

**Aylin Gözalan M.A.**

**An empirical and theoretical integration of  
Intellectual Capital, Dynamic Capabilities  
and business performance**



## Outline

1. **Research Framework**
2. Methodology – Conceptual Framework
  - 2.1 Intellectual Capital
  - 2.2 Dynamic Capabilities
3. Outlook

## Presentation Outline

1. **Research Framework**
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3. **Outlook**



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## Zygmunt Bauman (1997): Postmodernity and its Discontents

- “Project of Modernity“

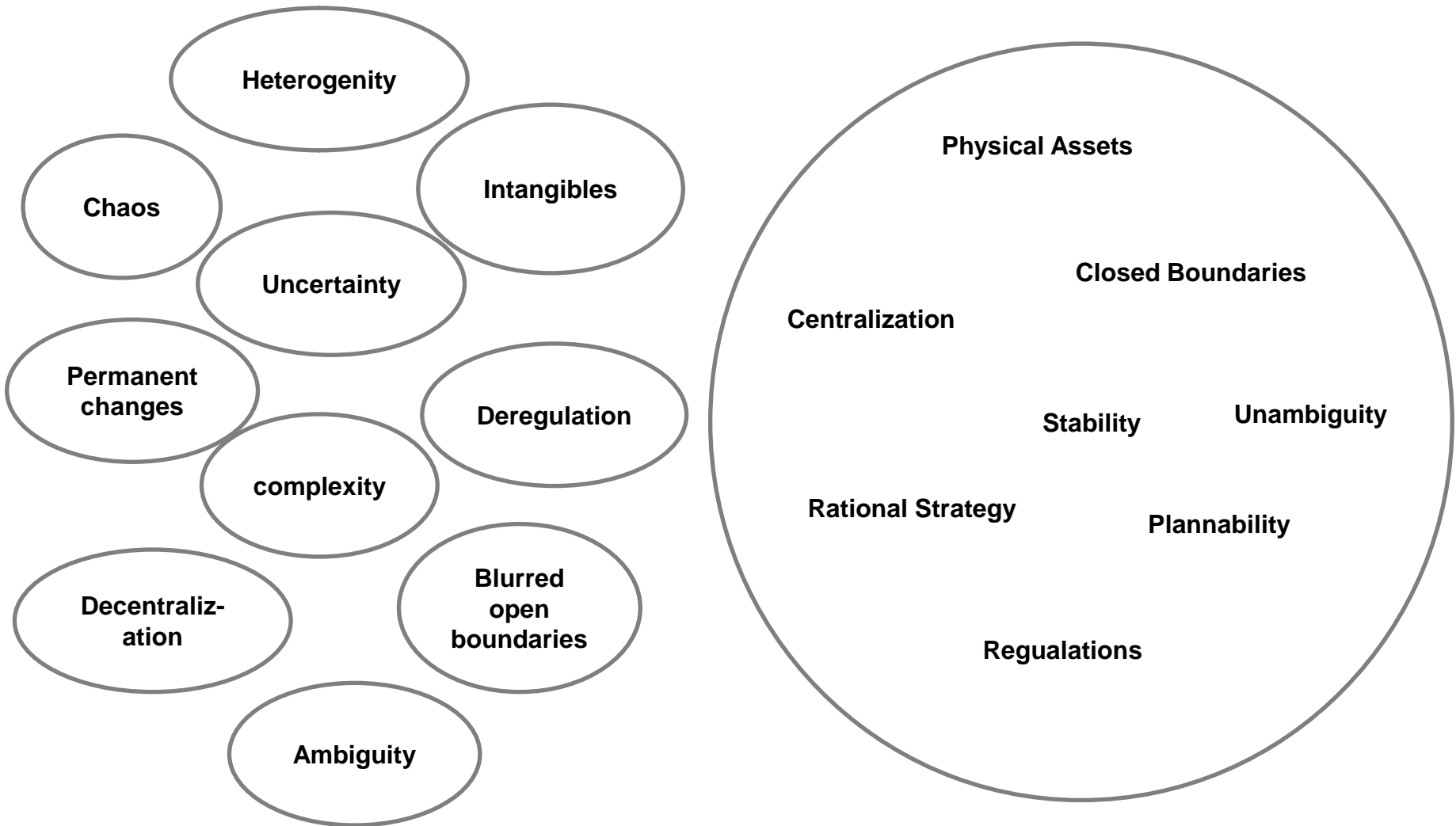




## Innovation Economy – Volatile and dynamic business environment :

### Outline

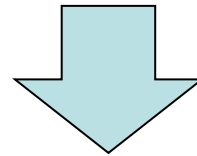
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- **Knowledge driven economy:** Knowledge and intangibles supercede tangible assets
- Organisations **need to learn** how to **change and adapt** to dynamic environments (Redding & Catalanello 1994)
- In an age of uncertainty and ambiguity only the ability to learn and change can give us certainty: “**Learning Imperative**“ (Howard 1990)



„The best competitioners in hypercompetitive industries [...] will also be the best learners“  
( Hanssen- Bauer/Snow 1996 : 426)



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*„The ability to learn faster than your competitors may be the only sustainable competitive advantage“*

DeGeus (1988); Corporate Planning Director in charge of business and scenario planning with the Royal Dutch Shell



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## What does this mean for the Strategic Management?

### Popularity of the Resource Based View (1980's – 1990's):

Resource based view (Barney 1991)  
Core Competencies (Prahalad & Hamel 1990)  
Absorptive Capacity (Cohen & Levinthal 1990)  
Dynamic Capabilities (Teece 1997)

What are these concepts all about?  
Is old wine sold in new wineskins?

## Outline

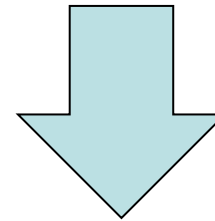
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## Research Framework and Objectives:

Regarding today's market dynamics and complexities prevailing Importance of Intellectual Capital **and** Dynamic Capabilities for gaining competitive advantage (Makdok 2001; Wu et al. 2007; Zahra et al. 2006)

**BUT**

The two concepts are treated solely as two distinctive areas (Bounfour 2003; Moustaghfir 2008)



**Theoretical and Empirical Integration of Dynamic Capabilities and Intellectual Capital for Organizational Performance**

