Achieving the Millennium Development Goals (MDGs) in Africa: NEPAD component on Sustainable Industrial Development (Africa Productive Capacity Initiative)

DEVELOPMENT OF PRODUCTIVE CAPACITY AND REGIONAL COMPETITIVENESS

21st November 2005 – Johannesburg

The DTI – Strategic Competitiveness Unit Workshop: National Strategy on Regional Industrial Development

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Conclusion and the way forward: Promoting Agglomeration approaches
Introduction:
Attracting Global Private flows through a performing Agglomeration culture
Global Private Financial Flows
to Developing Regions, 1998 and 2003 (in billions of $ US)

Global hubs of Technological Innovation
2000-2001

Source: Hillner (2000) and UNDP (2001)
Knowledge and Innovation: Agglomeration matters, 1995
1. Reduce inequality to achieve the MDGs: Regions have a say
Real GDP Growth rates in African Sub-regions, 1999-2003 (in Percentage)

- None of the African sub-regions reached 7% of GDP as suggested in the MDG.

Source: Data from ADfB, *African Development Report 2004*
South Africa has one of the world’s highest levels of inequality: Few regions are really performing in SA.
Level of inequality: Distribution of income or consumption
Share of Lowest 20% and Highest 20% in selected countries

Value addition and strategy of a nation:
Agglomeration approaches at the proximity level

- Failure of existing strategic policies to improve inequality and reduce poverty
- Could spatial and sectoral strategies on competitiveness promote economic and productive capabilities within and between provinces/regions?
- Should Regional industrial development be promoted as an integrated part of a national strategy?

1. Y E S, there is no alternative (TINA) to diversification and Agglomeration approaches
2. Learning to perform in Global/local economy (building performance at the proximity level)

Multi-level Road Maps needed

1. Multi-level governance: (continental, Regional, national and local)
2. Capability Building to ensure a smooth transition towards a Knowledge based economy (economic, social and environmental)
3. Upgrading skills and processes to achieve labour productivity through an increase in the technological content of the production system and upgrading of traditional processes (reducing transaction costs)
4. Ensure Shared Growth with a human face
5. Road Map building through multilevel network of economic watch system (Observatories)
6. Building Coherent strategy on multi-levels Road Maps

Industrial development in Sub-Saharan Africa
Share of MVA in GDP in Sub-Saharan African countries, 2001

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Sectoral Growth rates in Africa, 1999-2003 (in Percentage changes from preceding year)

1. Industry
2. Services
3. Agriculture
4. Manufacturing

- Lower Commitment to Manufacturing? From 3.3% in 1999 to 2.3% in 2003
- Better performance of Africa in Services
- Lack of innovation policies at regional/local levels?

<table>
<thead>
<tr>
<th>Year</th>
<th>Industry</th>
<th>Services</th>
<th>Agriculture</th>
<th>Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>2.4</td>
<td>3.7</td>
<td>2.1</td>
<td>3.3</td>
</tr>
<tr>
<td>2000</td>
<td>4.3</td>
<td>3.4</td>
<td>1.4</td>
<td>4.3</td>
</tr>
<tr>
<td>2001</td>
<td>3.6</td>
<td>2.9</td>
<td>4.7</td>
<td>4.1</td>
</tr>
<tr>
<td>2002</td>
<td>2.6</td>
<td>3.4</td>
<td>2.8</td>
<td>3.5</td>
</tr>
<tr>
<td>2003</td>
<td>4.1</td>
<td>3.6</td>
<td>3.1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Source: Data from ADfB, *African Development Report 2004*
2. The new modernization process: Flexibility and Agility
The Chain of a structural change

Flexibility of:
People
Processes
Technology and Diffusion policy

Global Economic changes
Unpredictability
Uncertainty

Agility
Adaptiveness
Responsiveness

Stages Of Competitive Development: Towards a modernization process

- **Factor-Driven Economy**
  - Input Cost

- **Investment-Driven Economy**
  - Efficiency

- **Innovation & Knowledge Driven Economy**
  - Unique Value


Building capabilities on existing productive sectors/segments/niches through learning and innovation

