

Intellectual Capital for Communities in the Knowledge Economy Nations, Regions and Cities

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Assessing Performance of European Innovation Systems: An Intellectual Capital Indexes Perspective

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The Agenda

Part A: The microeconomic perspective

Part B : From Micro to Meso/Macro,
Benchmarking national Innovation systems
in Europe

Part A:
A microeconomic perspective
The IC-dVAL[®] approach

1-1- What types of approaches to Intangibles ?

Five main approaches to intangibles

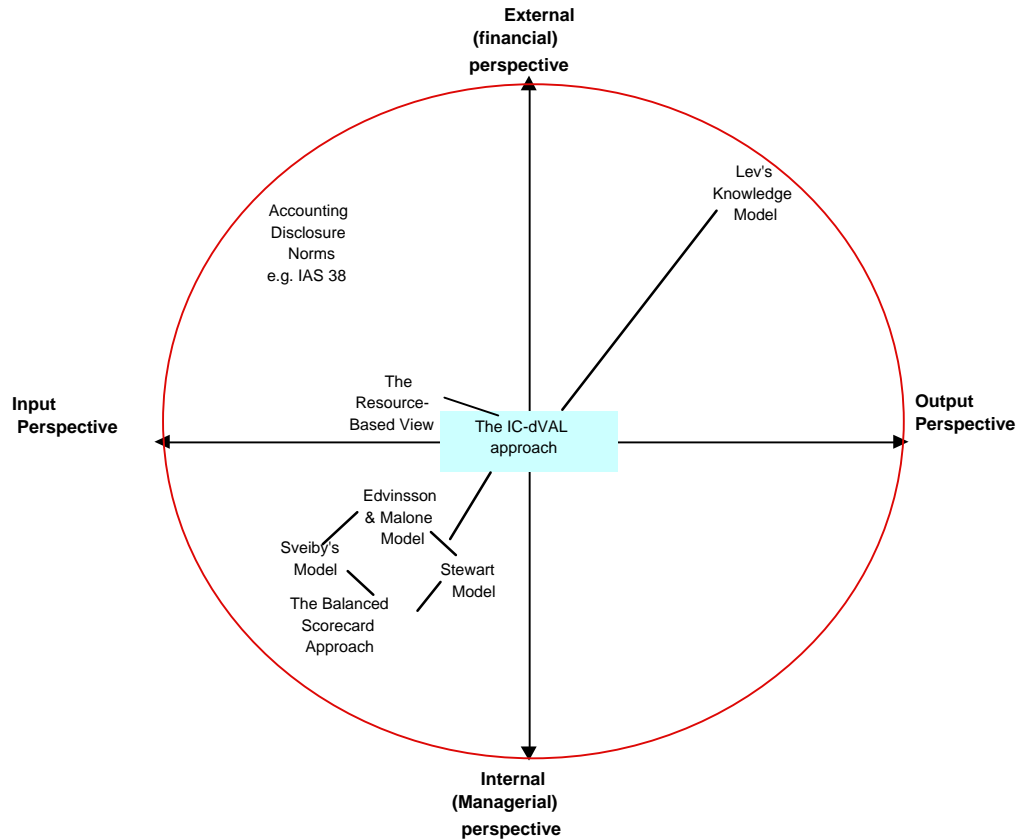
- The services approach
 - The analytical approach
 - The accounting/financial approach
 - The Intellectual Capital approach
 - The strategic management approach
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- The resource-based View
 - The Competences approach
 - The Knowledge creation approach
 - The Evolutionary approach
 -