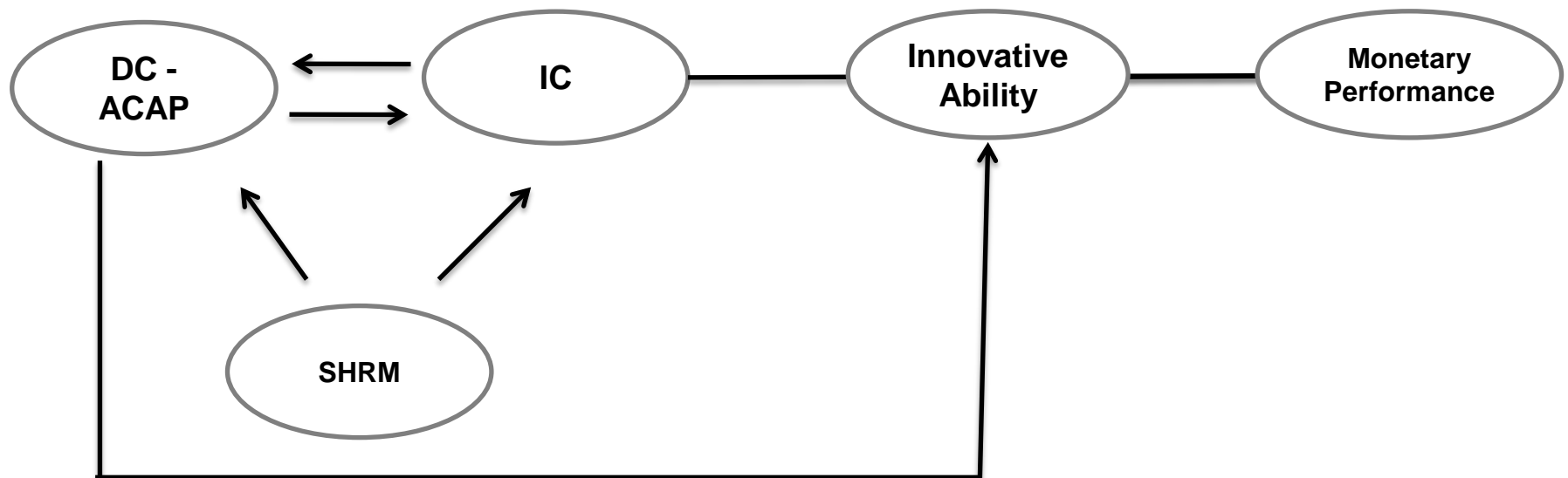




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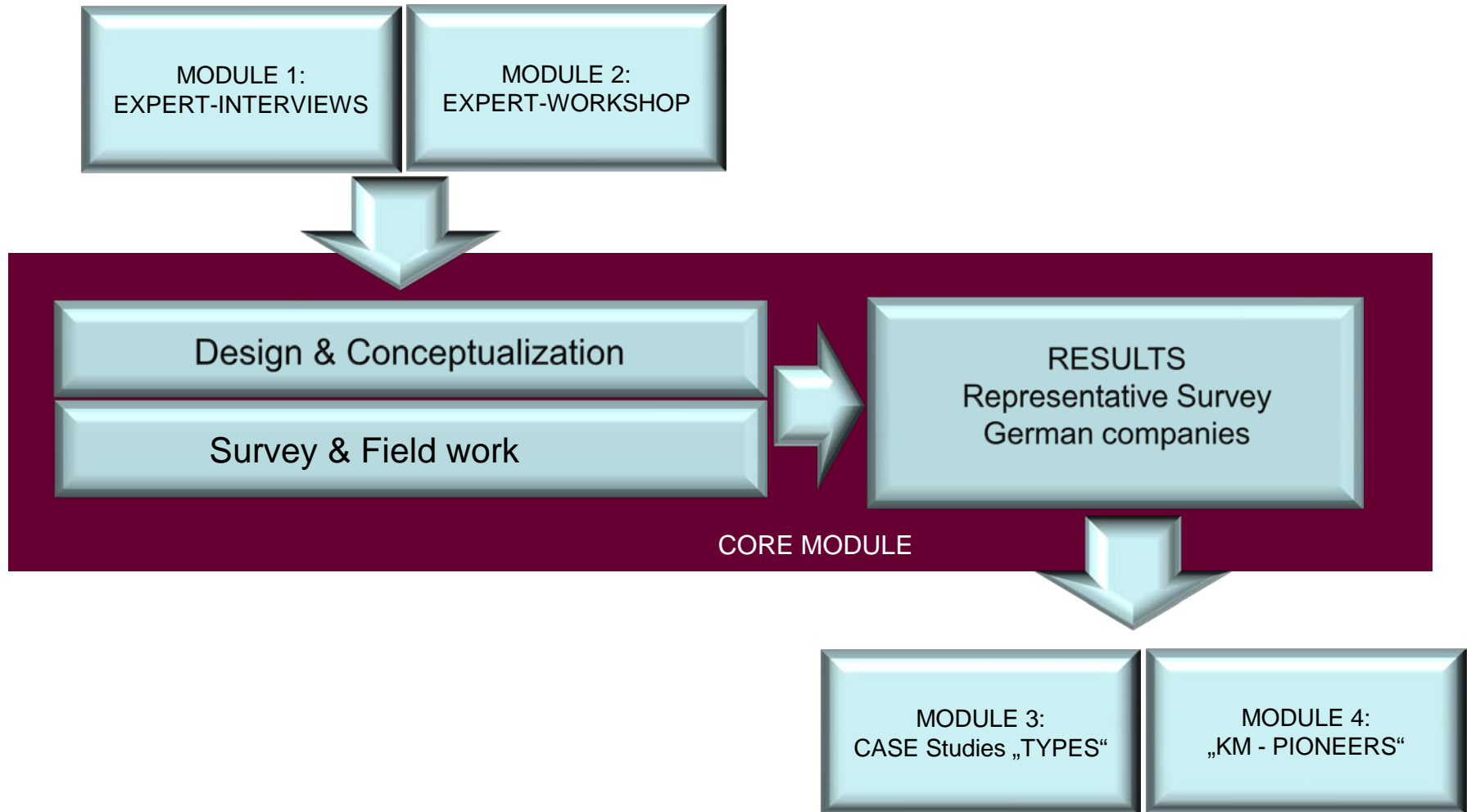
## Preliminary Research Framework:



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## Project KM 2010:





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## Core Module of the Project KM 2010:

- Representative Sample of the German economy ( n = 3401 )
- Method of computer assisted telephone interviewing

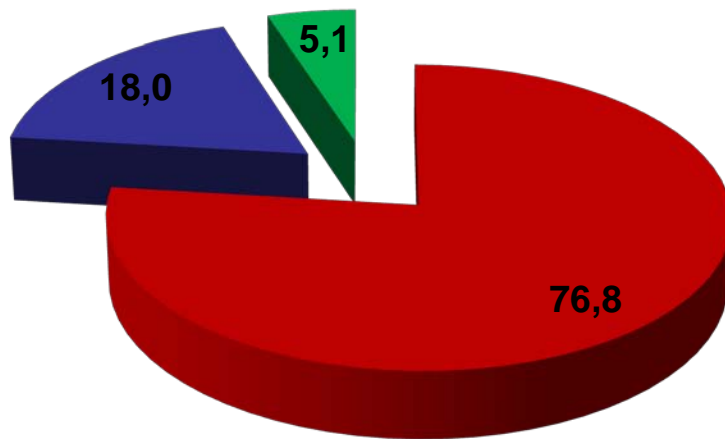


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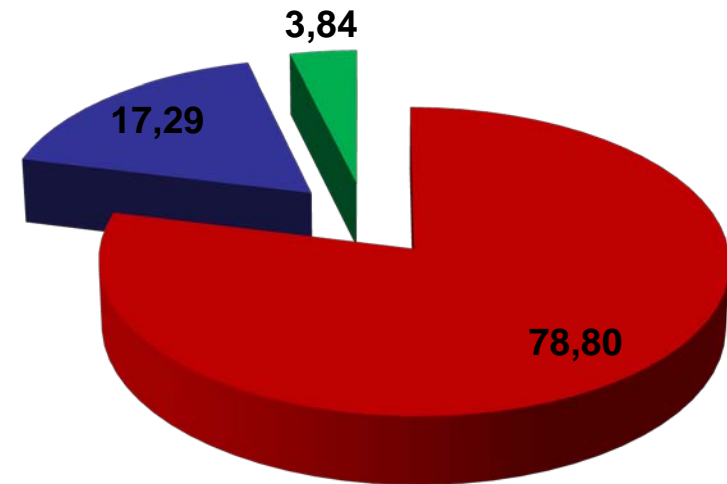
## Company size in sample and national distribution:

Sample: company size



■ 10 - 49 MA ■ 50 - 249 MA ■ 250 und mehr MA

Distribution of company size in Germany:



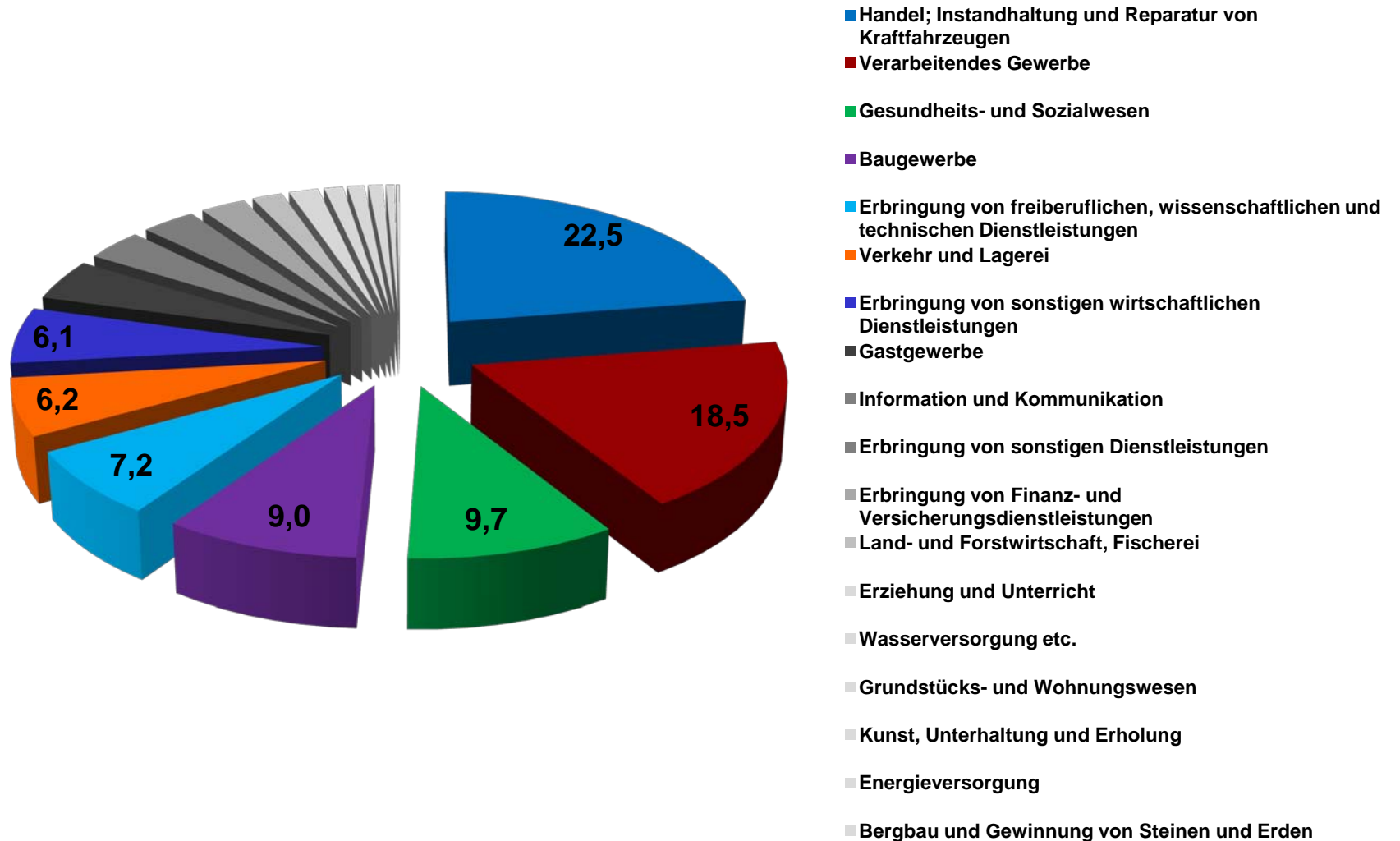
■ 10-49 MA ■ 50-249 MA ■ 250 und mehr MA



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## Line of Business in Sample:

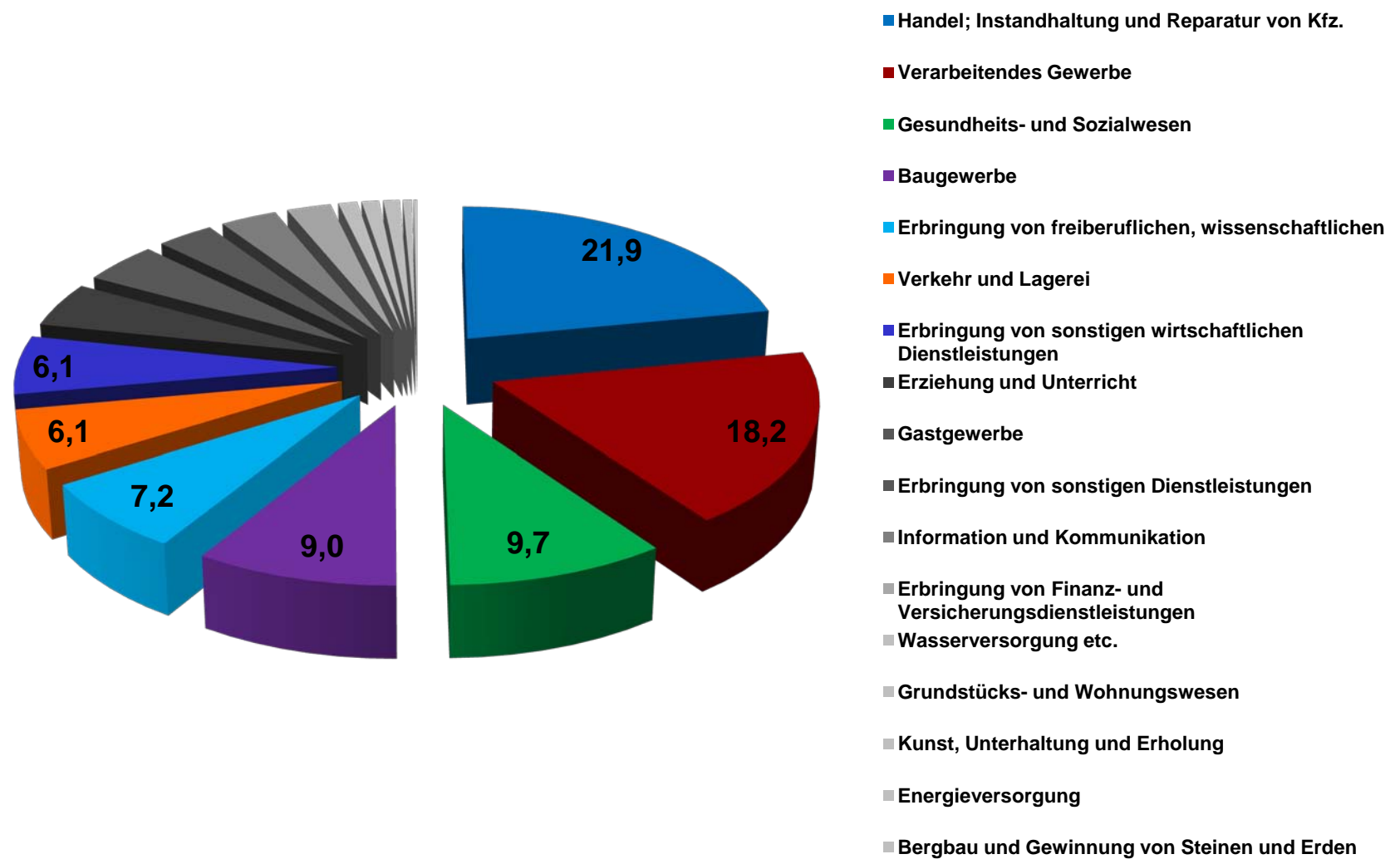




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## Line of Business in national distribution:

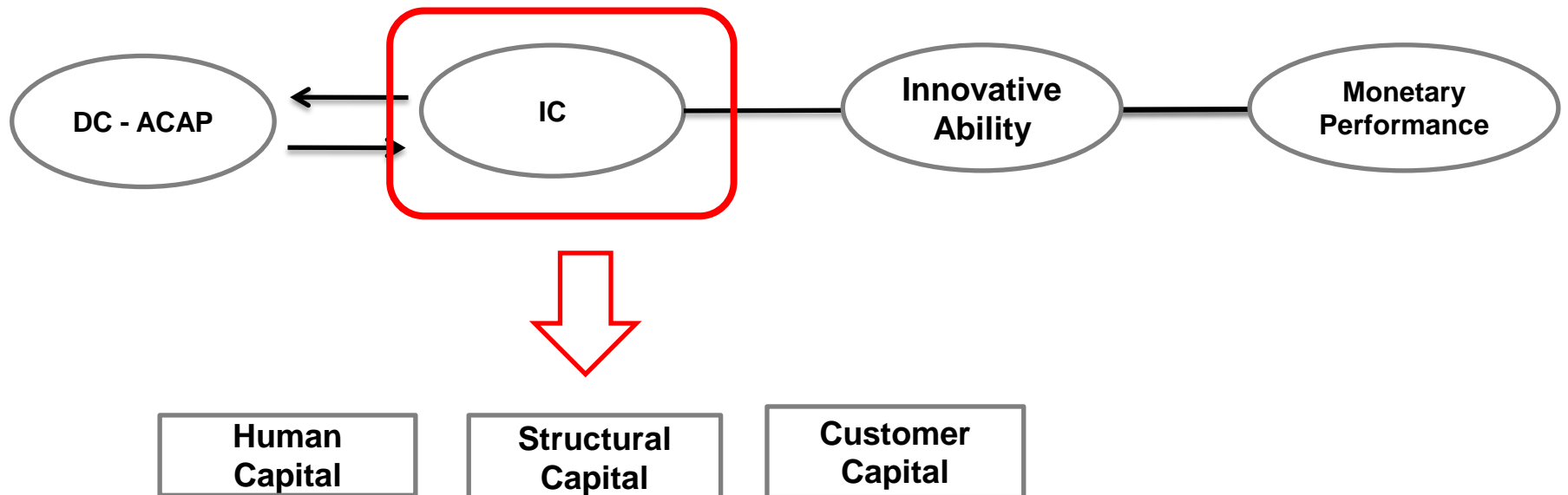




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## Conceptual Introduction: Intellectual Capital

Stewart 1997 :

Human Capital

Structural Capital

Customer Capital

Sveiby 1997:

Human Capital

Internal Structural Capital

External Structural Capital

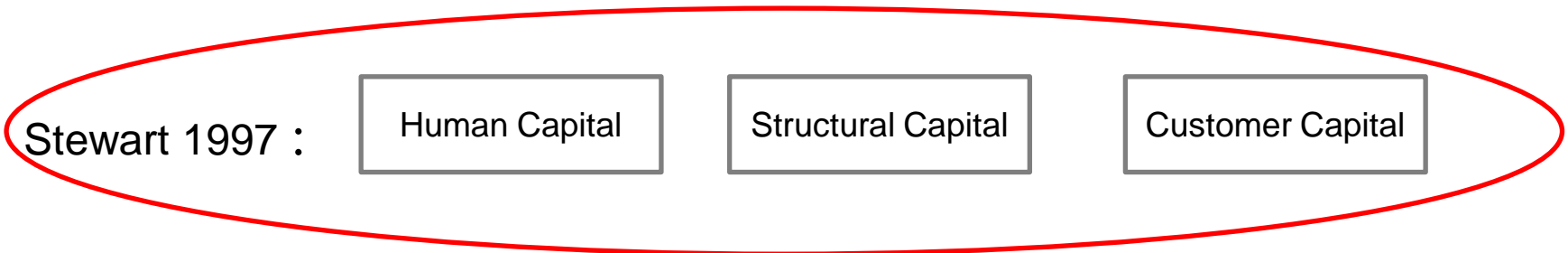
Edvinsson & Malone 1997:

Human Capital

Structural Capital

Organizational Capital

Innovation Capital



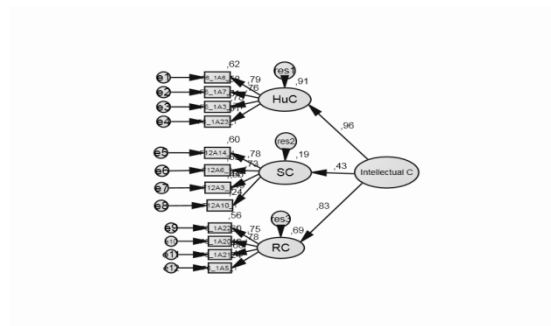
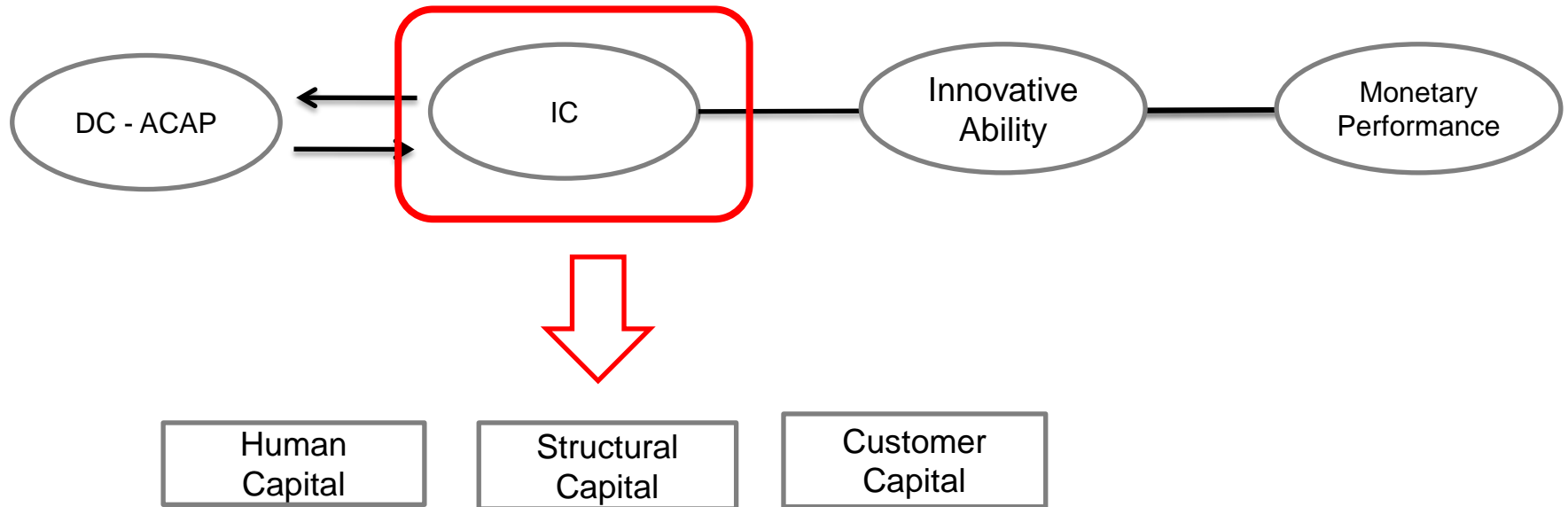




