

Higher Education and Productivity

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Goal

Sustainable

Socio-Economic Development

Overarching Approach

- Simultaneous Bi-Modal Approach Required
 - Bottom-Up
 - Basic Health, Primary Education, Water
 - Top-Down
 - Higher Education
 - Industrial Linkage

Why Top Down:

Higher Education is a tool for Poverty Alleviation

- The World Bank's* assistance in tertiary education seeks to generate economic growth as a mechanism for **sustainable poverty eradication**. This goal is promoted by
 - Building Advanced Human Capital
 - Enhancing and funding domestic research for adapting foreign technologies
 - Preparing individuals for less profitable and socially desirable careers

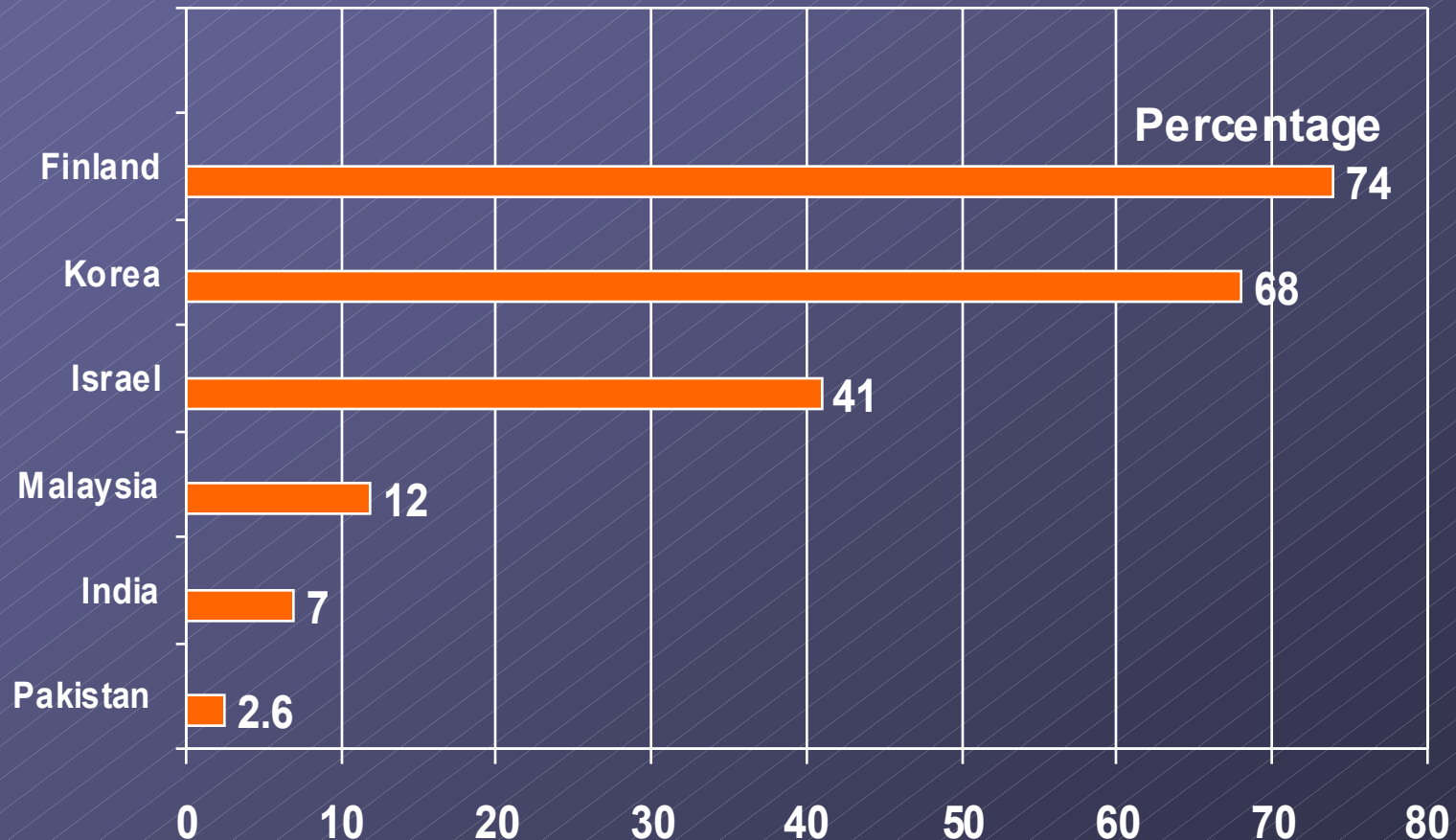
*Providing Skills for the knowledge economy
L.B. Holm-Nielsen, A. Bloom, P L Garcia-Zuniga
en breve February 2003 No.19, World Bank

Pakistan: Public Sector Management

World Bank Report, Jan. 2004 Extracts

- “In Education Pakistan appears to be at least 35 – 40 years behind East Asian Countries, and 10 – 15 years behind the South Asian Countries”
- During the past decades, “per-student spending at higher education levels declined by as much as 50% in real terms”
- “The next few years represent a period of great opportunity for Pakistan to accelerate its economic & social development”