1-2- Intangible Resources in the Strategic Literature

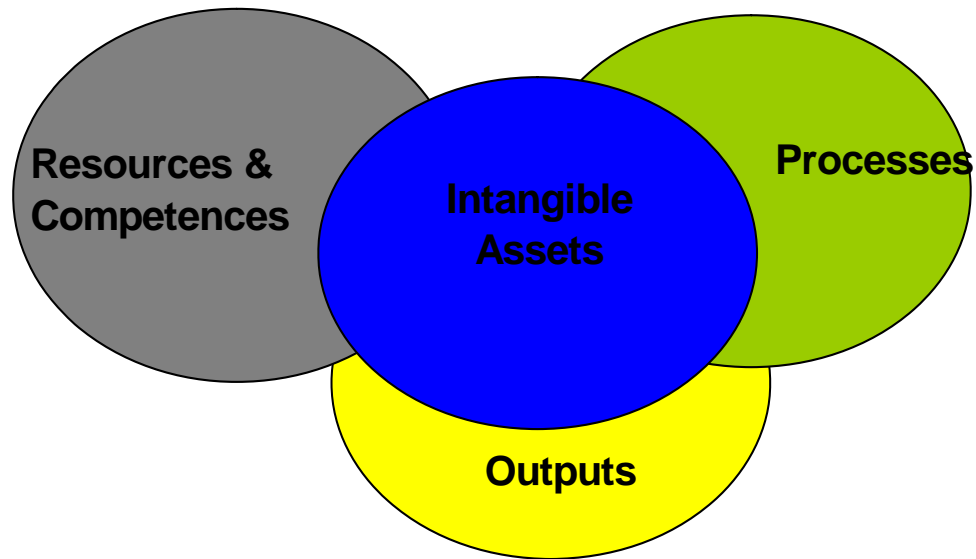
The main arguments

- Firms are heterogeneous with respect to their resources / capabilities endowments
- Firms performance are influenced by their level of resources endowments
- Building resources may take time
- Firms may lack organisational capabilities to develop new competences
- Some assets are non tradable : tacit knowledge or reputation
- **Dynamic and consistent** view of intangibles should be developed
- Efficient processes have to be implemented, especially those dedicated to combining intangible resources

1-3- Four Perspectives for Reporting and Managing Intellectual Capital



1-4- IC-dVAL[®]: Four dimensions



1-4- IC-dVAL[®]: A set of Metrics

Partial performance Indexes

- Performance Indexes for Resources (PiR)
- Performance Indexes for Processes (PiP)
- Performance Indexes for Outputs (PiO)

An overall performance Index

- OiP

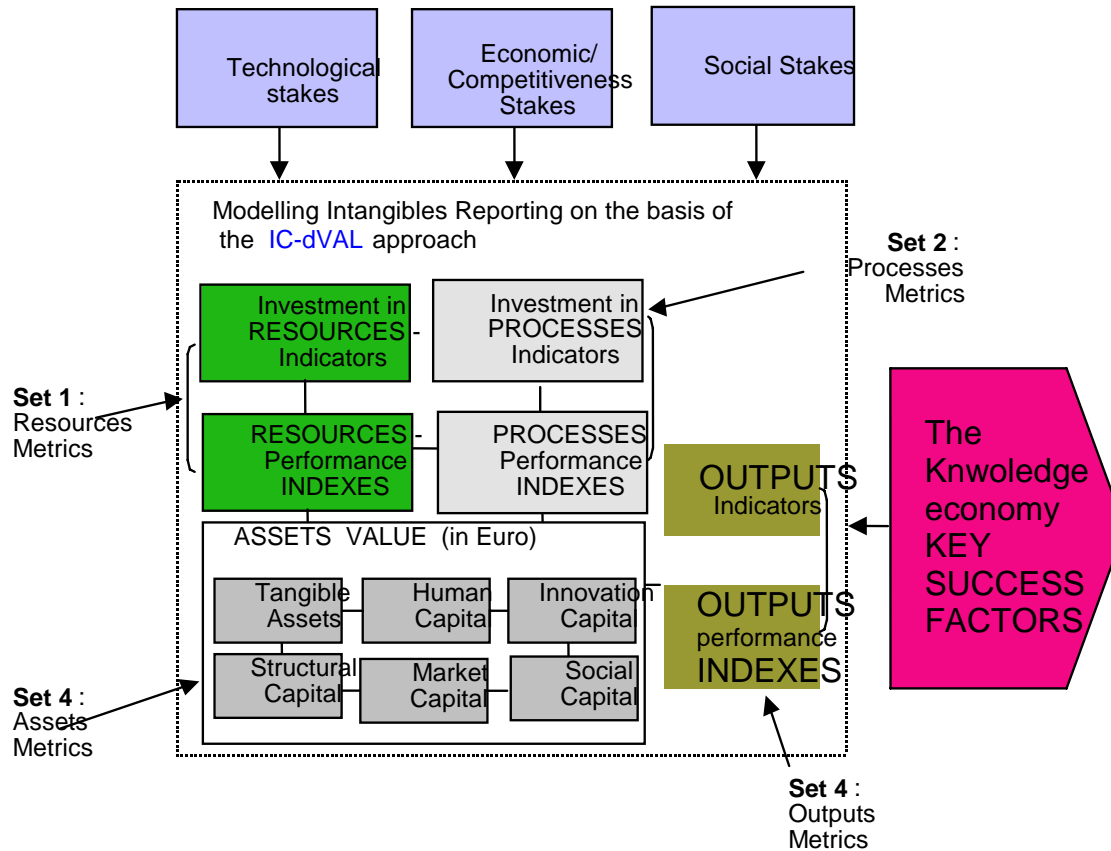
Assessment of Assets Value into \pounds

Part B :

