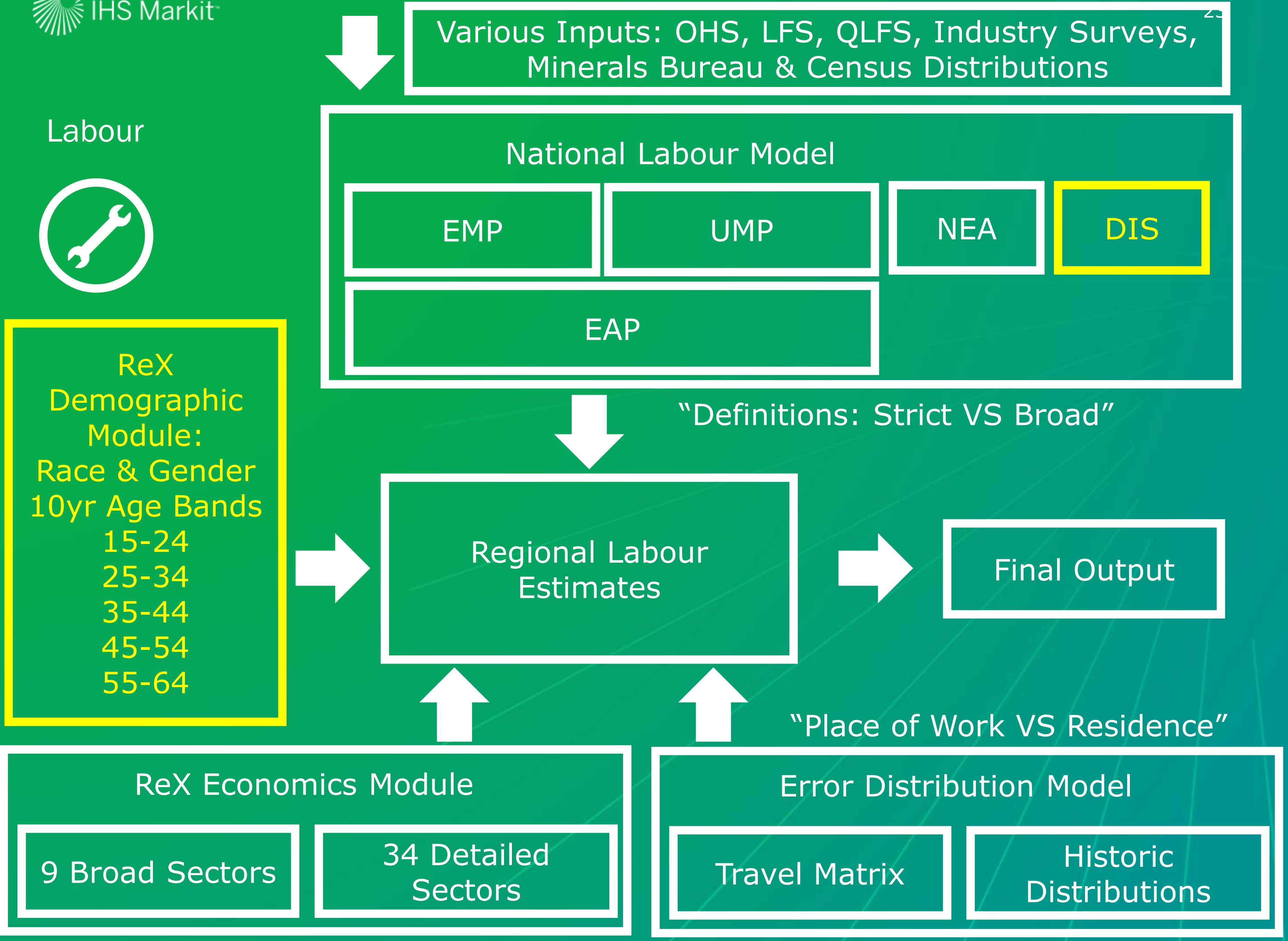

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National Labour Model

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NEA

DIS

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"Definitions: Strict VS Broad"

ReX Demographic Module:
Race & Gender
10yr Age Bands
15-24
25-34
35-44
45-54
55-64