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3. Regional competitiveness in Global Value chain:
Concrete objectives behind the improvement of Regional Performance

- Increase taxes collection
- Increase workers income and business profits
- Generate decent employment from productive capacity initiatives
- Take advantages of opportunities of global markets

Region: No clear entity

Regions
Sub-region
Provinces
Districts
Autonomous zones
Whole country
Subsidiary states
Confederal states
Groups of counties
Metropolitan
Hubs of towns
Peripheries
Regional competitiveness:
New industrial geography of production and intra-trade and exports

Agglomeration economies

Regional competitiveness

Local endogenous growth and capability building (learning process)

A new Glocal culture:
Coo-petition (competition and cooperation)
Synergy and Complementarity

Building capabilities on existing productive sectors/segments/niches through learning and innovation

Reducing transaction costs to Total Regional Productivity Paradigm
Region as a Stabilization of Migration flows and Brain drain
Region as a Hubs of knowledge and technology diffusion
Region as a source of wealth generation and decent job creation
Regional specialization: Export and outsourcing
Regional approach: Production close to input

Source: Inspired by Prof. Ronald L. Martin, A study on the factors of Regional Competitiveness, Draft report for the European Commission, Directorate-General Regional Policy, European Union, university of Cambridge, 2005
Main regional factors of competitiveness:

Infrastructure and connectivity

Human Capital and skilled and agile workforce

Predictable and productive environment

Operational Public-Private Partnership Body (ies) organized in a network and led by representatives of the Private sector (including finance)

Regulatory and incentives roles of the Regional State or Government

Source: Inspired by Prof. Ronald L. Martin, op. cit. 2-32
Identify Agile Regions and upgrade the less competitive ones

1. Identify potential driving factors

2. Classify regions according to selected criteria (GDP, Labour productivity, availability of skills and outsource possibilities, build sectoral drivers and regional scoreboard)

3. Peers Review mechanism with similar regions outside Africa (Study and experience sharing tours)

4. PPPB monitoring mechanism with Budget (led by the private sector on a rotative basis)

5. Towards a Regional Watch system (Competitiveness observatory built on a network basis)

APCI: Sectoral Action plans (national levels)
Regional Road Maps (Regional levels)

Value chains, Competitiveness, Diversification, Employment
Innovation is key for a competitive Region performing in a Global production networks system

- A non-linear process
- Innovation cannot be limited to technological innovation, innovation in managerial, organisational, marketing, new use in new contexts or technology and knowledge, new thinking, new approaches
- Innovation cannot be exclusively limited to “high tech users” Traditional sectors are concerned
- Multiple Actors under Market pressure (Government, innovation councils, scientists, suppliers, customers, enterprises, competitors…) structured in clusters, technology parks, free-processing zones, technology incubators, science parks, Diaspora/Brain gain…)

A broad Definition of innovation in a region:

1. Identification and diffusion of a product, process, practice which is new in a region environment (building on dynamic products)
2. Everything that helps an enterprise adapt to a changing environment (productivity improvement and technological and organizational upgrading)

Source: Industrial Development Report 2002/2003, p 115; See also Luc Hendrickx, Director fro enterprise policy at the European Association of Craft, Small and Medium-sized Enterprises
Innovation as part of an Agglomeration Process

✓ Looking for a minimum critical level of added value combination and common features
✓ Hub of Competitiveness (concentration and synergies)
✓ Regional Competitiveness (convergence)
✓ Development of Cluster (specialization and agglomeration)

Selected characteristics: Measuring competitiveness, using productivity

1. R&D,
2. Win-Win Public-Private Partnership,
3. Creation and Diffusion of knowledge,
4. Fiscal and social incentives,
5. Networking,
6. Creating and maintaining jobs, Positive collateral effects,
7. Benchmarking with competitiveness indicators (drivers...),
8. Learning process,
9. Flexibility/Agility of enterprises,
10. Up-grading technological levels,
11. Modernization process...