Gross Tertiary Enrolment Ratio In Selected Countries

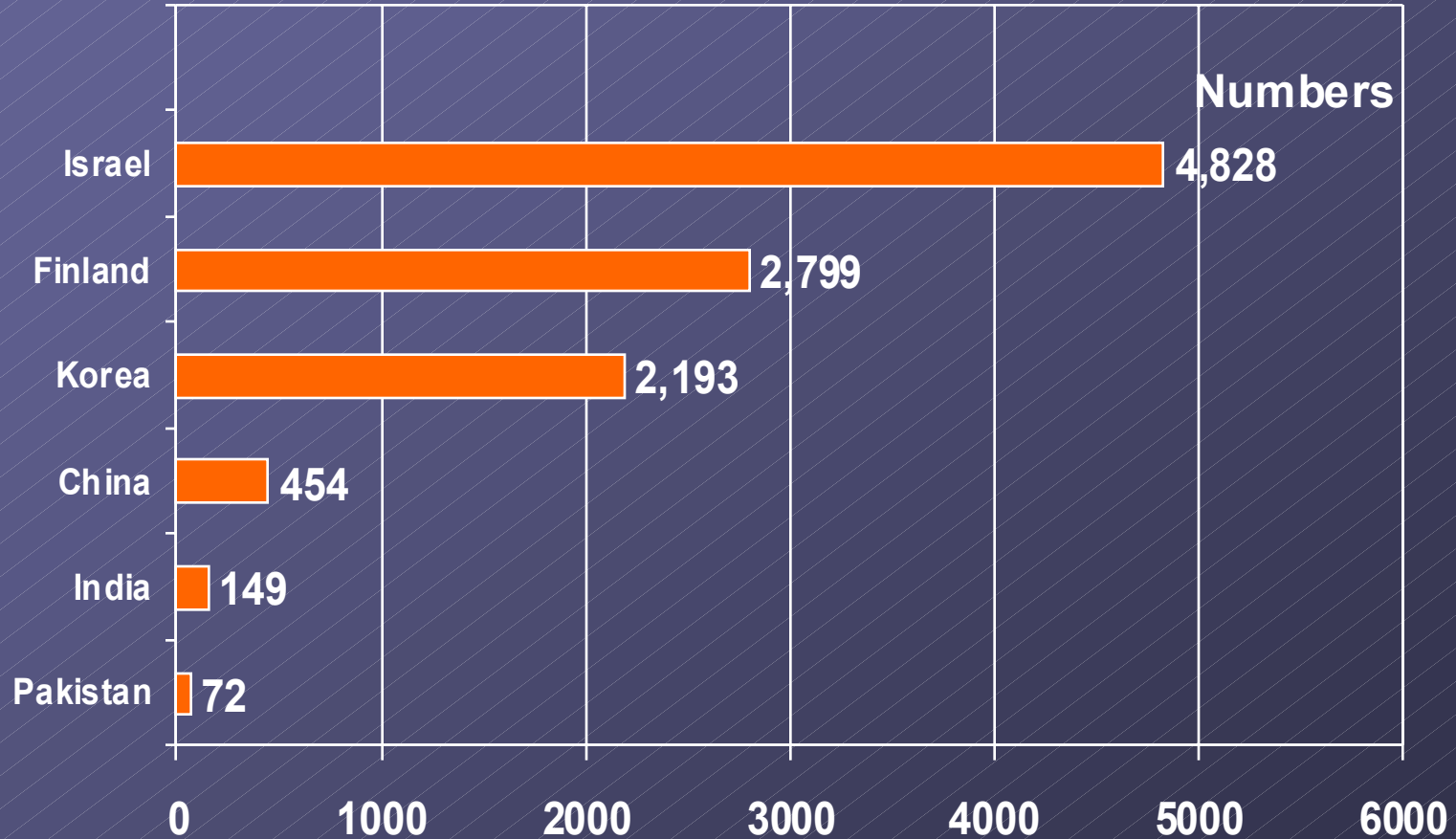


Pakistan Target

8% ??

