



# Global Innovation Networks: what are they and where can we find them? (Conceptual and Empirical issues)

**An FP7 research project on  
Impact of Networks, Globalisation, and their INTERaction with EU Strategies**





# **Global Innovation Networks: What are they and where can we find them?**

Impact of Networks, Globalisation, and their Interaction with EU strategies.

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*Socio-economic  
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# Outline

- What are Global Innovation Networks?
  - Empirically
  - Theoretically
- The dominance of MNCs in:
  - The increasing globalisation of innovation
  - The increasing networkedness of innovation
- Reasons to expect MNCs to dominate GINs – or not
- What the evidence suggests

# A GIN definition

- A globally organized network of interconnected and integrated functions and operations by firms and non-firm organizations engaged in the development or diffusion of innovations

# What is happening?

- The apparent “end point” of globalisation is the emergence of GINs (Global Innovation Networks)
  - Firms do not only sell or produce across the globe, but also innovate globally
  - Moreover, they do this by drawing on a rich network of partners (both firms and non-firms like business schools, research institutes etc)

# The globalisation of innovation

- Innovation is driven by
  - Increases in technological advances
  - Accelerating cycles of customer preferences
- A global dispersion of first production and increasingly innovation has resulted from
  - A scarcity of skilled resources
  - The need to tap into specialised expertise
- This process has been driven by established MNCs with their extensive reach

# G + I + N = GIN?

- Do GINs represent the deepening of existing trends – where established MNCs continue to spearhead the evolution into GINs, given the increasing importance of globalisation and networkedness?

AND/OR

- Do GINs represent a new form of organisation where established MNCs may not be lead players?

# Methodology - survey

Countries	ICT	Auto	Agro	TOTAL
Brazil		69 (25.9%)		
China	243 (2.7%)			
India	324 (25.2%)			
South Africa			84 (16.9%)	
<b>TOTAL emerging markets</b>	<b>567</b>	<b>69</b>	<b>84</b>	<b>720</b>
Denmark			49 (23.3%)	
Estonia	17 (14%)			
Germany		53 (4.7%)		
Norway	181 (11.9%)			
Sweden	171 (10.3%)	24 (14.3%)		
<b>TOTAL developed countries</b>	<b>369</b>	<b>77</b>	<b>49</b>	<b>495</b>
<b>TOTAL ALL</b>	<b>936</b>	<b>146</b>	<b>133</b>	<b>1215</b>



