

«Seminario di studio a carattere scientifico per la diffusione dei risultati dell'approfondimento su Formazione e risorse umane come capitale intangibile»

Presentazione esiti INDAGINE IAS - *INTANGIBLE ASSETS SURVEY*



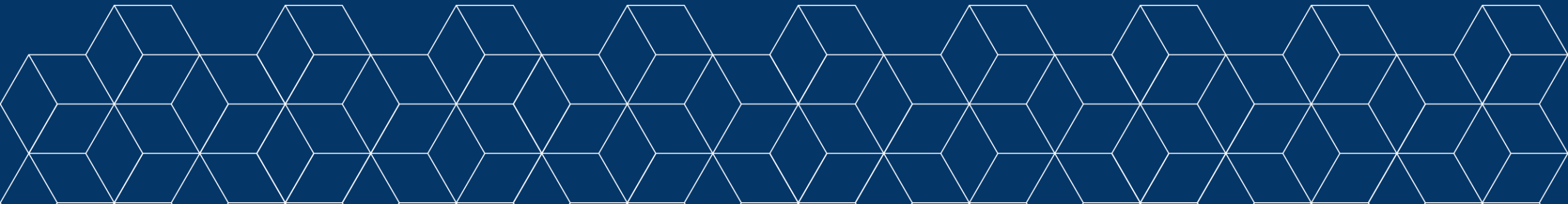
# IA DATA AT FIRM LEVEL: OPTIONS FOR ANALYSIS

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## Micro vs. Macro in assessing the IA impact (1)

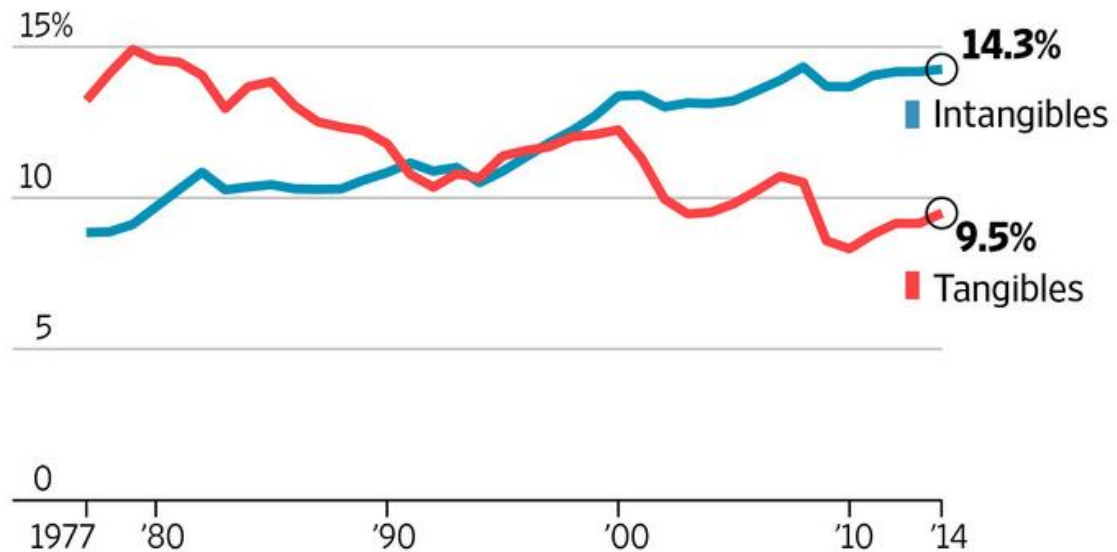
- The «capitalism without [fixed] capital» literature, since the seminal CHS paper, has been focusing on the contribution of IAs to the TFP increase at macro level.
- Although the initial interest by economists (e.g. Griliches) was about IA investments (R&D) at firm level, the main source of data on the IA impact are currently industry-level databases with data mostly calculated according to NA standards



