IC Reporting in Serbia

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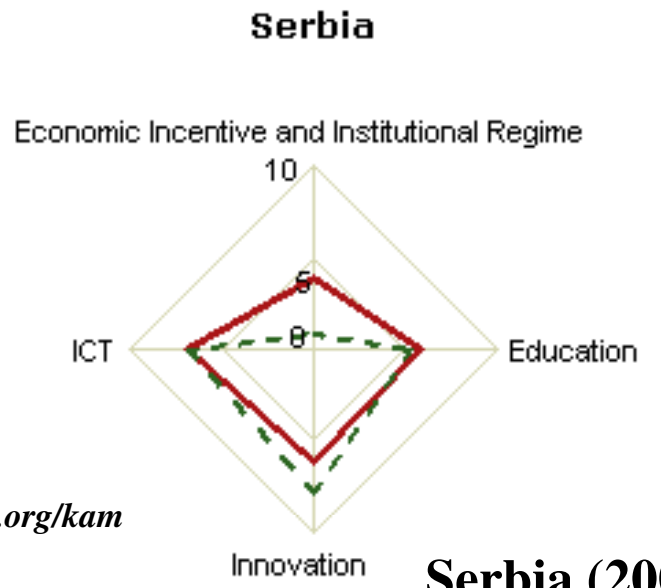
Serbia's Transition to the Knowledge Economy



Source: http://www.worldbank.org/kam

Index	Serbia (2008)	Serbia (1995)
1.Knowledge Economy Index- KEI	5.74	5.26
2. Knowledge Index – KI	6.32	6.67
3. Economic Incentive and Institutional Regime	4.01	1.04
4. Education	5.83	5.33
5. Innovation	6.15	7.79
6. ICT	6.99	6.88

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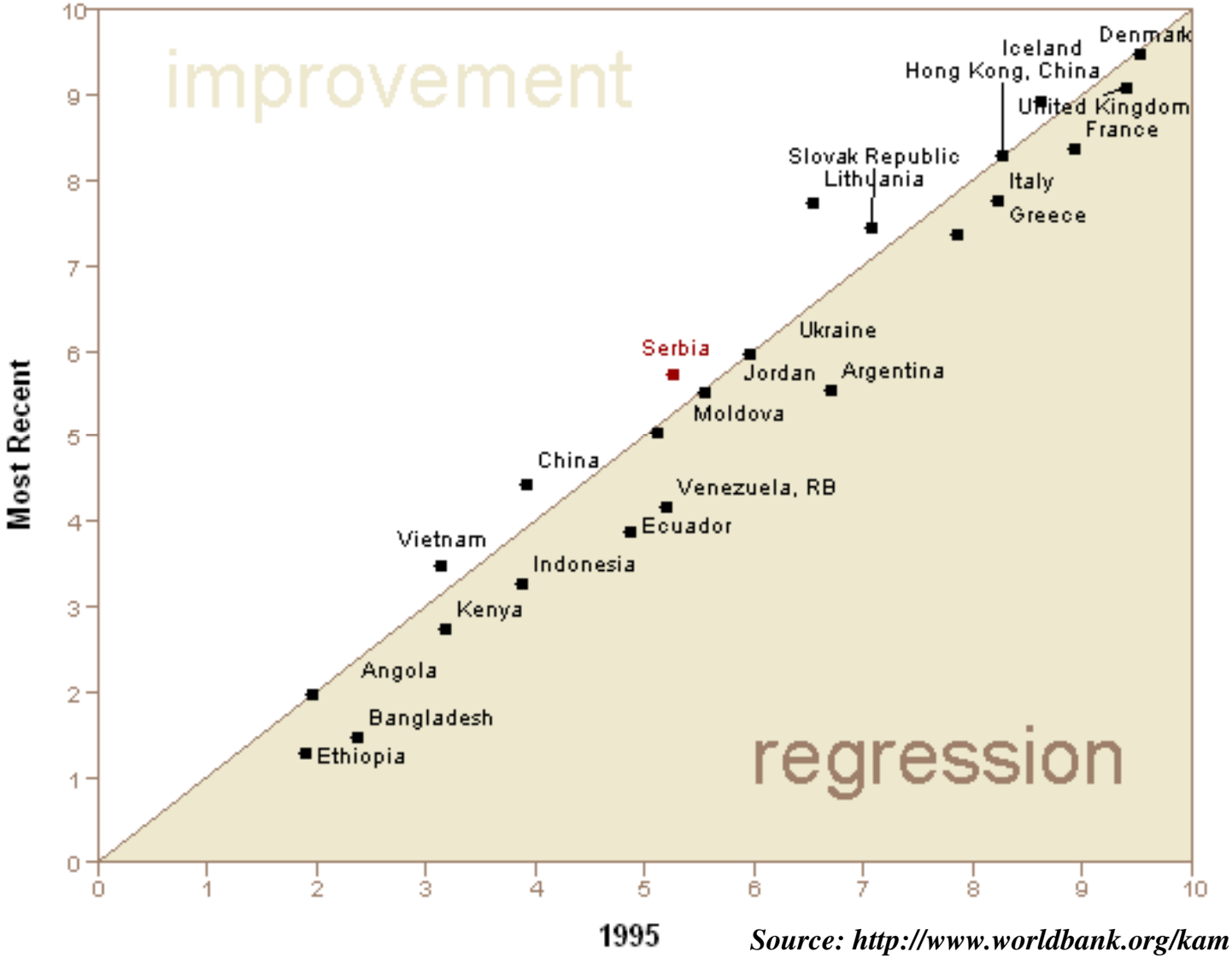
Serbia's position in the Global Knowledge Economy