Regional Labour Estimates

Final Output

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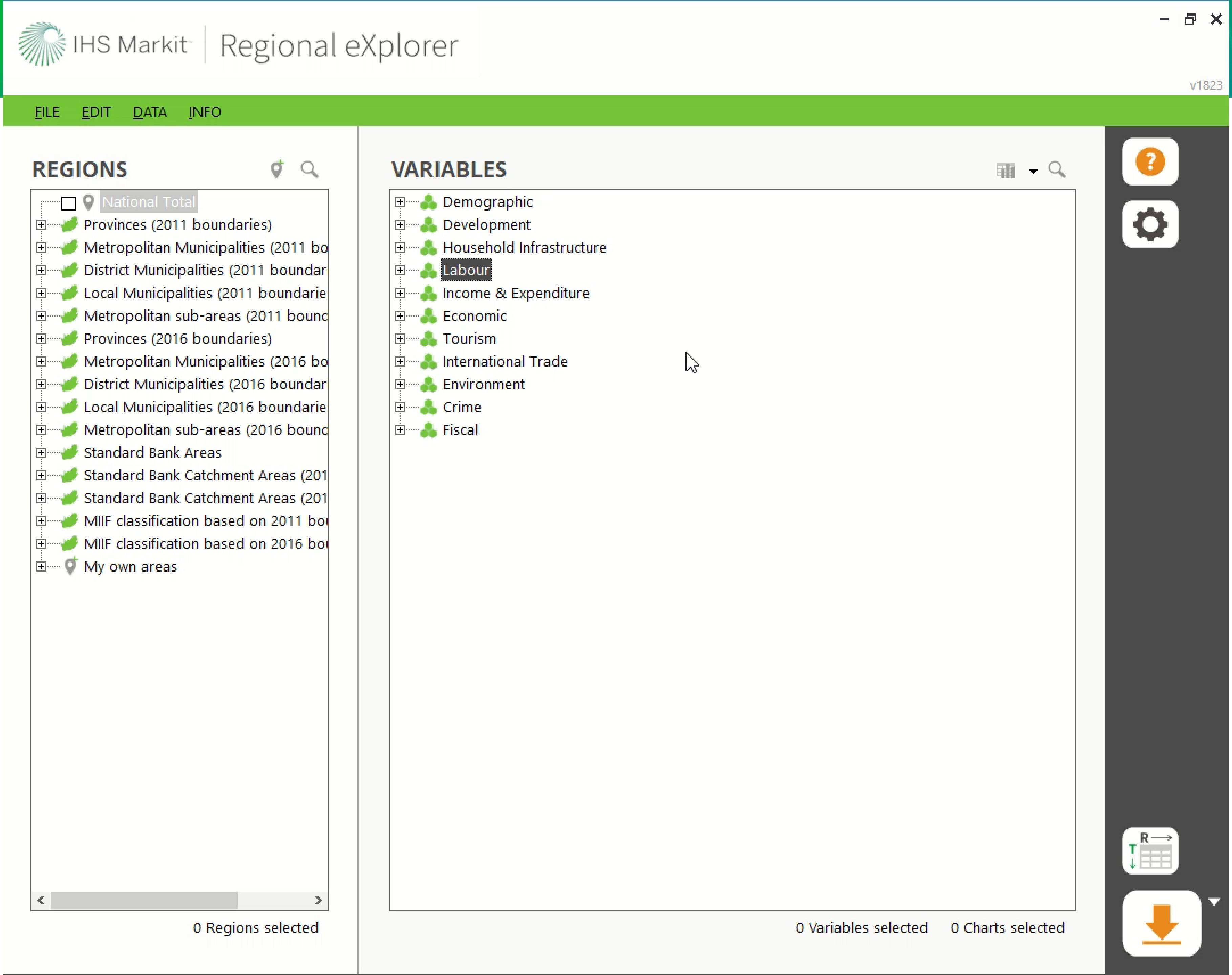

