



Innovation policies - at National and Regional level

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Innovation

- innovation refer to the creation, adaptation and adoption of new or improved products, processes or services"

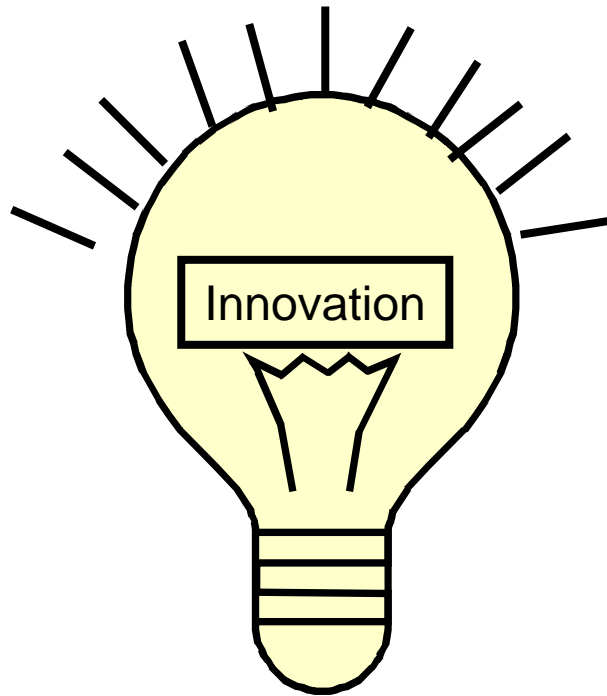


Why innovate

- In an increasingly global, increasingly knowledge-based economy, innovation assumes a greater importance than ever before.



Why policy for innovation?



- Promote innovations
- Safeguard the society, the environment and traditional knowledge
- Safeguard innovators
- Transfer the knowledge/ technology to the end users



Promote innovations

- promoting an innovation culture
- establishing a favorable environment for innovation;
 - Legal
 - Regulatory
 - financial
- gearing research more closely to innovation



Promote innovations

- Establish partnership in innovation
- Innovation policy
- easy access to the
 - Knowledge
 - Skills
 - technologies
 - finance



Promote innovations

- Realization that R & D contribute only in part to an innovation
- Adequate safeguards – to society, environment, inventors, traditional knowledge
- Transfer the knowledge/ technology to the end users



Partnership for innovation

- Partnership among
 - End-users (industry and consumers)
 - Scientists/ researchers
 - National policy unit
 - Funding organizations
 - R & D – State institutions
 - entrepreneurs
 - investors of all kinds
 - patent agents
- Adequate networking and knowledge transfer mechanisms are crucial



Realization that R & D contribute only in part to an innovation

- R&D expenditure only amounts to 27% of overall investment in innovation, even in high tech electronic equipment sector¹
- Human resource development
- Infrastructure development
- Governance (regulatory measures, institutional arrangements etc.)
- managerial and marketing skills,
- organizational, social, economic and administrative knowledge.

Innovation Policy Studies - Status report of latest results, and forthcoming tasks. <http://www.cordis.lu/innovation-policy/studies.htm#workingdocs>



Promotion policy

- Encourage natural innovativeness
- Consider applicability
 - Promote new products and processes in more traditional industries – which remain the major employer
 - Do not neglect the need for high tech innovations – to face competitions in the future
- Appreciate the “diverse routes to innovation”
- Safeguard Traditional knowledge



Safeguards

- Safeguard
 - the society
 - the environment
 - Traditional knowledge
 - Intellectual policy



Safeguard and reward innovators

- Sufficient incentives for business R+D
- Adequate rewards for successful discoveries
- IPR policy



Transfer the knowledge/ technology to the end users

- Adequate networking and knowledge transfer mechanisms
- Proximity is an important feature
 - Science parks
 - Technology incubators
- Legal, administrative and financial framework needed to stimulate the creation of new firms by research institutions.