Source: http://www.worldbank.org/kam

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Situation in Serbia related to IC reporting

The world is experiencing an increasing interest in IC reporting
BUT

1) Serbia presents a rather turbulent environment
2) There is no precisely defined national strategy for IC
3) Brain drain has been a growing trend in the last 20 years
4) **There is a lack of awareness of the importance and the nature of IC, measuring methods and IC reporting in Serbia**
5) IC project implementation has been more difficult in such business environment
6) Poor research and practical experience
7) **The ability of companies to choose a proper method and apply it successfully is diminished**

The first IC research in Serbia (2004-2005)

- **Application of two IC measuring methods** - IAM and Danish Guidelines, in one of insurance companies in Serbia (Cabrilo, 2005).
- The research indicated a necessity for **modification of the existing IC measuring** methods, particularly in the field of indicators, **pertaining to characteristics of the environment, industry and the company** (Cabrilo, 2005).

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Research questions & problems

How to provide IC reporting that aims to more efficient and effective IC management given the lack of understanding of the existing IC reporting methods?

GENERAL MODEL FOR IC REPORTING IN SERBIA

Can a unique IC report, or the same group of IC indicators, measure and report on IC of companies from different industries with equal accuracy?

MODELS FOR IC REPORTING WITHIN INDUSTRIES

Research/ Purpose & Objectives

A wide-ranging IC research within Serbia's business environment

THE PURPOSE - to scrutinize organizational IC in Serbia in order to facilitate the fine-tuning of IC reporting according to specific economic environment as well as particular facets of the industry.

OBJECTIVES:

- to analyze IC in Serbia's companies from different industries
- to distinguish general IC characteristics of particular industries
- to identify the key IC value drivers in Serbia as well as within different industries
- to define relevant IC indicators within the observed economic system as well as within particular industries