REGIONS

- ☐ National Total
- Provinces (2011 boundaries)
- Metropolitan Municipalities (2011 bo
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- Metropolitan sub-areas (2011 bounc
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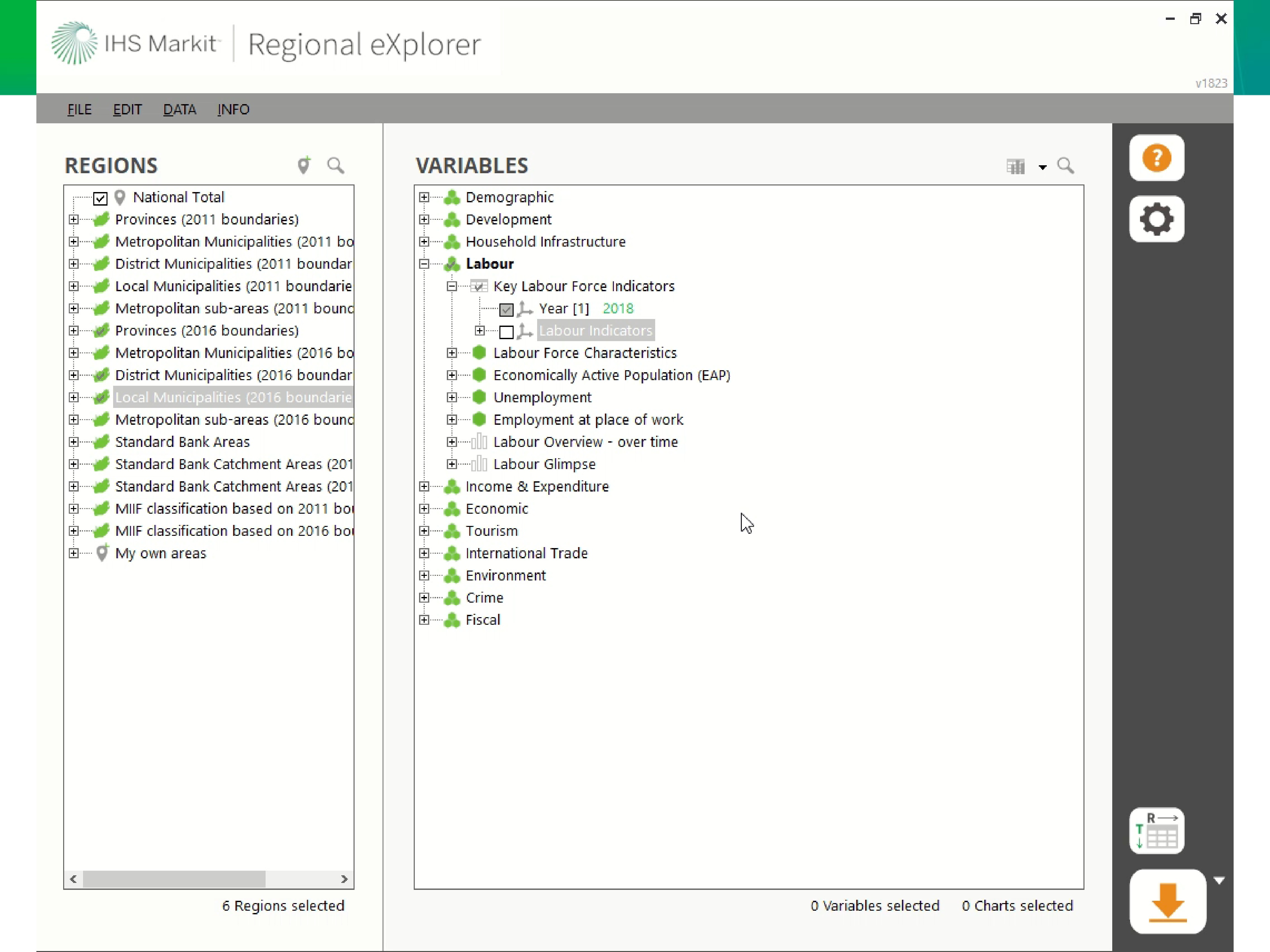
- Local Municipalities (2016 boundarie
- Metropolitan sub-areas (2016 bounc
- Standard Bank Areas
- Standard Bank Catchment Areas (201
- Standard Bank Catchment Areas (201
- MIIF classification based on 2011 bo
- MIIF classification based on 2016 bo
- My own areas

0 Regions selected

VARIABLES

- Demographic
- Development
- Household Infrastructure
- Labour
- Income & Expenditure
- Economic
- Tourism
- International Trade
- Environment
- Crime
- Fiscal