## Micro vs. Macro in assessing the IA impact (2)

### Intangible Investment

Investment rates in assets, as a percentage of private-sector GDP



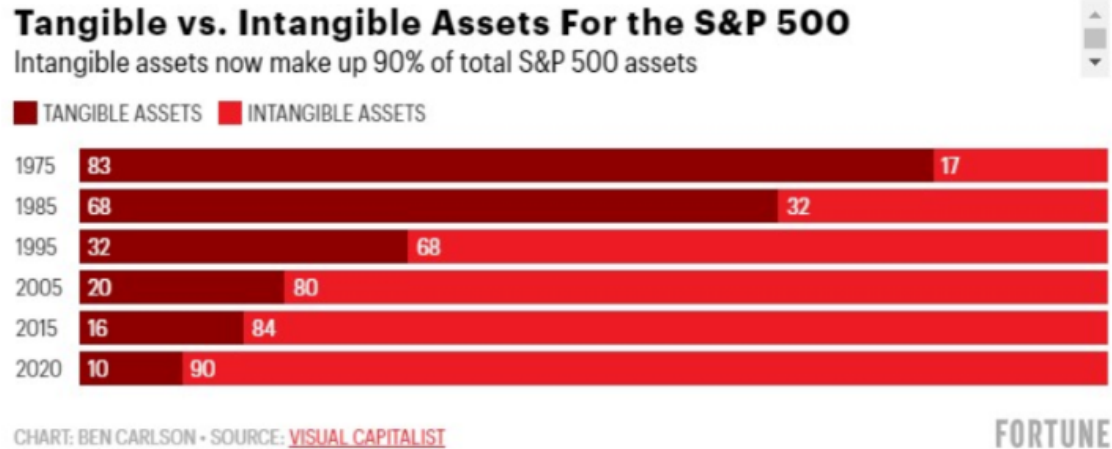
Source: Carol Corrado and Charles Hulten

THE WALL STREET JOURNAL.

- This chart became popular in mid-2010s as an evidence of a global trend towards a replacement of fixed capital with intangibles at macro level.



## Micro vs. Macro in assessing the IA impact (3)

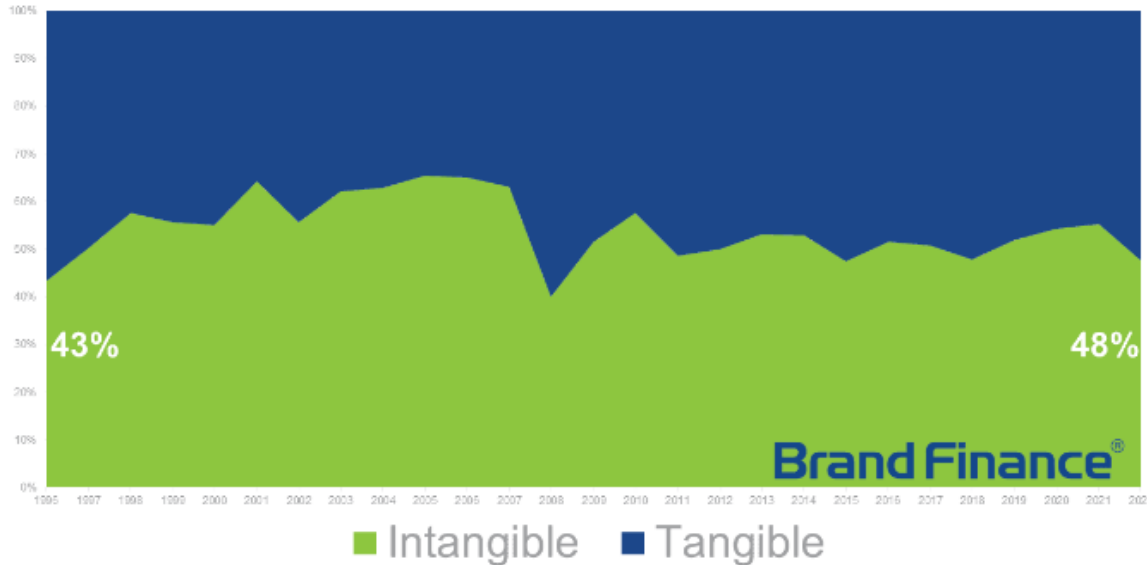


- A similar trend is described with reference to the largest US and international companies' assets (Fortune, 2022). **But do we really face a such sharp trend?**



## Micro vs. Macro in assessing the IA impact (4)

Tangible v Intangible assets over time



Source: Global Intangible Finance Tracker (GIFT) report, 2022

- First, data from international (not just US) stock markets tell a different story.
- Second, accounting data can be misleading as they are influenced by accounting standards (and their interpretation)



## Stock and flow of intangibles at firm level (1)

- Not enough to say «standards for reporting intangibles into company accounts are problematic and asymmetric» (Corrado et al., 2022) to measure both IA stocks and flows.
- Neither balance sheets, nor financial statements can provide for a correct measurement of intangibles (mostly underestimated) but their integration with other data sources – not yet fully exploited – can help to deal with most research needs.

