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Competitiveness in Pakistan: A Case Study of the ICT Industry

Motivation

Great potential for growth and development – largely untapped

Industrial Performance and weak structural transformation

Case study approach can provide valuable insights

Aims and Objectives

HIGHLIGHT ROLE OF INDUSTRY IN PAKISTAN'S ECONOMY

ANALYZE CONSTRAINTS TO COMPETITIVENESS

SPELL OUT KEY CHALLENGES TO PRODUCTIVITY GAINS

RECOMMEND POLICY INTERVENTIONS

Outline

Introduction

ICT Industry in Pakistan

Key Sectoral Issues

Impediments to Growth

Policy Recommendations

Information and Communications Technology Industry

Primer on Industry

Key trends

Key issues

Primer on the Industry

Cost-effective tool for socio-economic development

Increasingly integrated into financial sector since 2003-04

Government taking an interest in the sector

Key Emerging Trends

- Growing Domestic Demand
- Innovative Business Models
- Systems Integration
- Growing and Fairly Robust Start-up Eco-system
- Growing Number of Success Stories

Research on the ICT Industry in Pakistan

Key research commissioned: PSEB (2004-05)

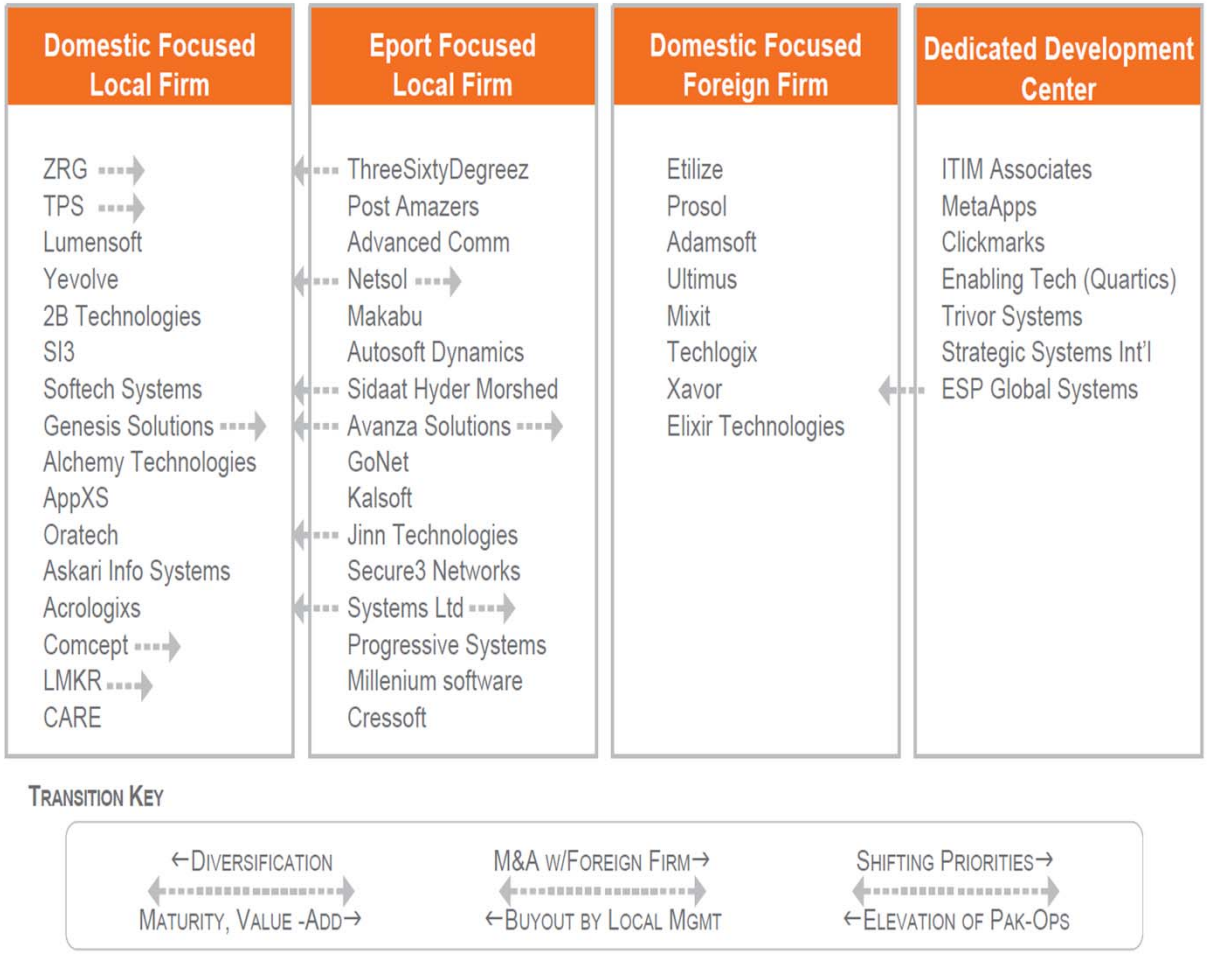
Area: Strategic challenges and best practices