0 Variables selected 0 Charts selected



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6 Regions selected

VARIABLES

- Demographic
- Development
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- **Labour**
  - ☑ Key Labour Force Indicators
    - ☑ Year [1] 2018
    - ☐ Labour Indicators
  - Labour Force Characteristics
  - Economically Active Population (EAP)
  - Unemployment
  - Employment at place of work
  - Labour Overview - over time
  - Labour Glimpse
- Income & Expenditure
- Economic
- Tourism
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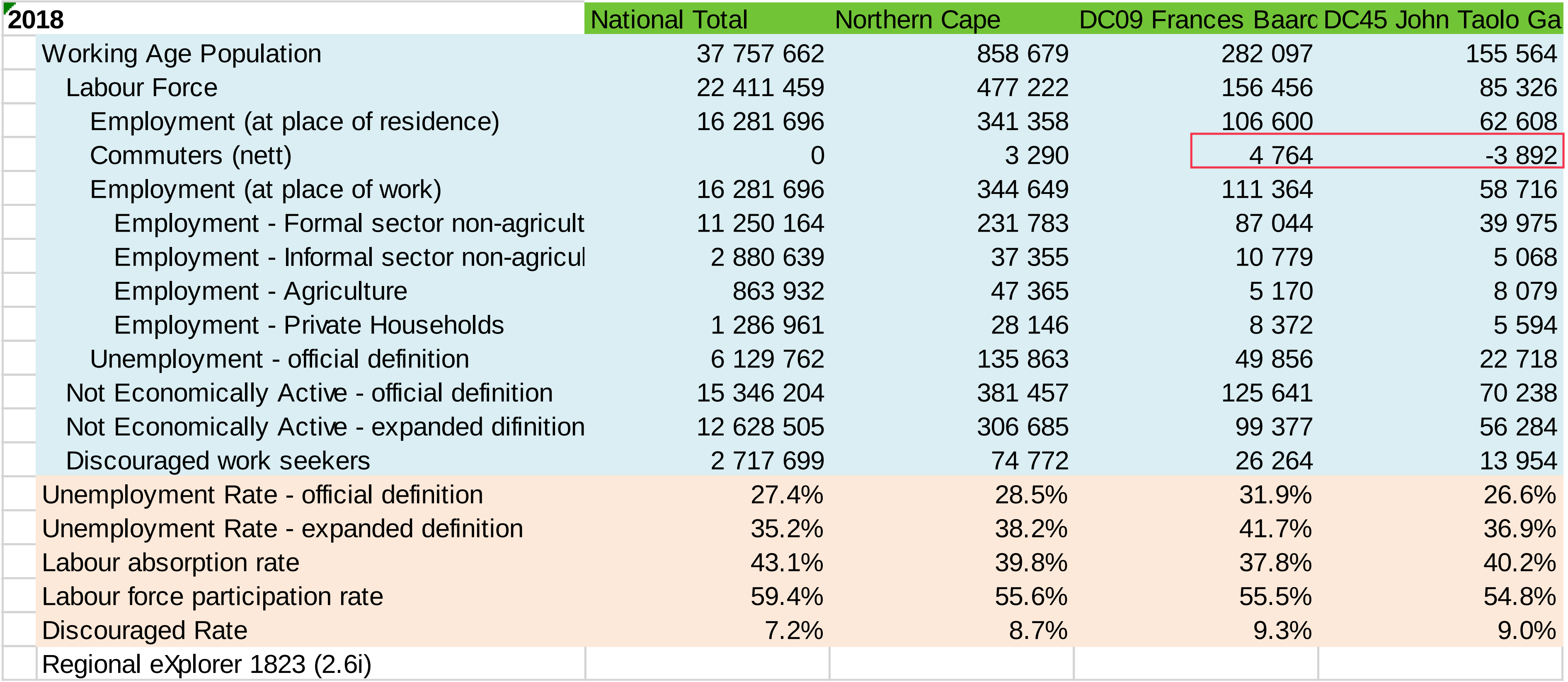
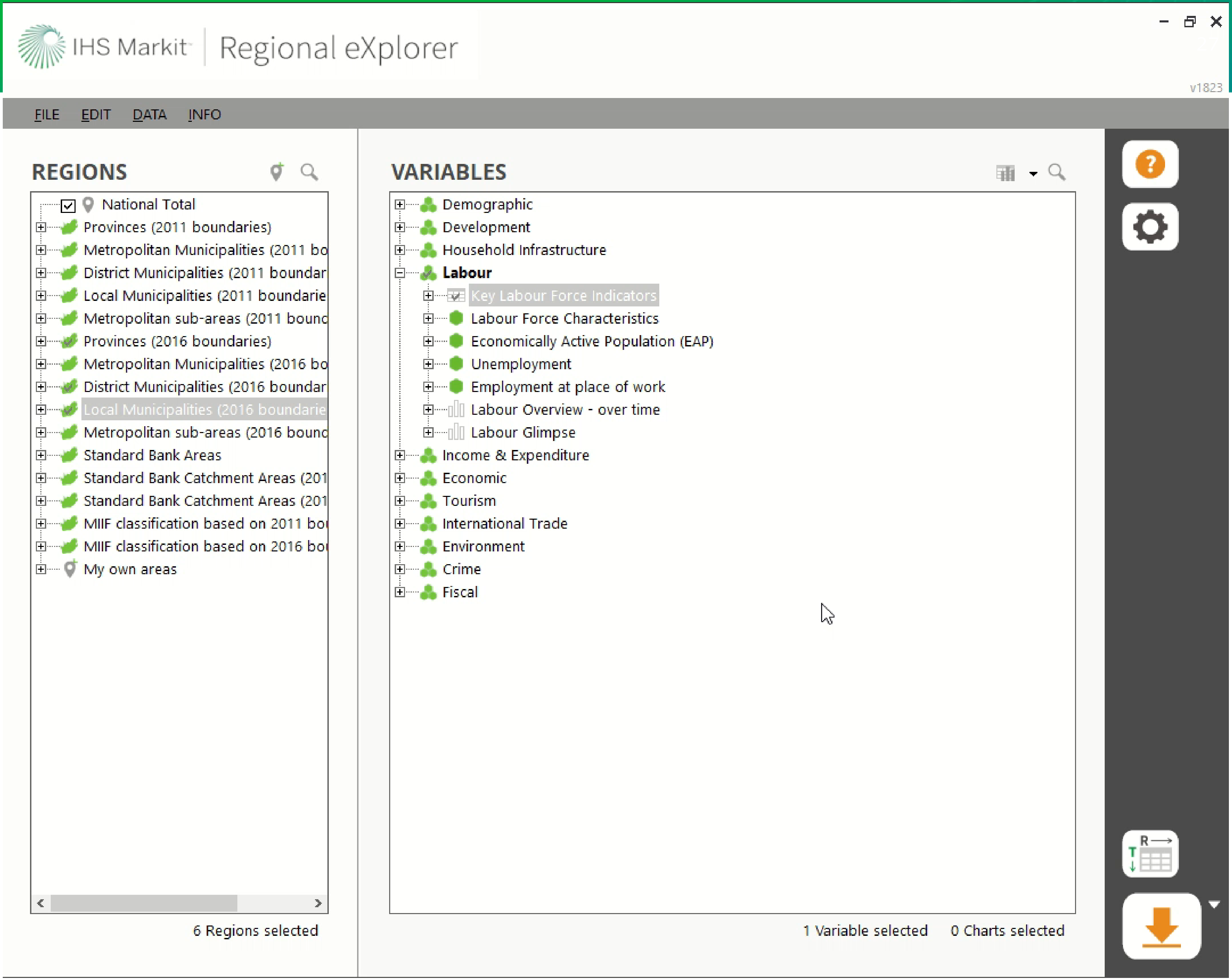
0 Variables selected
0 Charts selected