Technological content: Benchmarking World Regions, 1981-2000

Source: UNIDO Data base 2004: calculated from Comtrade Database
High technology exports
% of manufactured exports


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Measuring Competitiveness using Productivity

✓ “Productivity depends on both the value of a nation’s products and services, measures by the prices they can command in open markets, and the efficiency with which they can be produced”

✓ Achieving high productivity in all sectors and at the regional level means that economies reached a high level of collective cohesion and coherence actions which could generate:

✓ High wages
✓ automatic upgrading process
✓ Strong currency
✓ Attractive returns to capital
✓ High standard of living

✓ Competitiveness is defined as the ability to produce goods and services which meet the test of international markets, while at the same time maintaining high and sustainable levels of income with the ability of the agglomerated economies to generate with no special protection, relatively high income and employment levels”, Adapted from European Commission 1999.

Source: See mainly M. Porter
UNIDO approach to measure industrial performance:

Productivity

Growth

Industrial Capabilities

Industrial Complexity & Upgrading

Competitive Industrial Performance Index (CIPI)
**Industrial Performance:**

“Attempt to qualify competitiveness in domestic and export markets”

<table>
<thead>
<tr>
<th>CIPI 1: Qualifying industrial performance</th>
<th>1. Industrial capacity</th>
<th>2. Industrial capability</th>
<th>3. 1 Industrial and technological complexity</th>
<th>4.1 Industrial upgrading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component indices used in IDR 2002/2003</td>
<td>Manufacturing Value added per capita</td>
<td>Manufactured exports per capita</td>
<td>Share of medium and high technology activities in Manufacturing value added</td>
<td>Share of medium and high technology products in Manufactured exports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CIPI 2: Qualifying industrial performance</th>
<th>1. Industrial capacity</th>
<th>2. Industrial capability</th>
<th>3.2 Intensity of Industrialization</th>
<th>4.2 Export Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Component indices used in IDR 2004/2005</td>
<td>Manufacturing Value added per capita</td>
<td>Manufactured exports per capita</td>
<td>a. Share of medium and high tech activities in Manufacturing value added</td>
<td>a. Share of medium and high technology in Manufactured exports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>b. Share of Manufacturing value added in Gross domestic product</td>
<td>b. Share of Manufactured exports in total exports</td>
</tr>
</tbody>
</table>
Benchmarking South Africa with selected countries, (index value between 0-1)

Source: UNIDO Scoreboard Database

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5. Innovation and Learning at the enterprise level
Innovation and learning in global value chains:

- Generating information and knowledge in at least three innovative directions: process, product and function
- Markedly improving inter-enterprise process and supply chain efficiency
- Important product development occurring both within and between linkages
- Internal enterprise process innovation as a new culture
- Gains in changing the mix of activities within enterprises and the global value chain through emphasizing design, finishing and marketing

Supporting innovation and learning by firms

Institutional support to technological efforts of firms: Codification becomes crucial

**Basic industrial services**
- Promote inward investment
- Provide export services
- Provide management services
  - Collect marketing information
  - Collect data on exports and imports
  - Provide managerial consulting
- Provide financial services (accounting, tax assistance, investment advice)

**Technology Information Centres**
- Provide information technology to firms, including networks, software, Internet capabilities, intranet, and databases
- Perform troubleshooting, assistance, and repair to firms
- Provide training in informational technology applications

**Metrology, Standards, Testing, and Quality Control Centres**
- Define domestic standards
- Assist firms in meeting International Organization for Standardization (ISO) compliance standards
  - Train firms in ISO standards and regulatory requirements
  - Test products to ensure compliance with standards
  - Provide technical assistance to firms
- Help firms with calibration of instruments
  - Maintain calibrated standards and calibration equipment
  - Calibrate firms’ machiner

**Productivity Centres**
- Improve quality
- Improve productivity, efficiency
- Provide training

**Technological Extension Agencies**
- Extend available technology to businesses lacking technical capabilities
- Help firms use cleaner production technologies
- Provide information on available technology
- Identify problems and use access to technology sources to solve problems
- Serve as external consultants and assist firms with trouble-shooting
- Promote cooperation of small and medium-size enterprises with larger research and cluster initiatives (South Africa MAC program)

**Research and Development Laboratories**
- Design new processes and products.
- Train businesses through demonstration, participation and extension
- Implement new technologies
  - Import and learn foreign technology
  - Adapt foreign technologies to local needs
  - Integrate these technologies into economy in collaboration with firms

