Agri-Value Chain Competitiveness Analysis

Team: Johan van Rooyen, Director Centre for AgriBusiness Analysis & Johann Boonzaaier, Heinrich Jantjies, PhD students; Dlikili, X, M student

Stellenbosch University & BFAP

FIRST PROGRESS REPORT
NOV 2016
Content & Scope

“How to make COMPETITIVENESS THINKING a useful tool for strategic management”

- consider, define the context of an industry and measure competitive performance over time - trend analysis the key
- Selected industry case studies.
- Strategic directions to enhance competitive performance
The key issue:
- Competitiveness.... If you can measure it, you can manage it to get results; otherwise it just remains a “good idea or theory”

The challenge:
- Designing a systematic approach to measure and analyse competitive performance - cycles, trends and shocks.
Sector/industry/firm level competitiveness?

Comprehensive economy wide views available but not industry level:

- IMD - WORLD COMPETITIVENESS YEARBOOK
- WEF - GLOBAL COMPETITIVENESS REPORT

Agri-focussed analysis: some but constrained views?

- Agri-benchmarking in fruit industry - O’Rourke, production cost based.
- Decision Support Model (DSM) &
- Market Attractiveness Index (MAI)?
- Profits; productivity; ROI; ROR, etc?
THE AGRI-COMPETITIVENESS ANALYSIS PROGRAMME (ACAP)
Stellenbosch University

1. Approach and process:
   • Define the agri-context - tradable/non-tradable?
   • Measurement - reliable data base? Trend lines?
   • Participative analysis - stakeholders/client inputs
   • Participative strategic planning - industry and or firm level;

2. Funding:
   WC Dept of Agriculture; Standard bank;....possible: Industry, agribusiness - projects

3. Dissemination:
   Annual Agri-Competitiveness Seminar, publications, papers

4. Selected commodities - currently - 2000/500+ lines
   Deciduous fruit, stone fruit, wine, dates, grains..
ACAP COMPETITIVE PERFORMANCE ANALYSIS: A Five Step analytical framework

1. DEFINITION
   Contextualise and define competitiveness

2. MEASUREMENT
   Empirically measure competitive performance

3. IDENTIFY FACTORS AND DETERMINANTS
   Identify, through interviews with industry experts and knowledgeable stakeholders (Executive Survey), trends and major factors impacting on competitive performance

4. ANALYSE
   Establish the major Determinants of Competitiveness through the application of the “new” competitiveness theory (Porter, 1990)

5. STRATEGY PLANNING
   Develop strategies to enhance the competitiveness of Agricultural Industries in SA - Participative planning (Log Frames...)
Step 1: DEFINING COMPETITIVE PERFORMANCE

“The sustained ability of an industry to attract investment and scares resources by competitively trading products in the global marketplace, whilst continuously striving to earn at least the opportunity cost of resources engaged” (Freebairn, 1987)

Notions of:
- Sustained international trade
- Scarcity; opportunity cost;
- Trends, cycles;
- Tradeble vs Non Tradeble products
- Comparative vs Competitive Advantage
Competitiveness in short.....

The ability to optimise your competitive advantage:

- Trade and keep trading;
- Selling products, services; ideas
- Sustain profits and invest;
- Engage, draw best production factors - management, technical, labour, land, water, etc.
- Grow the business/industry
Step 2: Measuring competitive performance

- Relative Trade Advantage (RTA): (Balassa, 1965, 1989; Vollrath, 1991) - including imports & exports

- RTA: Ratio’s of global trade value in a particular product (from Country A) vs Total global trade in that product .... divided by .... trade value in all products from Country A vs Global trade in all products

- Ex: Wine SA Trade vs Total Wine Trade vs alternative trade opportunities

- RTA > 0 = increasing competitiveness

- TRENDS - winners and losers
TRADE BASED MEASURES

- RER and PPP
- RCA and RTA
- Other Indices; EMS, NEI, GL

\[ \text{RCA}_{ij} = \text{RXA}_{ij} = \frac{X_{ij}}{X_{ik}} \]

\[ \text{RMA}_{ij} = \frac{M_{ij}}{M_{ik}} \]

\[ \text{RTA}_{ij} = \text{RXA}_{ij} - \text{RMA}_{ij} \]

(Balassa 1966, Vollrath 1991)

Data:
FAO STATS -1961;
TRADEMAP -2001

STRAEGIC ANALYSIS & PLANNING

- Cost Measures
- Profitability
- Productivity and Efficiency

- PORTER DIAMOND; EXEC SURVEYS; LOGFRAMES

COMPREHENSIVE ASSEMENTS
SA Agricultural competitiveness: long term trends

RTA - Primary Agricultural Products - sustained positive, marginal

Protectionism


-0.50 0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50

1st Deregulation
War - economy?
Sanctions economy?
Madiba Magic + Learning by doing
Sustaining Global Comp.
VALUE OF CURRENCY & COMPETITIVENESS

RTA Primary Agricultural Production vs Major currencies/ZAR
AGRO PROCESSING COMPETITIVENESS INDEX

LOCAL VALUE ADDING - PROCESSING, PACKAGING, BOTTLING, PROBLEMATIC!!!!
Phase 1: Regulated, constrained Competitiveness; economic sanctions

Phase 2: The Madiba Magic Period - learning the trade (1990-2001)

Phase 3: Towards becoming a global player (2001-2010)

Phase 4: Operating in a constrained competitive environment (2010-)
Step 3: Which factors determine industry level competitive performance?