From Micro to Meso/Macro ,
Benchmarking national Innovation systems
in Europe from an intellectual capital
perspective

2-1- IC-dVAL[®] :

The Macro/Meso Perspective



2-2- The Meso/Macro perspective

Proxy Values

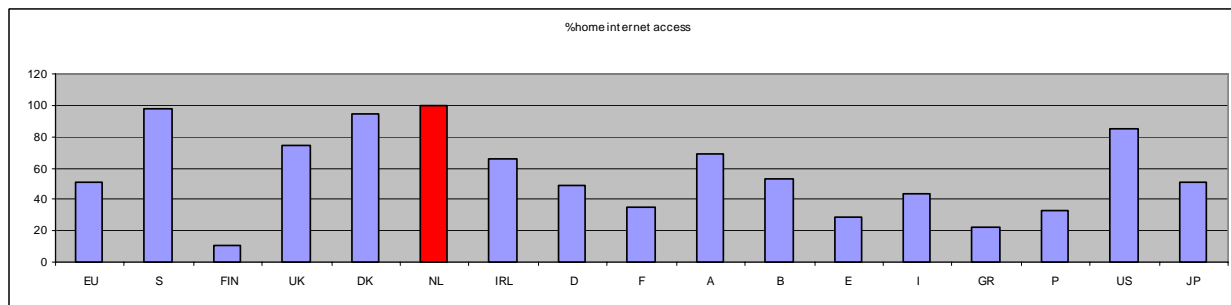
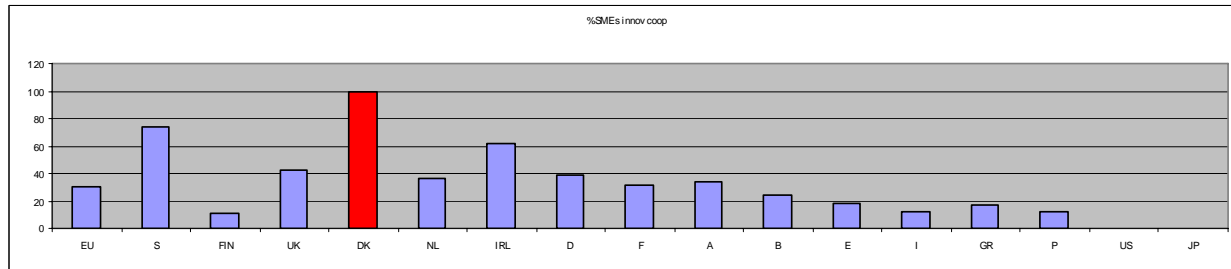
Table 2 : Metrics used as proxy values for benchmarking EU IC performance

Resources Indexes	
Indicators	Year/period
• Public Expenditures R&D / GDP	1999
• BERD /GDP	1999
• Percentage of venture capital / GDP	2000
• Percentage of new capital / GDP	
Processes Indexes	
Indicators	Year/period
• Percentage of SMEs innovating in-house	1996
• Percentage of SMEs innovating in cooperation	1996
• Percentage of home Internet Access	2000
• Percentage of ICT Markets / GDP	2000
• Percentage of High-Tech Value added	1997
• Labor Productivity Growth – Long term	1991-1999
Output Indexes	
Indicators	Year/period
• Percentage of innovating exports/total sales	1996
• Unemployment rate	1999
• Percentage of new-to-market products	1996
• GDP per capita (PPS)	1999
• Real GDP growth	1995-1999
Asset Indexes	
Indicators	Year/period
<i>A- Structural Capital Indexes</i>	
Number of scientific publication per million	1998
EPO high-tech patents / population	1999
USPTO hi-tech patents/ population	1998
<i>B- Human Capital Indexes</i>	
Percentage of S&E graduates / 20-29 population	1999
Percentage of population with 3 rd education	2000
Life-long learning	2000