Approach: analyzed organizational characteristics

Findings:

- Industry more fragmented then
- Lacking future direction
- Growth hampered by 200 people barrier
- Strategic challenges for industry cannot be generalized – function of business model

Business Models Identified



Source: P@SHA

Success Story - NetSol

- Founded in 1997 in Lahore
- Now global company with offices in numerous countries
- Engaged in licensing, customization, enhancement and maintenance of financial applications suite
- Key to success - willingness to take entrepreneurial risks; prioritizing employee retention

Success Story - LMKR

- Small petroleum technology company - Mathtech – workforce: 12 employees
- Foothold - creating database & integrating with GIS
- Taken over by Haliburton; rebranded as LMK Resources
- Equity bought back in later years
- Financing approach against industry “wisdom” - reflects Silicon Valley saying

Success Story – Voxel Communications

- Faced with virtual extinction in mid-2005
- Excess capacity and equipment in Islamabad lent to client
- In exchange for outsourcing a certain number of seats to the company
- Allowed company to survive

Key Sectoral Issues

- Human Capital Deficiencies
- Low Adoption Rate of Automation
- Access to Finance
- Policy (In)Consistency
- Regulatory Burden
- Market Identification and Capture
- Institutional Weaknesses

Human Capital Deficiencies

Salaries Not Rationalized

Employees – demand salaries commensurate with **their** perceptions

Employers – perceive lack of experience, education

Result: brain-drain

Curriculum Not Aligned

With current industry needs

Graduates mismatched for industry positions

Result: on the job training

Weak Adoption of Automation

Industry is technology intensive by nature

Competitiveness requires automation

Even simple tasks not automated

Result: inefficiencies where they should not be

Trouble-shooting an alien concept

Result: fault is rarely corrected and multiplies causing greater friction

Access to Finance

- Limited access to finance for firm operations and expansion
- Banks: high transaction cost of servicing SME and free-lance
- Venture capital market: under-developed
- New initiatives, especially by PITB, show promise

Policy (In)Consistency

Industry perception - state lacks:

policy coherence

Policy consistency

Result:

no credible long-term development vision

New IT policy by PITB:

Developed in consultation with stakeholders

Regulatory Burden

Increased burden since 18th amendment

Pre: federal government

Post: federal government + provincial + local

Investment in R & D

Private sector: limited

State: numerous, with limited impact

Market Identification and Capture

Local firms:

Limited awareness of markets

PSEB:

limited success

Global markets:

unaware of capabilities and potential of Pakistani firms

Institutional Weaknesses

STPs not achieved full potential

State sponsored incentives not yielded designed benefits

Reason: lack of/inadequate follow-through

Workers acquiring skills not given appropriate jobs

Internship programmes out of sync with industry demands

Deficiencies in M & E

Impediments to Industry Growth

- Lack of appropriate business plans
- Lack of up-to-date and relevant legislation
- High quality human resources demand outstrips declining supply
- Inadequate educational system

Impediments to Growth

Mismatch in Labour Market

Lack of Widespread Entrepreneurial Spirit

Policy Shortfalls

Labour Market Mismatch

Pakistan just as competitive as India in 1970s and 1980s

Now: 3 out of 10 graduates – high caliber

ICT curriculum not current; quality lacking

Result: On-the-job training required

Weak Entrepreneurial Spirit

Exists, but not widespread or readily apparent

Number of local success stories

Silicon Valley stars

Policy Shortfalls

No shortage of ideas

But ideas are not concrete

Gap between policy formulation and implementation

Policy Recommendations

- Census of ICT Industry
- Education Policy Alignment
- Skill Development: Effective and aligned with industry
- Incentivized Industry Operations

Policy Recommendations

- Expansion of Innovation and Incubation Centers
- Effective Product and Capabilities Marketing
- Encouraging Cross Border Linkages
- Incentivizing Software Technology Park Use

Conclusion

Key issues constraining industry performance

Integrated approach - align education policy and skill development with industry demand

Potential to compete globally

Firms must be ready to do their own thing