Key Labour Indicators 2018



2018	National Total	Northern Cape	DC09 Frances Baarc	DC45 John Taolo Ga
Working Age Population	37 757 662	858 679	282 097	155 564
Labour Force	22 411 459	477 222	156 456	85 326
Employment (at place of residence)	16 281 696	341 358	106 600	62 608
Commuters (nett)	0	3 290	4 764	-3 892
Employment (at place of work)	16 281 696	344 649	111 364	58 716
Employment - Formal sector non-agricult	11 250 164	231 783	87 044	39 975
Employment - Informal sector non-agricul	2 880 639	37 355	10 779	5 068
Employment - Agriculture	863 932	47 365	5 170	8 079
Employment - Private Households	1 286 961	28 146	8 372	5 594
Unemployment - official definition	6 129 762	135 863	49 856	22 718
Not Economically Active - official definition	15 346 204	381 457	125 641	70 238
Not Economically Active - expanded difinition	12 628 505	306 685	99 377	56 284
Discouraged work seekers	2 717 699	74 772	26 264	13 954
Unemployment Rate - official definition	27.4%	28.5%	31.9%	26.6%
Unemployment Rate - expanded definition	35.2%	38.2%	41.7%	36.9%
Labour absorption rate	43.1%	39.8%	37.8%	40.2%
Labour force participation rate	59.4%	55.6%	55.5%	54.8%
Discouraged Rate	7.2%	8.7%	9.3%	9.0%
Regional eXplorer 1823 (2.6i)				



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1 Variable selected
0 Charts selected

Youth Unemployment Rate 2018

Total	National Total	Northern Cape	DC09 Frances Baarc	DC45 John Taolo Ga
2018				
Male	49.5%	45.8%	58.3%	45.3%
Female	58.8%	58.2%	66.9%	63.8%
2018				
African	59.2%	51.3%	69.1%	62.2%
White	21.0%	18.5%	15.8%	18.4%
Coloured	43.4%	55.0%	60.9%	42.1%
Asian	26.7%	39.4%	41.8%	20.5%

In Summary

- No survey is flawless and labour statistics should be carefully interpreted keeping the strengths and weaknesses of the survey in mind.

- The ReX Labour Module has been updated with:
  - >Discouraged workers
    - – Unemployment rate - official & expanded.
  - >Labour characteristics by Age
    - – Youth unemployment rate.