Intellectual Capital for Communities
in the Knowledge Economy

Regional Indicators and IC Building

Jacques van der Meer

European Investment Bank

EIB's Innovation 2010 Initiative
Enactment of the Lisbon Agenda

EUR 10.7 bn loans advanced in 2005

- Research, development and innovation (~60%)
- Education and Training
- Information and Communication Technology

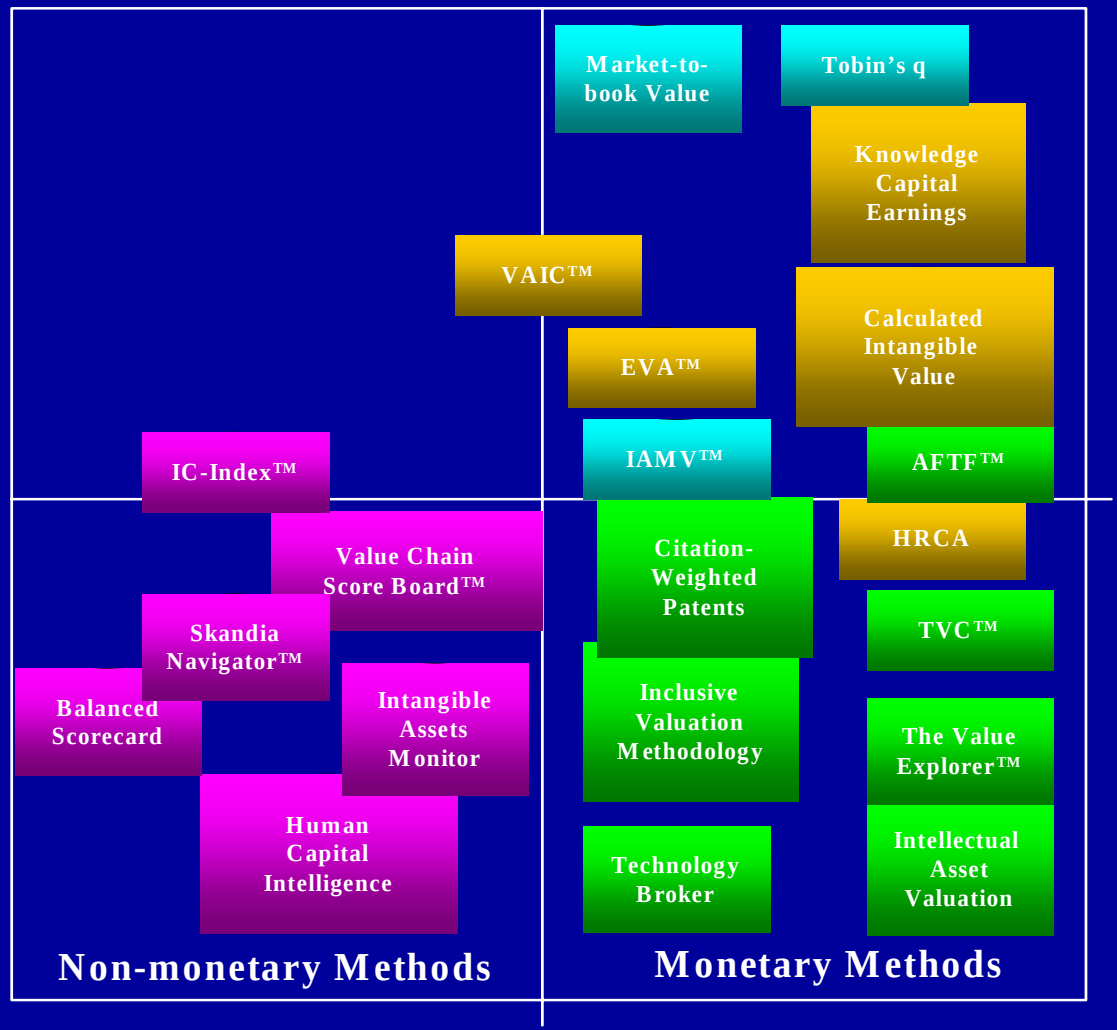
Shift from Fixed Capital to Intellectual Capital Formation

Key question

How do we know that these investments add value and can we measure it?