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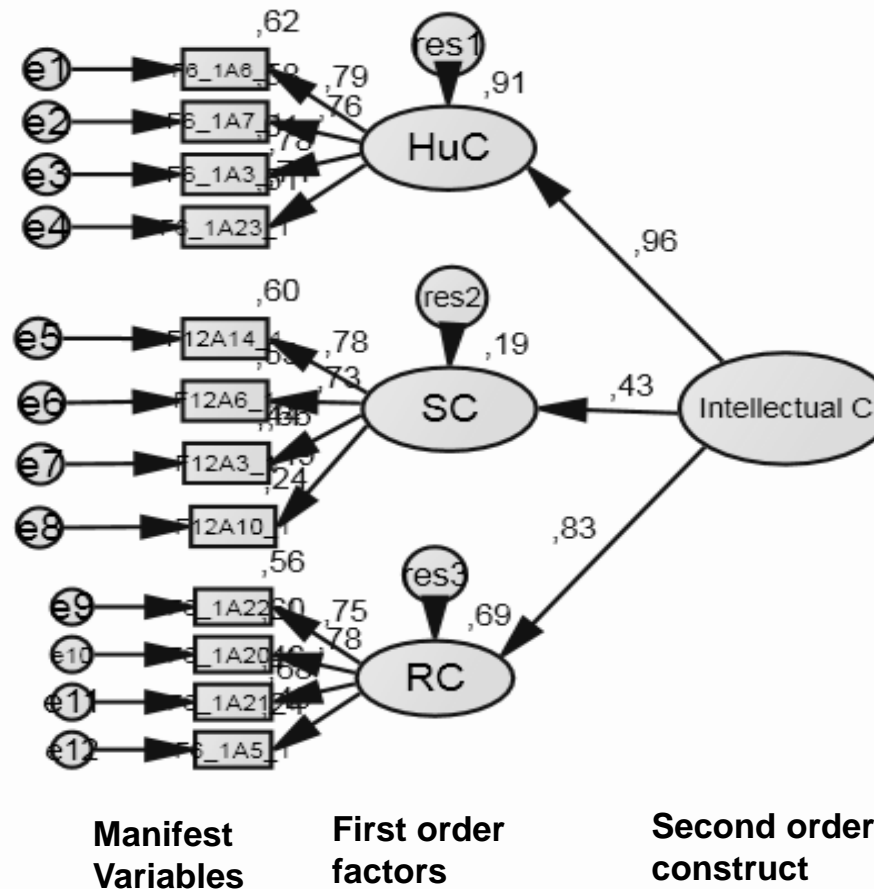
### Preliminary Research Framework:



## Hypotheses 1: IC is a multidimensional construct composed of 3. factors

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# Intellectual Capital and Dynamic Capabilities

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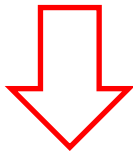
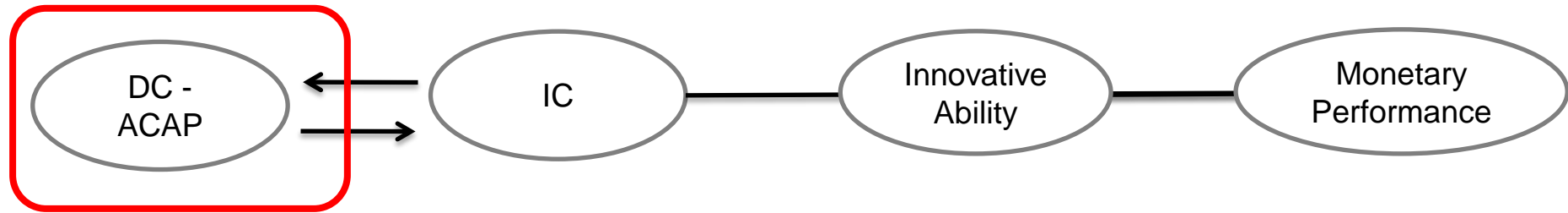
Dimension	Item	Standardised Factor loadings	Reliability
Human Capital	Particularly creative employees	.711	.844
	Employees with higher learning ability	.779	
	Employees with higher motivation and loyalty	.762	
	Employees with better skills and more know-how	.787	
Structural Capital	<i>Use of electronic data bases</i>	.493	.756
	Documentation of practical knowlege from employees leaving the organization	.661	
	Formulation of case studies, reports and sucess stories	.728	
	Documentation of expert knowledge	.776	
Relational Capital	<i>Better Networks of relations and better contacts</i>	.486	.753
	Resilience and Flexibility of the firm	.678	
	Higher customer satisfaction	.776	
	particularly close customer-relationships	.745	
<b>Goodness of fit statistics for second order Model</b> <b>CFI: .944      NFI: .941      RMSEA: .070</b>			



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## Preliminary Research Framework:



**What are  
Dynamic Capabilities ?  
What is  
Absorptive Capacity ?**

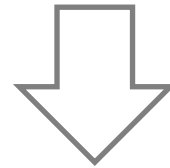
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## Conceptual Introduction: Dynamic Capabilities

"firm's ability to **integrate, build, and reconfigure internal and external competences** to address rapidly changing environments" (Teece et al. 1997: 516)

"Capacity of an organization to purposefully **create, extend, or modify** its resource base" (Helfat et al. 2007: 4)



"From this point of view [...] building competitive advantage on the basis of intangibles is mainly ensured via the deployment of a "**combinatory function**" of these resources in a **distinctive and specific way**" (Bounfour 2003: 400)

Innovations can result through the direct imitation of external knowledge or from hybridization and "**combinative capabilities**" of the organization. These capabilities are formed by **internal and external learning** and effect the firm's opportunities to prosper in uncertain future markets (Kogut and Zander 1992: 384)



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## Conceptual Introduction: Dynamic Capabilities – Absorptive Capacity

### Conceptual founding fathers of ACAP (Cohen & Levinthal 1990):

“ability of a firm to **recognize the value** of new, external information, **assimilate** it, and **apply it** to commercial ends is critical to its innovative capabilities. We label this capability a firm's absorptive capacity [...]” (Cohen & Levinthal 1990: 128)

“Absorptive capacity refers not only to the acquisition or assimilation of information by an organization but also to the organization's ability to exploit it. Therefore, an organization's absorptive capacity does not simply depend on the organization's **direct interface with the external environment**. It also depends on **transfers of knowledge across and within subunits** that may be quite removed from the original point of entry”  
(Cohen & Levinthal 1990: 128)



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## Conceptual Introduction: Dynamic Capabilities – Absorptive Capacity

### Reconceptualization of ACAP as a Dynamic Capability (Zahra & George 2002) :

ACAP as a four dimensional construct: Acquisition; Assimilation, transformation and exploitation of knowledge.

