
Key issues for African countries in Science, Technology and Innovation



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- Technology has a public goods dimension:
 - Technology, innovation to address sustainable development goals
 - Science education, access to knowledge and implications for tertiary education
 - STI and key challenges
 - agriculture and food security
 - health and access to medicines
 - Access to energy



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- Technology and innovation are essential for private enterprise development:
 - Building capabilities within countries at the enterprise level
 - Promoting technological change in small and large enterprises
 - Harnessing interactive learning
 - ICTs and private sector-led development



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- Technology and innovation capacity have a critical developmental dimension:
 - Technological development is an essential component of building productive capacity.
 - Large technology and innovation gaps exist, and developing countries particularly in Africa are often far from technology frontiers.
 - Economic catch-up requires narrowing these gaps through the accumulation of knowledge and innovation capacity, moving closer to the technology frontiers.



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- Focuses on technological change and capabilities building wherein
 - Institutional frameworks that enable the creation of dynamic capabilities are critical for learning (national, sectoral).
 - Coordination of policies and incentives is critical – education, R&D, science and technology policy, technology transfer, IPRs, - that are coordinated to promote interactive learning.



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- Promoting productive and absorptive capacities
 - » Arresting the growing technological divide
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- In a large number of developing countries, shallow financial markets often thwart their responses to developmental needs.
 - Structural vulnerabilities can be reduced inter alia through promoting technological change, which supports structural diversification and reduces the dependence of countries and economies on commodity boom/bust cycles.
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Figure 1.1: Real GDP growth rates of developed and developing countries, 1980–2010 (Per cent)

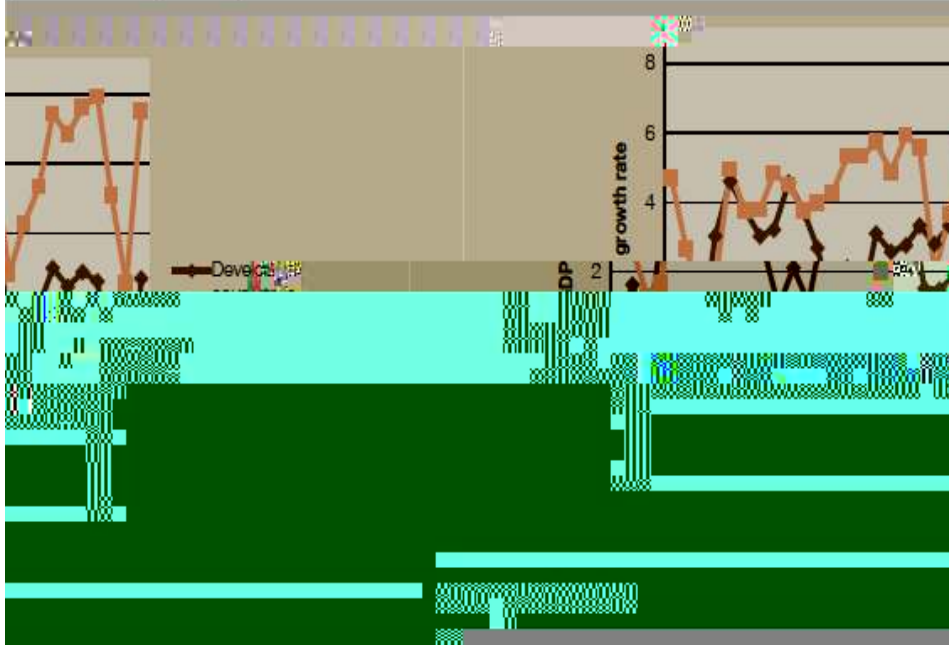




Table 2.1: Regional share of imports of capital goods (as part of total imports)

Year	Developing (Importing region)	Developed (Importing region)	Latin America (Other)	South-East Asia (Other)	Other (Other)
1970	~45	~55	~10	~10	~15
1975	~48	~52	~10	~10	~15
1980	~50	~50	~10	~10	~15
1985	~52	~48	~10	~10	~15
1990	~55	~45	~10	~10	~15
1995	~58	~42	~10	~10	~15
2000	~60	~40	~10	~10	~15
2005	~62	~38	~10	~10	~15
2010	~65	~35	~10	~10	~15
2014	~68	~32	~10	~10	~15

Source: UNCTAD Secretariat









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Figure 2.8: Imports per capita of machinery and transport equipment by developing countries

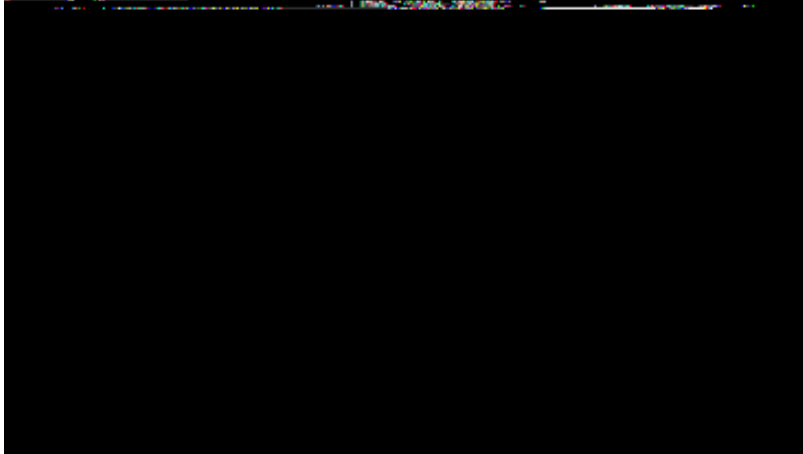


Figure 2.13: Number of scientific and technical publications in LDCs and selected countries, 1990-2007

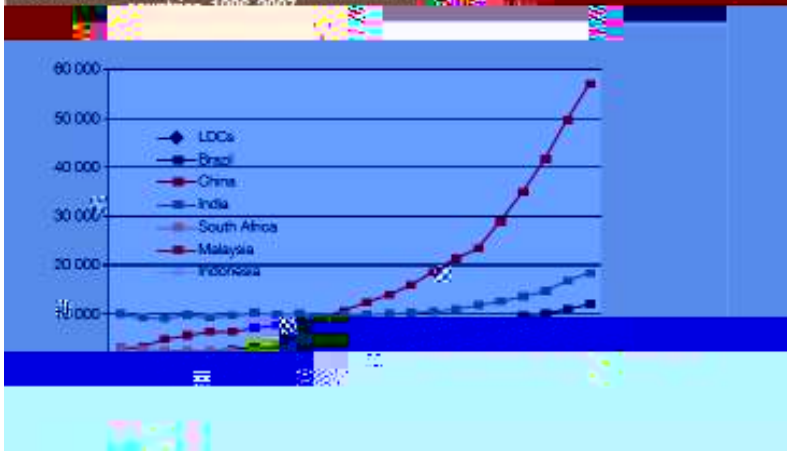


Figure 2.14: Royalty and licensing payments in LDCs and selected countries, 1990-2007 (in million USD)



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