Measuring Mess?

Intangible Assets Measuring Models



Legend

- Market Capitalisation Method
- Return on Assets Method
- Direct Intellectual Capital
- Score Card Method

Holistic / non-monetary indicators

OECD: Science and Technology Indicators/ Education at a Glance

World Bank: Knowledge Economy Index; Knowledge Assessment Methodology

The Lisbon Review (World Economic Forum)

EU Innovation scoreboard, Eurostat / EU-DG statistics

Stock and Input indicators

Performance indicators

BUT….

What are we really « looking » at?

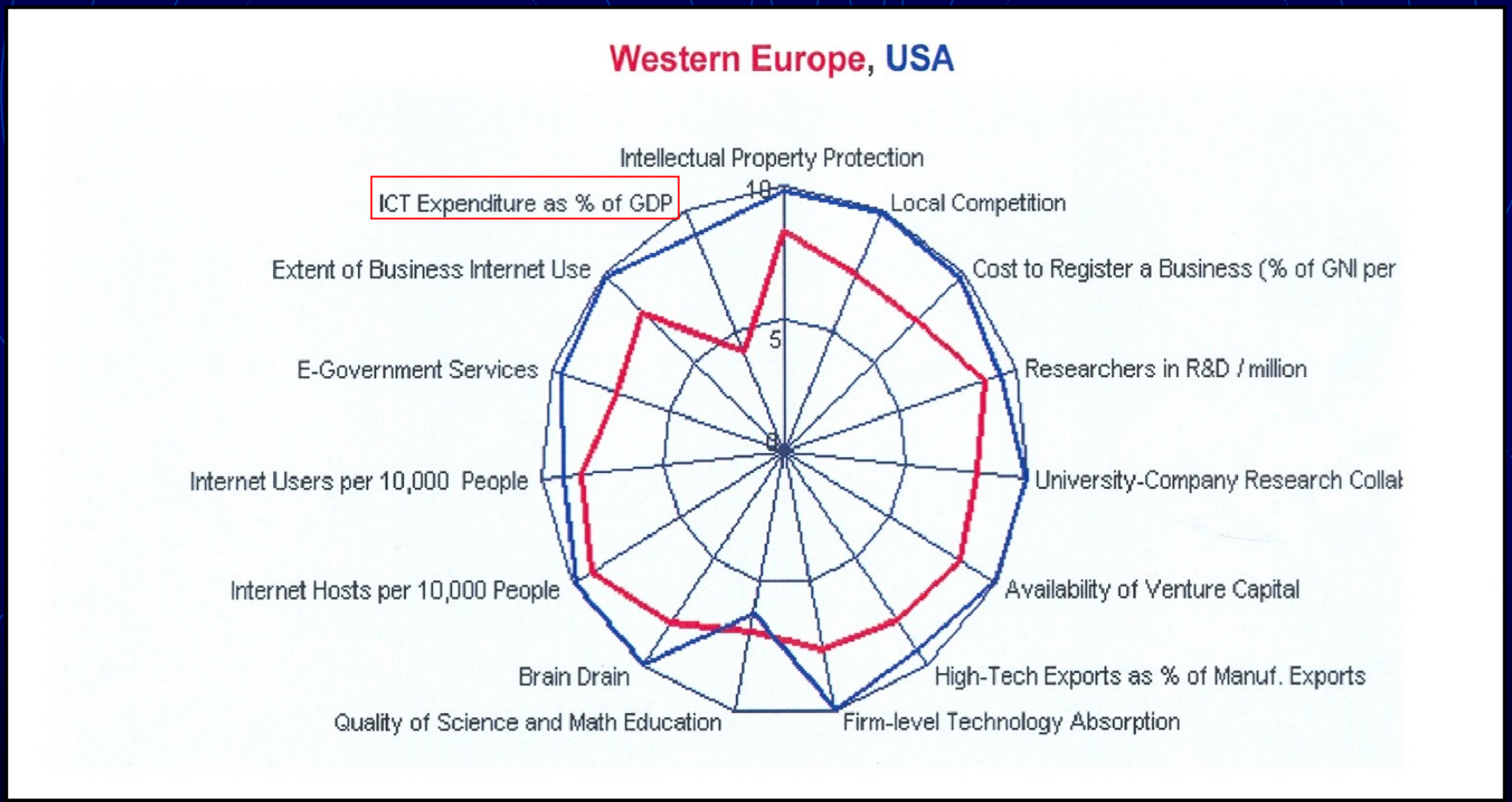
Intangibles / Intellectual Capital

An organization / community's indigenous capacity (to adequately realize its objectives) / (create social-economic value from its resources) by arranging its social relations and effectively meet requirements of the external environment"

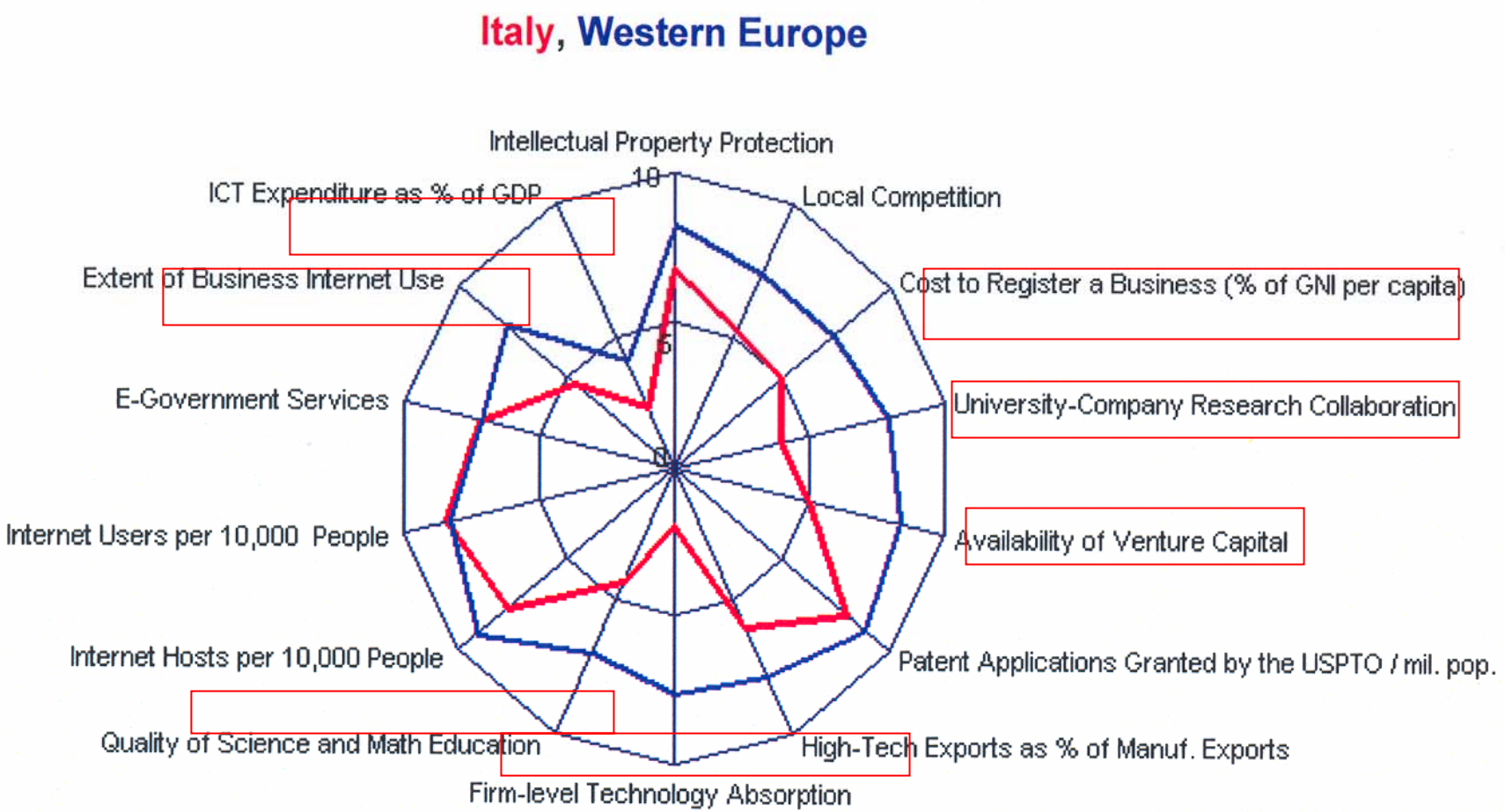
- people (community)
- external /internal structuring
- means, resources, capabilities
- ends / objectives