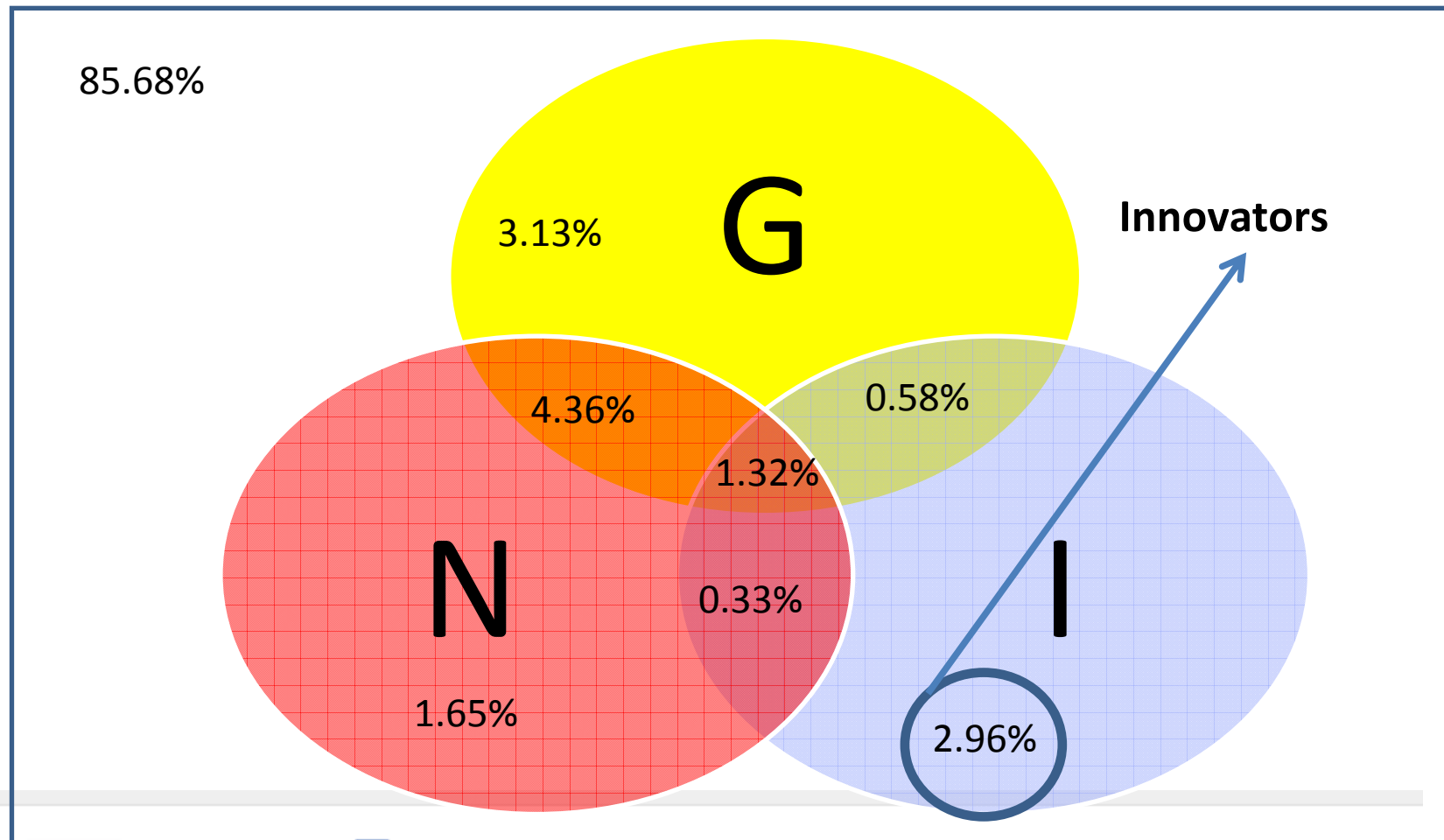
# Scoring system for data

- For the three concepts (Global, Innovative and Networked), relevant questions in the survey were identified
- Each instance was scored relative to the other instances in the dataset
  - A formula was specified to give each instance in the dataset a continuous value greater than or equal to 0
  - This value was divided by the maximum value in the dataset, so that each instance had a continuous score between 0 and 1
- Scores were displayed on a scatter plot, and a combination of cluster analysis and inspection of the scatter plot used to identify the cut-off point between categories

# Three levels

- G / I / N – **TRULY** global / innovative / networked
  - g / i / n – **somewhat** global / innovative / networked
  - \* / \* / \* – **not at all** global / innovative / networked
- 
- Mathematically 27 (3x3x3) possible combinations  
e.g. giN or \*In
  - If theoretically driven, should have fewer