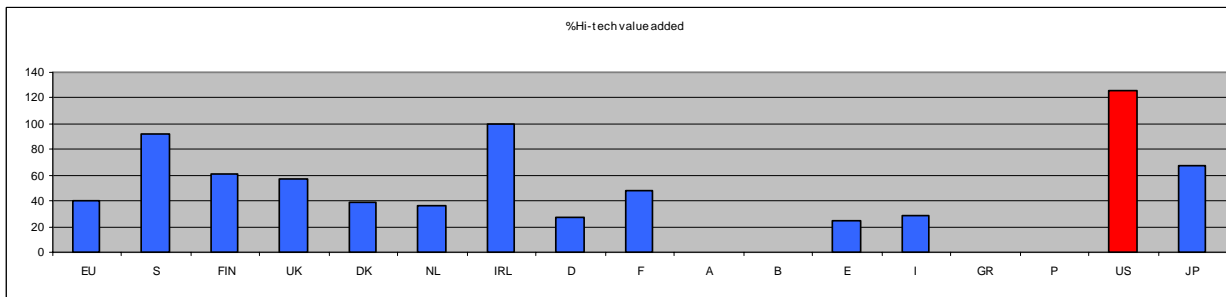
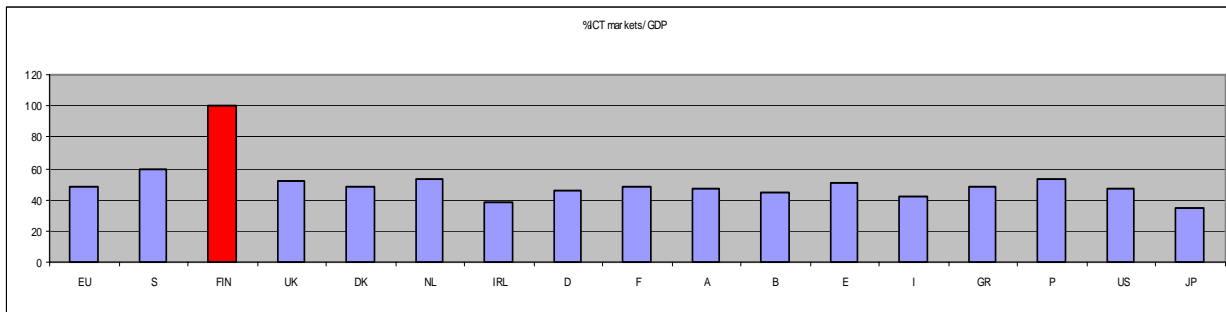
A- Resources-Indexes



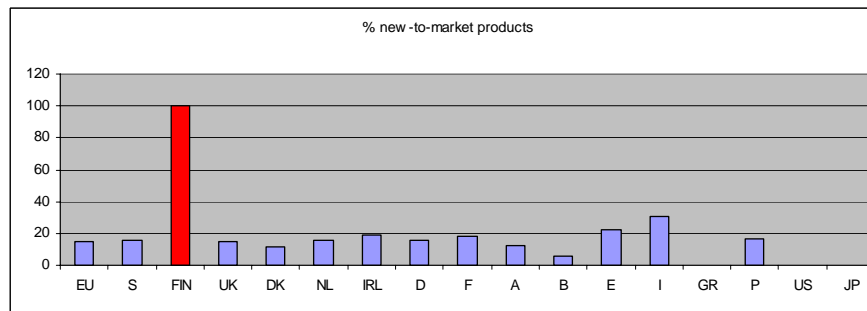
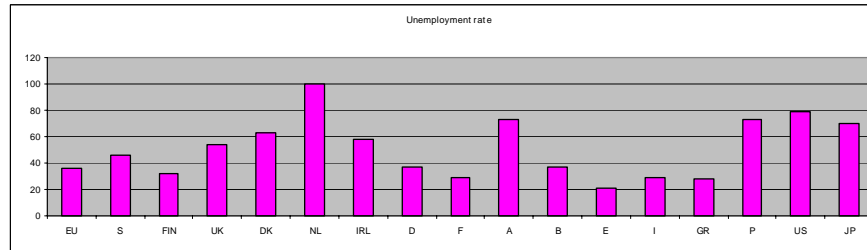
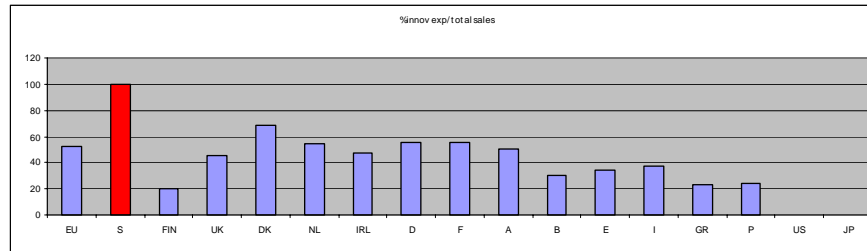
B-Processes-indexes



