

Free software as driver of Innovation

– Experiences from India

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Innovation

Just another Buzzword ?



Defining Innovation

- Joseph Shumpeter, 1934
- “new combinations” of new or existing knowledge, resources, equipment, and other factors



Catch-up

- Technologically lagging regions catching up with regions in the frontier
- Challenges are
 - Access to knowledge (hard technology)
 - Creating institutions required (soft technology)



Catch up experience from Past

- Based on 'Public research institutions and economic catch-up' by R Mazzoleni and RR Nelson
- Modes of Knowledge Flow
- Cross-border flow of people
 - Textile Manufacturing from Briton to USA
 - Japan industry learning from west
 - Korea and Taiwan electronic industry from USA
- Companies as agents of knowledge flow (20th century)
- Transnational Humanflow as part of university studies in technology and applied sciences (21st century)



Catch up experience from Past

- Role of State
 - Infant industry protection
 - Free trade ?
 - Challenge of global politics
- Patents and Copyrights



Indian Catch up experience

- Indian Pharma
 - Local research and movement of people
 - Accessing technology from eastern Europe
 - State created demand
 - Changing patent regime
- Indian Petroleum sector
 - Own oil refineries
 - Local private industry spin-off



Indian software industry

- India software and computing
 - For planning and nuclear technology
- Unix and Indian Banking sector
- Free software ?



Kerala Stories

- IT@School
- KSEB
 - Data center, database management, GIS etc
- Govt in general



Private industry

- Odoo
- Drupal, Typo3
- And a lot more
- 70% firms depending on free software for their service



State – The real entrepreneur

- Public policy as key driver of change
- State as source of demand
- Public research and public sector industry
- State – knowing when to enter and when to get out



Computing Sovereignty of the nation at stake