### Learning process – oriented definition of ACAP (Lane & Koka 2006 : 856):

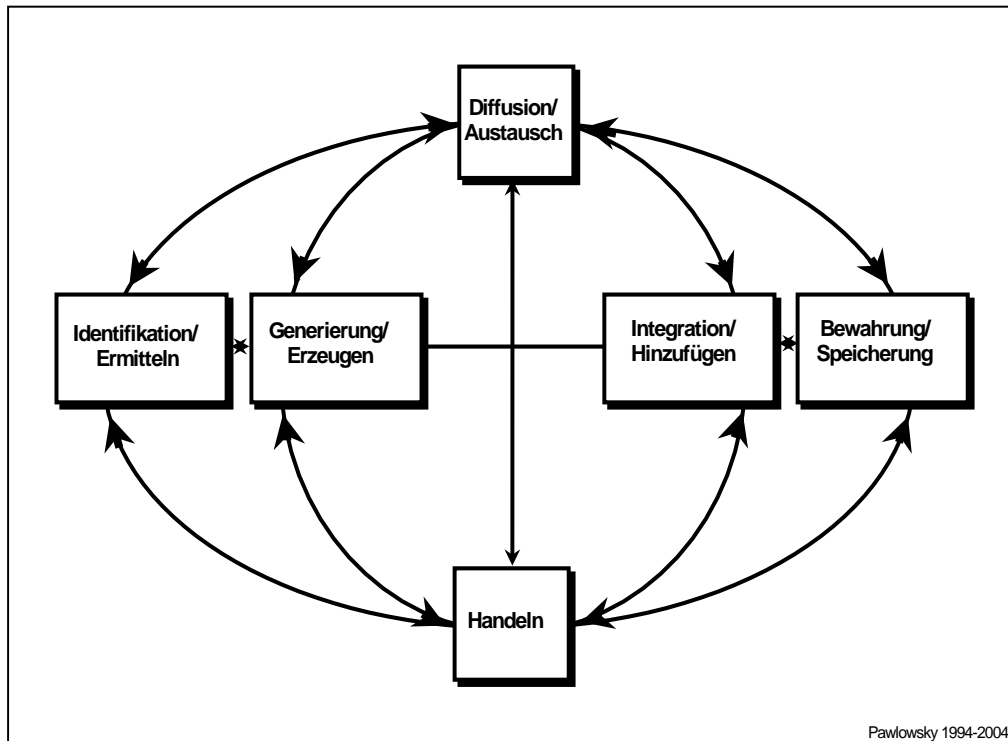
“Absorptive capacity is a firm’s ability to utilize externally held knowledge through three sequential processes:

- (1) recognizing and understanding potentially valuable new knowledge outside the firm through **exploratory learning**
- (2) assimilating valuable new knowledge through **transformative learning**, and
- (3) using the assimilated knowledge to create new knowledge and commercial outputs through **exploitative learning**”

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## Conceptual Introduction: Dynamic Capabilities – Absorptive Capacity



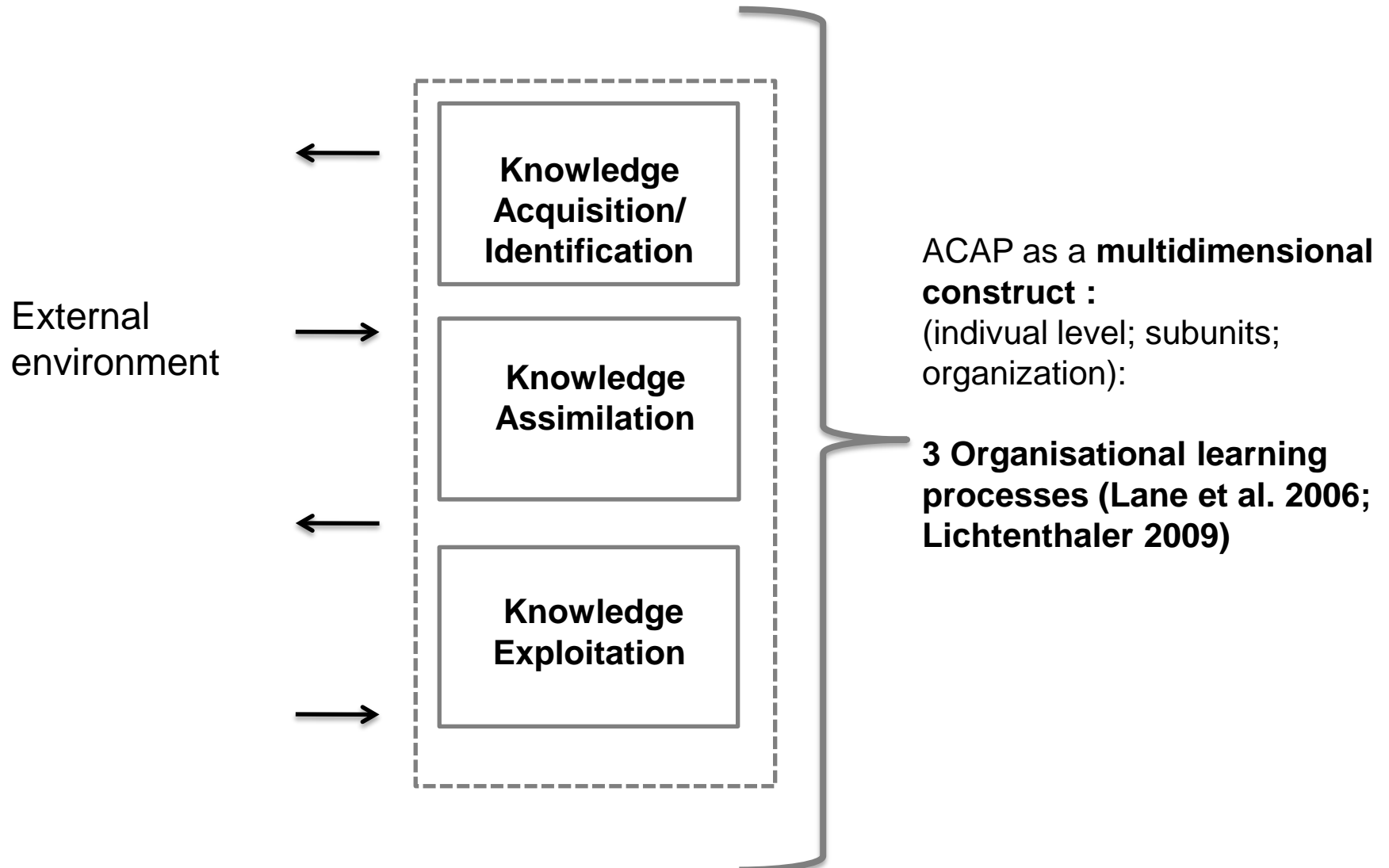
„ACAP as a special type of organizational learning which concerns an organization’s relationship with external knowledge“  
(Sun & Anderson 2008 : 15 )