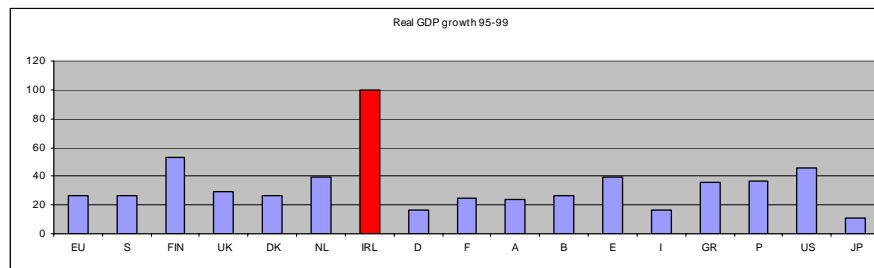
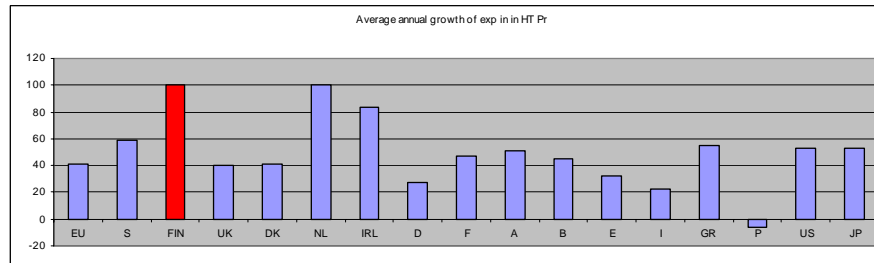
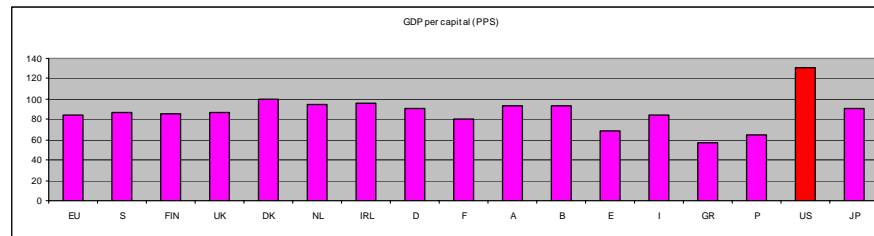
B-Processes-indexes (Con't)



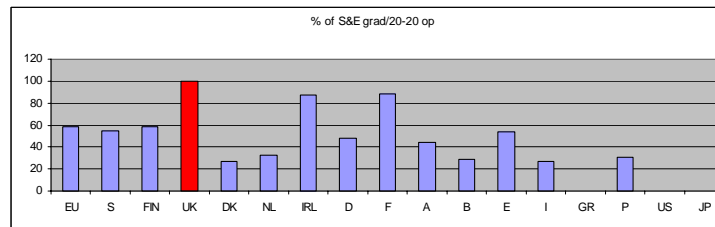
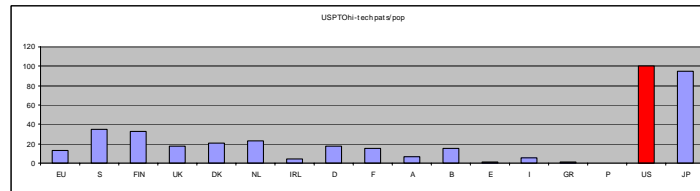
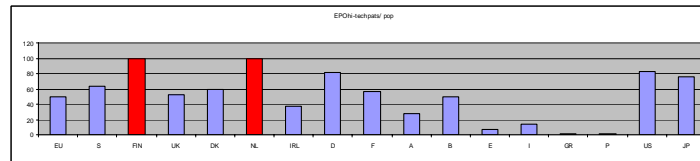
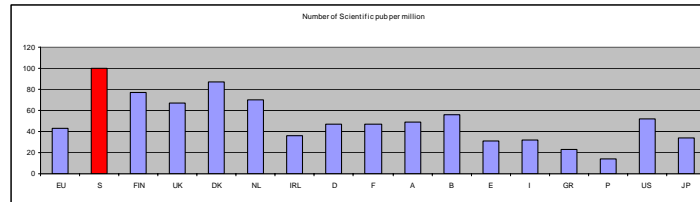
C- Outputs Indexes