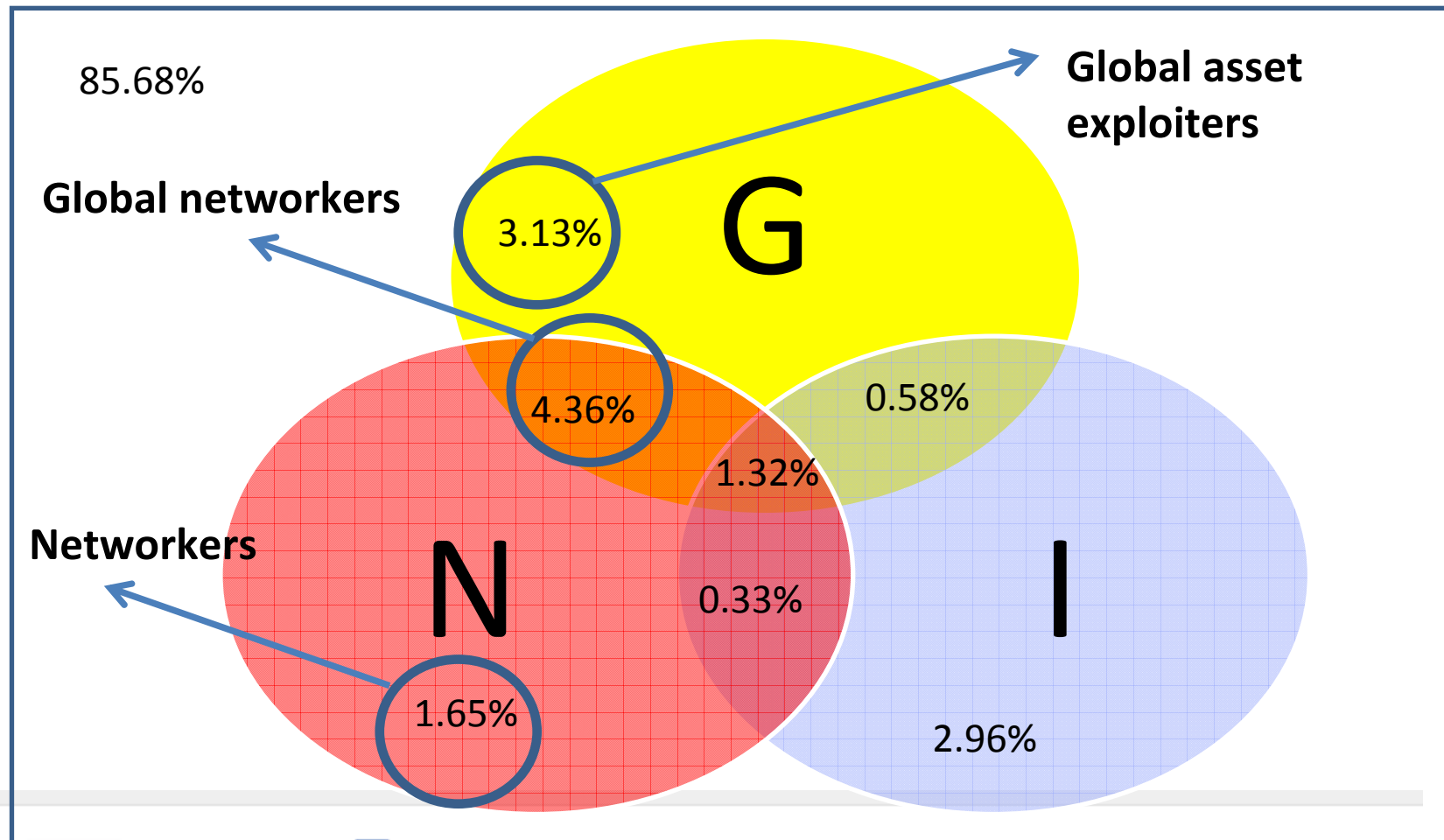
# Innovators



# Some characteristics of gln

- All industries
- European firms best represented
  - Drawing on rich institutional context
- Small firms (less than 50 employees)
- Standalone firms
- Little evidence of harvesting value

