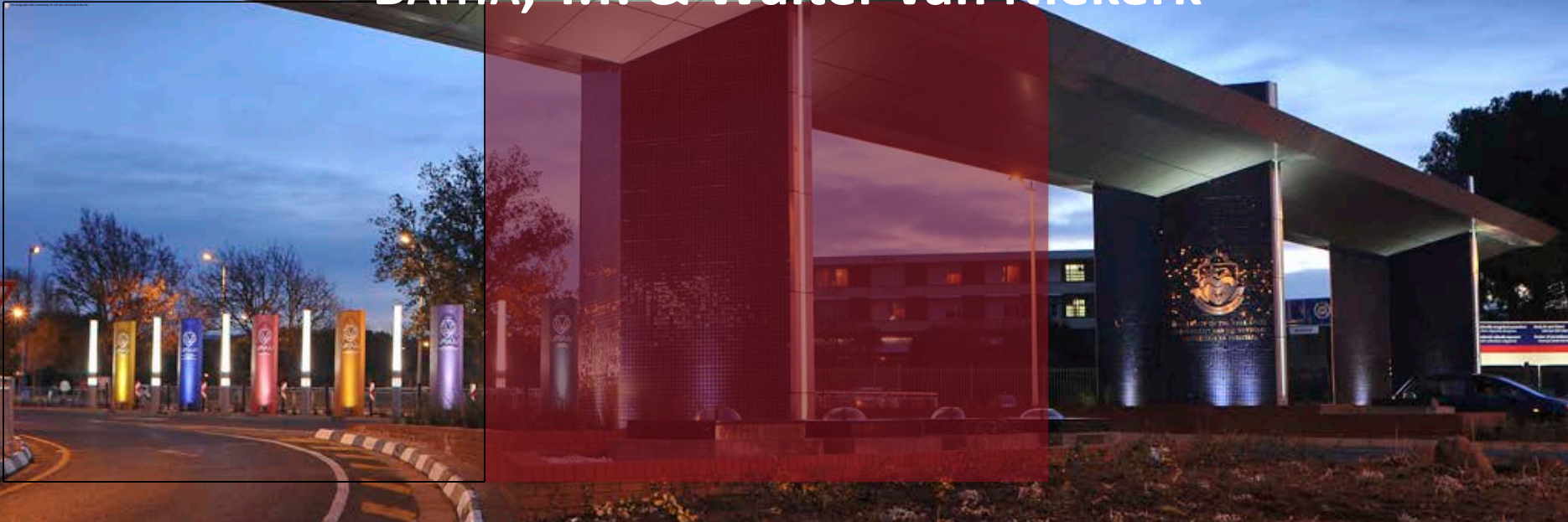


RESOURCES USE, TECHNICAL EFFICIENCY OF MAIZE INDUSTRY AND PERFORMANCE OF THE SOUTH AFRICA ECONOMY

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1. INTRODUCTION

- Maize is the main staple crop in Southern Africa.
- Approximately 2.5 million hectares of land, & 10-12 million tons of maize grain produced in South Africa annually,

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INTRODUCTION

- The South African agricultural sector has not performed well in terms of gross output value during the last four decades