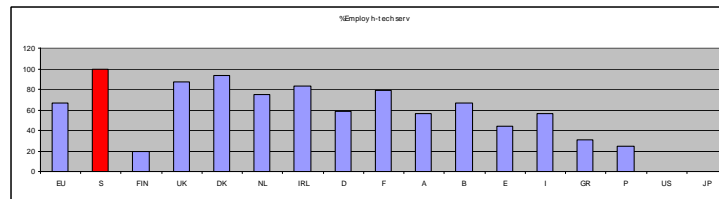
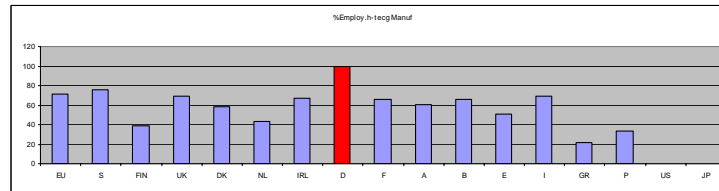
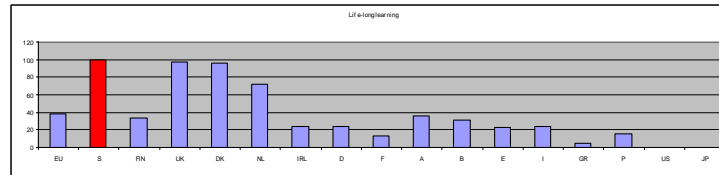
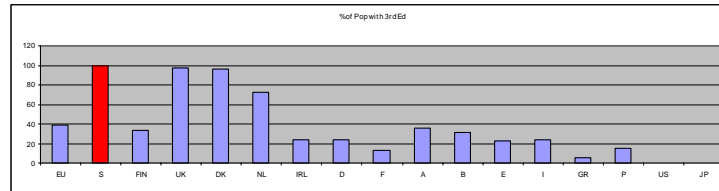
C- Outputs Indexes (Con't)