- **Deciduous Fruit Case**
- **Executive Survey (views industry leaders, investors, producers, ceo’s):**
  
  Identify the **major operational factors** affecting competitive performance
  
  (2015 Deciduous Fruit Industry Exec Survey)

- **Views in value chain clusters:**

  - Cluster 1 - “Trade” respondents in exporting and marketing (down stream value chain)
  - Cluster 2 - “Agribusiness” respondents in primary production, winemaking, packaging processing (up-stream value chain)
### 84 Factors impacting on competitive performance

#### Top 10 Enhancing Factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>Average Score</th>
<th>Top 10 Constraining Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Market Competition</td>
<td>4.23</td>
<td>Politicians/Ministers trustworthiness</td>
</tr>
<tr>
<td>Economies of Scale</td>
<td>4.06</td>
<td>Political System Credibility</td>
</tr>
<tr>
<td>General Infrastructure</td>
<td>4</td>
<td>Entry-level labour: Quality</td>
</tr>
<tr>
<td>Technology Services: Availability</td>
<td>3.96</td>
<td>Labour Policies - inflexibilities</td>
</tr>
<tr>
<td>Devaluing exchange Rate</td>
<td>3.96</td>
<td>Land Reform Policy-uncertainties</td>
</tr>
<tr>
<td>Global locality</td>
<td>3.95</td>
<td>Red tape/admin/ Cof B</td>
</tr>
<tr>
<td>Storage/Product Handling: Facility</td>
<td>3.95</td>
<td>High establishment cost</td>
</tr>
<tr>
<td>Availability and services</td>
<td>3.8</td>
<td>Skilled labour: Obtaining</td>
</tr>
<tr>
<td>Entry-level labour: Obtaining</td>
<td>3.76</td>
<td>Social Unrest</td>
</tr>
<tr>
<td>Local Input Suppliers: Availability</td>
<td>3.72</td>
<td>Crime impact</td>
</tr>
<tr>
<td>Reinvestment opportunities</td>
<td>3.71</td>
<td></td>
</tr>
</tbody>
</table>
Step 4: Determinants of Competitive Industry Performance (The Porter Diamond)
# Step 4: The major determinants of competitiveness - Porter Diamond Analysis, 2015

<table>
<thead>
<tr>
<th>Porter determinants of Competitiveness:</th>
<th>Trade &amp; Value - adding (Cluster 1)</th>
<th>Agbusiness &amp; Primary production (Cluster 2)</th>
<th>Industry (overall)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Strategy, Structure and Rivalry</td>
<td>3.81</td>
<td>3.22</td>
<td>3.55</td>
</tr>
<tr>
<td>Relating and Supporting Industries</td>
<td>3.39</td>
<td>2.80</td>
<td>3.14</td>
</tr>
<tr>
<td>Production Factor Conditions</td>
<td>3.08</td>
<td>2.45</td>
<td>2.81</td>
</tr>
<tr>
<td>Demand Market Factors</td>
<td>3.01</td>
<td>2.42</td>
<td>2.76</td>
</tr>
<tr>
<td>Chance of Opportunity Factors</td>
<td>2.90</td>
<td>2.33</td>
<td>2.66</td>
</tr>
<tr>
<td>Government Support and Policy</td>
<td>2.56</td>
<td>2.07</td>
<td>2.35</td>
</tr>
</tbody>
</table>
THE PORTER DETERMINANTS:

“Setting the agenda”

- Focus group sessions - inclusive value chain participation;
- Industry sessions;
- Commodity workshops
- Expert discussions
Production factor conditions
Demand/market factor conditions
Relating and supporting industries
Firm strategy, structure and rivalry
Government support and policies

- Cluster 1
  - Trade Policy
  - Corruption
  - Political Factors
  - Taxation
  - Administrative Regulations
  - Regulatory Standards Comply
  - Regulatory Standards
  - Politicians Credibility

- Cluster 2
  - Land Reform Policy
  - Labour Policy
  - Macro-economic Policy
  - Competition Law
  - BEE Policy
  - Political System Credibility
Chance factors
STEP 5: STRATEGIC PLANNING

“In today’s (agri) business, the competition will bite you if you keep running; if you stand still they will swallow you!”
(William Knutsen, Jr. Chairman, Ford Motor Company)
Noting the trends: wine industry competitive performance (Porter Diamond)
## COOPERATIVE AGENDA SETTING: SA DECIDIOUS FRUIT INDUSTRY

<table>
<thead>
<tr>
<th>Porter determinants</th>
<th>Relevant and constraining competitive factors</th>
<th>Strategic proposals</th>
</tr>
</thead>
</table>
| Production factors conditions | High technology cost | • Technological innovation through value chain collaboration  
• “Anticipating climate change”; water scarcity |
| Demand/ market factors | Inconsistent quality and availability of SA stone fruit varieties in markets | • Improved consistency in supply to exports markets, standardisation and certification  
• Extended supply in export markets  
• Market intelligence to achieve preferred supplier status - what where when |
<p>| | The influence of adverse weather conditions on buying patterns of consumers (export markets) | • Redirecting market supply mechanisms |</p>
<table>
<thead>
<tr>
<th>Porter determinants</th>
<th>Relevant and constraining competitive factors</th>
<th>Strategic proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Related and supporting industries</td>
<td>Electricity supply (including renewable energy and fossil fuels)</td>
<td>• Consistency of power supply; economising; green energy:</td>
</tr>
<tr>
<td></td>
<td>Industry’s expenditure on Research &amp; Development and innovation</td>
<td>• Institutional arrangements to create innovation through collaborative partnerships:</td>
</tr>
<tr>
<td>Government support and policy</td>
<td>Trade policy</td>
<td>• Trade promotion support:</td>
</tr>
<tr>
<td></td>
<td>Dealing with the political economy</td>
<td>• A “Stone Fruit Industry Plan (SFIP) and compact:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Improved industry intelligence systems:</td>
</tr>
</tbody>
</table>
THANK YOU & REMEMBER -

BE COMPETITIVE!