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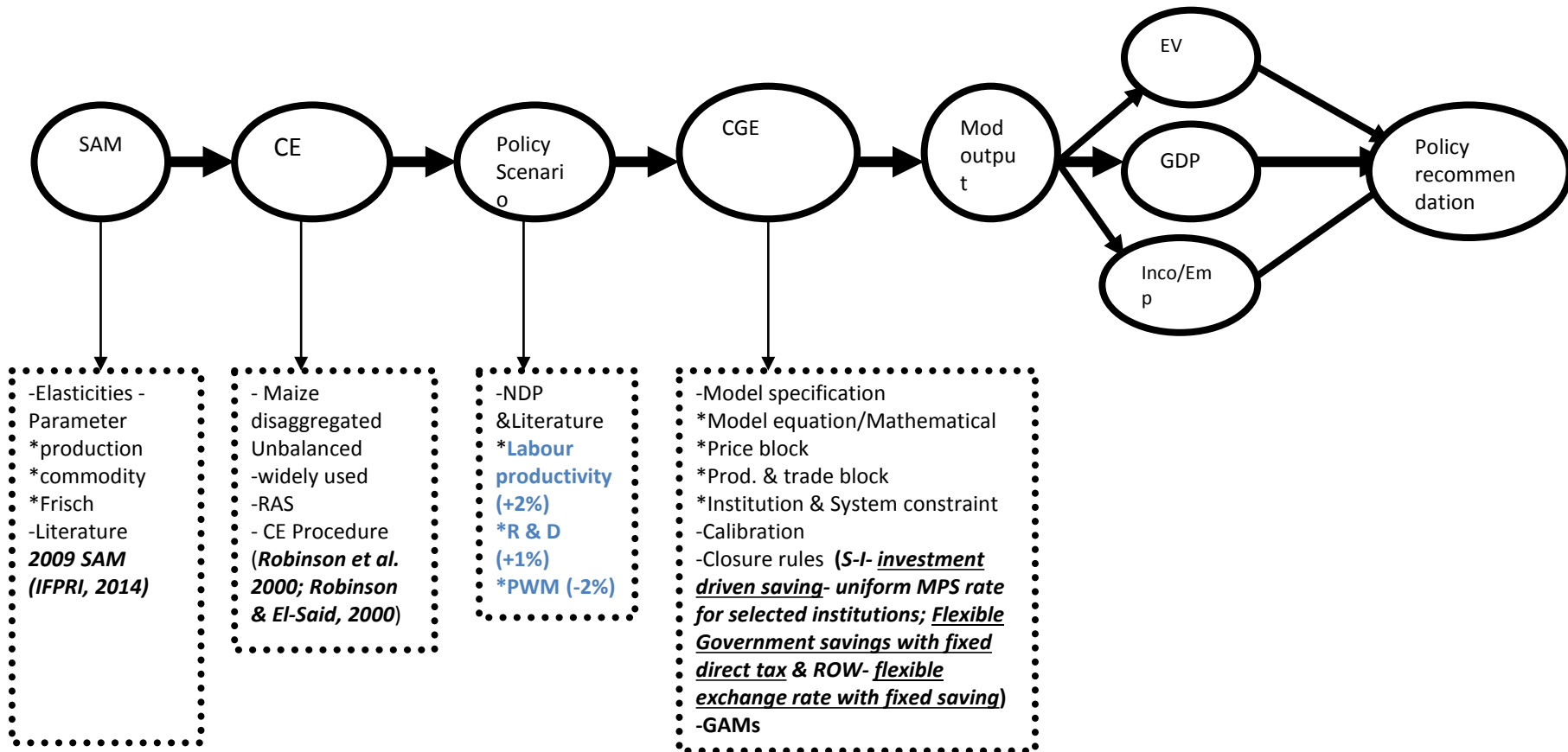
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2. OBJECTIVE

- Analyses the impact of improved technical efficiency in the maize industry on the South African economy