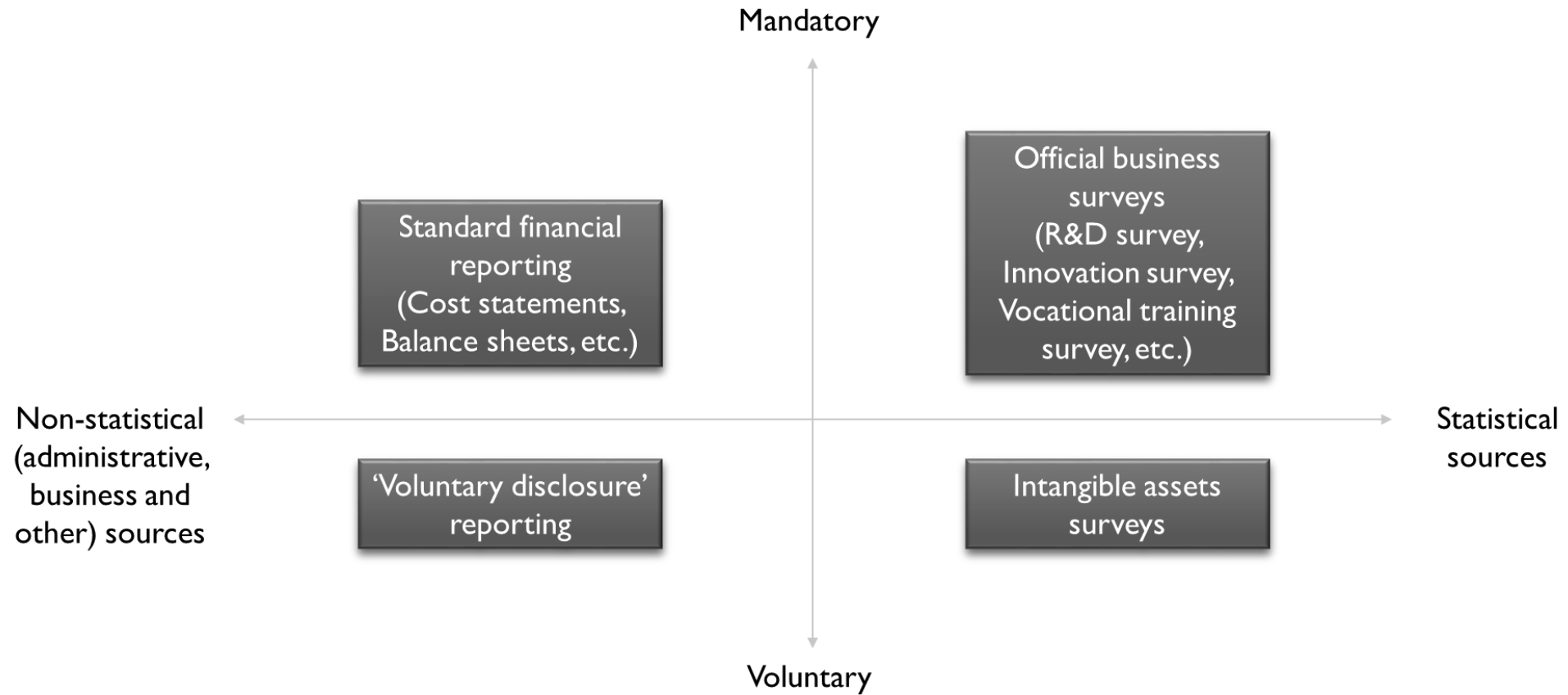


## Stock and flow of intangibles at firm level (2)

National accounts	→	Investment flows (with depreciation rates) are used to calculate asset stocks, asset values and asset incomes.
Growth accounting (Macroeconomics)	→	Focus on the relationship between intangible capital inputs flows and productivity growth.
Innovation performance	→	From R&D inputs (technological innovation) to investment flows on training, marketing, IP protection.
Innovation and sustainability strategies	→	Innovation activity and innovation-related investment flows as proxies of the returns on knowledge stock.
Stock value and trends	→	Expenditure-based approach vs. comparative models between stocks' value and intangible-related flows.



# Comparing different data sources





## The potential of IA surveys

- IA business surveys can use detailed and customised definitions of intangible assets to accommodate different needs.
- They can even replicate (simplified) dashboards where collecting information on IA strategies.
- Under some conditions they can be mandatory.
- Integration with administrative data are becoming a standard procedure for survey data analysis.