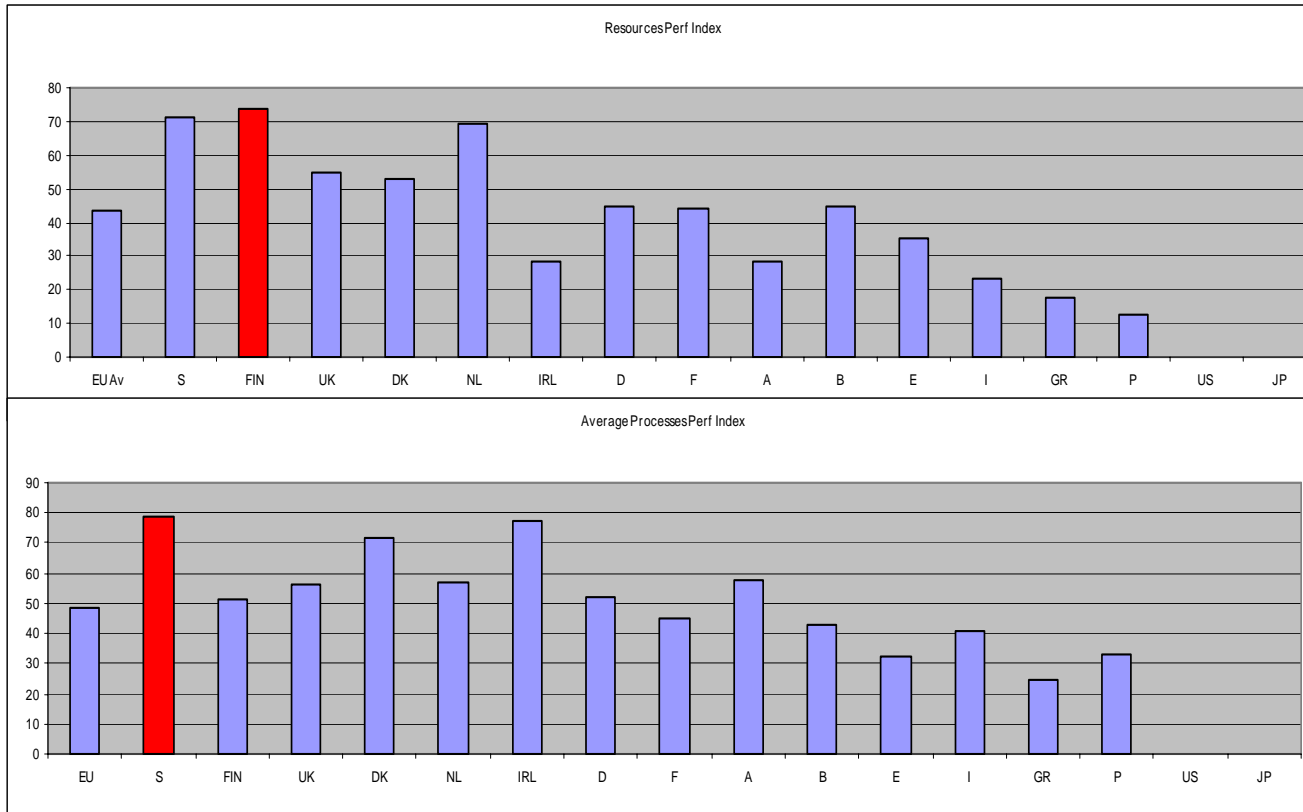
D- Assets Indexes



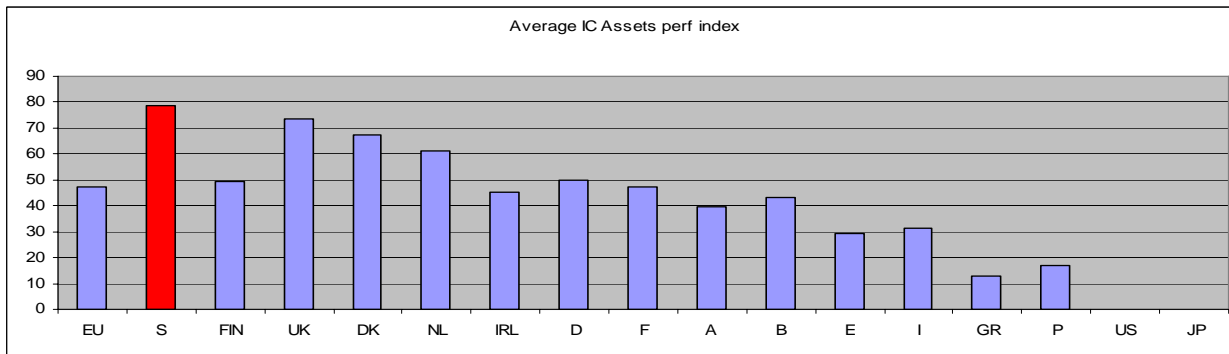
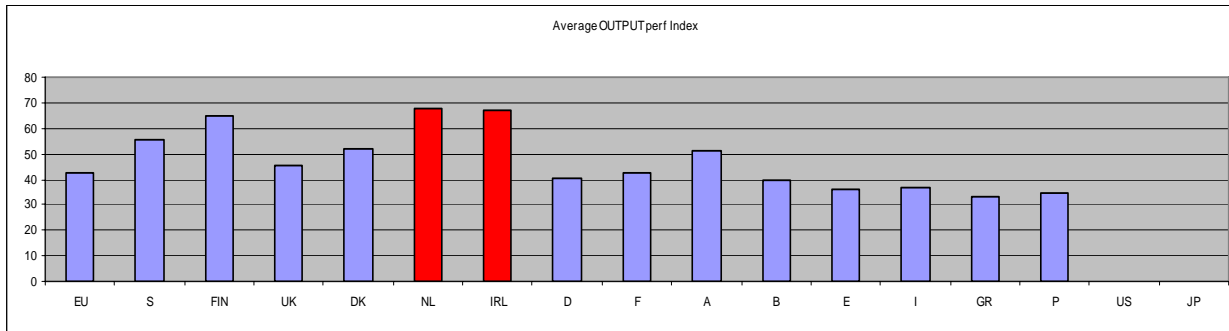
D- Assets Indexes (Con't)