Other considerations

- Identify and review the links between innovation policy and other policies-in particular those relating to the legal and regulatory framework
- Specific measures to foster innovation in private sector
- Identify Business interfaces (university-industry co-operation, etc.)
- patterns of demand of new products, processes and the emergence of new markets to be assessed



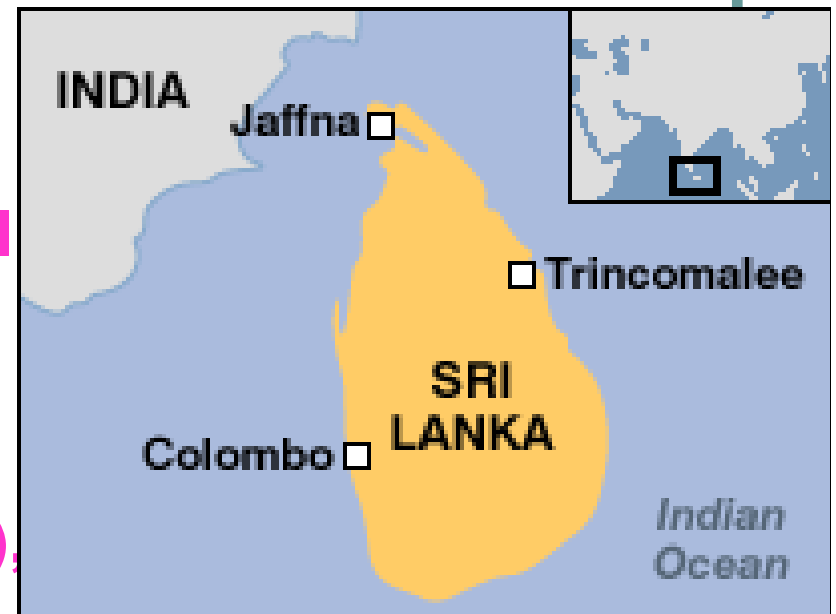
Innovation in present context - Sri Lankan perspective

Sirimali Fernando



Profile of Sri Lanka

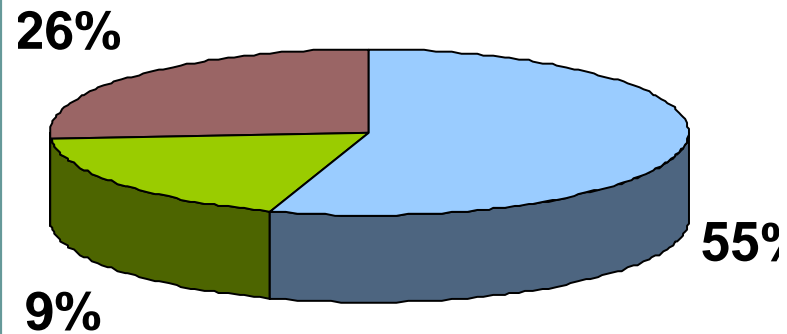
- **Area: 65,525 sq km**
- **Population: 19 million**
- **Capital: Colombo (commercial), Sri Jayewardenepura (administrative)**
- **Major languages: Sinhala, Tamil, English**
- **Major religions: Buddhism, Hinduism, Islam, Christianity**
- **Life expectancy: 70 years (men), 76 years (women)**
- **GDP growth rate : 6 (2000)**
- **Annual Per capita GDP: US\$ 870**