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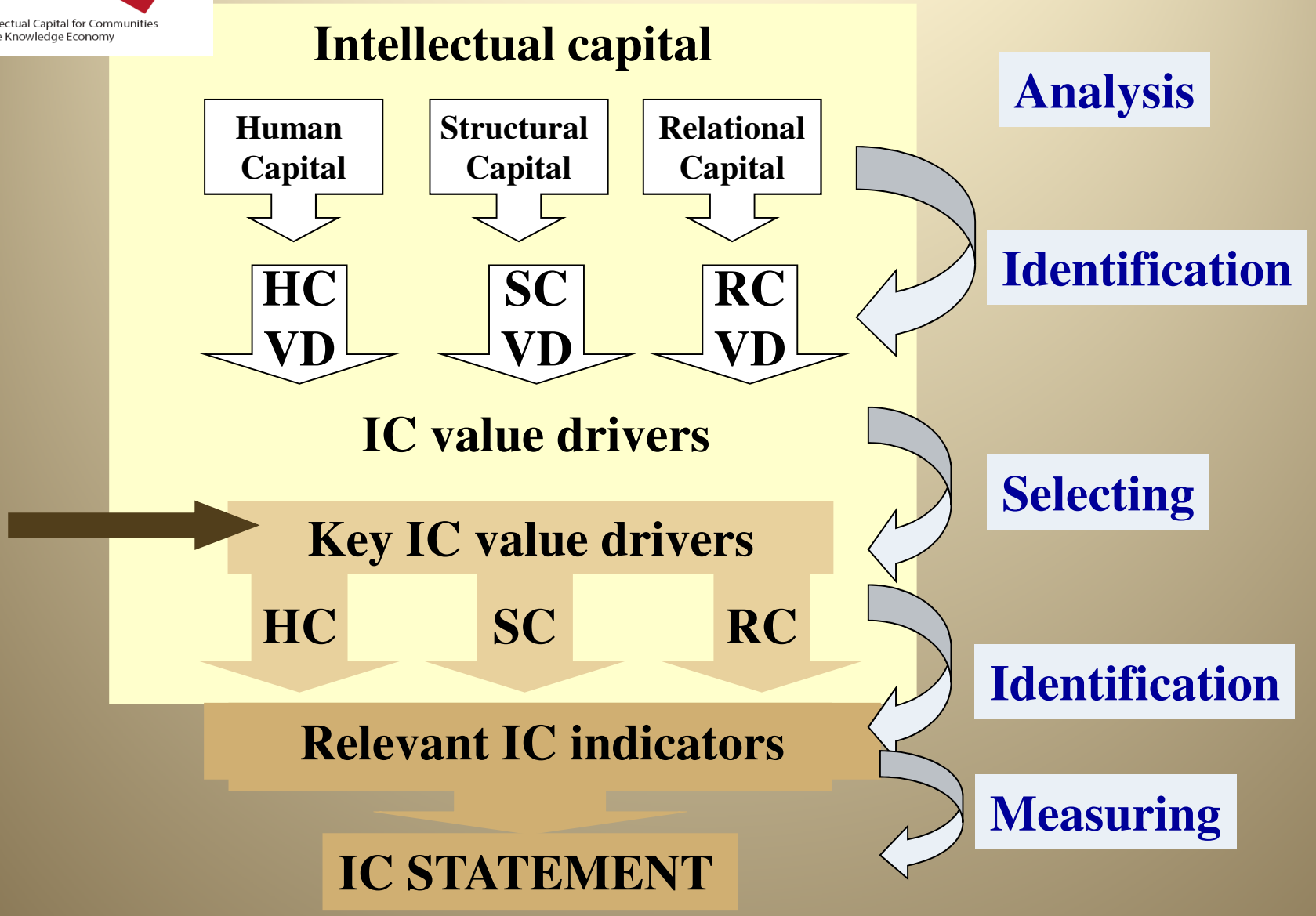
IC reporting and IC value drivers



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Methodology

- **The questionnaire** - based upon IC value drivers from Intangible Assets Monitor, Danish Guidelines, Meritum Guidelines and Wissensbilanz
- 32 IC value drivers were chosen and determined by a group of questions
- **SAMPLE:** The total of 642 top- and medium-level managers from 80 Serbian companies participated in the survey
- Groups of participants, according to industries, were formed
- Further analysis included the whole sample and 7 industries
- **DATA ANALYSIS:** Pareto analysis and factor analysis

INDUSTRY	No. of participants	% in the sample
Utility services	116	18.1%
Industry	109	17.0%
Mining and energy	94	14.6%
Services	79	12.3%
Media	55	8.6%
Telecommunications & IT	51	7.9%
Banking	50	7.8%
Insurance	35	5.5%
Education	32	5.0%
Chemistry and pharmacy	16	2.5%
Agriculture	4	0.6%
Traffic	1	0.1%
TOTAL	**642**	**100 %**