## The INAPP 2019 IA survey (1)

National accounts

Growth accounting  
(Macroeconomics)

Innovation performance

Innovation strategies  
and sustainability

Stock value and trends



### 15 areas of IA-related activity/investment

- Market conditions
- Human resources (retention)
- Human resources (union relations)
- Organizational capital (transparency)
- Organizational capital (decentralization)
- Quality management
- Adoption of CRM procedures
- IT management
- IT updating
- Intellectual property protection
- R&D strategy
- Brand value management
- Quality of supplies
- Synergies with the local environment
- State of the natural environment



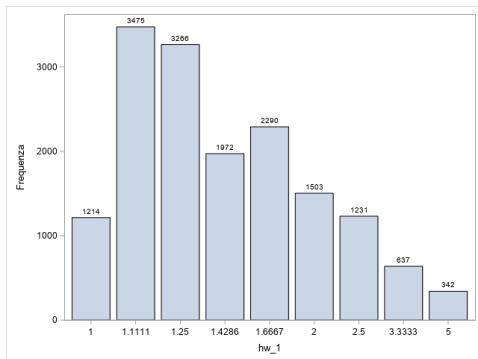
## The INAPP 2019 IA survey (2)

- Pilot design / Occasional frequency.
- Impact of the Covid-19 crisis.
- Three analytical approaches:
  - Structure and level of IA investments
  - Focus on the IA investments of listed companies (only 80 observations available: to be investigated as case-studies)
  - Evidence on business IA strategies



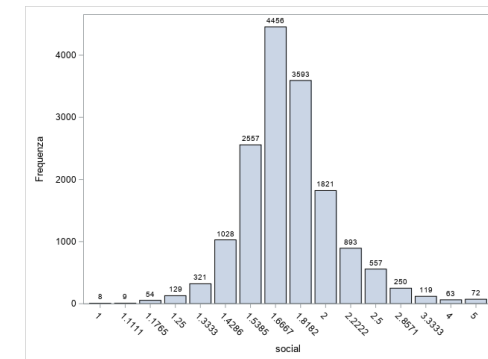
## The INAPP 2019 IA survey (3)

- Which IA-related activities are associated with a higher probability to invest on intangibles?
  - High heterogeneity.
  - Mixed patterns of distribution of IA practices among businesses.