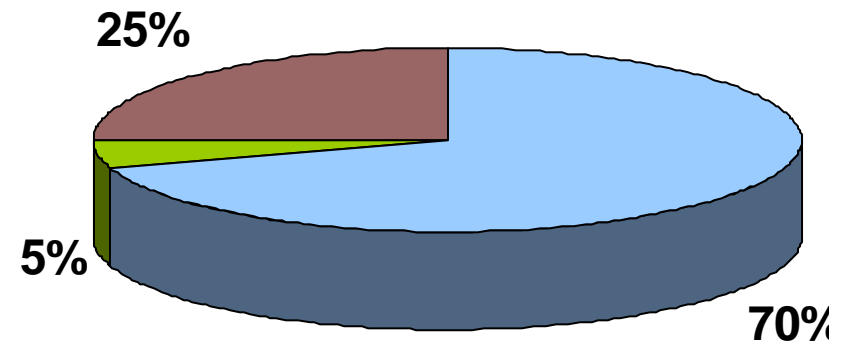
GDP – Sectoral sector performance in Sri Lanka

Sectoral composition of GDP - 2003



■ Services ■ Agriculture
■ Industry

Sectoral contribution to growth - 2003



■ Service ■ Agriculture
■ Industry



Threats and weaknesses

- The relatively low number of researchers;
- Insufficient expenditure on R&D
- Present research culture
 - Curiosity driven than demand driven
- The wide diversity in legislation, regulations, fiscal and social conditions, and heavy administrative procedures which restrict innovation;
- The separation between science and industry, education and business, training and employment;
- Difficulty in mobilizing private capital;
- Poor linking, coordination and concentration of efforts among stakeholders



Strengths and opportunities

- Human resources
- Rich biodiversity
- Wealth of Traditional/ indigenous knowledge
- Natural resources
- Potential market within the region itself



Innovative capacity

- Innovative capacity on the whole is weak at present.
- Innovative capacity of industry is skewed towards larger firms.
- SMEs lack both the internal resources and the external networks necessary for easy access to the knowledge, skills, technologies and finance,
- technology-oriented SMEs are affected by many institutional barriers and costs
- Remove unnecessary regulatory systems on the creation of new technological markets



Analysis of patents granted during 1997 -2000 in Sri Lanka

- Technological innovations – 80
- New process development – 19
- High technology products - 21



No. of patents granted during 1999-2001 in Sri Lanka

Year	Resident	Non - resident	Total
1999	78	101	179
2000	59	169	228
2001	71	104	175



From a regional perspective



From a regional perspective

- Identify the strengths and weaknesses of the region
- Monitor level of innovation - Innovation Scoreboard
- Encourage regional cooperation
 - Technology Transfer from one country to another
 - Technology Relay centers (As in EU)
- Innovation promotion in SMEs
 - Venture capital and other funding mechanisms
- Gathering, analysis and dissemination of information on S&T developments, applications and markets
 - Establishment of a regional S and T Management Information system



From a regional perspective

- **Technology Transfer from one country to another in the form of**
 - a licensing agreement
 - a joint venture agreement
 - a manufacturing agreement
 - and/or a commercial agreement with technical assistance



From a regional perspective

Innovation Relay Centers

- enhance the client's ability to perform technology transfer
 - to audit their technological needs
 - to find suitable technologies and/or partners
 - to support their clients throughout all the steps of the technology transfer process, for example
 - in assisting them in the negotiation process
 - by advising them on IPR or innovation financing
- Disseminate information on innovations via an internet based Business Bulletin System (BBS), so that Technology Offers or Requests can rapidly be conveyed across Europe
- Technology transfer at an international level - technology transfers to or from the USA , EU etc.



From a regional perspective

- **Innovation policy studies at regional level**
 - Identification of **major stakeholders in the design and implementation of innovation measures affecting enterprises.**
 - Review of the legal and administrative framework including **competition rules and their application, administrative procedures to create companies, protection of intellectual property rights, etc. in an enterprise innovation policy framework.**
 - Examination and comparative analysis of **company tax incentives to promote investments in innovation** (technology and intangibles) by enterprises.



References

- National survey of research and development in Sri Lanka – 2000. National science Foundation : pp 24-30
- <http://www.cordis.lu/en/home.html>
- European innovation scoreboard
<http://trendchart.cordis.lu/scoreboard2003/index.html>