Requirement: US\$ 1Billion per 1% increase

S&E Researchers per Million Inhabitants



Pakistan Target 200 per million by 2010/2015

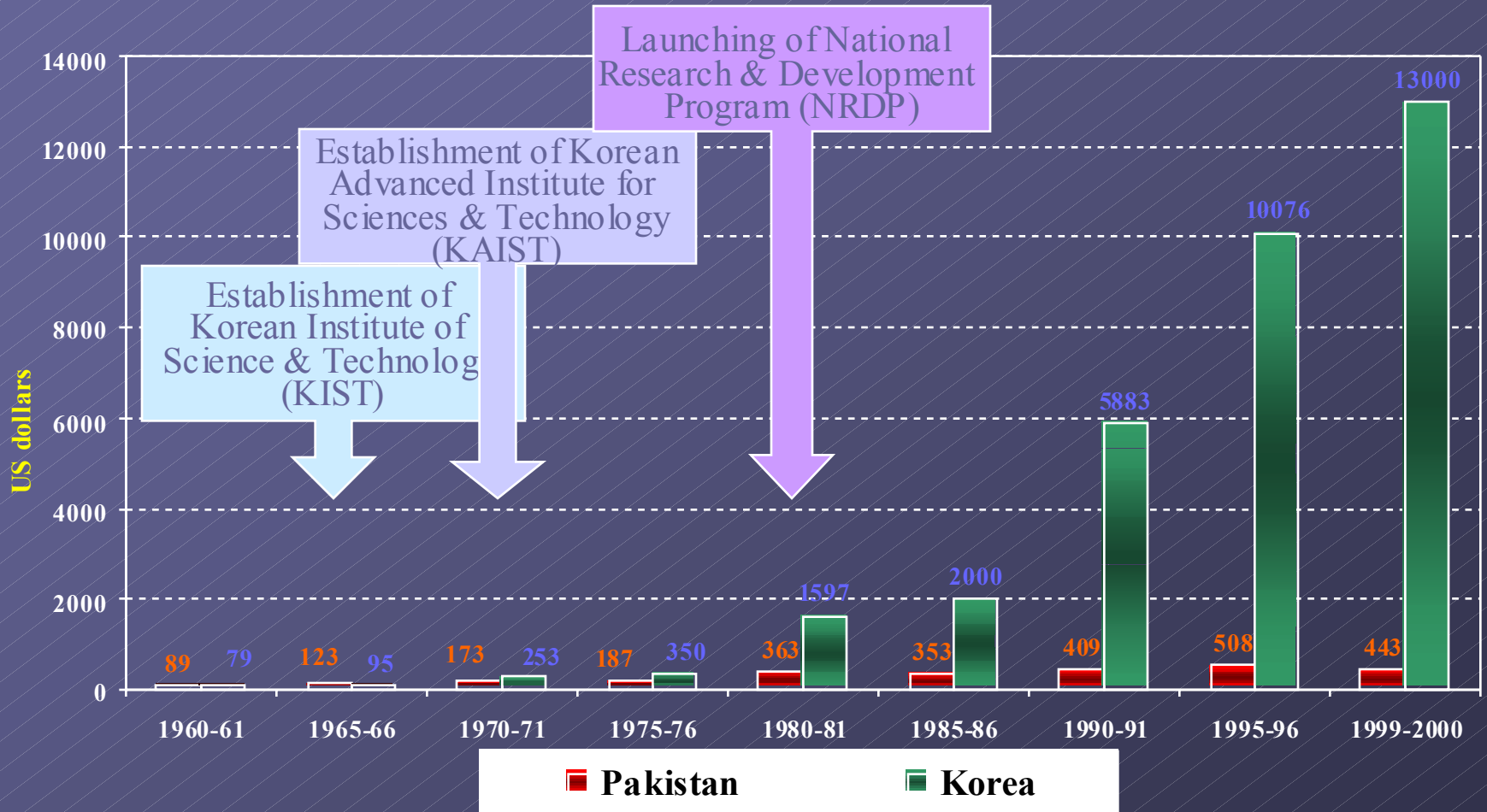
Korea: A Direct Correlation Between Technical Manpower and Exports

	1960	1970	1980	1990	2001
Higher Education Enrollment	5%	8.7%	16%	37.7%	68% *(2.6%)
Exports US\$(Millions)	32	660	17,214	63,2124	150,439 *(10,000)

* Statistics for Pakistan

Growth of Per Capita GNP

PAKISTAN & KOREA



Source Pakistan: UNESCO, Statistical Year Book 1980, 1982, 1991 and Economic Survey of Pakistan

Source Korea: Science & Technology Policy Institute (STEPI), Korea

HEC Intervention Strategy

- Faculty Development
 - Scholarships, Training, Research Support
- Governance
 - Faculty Selection, Information Mgmt. System
- Technological Infrastructure Development
 - PERN, Digital Library Program
- Focused Support in Key Areas
 - Industrial Relevance
- Linkages to the Economy
 - Developing the Culture of Innovation
- Quality Assurance
 - Accreditation, Curriculum Review, etc.

HEC Achievements

- Over 300 projects launched to support the Intervention Strategy, including:
 - 19 Indigenous/Foreign Scholarship Projects
 - University Computerization Initiative
 - Central Resource Laboratories
 - PERN & Digital Library Programme
 - National Technology Incubator
 - Tenure Track System of Appointment
 - Curriculum Review in Collaboration with Industry

Higher Education Sector Funding Yearly Funding Requirement

Sector	Funds (US\$ Mil.)
Faculty Development	15
Technological Infrastructure	10
Focused Area Support	11
Industrial Linkages	8
Governance & Higher Education Sector Reform	6
Total Yearly Funding Requirement	50
Total Requirement for 5 years	250

Conclusions

- Investment in Higher Education is essential to
 - Achieve literacy and Primary/Secondary Education targets
 - Successfully implement ALL development projects
 - Sustainable poverty reduction
 - Build Pakistan's Human Capital
 - Attain, and sustain higher GDP growth
- Additional Funding: US\$50 million yearly