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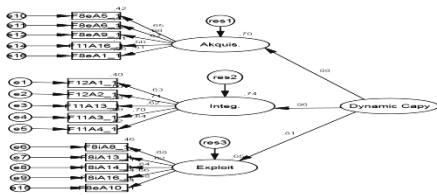
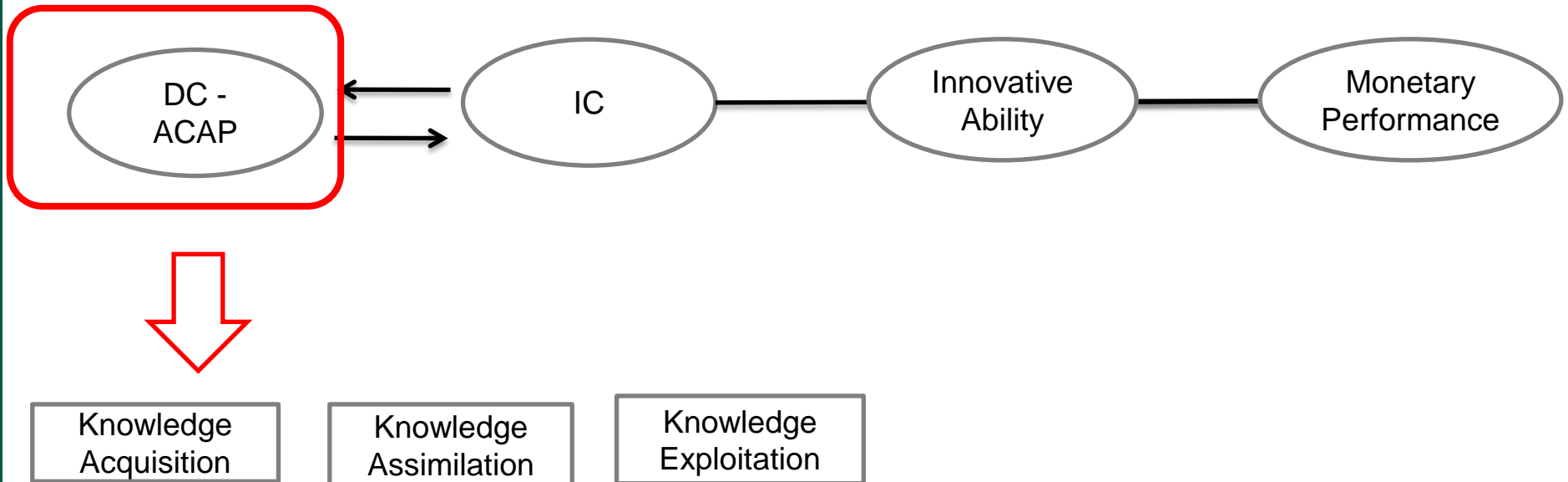
## Conceptual Introduction: Dynamic Capabilities – Absorptive Capacity



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### Preliminary Research Framework:

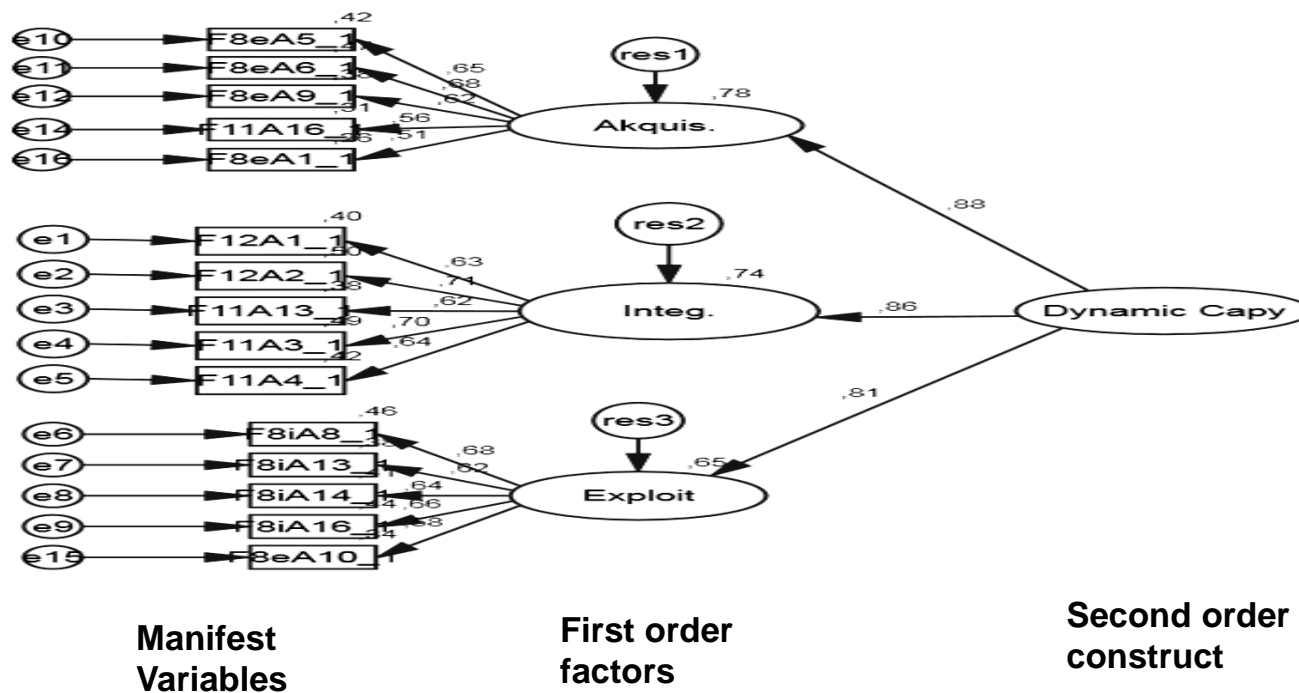




**Hypotheses 2: ACAP (DCs) are a multidimensional construct, composed of 3 factors (organizational learning processes)**

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Dimension	Item	Standardised Factor loadings	Reliability
<b>Acquisition</b>	<b>Cooperating with user and criticer groups</b>	<b>.645</b>	<b>.714</b>
	<b>Implementing open innovation</b>	<b>.686</b>	
	<b>Conducting market research</b>	<b>.616</b>	
	<b>R&amp;D cooperations with other organizations</b>	<b>.559</b>	
	<b>Evaluation of customer complaints</b>	<b>.506</b>	
<b>Integration</b>	<b>Documentation of organisational processes</b>	<b>.629</b>	<b>.790</b>
	<b>Documentation of projects and experiences</b>	<b>.710</b>	
	<b>Knowledge exchange with the use of data bases</b>	<b>.615</b>	
	<b>Knowledge transfer between project-teams</b>	<b>.703</b>	
	<b>Knowlege exchange between cross-functional subunits</b>	<b>.645</b>	
<b>Exploitation</b>	<b>Regular reviews of experiences and routines</b>	<b>.681</b>	<b>.777</b>
	<b>Active support of CEO's and superiors</b>	<b>.616</b>	
	<b>Feedback and incentives for learning at the workplace</b>	<b>.644</b>	
	<b>Continuous improvement of process (CIP)</b>	<b>.660</b>	
	<b>Transfer of successful concepts/ and practices</b>	<b>.581</b>	
	<b>Goodness of fit statistics for second order Model</b>		
<b>AGFI: .968</b>		<b>NFI: .960</b>	



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**Hypotheses 2b: ACAP (DCs) are a multidimensional construct, composed of 4 factors, namely 3 learning processes and Environmental perception???**

<b>Environmental challenges - Market dynamics</b> $\alpha=.718$	1	2	3	4
Process coordination		.588		
Speed of environmental changes		.583		
Internationalisation of markets		.519		
Mobility requirements		.476		
Trends towards concentration / mergers		.464		
Uncertain business conditions		.414		