The way forward: Five principles for National Strategy:
Promoting Regional Innovation and Learning

1. Set priorities for policy intervention in line with the vision (Public/Private)

2. Leverage national resources with foreign one (as part of the global value chains)

3. Public-Private Coordination of the vision, the strategy, the framework conditions and the drivers

4. Local capacity building in terms of skills, knowledge, competencies and skills for operation

5. Benchmarking with key actors in the international community in strategy formulation

6. African

Productive Capacity Initiative (APCI) and its Flexible Facility

A well targeted programme-framework to bolster the implementation of NEPAD
Africa Productive Capacity Initiative (APCI): NEPAD component on sustainable industrial development

The APCI is the policy framework for Africa’s industrialisation effort

✓ Comprehensive programme framework for developing value chains based on the existing strengths and competencies of organized groups of stakeholders active in promoting productive capacity at national, regional and continental levels

☐ Eight (8) core sectors: food processing, textiles and garments, mineral and metals products, woods and woods products, automobile equipment and assembly, pharmaceuticals and building materials

☐ Several cross-cutting issues

☐ Promoting Public Private Partnerships at all levels
Full Support to APCI: From 2002 to 2005
UN, CAMI, UNIDO, NEPAD, AU, African Private Sector, UK Commission for Africa

1. General Assembly Resolution 57/297, December 2002: “Called upon the international community, including the UN System to channel its support for Africa’s industrialization efforts within the framework of the New Partnership for Africa’s Development”

2. UNIDO’s and CAMI’s proposal was: Africa Productive Capacity Initiative (APCI) CAMI Resolutions - 28 Nov 2003 and endorsed by UNIDO General Conference 5 Dec. 2003 as well as adopted as the sub-regional levels

3. APCI was endorsed as the NEPAD component on Sustainable Industrial Development and received support of African Union (African Heads of State in July 2004)

4. APCI as the official follow-up to the former IDDA (end 2003), Report of the UN Secretary General on NEPAD implementation on Industrialisation (A/59/206, 3 August 2004, p. 8.)

5. APCI adopted by the World Congress of the African Private Sector organized by the African Business Round Table, (Dakar, 19 Nov 2004)

6. APCI acknowledged by the UK Commission for Africa, March 2005
Definition: the Africa Productive Capacity Initiative (APCI) is based on the value chain approach;

✓ A value chain is the sequence of production or value added activities leading to and supporting end users of a particular product: From inception to final consumption

✓ Productive Capacity is the ability:

☐ To produce goods that meet the quality requirements of present markets, and to upgrade in order to tap future markets.

☐ Mastering the above through Public-Private Sector Partnerships should enable Africa to ensure its sustainable participation in the new global production settings based on production networks.
Regional and Sectoral Priorities in Support to Private Sector Development and Regional Economic Integration

<table>
<thead>
<tr>
<th>ISIC* Rev. 2 or 3</th>
<th>8 Sectors</th>
<th>Eastern Africa</th>
<th>Central Africa</th>
<th>Western Africa</th>
<th>Northern Africa</th>
<th>Southern Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food products, beverages and tobacco (ISIC 311/2/3/4)</td>
<td>Agro-food</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textiles and wearing apparel (ISIC 321/2)</td>
<td>Textile and Garment</td>
<td></td>
<td></td>
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<tr>
<td>Leather and footwear (ISIC 331)</td>
<td>Leather and Leather products</td>
<td></td>
<td></td>
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<tr>
<td>Wood and cork products (ISIC 331)</td>
<td>Wood and Wood products</td>
<td></td>
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</tr>
<tr>
<td>Metallic and non-metallic mineral products (ISIC 281, 361/2/9)</td>
<td>Mineral and Metallic products (processing of)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Transport equipment (ISIC 384)</td>
<td>Auto equipment and assembly</td>
<td></td>
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<tr>
<td>Chemicals (ISIC 351/2)</td>
<td>Pharmaceuticals products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Building materials**</td>
<td></td>
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</tbody>
</table>