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Results are related to…

- **HUMAN CAPITAL** - managers' competence development and innovation attitudes, desirable characteristics of employees, employees' motivational factors, HC value drivers
- **STRUCTURAL CAPITAL** - knowledge creation, acquisition, codification, sharing and storage, organizational routines, organizational culture, managerial mechanisms, processes and procedures, SC value drivers
- **RELATIONAL CAPITAL** - companies' relational networks with external stakeholders, key sources of competitiveness, key stakeholders, RC value drivers

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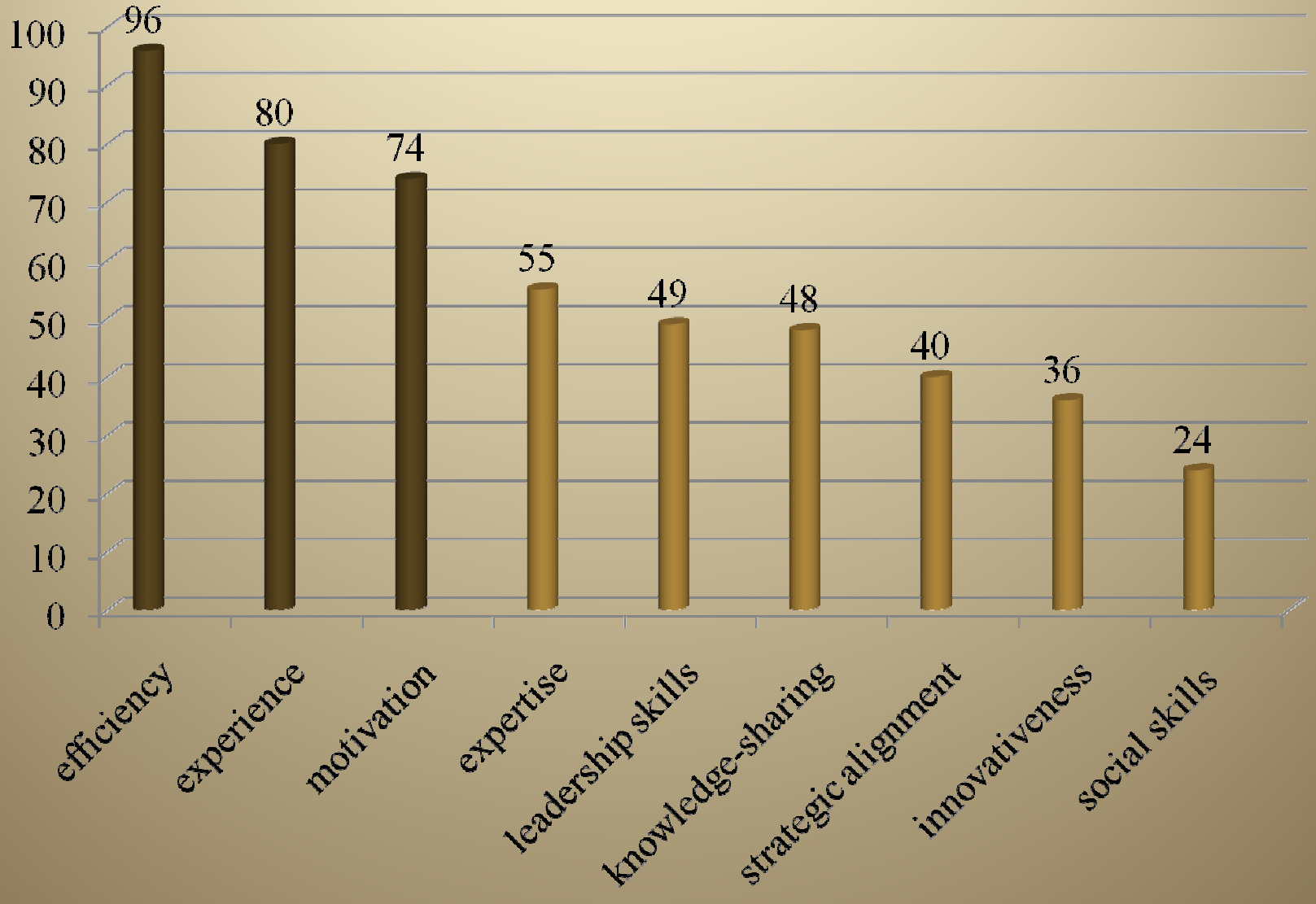
Strategic importance of HC value drivers in Serbia