An example: USA,W-Europe, Italy

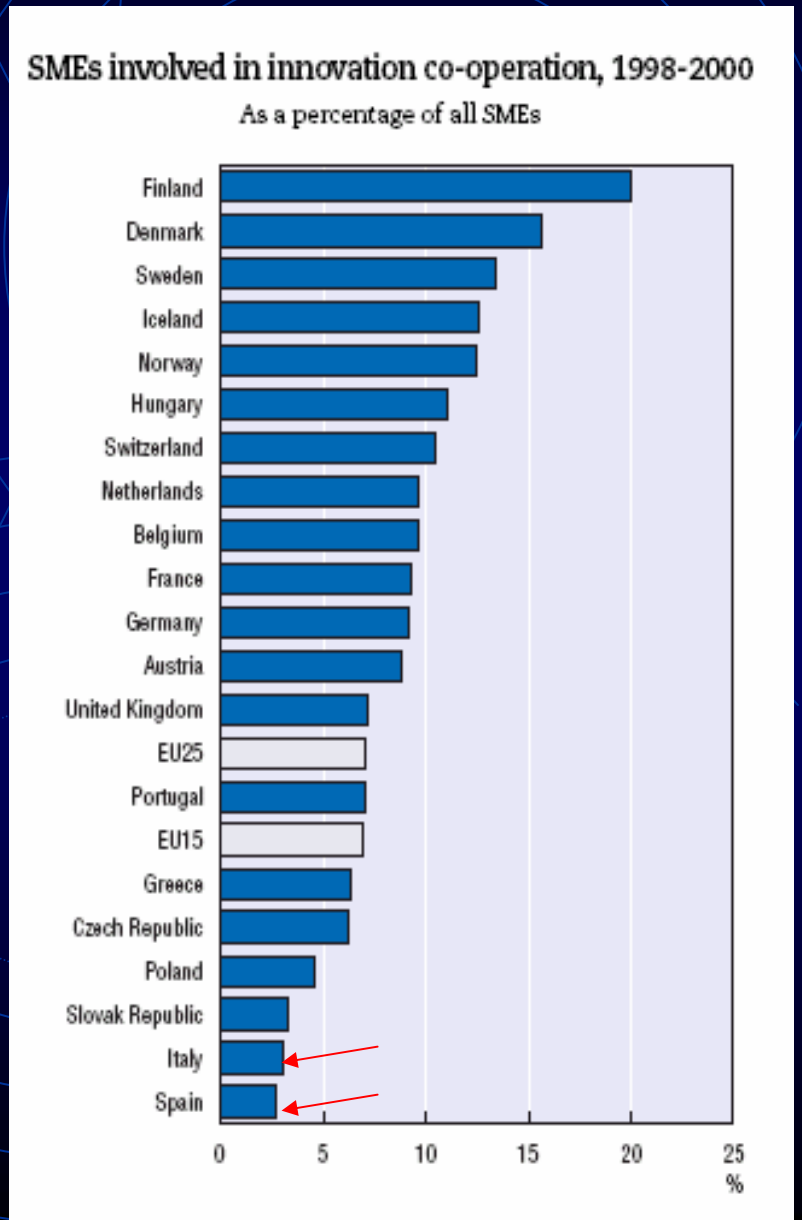
(WorldBank K.A.M.)