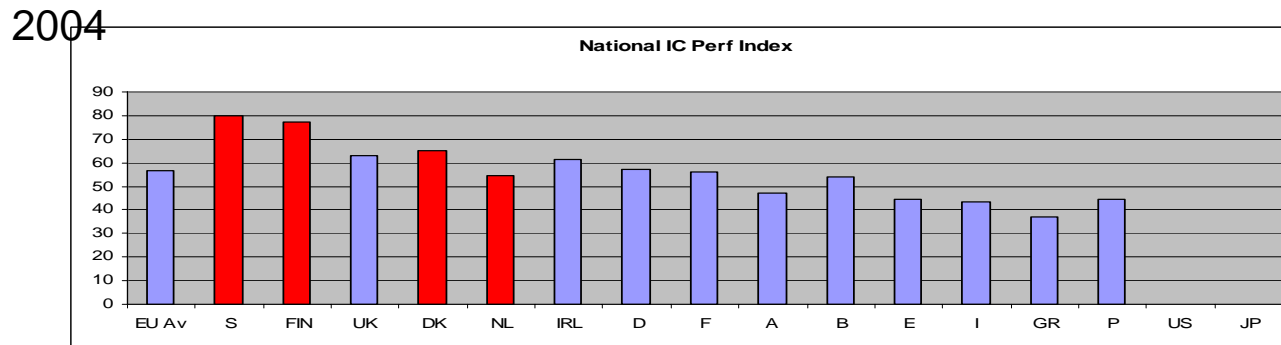
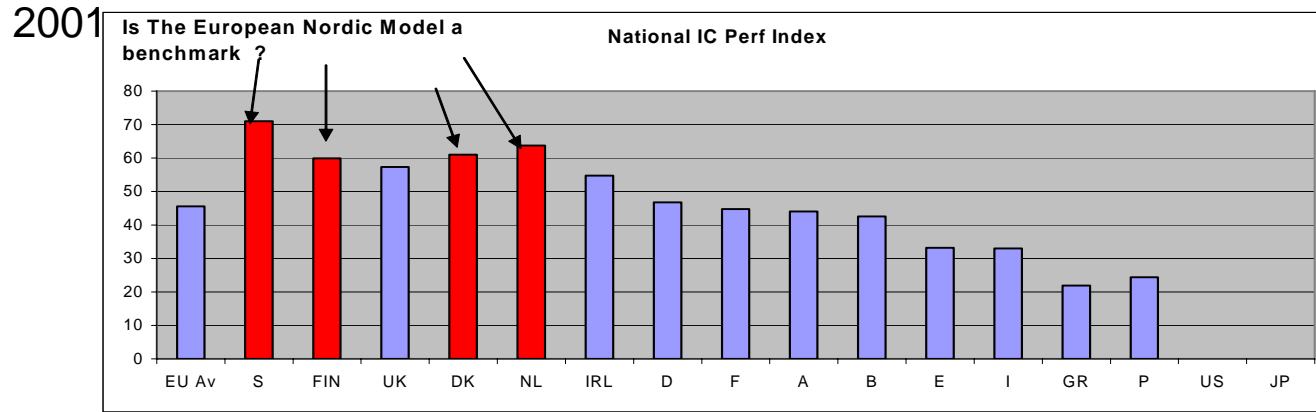
E- Average Partial Indexes



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F-Final National Performance Indexes



G- Possible Readings

- Different models can be derived from the analysis
- A hypothesis : Nordic Countries organisational modes might be considered as better adapted to the knowledge economy requirements (Cf. National economic cultures as they have been analysed by G. Hofstede: Masculinity vs Femininity; acceptance of distance power vs refusal, etc.)
- These performance elements are necessary contingent e.g. Path-dependent. There is a strong implication for how to organise a dialogue (conversation) among national innovation systems , e.g. for benchmarking as a policy tool for innovation systems.
 - > A intelligent Benchmarking has to be substituted to a naive benchmarking (Lundvall and Tomilson, 2000)
- Further Analysis must be conducted at Sub National Levels : Regions, Districts, Cities, etc.
- A cross-sectional analysis is needed
- The demonstration of the links between Indexes level and National performance Metrics (GDP growth, employment....)

Thank you for your interest