TECHNOLOGY, EXPORTS AND DEVELOPMENT: NEW OPPORTUNITIES FOR BUSINESS

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THREE COMPONENTS:

1. TECHNOLOGY ABSORPTION AND MANUFACTURING EXPORTERS
2. BUILDING BACKWARD LINKAGES FROM THE COMMODITY SECTOR
3. NEW FORMS OF ENTREPRENEURSHIP
DRAWN FROM WORLD BANK STUDY

• FOSTERING TECHNOLOGY ABSORPTION IN ENTERPRISES IN SOUTHERN AFRICA (SOUTH AFRICA; MAURITIUS; LESOTHO; NAMIBIA) EXPORT ORIENTED SECTORS
FIRM CASE STUDIES AND SURVEY DATA
TECHNOLOGY ACQUISITION AND ABSORPTION IS KEY

• SIGNIFICANTLY BEHIND THE GLOBAL FRONTIER

• SOUTH AFRICA PARTIAL EXCEPTION IN A VERY FEW AREAS – MINING EQUIPMENT AND SPECIALIST SERVICES; ICT

• YET MUCH POLICY SUPPORT IS STILL FOCUSED ON INNOVATION

• VERY FEW FIRMS ACCESS ANY FORM OF SUPPORT
1. PRIMARY CHANNEL ACQUISITION OF PLANT AND EQUIPMENT

- SOUTH AFRICA – 80%; MAURITIUS 54%.
- ENHANCED WHEN ACCOMPANIED BY TRAINING AND SKILLING
- CHURN IN TRAINED OPERATIVES RESULTS IN TOO LITTLE TRAINING
- ONE POSSIBLE POLICY RESPONSE – MAURITIUS TDS.
2. LEARNING BY EXPORTING

- ENTRY INTO EXPORT MARKETS STRONGLY ASSOCIATED WITH TECHNOLOGY UPGRAADING
- COMPETITION AND STANDARDS REQUIRE UPGRAADING
- IN PART A RESULT OF INCREASED SCALE
- TECHNOLOGICAL COMPETENCIES A DETERMINANT OF THE EXPORT DESTINATION
3. FOREIGN DIRECT INVESTMENT

• FOREIGN FIRMS:
  - MORE PRODUCTIVE
  - EMPLOY MORE SKILLS
  - TRAIN MORE
  - MORE INNOVATIVE
  - MORE EXPORT ORIENTED

BUT EXPORTS OFTEN LOW COST ASSEMBLY PRODUCTS E.G. LESOTHO TEXTILES
FDI (2) : TECHNOLOGY SPILLOVERS

A KEY BENEFIT: BUT HEAVILY DEPENDENT ON
(A) TECHNOLOGICAL CAPACITIES OF LOCAL FIRMS
(B) ACCESS TO SKILLS

MAY BE NO SPILLOVERS – LESOTHO CLOTHING
FDI (3): KEY CONSTRAINTS

- LABOUR MARKET INFLEXIBILITY
- REGULATORY AND POLITICAL UNCERTAINTY
- CORRUPTION
- CRIME
- EXCHANGE CONTROLS
- SKILLS
4. SKILLS

• SHORTAGES ARE UBIQUITOUS (LESS SO IN MAURITIUS)
• CONSTRAINT FOR ALL FIRMS BUT HEAVIEST INCIDENCE FALLS ON NEW ENTRANTS; SMALL AND LESS CAPITALISED FIRMS
• BY CONTRAST, WELL-ESTABLISHED FIRMS “CORNER THE MARKET”
• LIMITS TECHNOLOGY ABSORPTION
• ADDS SIGNIFICANTLY TO COST
• REDUCES COMPETITION
• CONSTRAINS FDI
SKILLS (2): FIRM RESPONSE AND POLICY

• SOME TRAINING – BUT LIMITED
• IMPORTATION – BUT CONSTRAINED
• NOT INVESTING
• INCREASING K INTENSITY

ENHANCE THE INCENTIVE TO TRAIN
RELAX RESTRICTIONS ON IMMIGRATION
5. FIRM LEVEL R&D

• R&D CORRELATED WITH FIRM PRODUCTIVITY
• A DETERMINANT OF FIRM LEVEL TECHNOLOGY ABSORPTION
• IMPORTANT FOR IDENTIFICATION, SELECTION AND ADAPTATION
FIRM LEVEL R&D POLICY

- TAX ALLOWANCES FOR R&D. LIMITED EFFICACY
- DIRECT GRANTS – LIMITED REACH.

EASIER ACCESS
EXTEND LIST OF QUALIFYING EXPENDITURES
CARRY FORWARD OF THE TAX DEDUCTION
6. COLLABORATION WITH PUBLIC RESEARCH INSTITUTIONS

- WEAK - ALL COUNTRIES
- SOUTH AFRICA – SCIENTIFIC KNOWLEDGE NOT BEING ACCESED BY FIRMS (INNOVATION CHASM)

MATCHING GRANTS TO CONSORTIA OF COS. AND RESEARCH INSTITUTIONS. CONSORTIA TO BE BUSINESS LED
7. ENHANCING INNOVATION AT THE FRONTIER

- SOUTH AFRICA HAS SOME CAPACITIES AT THE GLOBAL TECHNOLOGY FRONTIER
- MINING EQUIPMENT AND SPECIALIST SERVICES
- ICT.

INNOVATION AND PRODUCTION
A REGIONAL HUB
AREAS OF CONSIDERABLE OPPORTUNITY
INNOVATION AT THE FRONTIER: POLICY

- MAJOR OPPORTUNITIES BUT ALSO CONSTRAINTS:

- MAJOR POLICY THRUST PROVISION OF SKILLS: AT ALL LEVELS
BACKWARD LINKAGES FROM EXPORT ORIENTED COMMODITY SECTOR

FACTORS FAVOURING LOCAL LINKAGES:

• THE COMMODITIES BOOM
• MORE OPEN POLICIES COMBINED WITH DEMANDS FOR LOCAL DEVELOPMENT
• INCREASE IN OUTSOURCING
• JUST-IN-TIME INPUT REQUIREMENTS
• NEW APPROACH BY LARGE MINING TNCs
POLICY DESIGN

• COLLABORATION WITH COMMODITY EXPORTERS

• GRADUALLY STRENGTHEN THE TECHNOLOGICAL CAPACITIES OF LOCAL SUPPLIERS
NEW FORMS OF ENTREPRENEURSHIP

HYBRID ENTREPRENEURSHIP: MARKET – SOCIAL – ENVIRONMENTAL

INNOVATION INTERMEDIARIES

DISRUPTIVE TECHNOLOGIES

AIMED AT POOR CONSUMERS

• EG IN KENYAN AGRICULTURE.