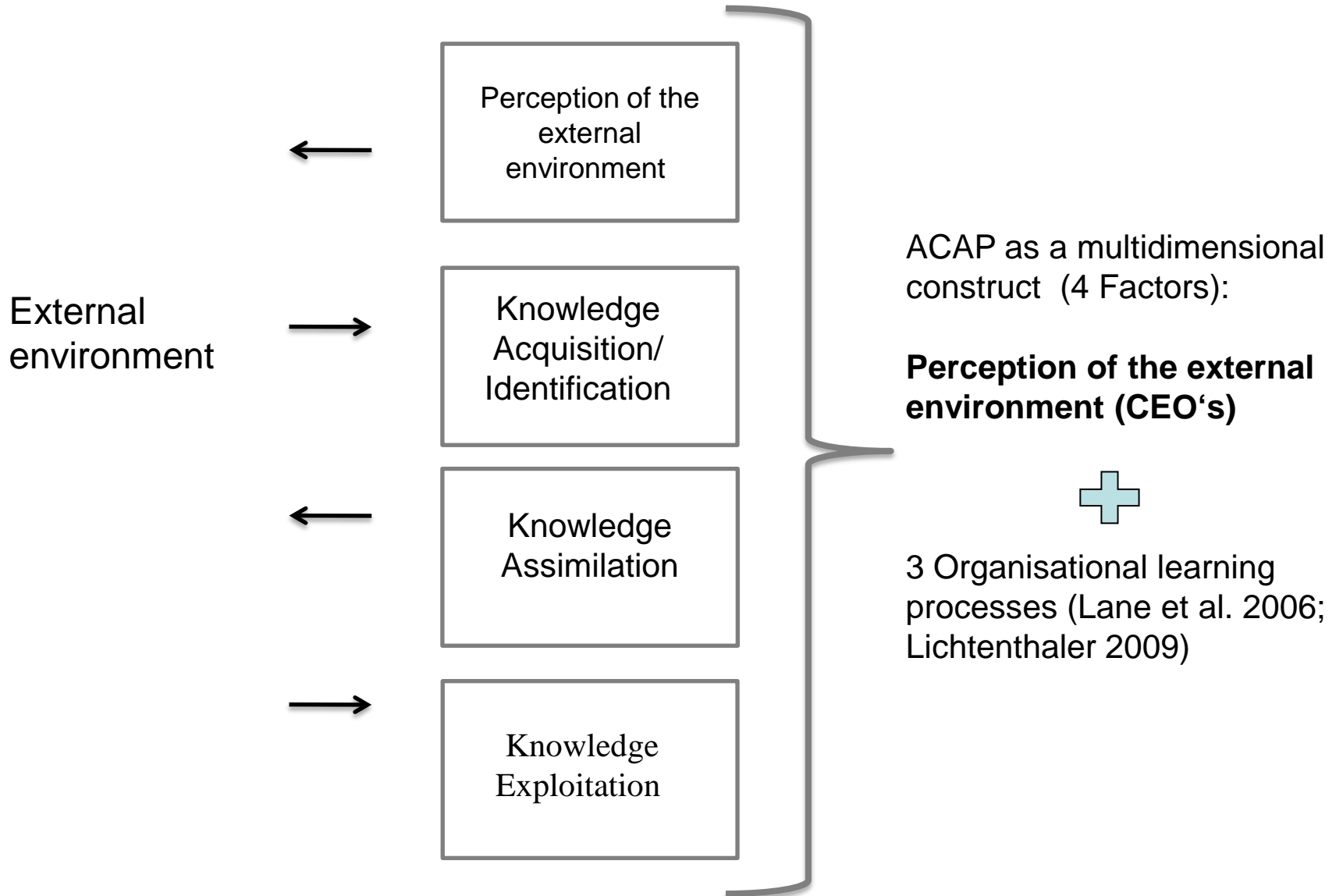
Principal Component with Kaiser-Normalization - Varimax (EFA)



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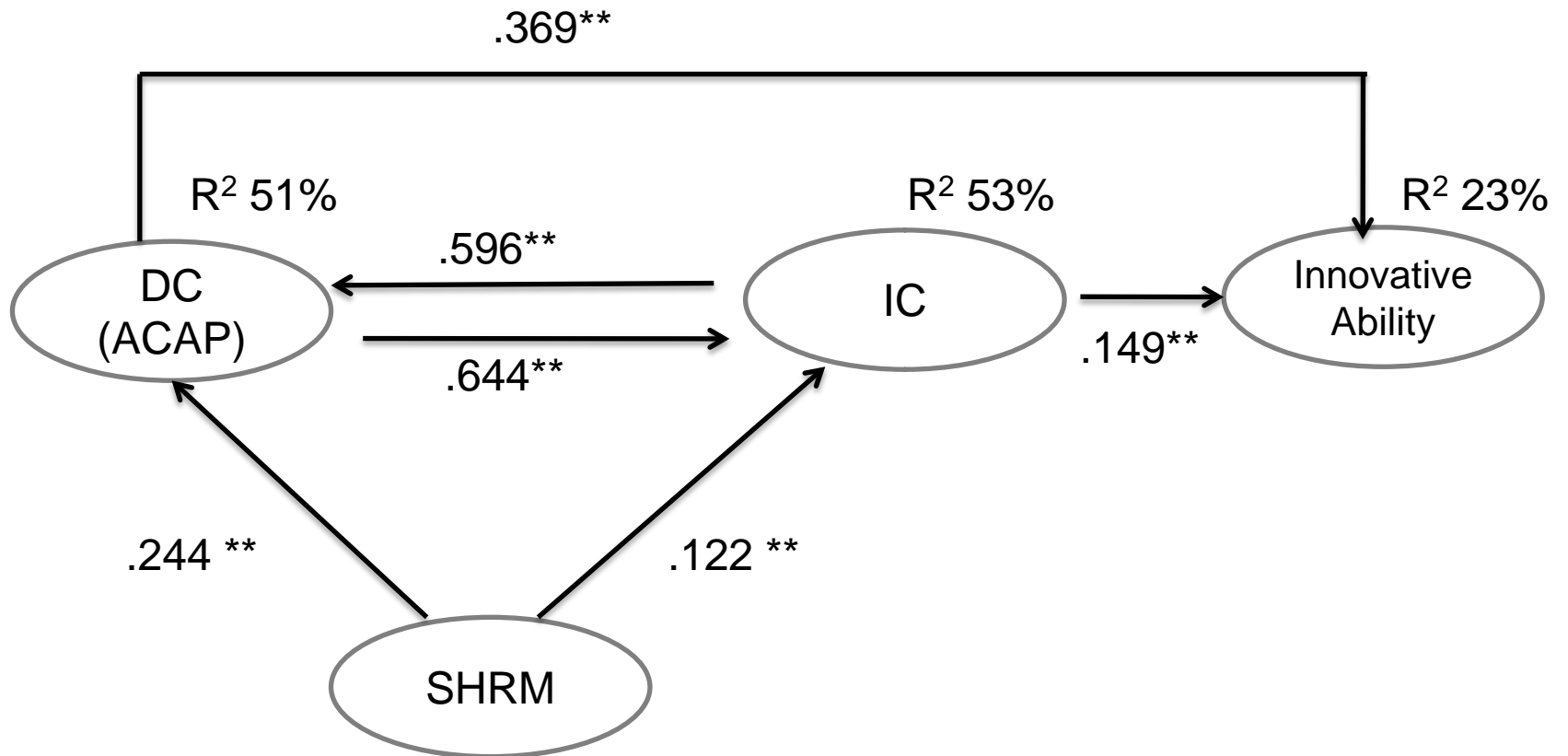




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### First figural insights:



OLS Regression Analysis  
(Ordinary Least Squares)



**Thanks for your attention!!!**

**Questions, Remarks and comments???**







## References

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