



# STANDARDS AND INNOVATION WHAT RELATIONSHIPS?

## A LITERATURE REVIEW



# Agenda

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- Definitions
- Methodology
- Classification
- Standard and Innovation: perspectives
- Conceptual Framework
- Conclusions



## STANDARDS

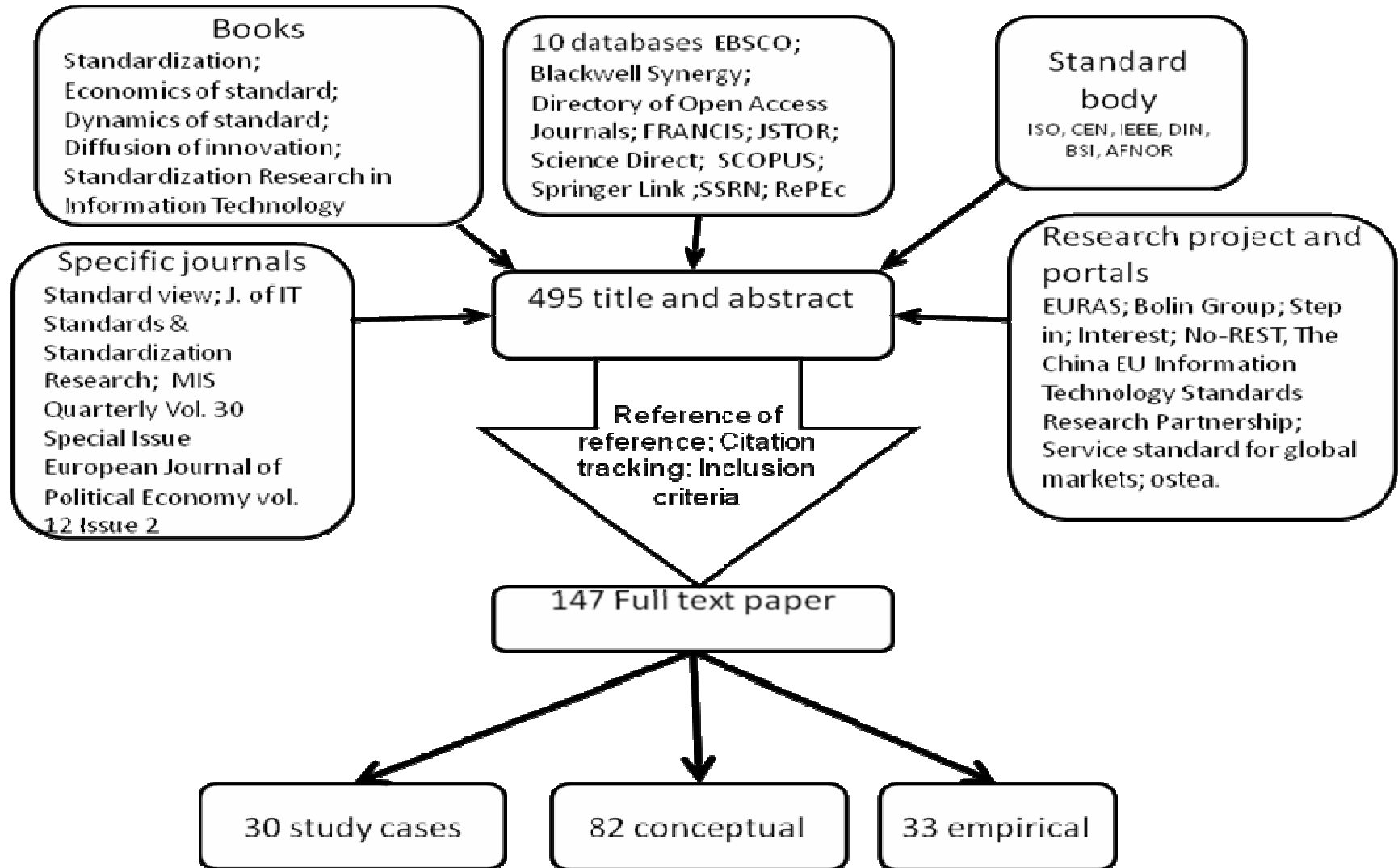
*“a limited set of solutions to actual or potential matching problems, these solutions will be repeatedly or continuously used, during a certain period” (De Vries, 1999)*

## INNOVATION

*“An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations” (Oslo manual, 2005)*



# Methodology





# Classification 1/2

Criterion	Type	Definition	Authors
setting consensus	“de facto”	established by the market forces without explicit consensus	David and Greenstein (1990); David (1985) (Den Butter, (2007), Abernethy, (2002); Maxwell (2006)
	“de jure”	established by the government	
	“voluntary”	established with the consensus of market players	
Economic problem solution	Compatibility/ Interface	specify properties that a product must have in order to work in a system	Farell and Soloner (1985), David (1985) Tassej (1987), Besen (1995) Swann (2000), Temple et.al.( 2005), Iversen (2001), den Butter (2007)
	Minimum Quality/ Safety	specify minimum product or service performance	
	Variety Reduction	limit range of characteristics of product or service	
	Information/ measurement	Provide codified knowledge and recognized test	Krechemer (2000)
Scope	internal	relevant inside the company	Slob and de Vries (2002)
	external	allow external relation of the company	
	national	relevant for domestic market	Blind, K. (2001); Hudson and Jones (2003) Yan (2007)
	International	relevant for global market	