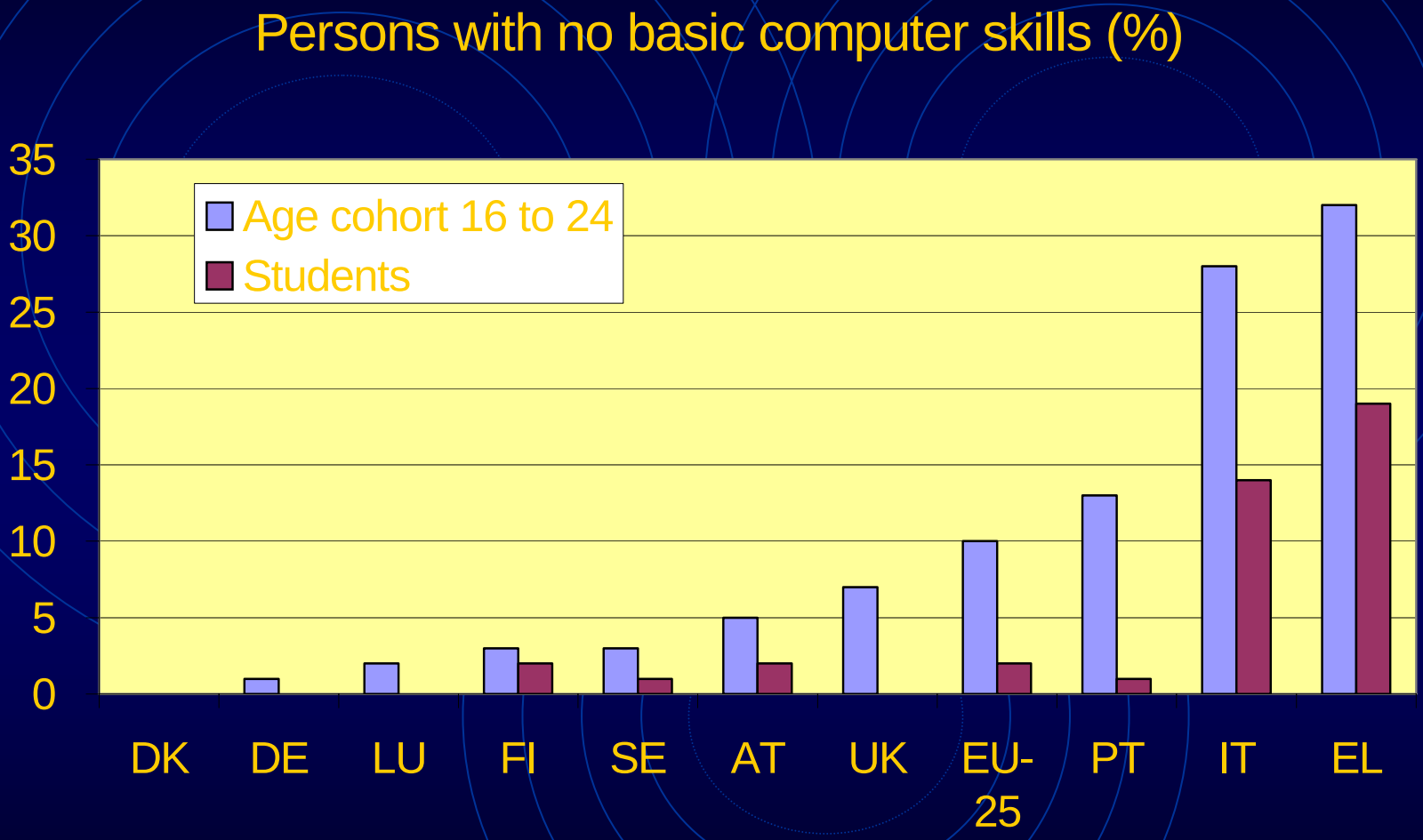
An example: USA,W-Europe, Italy
(WorldBank K.A.M.)



R&D tax incentives in isolation?



Problems ahead for Dig-ITALY ?