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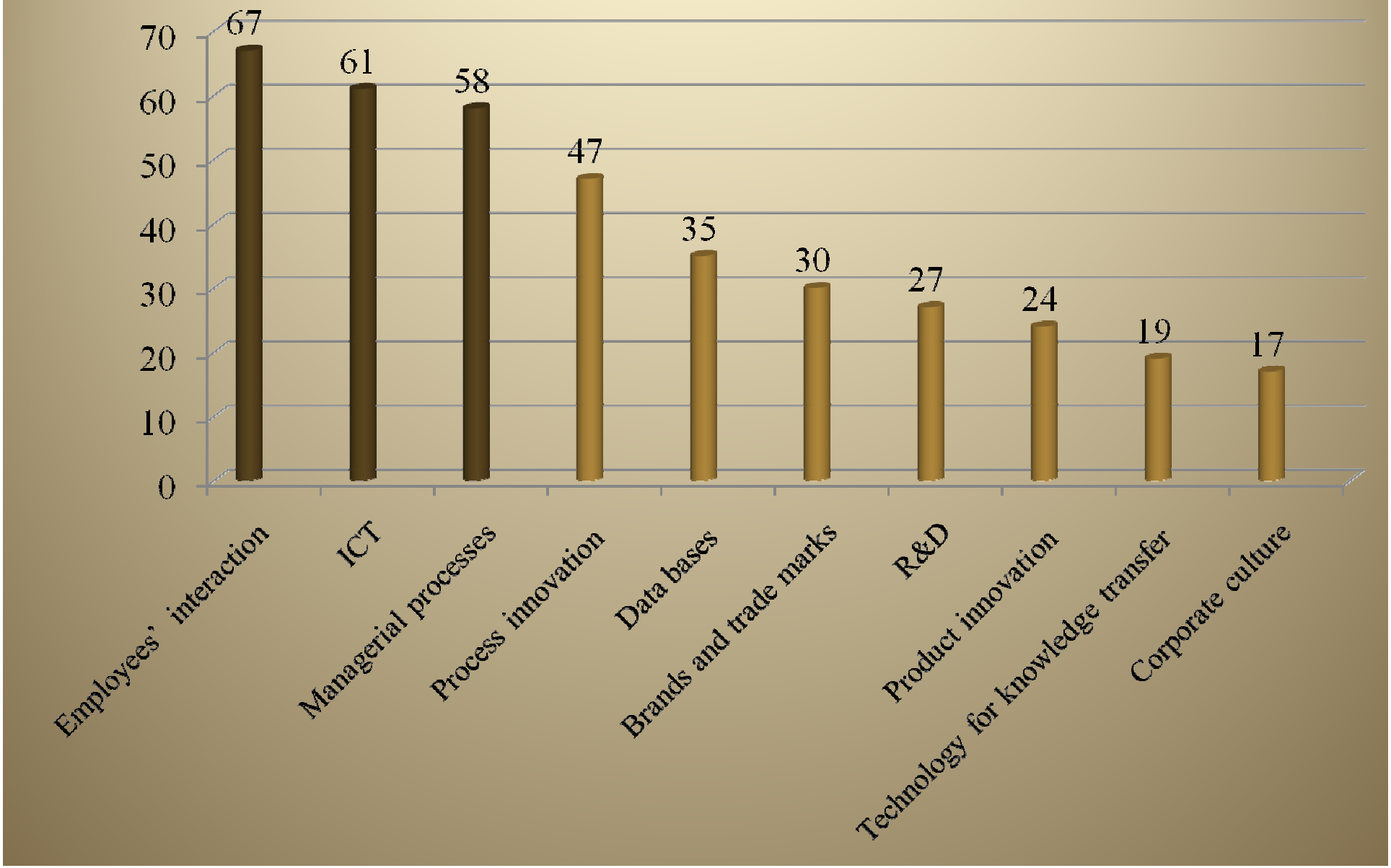
Strategic importance of SC value drivers in Serbia