Criterion	Type	Definition	Authors
Object	Prescriptive / “How”	prescribe the production process	Hesser et al., 2007; Sahay and Riley, (2003); CIE(2007)
	Propositional/ “What”	settle characteristic that a product or a service has to have	
public good content	Product / specific	give direct competitive advantage to one market player	Tassej, (1999); Langlois (1999), Shintaku,( 2006)
	No-product / basic	neutral to the competition in the market	
timing respect innovation	Anticipatory	settled before the market acceptance of the emerging innovation	Blind (2001), Söderström (2004), Egyedi and Blind (2008)
	Enabling	developed during the penetration of the innovation in the market	
	Responsive	settled when the innovation is well established	

## “NETWORK”

properly work in the same system (compatibility)

economy of scale (variety reduction)

stifle innovation if the switching costs are high (Lock-in)

## “KNOWLEDGE”

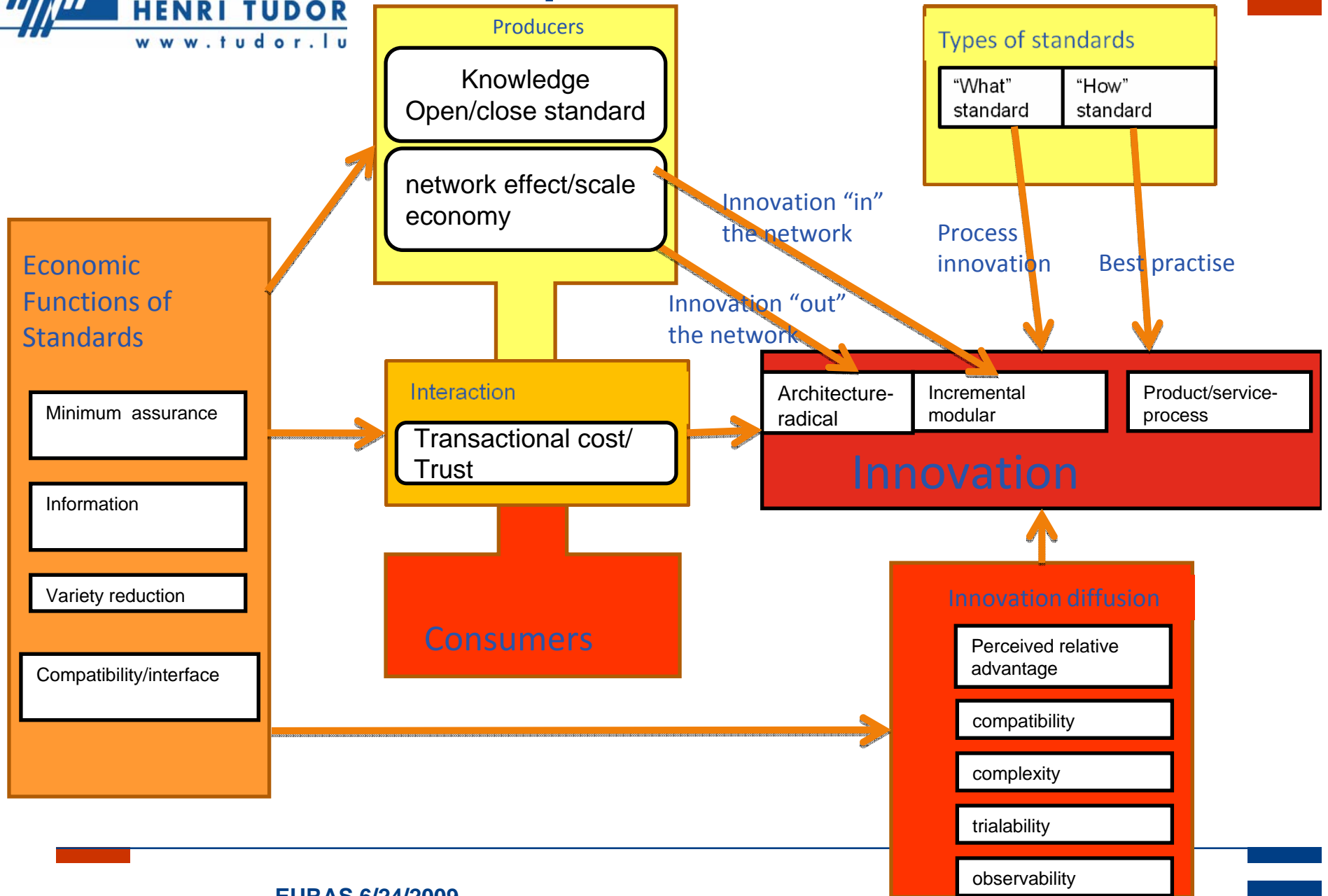
codification of knowledge (information standard) and the accessibility (IPR, “open” standard, Fair Reasonable And Not Discriminatory)

## “TRANSACTIONAL COST”

reduce sink cost different than money involved in any transaction (minimum assurance standards)



# Conceptual Framework





## MAIN LIMITATIONS

- The Conceptual framework was not validated
- Relation innovation-standards is not investigated

## CONCLUSIONS

- Standards can foster and hamper innovation at the same time
- Further investigation on negative effect of standard on innovation (lack of innovation is not easy to identify)
- Further quantitative studies on the “net effect “ of standards on innovation
- Literature standards and innovation, especially in service sector, is still rare but increasing

## FURTHER RESEARCH

- Community Innovation Survey data and ISO certified companies in Luxembourg.



# Thank you