3. METHODOLOGICAL FRAME WORK



4. RESULT AND DISCUSSION

TABLE 1. % INTERMEDIATE INPUT, VALUE ADDED & OUTPUT

| | Aggregate labour | | | | | | World import price | | | | | | Research and development | | | | | |
|-----------------------------------|---------------------|---------------|--------------|--------------|-------------------|-------------|---------------------|--------------|---------------|--------------|-------------------|--------------|--------------------------|---------------|---------------|---------------|-------------------|----------------|
| | Intermediate inputs | | Value added | | Output/Production | | Intermediate inputs | | Value added | | Output/Production | | Intermediate inputs | | Value added | | Output/Production | |
| | QINTAXP | PINTAXP | QVAXP | PVAXP | QXXP | PXXP | QINTAXP | PINTAXP | QVAXP | PVAXP | QXXP | PXXP | QINTAXP | PINTAXP | QVAXP | PVAXP | QXXP | PXXP |
| Agriculture, forestry and fishery | -0.25 | 0.0007 | -0.25 | -0.54 | 0.16 | -0.23 | 0.0009 | 0.001 | 0.0009 | 0.005 | 0.00007 | 0.003 | 0.0005 | 0.0001 | 0.0005 | 0.001 | 0.0005 | 0.0006 |
| Maize | 2.60 | 0.0006 | 2.602 | -0.95 | 2.00 | -0.5 | -0.005 | 0.001 | -0.005 | 0.004 | 0.003 | -0.06 | 0.0004 | 0.0001 | 0.0004 | 0.0008 | 0.0005 | 0.00007 |
| Mining | -0.01 | 0.016 | -0.014 | 0.01 | -0.01 | 0.01 | -0.0003 | 0.003 | -0.0003 | 0.003 | -0.0003 | 0.003 | 0.0001 | 0.0002 | 0.0001 | 0.0003 | 0.0001 | 0.0003 |
| Manufacturing | 0.01 | -0.01 | 0.008 | 0.04 | 0.008 | -0.0007 | -0.0002 | 0.003 | -0.0002 | 0.003 | -0.0002 | 0.003 | 0.0007 | -0.0002 | 0.0007 | 0.0006 | 0.0007 | 0.00002 |
| Electricity and water | 0.003 | 0.02 | 0.003 | 0.04 | 0.003 | 0.03 | 0.00004 | 0.003 | 0.00004 | 0.003 | 0.00004 | 0.003 | 0.0005 | 0.0004 | 0.0005 | 0.001 | 0.0005 | 0.0007 |
| Construction | 0.002 | 0.012 | 0.002 | 0.03 | 0.0007 | 0.02 | -0.00005 | 0.003 | -0.00005 | 0.003 | -0.000009 | 0.003 | -0.00006 | 0.0001 | -0.00006 | 0.00006 | 0.0001 | 0.00007 |
| Trade and accommodation | 0.01 | 0.018 | 0.009 | 0.04 | 0.008 | 0.03 | -0.000045 | 0.003 | -0.00005 | 0.003 | -0.00003 | 0.003 | 0.0003 | 0.0002 | 0.0003 | 0.0003 | 0.0005 | 0.0003 |
| Transport and communication | 0.005 | 0.018 | 0.005 | 0.04 | 0.005 | 0.03 | -0.000009 | 0.003 | -0.000009 | 0.003 | -0.0000002 | 0.003 | 0.0006 | 0.000001 | 0.0006 | 0.001 | 0.0006 | 0.0005 |
| Research and development | 0.001 | 0.02 | 0.001 | 0.03 | 0.001 | 0.02 | 0.0001 | 0.003 | 0.0001 | 0.003 | 0.0001 | 0.003 | 0.051 | -0.016 | 0.051 | -1.071 | 0.05 | -0.5 |
| Financial and business services | 0.0006 | 0.024 | 0.0006 | 0.03 | 0.001 | 0.03 | 0.00007 | 0.003 | 0.00007 | 0.003 | 0.00007 | 0.003 | 0.0007 | -0.0008 | 0.0007 | 0.001 | 0.0008 | 0.0002 |
| Other services | 0.002 | 0.018 | 0.002 | 0.03 | 0.002 | 0.03 | 0.0002 | 0.003 | 0.0002 | 0.003 | 0.0002 | 0.003 | 0.001 | -0.003 | 0.001 | 0.0007 | 0.001 | -0.001 |