* Sectors are structured according to the International Standard Industrial Classification (Revision 2 or 3)
** Not anymore included in UNIDO technical assistance
*** Priority of selected countries in SADC
Source: Conclusions of the Ministerial sessions of various Sub-regional CAMI Meetings 2002 and 2003.
## Cross-Cutting Priorities (estimated ranking)

in support to Private Sector Development and Regional Economic Integration

<table>
<thead>
<tr>
<th>Promoting selected segments of the value chains or UNIDO Services Modules (i.e. Integrated Programmes):</th>
<th>Eastern Africa</th>
<th>Central Africa</th>
<th>Western Africa</th>
<th>Northern Africa</th>
<th>Southern Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmonization of industrial strategies and policies (including up-grading of statistical data)</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Improving quality infrastructure and investment promotion</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Energy supply especially in rural areas and modular costs</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Information and communication technologies (use of Internet to reduce transaction costs in productive activities)</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Focusing on technology diffusion, clean production and productivity</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Conducive regulatory and business environment (support systems)</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Up-grading of skills through learning and innovation process</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Conclusions of the Ministerial sessions of various Sub-regional CAMI Meetings 2002 and 2003
The Flexible APCF
(African Productive Capacity Facility)

- A set of resources dedicated to the support of regional and sectoral productive capacity initiatives
  - Loans
  - Loans guarantees
  - Grants
  - Technical assistance and expertise
  - Fiscal measures
  - Contribution in kind

- Marketing each identified financial stakeholders
  - Financial institutions (starting with IDB, WADB, ADB, BADEA...)
  - Private sector’s contributions
  - Supportive Donors (Starting with Blair Commission, TICAD/Japan)
  - International organizations (UNIDO (seed money), UNDP, ILO, ACBF...)
  - Venture Capital
  - Governments’ contribution (Cameroon, Nigeria)
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**Policy Dimension**
(endogenous development strategies?)

**Value Chain Methodology and Peers’ review mechanism on industrial performance**

**Leveraging on the Private sector: Improving industrial Health**

**Diffusion of Environment Sound Technologies (EST)**

**IDR 2002/2003: Competing through innovation and learning**

**Enlisting the private sector in Poverty Reduction**

**Diffusion of Advanced Technologies**

**Promoting Industrial Policy Capabilities for a predictable environment**

**IDR 2004**

**NEPAD/APCI**

**Policy Paper on Productive Capacity Initiative**

**Policy needs**

**From Elusive promise to reality in LICs/LDCs**

**Strengthening a network of Observatories on competitiveness, Productive capacity and Employment**

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Operational Dimension

Policy Paper on Productive Capacity Initiative

Ownership of Stakeholders

Sub-regional and national dimensions

Institutional conducive Infrastructure

Joint Resources Mobilization

Advocacy and Global Forum

Regional Economic Communities (RECs)

Bottom-up approach

Building predictability

Financial means

Coordination with AU/NEPAD and UN

Least Industrialized countries

MVA structurally below 17% of GDP

Building Joint Teams to raise awareness on Innovation, productivity and competitiveness
Conclusion: Promoting Agglomeration approaches
Productive Capacity Building Strategy

Global Competitive Position

- Improving industrial Competitiveness
- Inter-Intra-firms co-op- petition
- Glocal negotiation
- Flexible African Productive Capacity Facility

NEPAD’ component on sustainable industrial development

Harnessing Capability Formation

Sectoral Road Maps/ Actions Plans

Regional/Sectoral Programmes/Projects

Global and Local value chains and Production Networks

Interaction Points:

- CAMI
- NEPAD
- AU
- UNIDO
- RECs
- Governments
- Private sectors
- DFIs
- Donors
- Intelligence centers

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The Road Map on Regional Competitiveness

Collective efficiency

Benchmarking Regional Manufacturing, Trade Performance and determinants of Regional industrial performance

Establishing a PPPB and a predictable regional Business and Policy environment

Collective efficiency

Competitiveness Observatory (networks) and sub-sectoral watch system for the Private sector

Sectoral Actions Plans and Road Maps on Regional/sectoral competitiveness
Discussions?

Thank you for your attention!