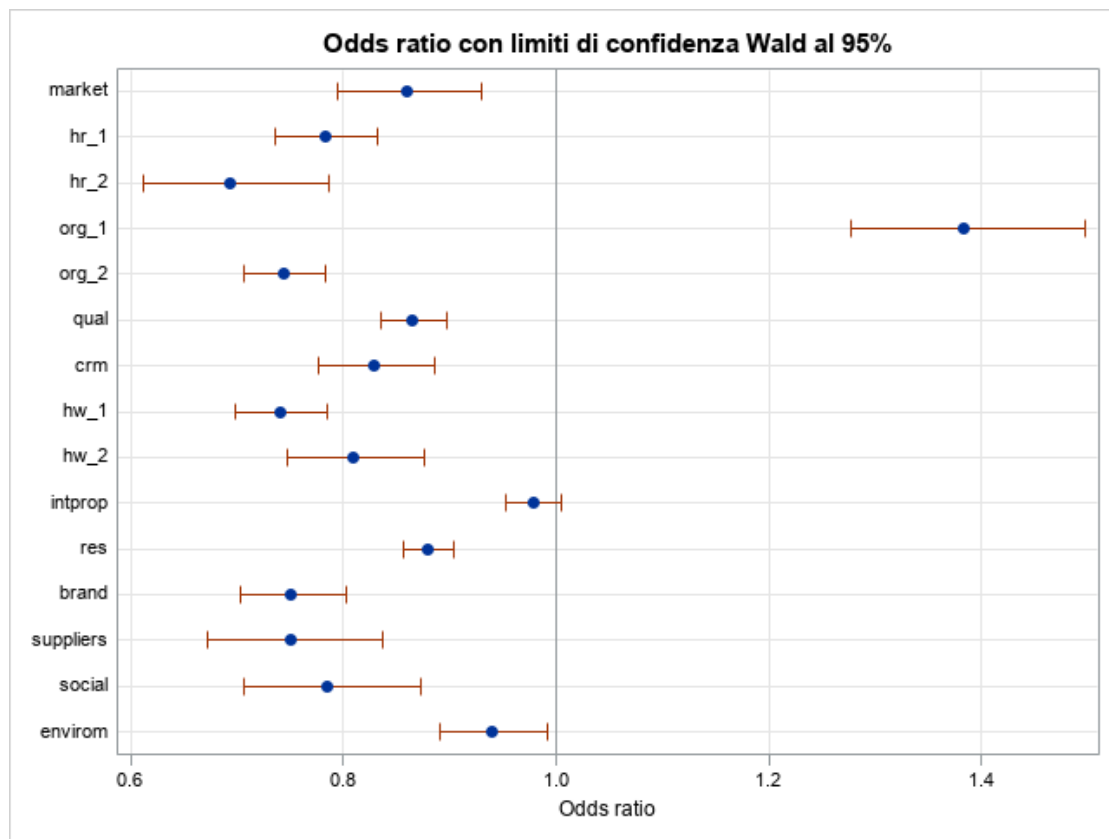


**Monotonic**  
(IT management)  
Most respondents undertake only a basic maintenance.

**Gaussian**  
(Social environment)  
Few cases of either very good or bad environment.



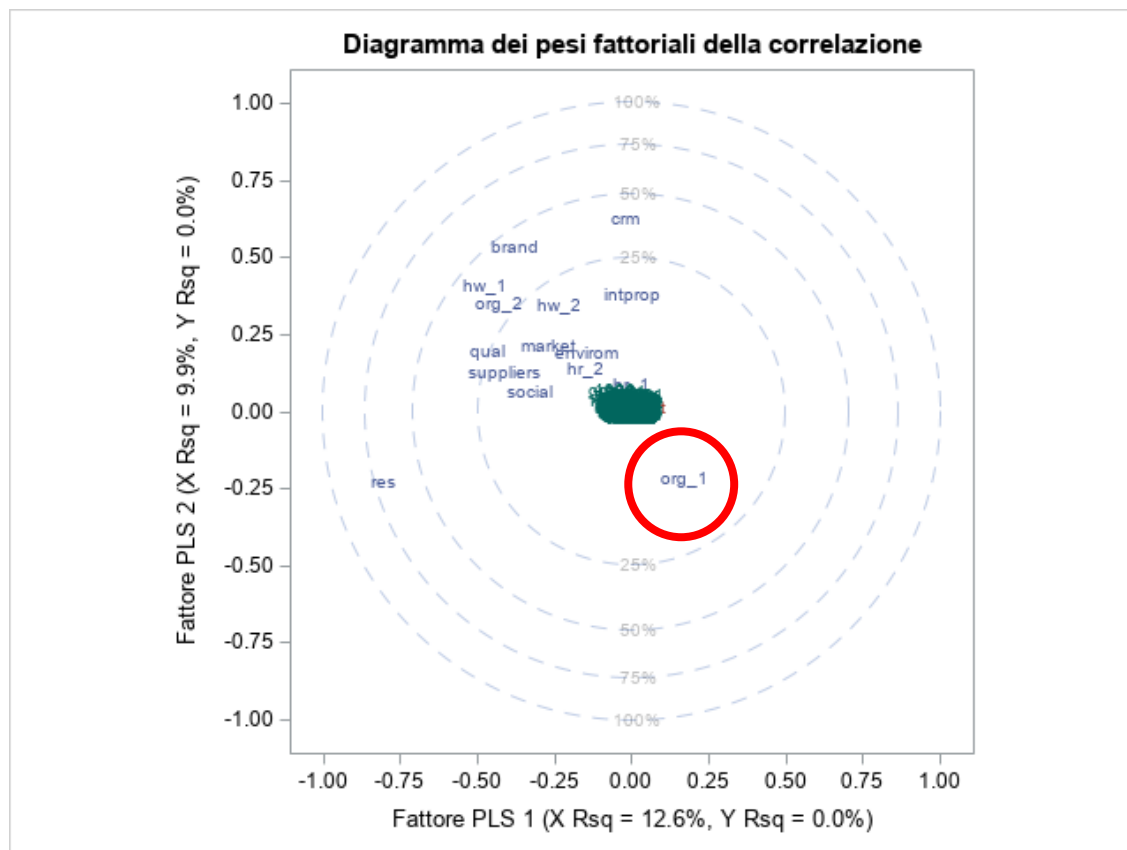
## The INAPP 2019 IA survey (4)



- Logistic stepwise regression.
- Dep. variable: IA investments
- Ind. Variables: IA practices.
- Impact on investments is significant for all practices.
- Positive impact only for «organization (transparency)»



## The INAPP 2019 IA survey (5)



- PLS regression.
- Dep. variable: ratio IA investments/sales.
- Ind. Variables: IA practices.
- Impact not-significant.
- Peculiar role of «organization (transparency)»