RESULT AND DISCUSSION

TABLE 2. % COMMODITY FLOW

| Industries | Aggregate labour | | | | World import price | | | | Research and development | | | |
|---------------------------------|------------------|---------------|--------------|--------------|--------------------|-------------|-------------|-------------|--------------------------|---------------|---------------|---------------|
| | QDXP | QMPX | QEXP | QQXP | QDXP | QMPX | QEXP | QQXP | QDXP | QMPX | QEXP | QQXP |
| Agriculture, forestry & fishery | 0.12 | -0.156 | 0.695 | 0.103 | 0.0001 | 0.0002 | -0.005 | 0.0001 | 0.0006 | 0.001 | -0.0007 | 0.0006 |
| Maize | 0.82 | -0.159 | 2.984 | 0.402 | -0.15 | 1.56 | 0.12 | 0.58 | 0.0006 | 0.0006 | 0.0003 | 0.0006 |
| Mining | 0.003 | 0.014 | -0.026 | 0.007 | -0.0002 | -0.0001 | -0.0003 | -0.0002 | 0.0006 | 0.0009 | -0.0002 | 0.0007 |
| Manufacturing | 0.014 | 0.008 | -0.015 | 0.011 | 0.00003 | 0.0002 | -0.001 | 0.0001 | 0.000743 | 0.0006 | 0.0007 | 0.0007 |
| Electricity and water | 0.003 | 0.021 | -0.061 | 0.003 | 0.00005 | 0.0003 | -0.0008 | 0.00005 | 0.000518 | 0.001 | -0.001 | 0.0005 |
| Construction | 0.0007 | 0.01 | -0.033 | 0.0007 | -0.000008 | 0.0002 | -0.0006 | -0.000008 | 0.000126 | 0.00005 | 0.00035 | 0.0001 |
| Trade and accommodation | 0.011 | 0.029 | -0.053 | 0.011 | 0.000002 | 0.0002 | -0.0008 | 0.000008 | 0.000504 | 0.0006 | 0.0002 | 0.0005 |
| Transport and communication | 0.007 | 0.026 | -0.04 | 0.01 | 0.00003 | 0.0003 | -0.0005 | 0.00006 | 0.00064 | 0.001 | -0.0001 | 0.0007 |
| Research and development | 0.002 | 0.017 | -0.035 | 0.003 | 0.0001 | 0.0003 | -0.0004 | 0.0001 | 0.022 | -0.46 | 1.11 | 0.002 |
| Financial and business services | 0.002 | 0.02 | -0.04 | 0.002 | 0.00008 | 0.0004 | -0.0006 | 0.00009 | 0.0008 | 0.0008 | 0.0007 | 0.0008 |
| Other services | 0.002 | 0.074 | -0.027 | 0.003 | 0.0002 | 0.002 | -0.0003 | 0.0002 | 0.001 | -0.005 | 0.004 | 0.001 |

RESULT AND DISCUSSION

TABLE 3. FACTOR DEMANDED

| Industries | Aggregate labour | World import price | Research and development |
|-----------------------------------|------------------|--------------------|--------------------------|
| Agriculture, forestry and fishery | -0.926 | -0.003 | 0.002 |
| Maize | -1.795 | -0.014 | 0.001 |
| Mining | -0.036 | -0.00071 | 0.0004 |
| Manufacturing | 0.014 | -0.00041 | 0.001 |
| Electricity and water | 0.009 | 0.00014 | 0.002 |
| Construction | 0.005 | -0.0001 | -0.0001 |
| Trade and accommodation | 0.017 | -0.00009 | 0.0006 |
| Transport and communication | 0.014 | -0.00003 | 0.002 |
| Research and development | 0.001 | 0.00011 | -1.04 |
| Financial and business services | 0.002 | 0.0002 | 0.002 |
| Other services | 0.003 | 0.00035 | 0.002 |

RESULT AND DISCUSSION

TABLE 4. % MACRO ECONOMIC INDICATORS

| | Aggregate labour | World import price | Research and development |
|---------------------|------------------|--------------------|--------------------------|
| Real GDP | 0.012 | 0.0004 | 0.0008 |
| Private consumption | 0.020 | 0.002 | 0.001 |
| Exports | 0.010 | -0.0003 | 0.0006 |
| Imports | 0.009 | 0.002 | 0.0005 |

5. SUMMARY, CONCLUSION AND RECOMMENDATIONS

- This study shows that the improvement of technical efficiency is directly related to competitiveness and welfare
- In spite of an employment reducing effect, government and policymakers are recommended to increase the rate of technical development

Questions? Comments?

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And...then you feel as if you have
really opened up all the cogs of
your brain!



Thank You
Dankie

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