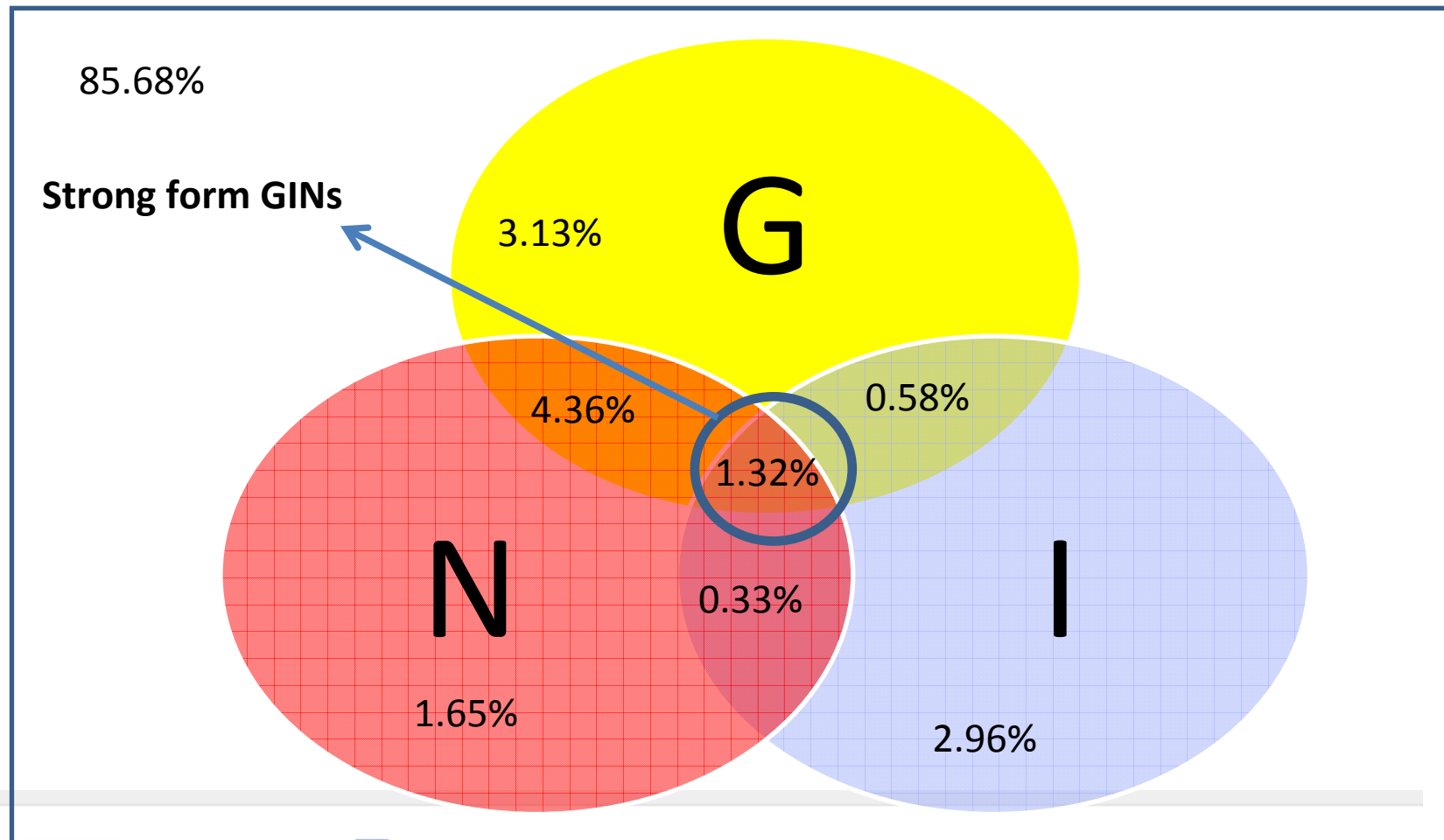
# Global asset exploiters, Global Networkers & Networkers



# Some characteristics of Gin, GiN & giN

- All industries
- Large firms – more than 1000 employees
- Mainly MNCs
  - European MNCs well represented among Gins – Global asset exploiters and giNs – non-global networkers
  - Emerging MNCs more likely to be GiNs – Global networkers
- Fairly traditional model – exploiting your locally developed capabilities abroad

# Strong-form GINs (15 out of 1215 firms in 9 countries)



# Some characteristics of GIN

- Not auto with its tiered hierarchy – but ICT and agro
- Between 50 and 1000 employees
  - Large enough to need to access resources globally
  - Small enough to manage that complex process
- Equal split between stand-alone firms and subsidiaries (of both established and emerging MNCs)
  - ALL located in developing countries rather than Europe



# GINs – a dual emergence

- It seems that GINs are emerging from two quite different processes
  - Advanced MNCs (mainly from the US) are deepening the trend to innovate through increasingly global and increasingly networked processes
  - Players from emerging markets (sometimes emerging MNCs, but sometimes not) are developing capabilities in the creation and management of global networks to compensate for institutional limitations, e.g. skills shortages



Thank you for your time

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