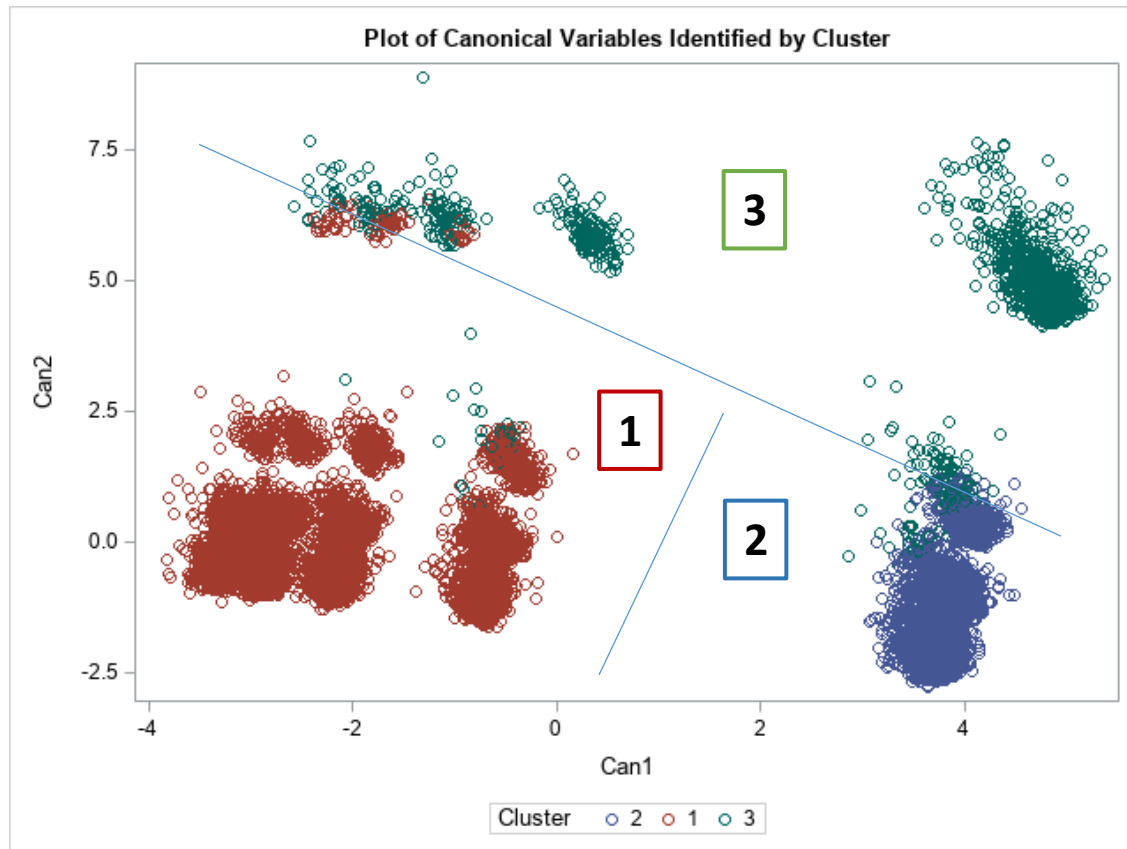


## The INAPP 2019 IA survey (6)

- IA practices are not necessarily linked to investments (firms could invest more just to improve their IA management).
- Some practices (like IPP policies) adopted by a few firms.
- Other practices more largely (like branding) and evenly diffused (as transparency of the organizational structure).
- Impact of practices on the firms' value to be assessed with reference to listed companies (Tobin q approach).



## The INAPP 2019 IA survey (7)



- Clustering (3 groups) of 15,930 obs.
- Canonical variable 1: R&D and HR.
- Canonical variable 2: Mixed
- Cluster 1 (62%): Less IA-oriented firms.
- Cluster 2 (29%): Focusing only on R&D-related activities.
- Cluster 3 (9%): High IA performance.







## Final comments

- The survey does not provide a clear evidence on firms' IA strategies. Segmentation (in order to reduce heterogeneity) and data integration as further steps in data analysis.
- Complementary sources of data will include: stock value series for listed companies, economic and financial microdata, statistical data from comparable surveys (e.g. the ISTAT business census).





THANK YOU



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# INDAGINE IAS - INTANGIBLE ASSETS SURVEY

## INDAGINE SUGLI INVESTIMENTI INTANGIBILI DELLE IMPRESE

15 MARZO 2023

