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## Studying the relation of social capital with knowledge sharing: a case study

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## New Capitals

- Evolution of various economic theories during the past decade and influencing organizational operations (Brooks and Nafukho, 2006)
- Expansion of traditional forms of capital to new intangibles capitals which contribute to more organizational development and growth

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## Social Capital

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- One the new capitals
- Result of existing relations in social networks of any organization
- The concept that underlies it has a long history (David Hume's farmers story)
- Applicable in business, economics, organizational behavior, political science, public health and other social sciences

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## Social Capital

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- Evolution the concept of social capital in management science, beginning by the work of Nahapiet and Ghoshal (1988).
- Defined as the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit
- Identified three dimension

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## Dimensions of Social Capital

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- **Structural Dimension:** the impersonal configuration of linkages between people or units.
  - network ties
  - network configuration
  - and appropriable organization

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**Dimensions of Social Capital**  


- **Relational Dimension:** Focusing on the particular relations people have, such as respect and friendship, that influence their behavior
  - Trust and trustworthiness
  - Norms and sanctions
  - Obligations and expectations
  - Identify and identification

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**Dimensions of Social Capital**  


- **Cognitive Dimension:** Referring to those resources providing shared representations, interpretations, and systems of meaning among parties
  - shared language and codes
  - shared narratives

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**Dimensions of Social Capital**  


- Three analytically separated dimensions, which many of the features are highly interrelated
- Identified two characteristics in different forms of social capital (Nahapiet and Ghoshal, 1988)
  - Constituting some aspects of the social structure
  - Facilitating the actions of individuals within the structure

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## Organizational knowledge

- Includes various aspects of organization:
  - Products,
  - Processes,
  - Management, and
  - Technologies
- Provides “competitive advantage”
- Main requirement for gaining competitive advantage:
  - Using knowledge management to generate, capture, codify and transfer knowledge

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## Knowledge Sharing

- Considered as the first generation of knowledge management
- Described as “supply-side KM” because people can acquire supplied knowledge through knowledge sharing systems (Firestone and McElroy, 2003)

**Knowledge sharing = Transmission + Absorption**  
(Davenport and Prusak, 1998)

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## Social Capital & knowledge sharing

- Providing great facilities for knowledge management as a result of Social capital capabilities, such as (Bakker et al., 2006):
  - **Facilitating** the relation between members
  - **Improving** the level of trust
  - **Creating** shared criteria and missions
- Importance of understanding the relation of social capital dimensions with knowledge sharing

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## Research Model

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- Defined it based on the Nahapiet and Ghoshal's theoretical model
- Trying to examine thirteen hypothesis
  - Is there any meaningful relation between social capital's factors and knowledge sharing's measuring indices?
- Using "Attitude and expectations about knowledge sharing" and "Quality of knowledge sharing" to measure knowledge sharing.

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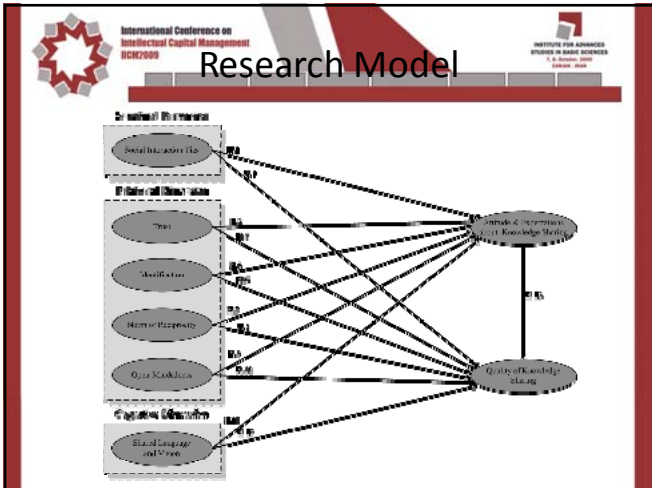
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## Research Model

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- Attitude and expectations about knowledge sharing:
  - Behavioral intention to share knowledge is determined by a person's attitude toward knowledge sharing (Chow and Chan, 2008).
  - Personal outcome expectations refer to the knowledge contributor's judgment of likely consequences that his or her knowledge sharing behavior will produce to him or herself (Chiu et al., 2006).

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## Research Model



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- Quality of knowledge sharing is an indicator of productivity that an organization can gain through knowledge sharing.
- In this research, it measures six items:
  - Relevance
  - Ease of understanding
  - Accuracy
  - Completeness
  - Reliability
  - Timeliness

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## Data Collection



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- The study sample consisted of personnel of the research center of IRIB.
- Using Cochran's formula (1977) for continuous data to compute the minimum required number of questionnaires:

$$n_0 = \frac{z^2 * s^2}{d^2} = \frac{1.96^2 * 1.2^2}{(6 * 0.03)^2} = \frac{5.531904}{0.0324} \approx 170$$

$$n_1 = \frac{n_0}{(1 + \frac{n_0}{Population})} = \frac{170}{(1 + \frac{170}{200})} = \frac{170}{1.85} \approx 92$$


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## Measurement Development



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- Developed by adopting measures that had been validated in prior studies and modified to fit the context of research
- Using 23(25) questions for measuring the six factors of social capital
- Using 17 questions for measuring the two indices of knowledge sharing.
- Six-point Likert's scale: anchors ranging from strongly disagree (1) to strongly agree (6).