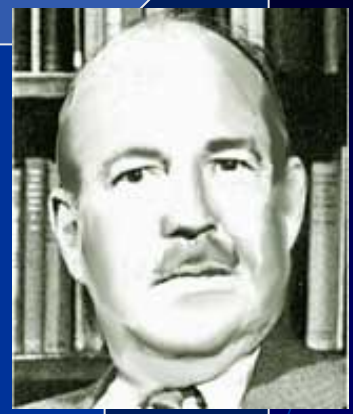
Source: Eurostat 17 /2006

Intangibles / Intellectual Capital

An organization / community's indigenous capacity (to adequately realize its objectives) / (create social-economic value from its resources) by arranging its social relations and effectively meet requirements of the external environment"

→ *Not an economic, but rather a structural functionalistic approach*

	Means / resources	Objectives / output
Extern	Adapt/ Enact Procuring, developing and use of resources & competences (human, goods, technology, information, etc) 'Resource/input Indicators'	Goal attainment Setting and implementing objectives (output) "Performance Indicators"
Intern	Latency Structure, rules, culture, motivation and rewards "Cultural indicators"	Integration / Efficiency Regulation to assure proper functioning, optimisation of processes…. "process/quality indicators"



Indicators for Education

- Enactment; educational expenditures % GDP or per student; funding structure (private/public); enrollment ration's, computers and internet access in schools; instruction time per subject, business-academic oriented R&D, University-Company Research Collaboration.

- Goals attainment; attainment levels; Ph.D.s; employment rates (cohorts / degrees); publications referreed journals; Nobel prices/inhabitant; literacy rates and PISA-scores; etc….

- Efficiency; length of study and graduation ages; drop-outs; study changes; student satisfaction; student/staff ratio's - educational expenditures/student; structure of expenditures as % of GDP; teaching hours/non-teaching duties; life-long learning…

- Structure, culture and rewards; gender development index; m/f % in cohorts; teacher salaries (performance based renumeration); teacher allowance for remote areas, geographic mobility, % foreign staff and students, internationally co-authored publications, Δ income after graduation / income differentials; brain-power retaining capability, student loans & public and private subsidies; *e*-university enrollment

Indicators for R&D-innovation

- Enactment: R&D expenditures; R&D-financing; R&D-personnel/staff; R&D-efforts by type of business/organization; external contacts and networks; professional conferences; number of science parks; availability of (high tech) venture capital in seed and start-up phases, strategic alliances; co-operation with clients.

- Goals attainment: Patents; scientific publications; high tech exports; revenues from new products; Technology Balance of Payments and Trade, scientific articles; royalty and license fees receipts

- Efficiency: Strategic position and fit (SWOT); consensus on strategic priorities of projects across the organization (go/kill); senior management involvement; procurement policies; ISO-certification;patenting; time-to-market; cost structure….

- Structure, culture and rewards: % SME innovating in-house; firm level technology absorption; seed capital for R&D-start ups, grants and special tax treatment for R&D; newly listed companies/ already listed companies; university start-up companies, SME's participating in R&D-cooperation; international co-operation in patenting, mobility of researchers, technology transfers;

Indicators for Information & Communication Technology

- Enactment; expenditure for IT-hardware, equipment and software; internet hosts per 10,000 people; (mobile) telephones and computers per 1000 people, broadband connections; computer skills literacy

- Goals: ICT industry's contribution to GDP; employment in ICT-industry;; % of turnover generated from e-commerce…

- Efficiency; access speed; comparative price-levels of ICT; use of e-commerce for buying and / or selling; enterprises IT systems for e-commerce linked with other internal IT systems; penetration of e-banking; web-site maintenance/ updates; % of employees with remote access to the firm's computer network…

- Strucutre, culture and rewards; e-government services, subsidies and incentives; internet connection prices cost per Mbps; use of computers or the internet by employees; % internet users; internet publications-subscription; % of business using internet for commerce

Conclusion:

+ IC-measuring models and IC- indicators exist
+ Measurement of endowment, input and performance
– time lagged
– causation ambigious

➢ value creation not merely economic but societal phenomenon

➢ Develop and harmonize indicators to better gauge « process / structural efficiency » and « structural, rules, cultural and reward».

j.vandermeer@eib.org
http://www.eib.org