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## Construct validity & Reliability

Result of construct validity and reliability test			
Factors (abbreviation)	Items	Factor Loading	Cronbach's $\alpha$
Social interaction ties (SIT)	4	0.71~0.88	0.81
Trust (T)	5	0.62~0.83	0.89
Identification (I)	4	0.77~0.95	0.93
Norm of Reciprocity (NR)	2	0.81~0.86	0.85
Open-Mindedness (OM)	3 (4)	0.70~0.75	0.88
Shared Language and Vision (SLV)	5 (6)	0.60~0.82	0.82
Attitude and Expectations about Knowledge Sharing (AEKS)	11	0.61~0.90	0.95
Quality of Knowledge Sharing (QKS)	6	0.70~0.92	0.92

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## Demographic Information

- Distributing questionnaires between all members of the center (200)
- Total of 144 replies (response rate of 72%)
- Male: 63, Female: 80
- 2-years colleague: 4, B.Sc.: 57, M.Sc.: 73, PhD: 6
- Researcher: 69, Research assistance: 39, Manager: 12, System expert: 8, Technical expert: 8, Others: 2
- Relation of job to field of study; Yes: 105, No: 36

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## Testing Hypothesis

- Using Multiple Regressions
- Using two Step-Wise regression for the first 12 hypothesis:
  - First one for the relations of social capital factors to attitude and expectations about knowledge sharing
  - Second one for the relations of social capital factors to quality of knowledge sharing
- Using one hierarchical regression for hypothesis No. 13

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## Testing Hypotheses

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**Correlation between variables**

	SIT	T	I	NR	OM	SLV	AEKS	QKS
SIT	1							
T	0.176*	1						
I	0.186*	0.448**	1					
NR	0.234**	0.477**	0.444**	1				
OM	0.104	0.604**	0.405**	0.426**	1			
SLV	-0.116	0.383**	0.313**	0.309**	0.456**	1		
AEKS	0.149	-0.066	0.218**	0.221**	0.007	0.327**	1	
QKS	0.081	0.166*	0.212*	0.261**	0.142	0.500**	0.581**	1

\*  $p < 0.05$   
\*\*  $p < 0.01$

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## Testing Hypotheses

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**Result of multiple regression for attitude and expectations about knowledge sharing**

IVs in the last model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	B	Std. error	$\beta$	t	Sig.
Const.	0.533	0.284	0.263	27/683	4.275		6.475	0.000
SLV				1.052	0.176	0.484	5.978	0.000
T				-0.680	0.151	-0.387	-4.506	0.000
SIT				0.482	0.162	0.226	2.967	0.004
NR				0.911	0.380	0.203	2.937	0.018

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## Testing Hypotheses

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**Result of multiple regression for quality of knowledge sharing**

IVs in the last model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	B	Std. error	$\beta$	t	Sig.
Const.	0.500	0.250	0.245	12.188	1.647		7.399	0.000
SLV				0.614	0.089	0.500	6.877	0.000

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## Testing Hypotheses

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Result of hierarchical regression (in two step)									
IVs in the model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change	B	Std. error	$\beta$	t	Sig.
1 Const.	0.500	0.250	0.245	0.250	12.188	1.647		7.399	0.000
SLV					.614	.089	.500	6.877	0.000
2 Const.	0.657	0.431	0.423	0.181	2.558	2.033		1.258	0.210
SLV					.404	.084	.329	4.811	0.000
AEKS					.259	.039	.459	6.707	0.000

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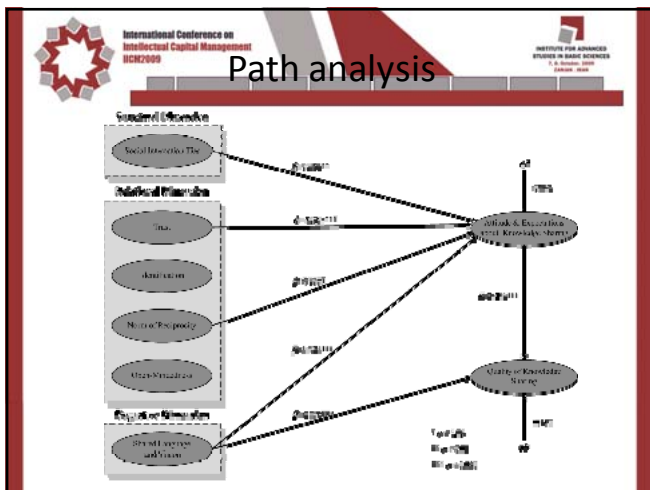
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## Conclusions

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- Positive and significant contribution to attitude and expectations about knowledge sharing:
  - Social interaction ties
  - norm of reciprocity
  - shared language and vision
- Negative and significant contribution to attitude and expectations about knowledge sharing:
  - Trust

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## Conclusions



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- Trust can have two layers:
  - Outer layer as a friendship behavior, without strong foundation
  - Inner Layer as a knowing means, which lead to better perception about the behaviors of others
- Supported by Iranian's individualism score, IDV=41 (Hofstede's cultural dimensions).

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## Conclusions



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- Shared language and vision significantly contributed to quality of knowledge sharing
- Attitude and expectations about knowledge sharing significantly contributed to quality of knowledge sharing.
- Social capital has a noticeable effect on knowledge sharing (specifically on attitude and expectations, and quality).

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## limitations



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- Carried out in a research center of a governmental organization (IRIB) in Iran
- Using only six factors of social capital
- Using only two indices (behavioral and quality) for measuring knowledge sharing
- Not considering other effective factors on knowledge sharing

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## Recommendations

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- Because of the importance of shared language and vision, it can be a proper policy to invest in cognitive dimension's factors of social capital
- Performing the research in other working context
- Studying the relation of social capital with knowledge sharing by using other indices to measure knowledge sharing

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