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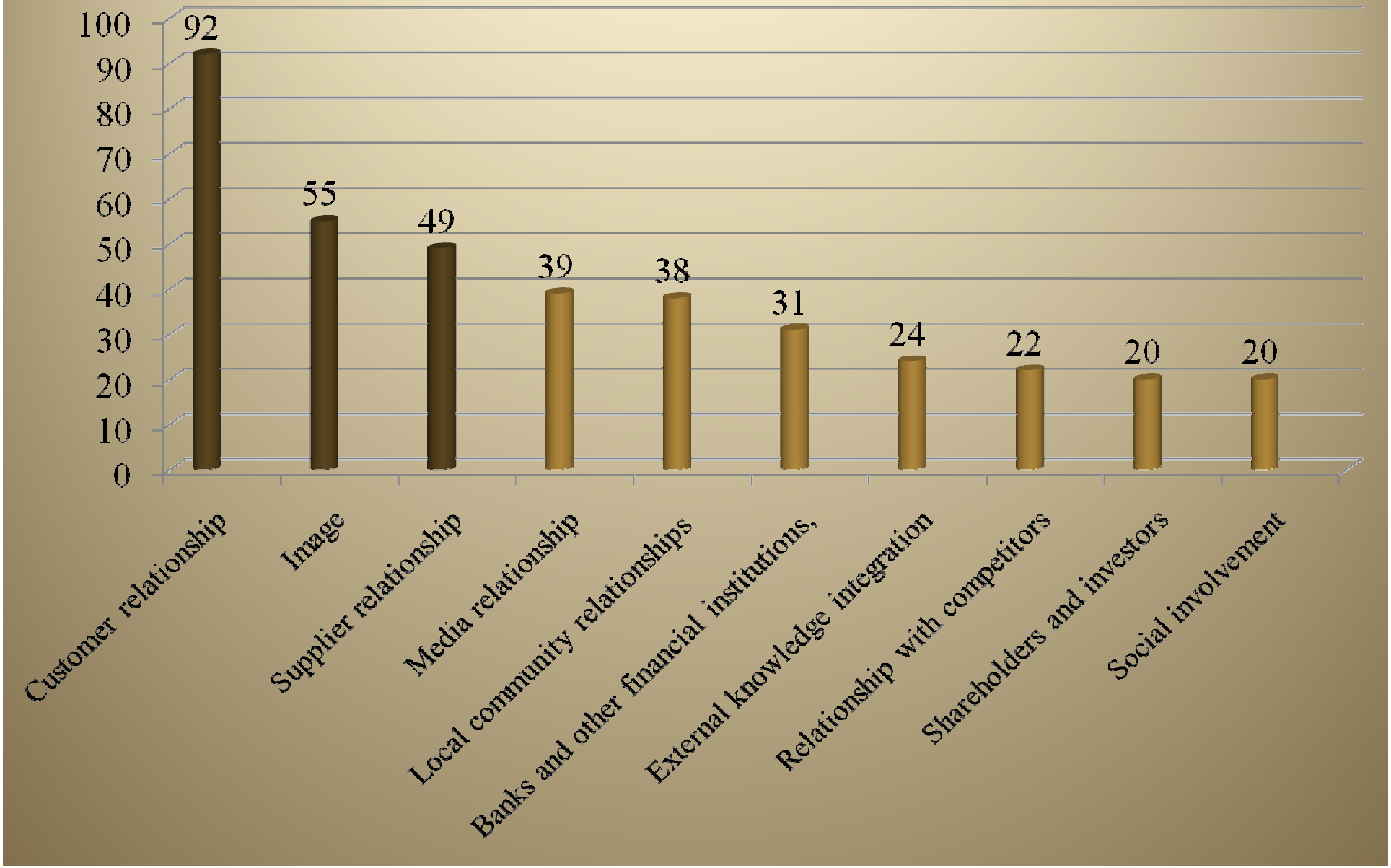
Strategic importance of RC value drivers in Serbia



General model for IC reporting in Serbia

	The key IC VD	IC Indicator
HC	Efficiency	Value added per employee Average level of goal achievement
	Experience	Growth in professional experience Average seniority
	Motivation	Absenteeism Employee satisfaction index
SC	Employees' interaction	Number of internal meetings Quality of internal cooperation and knowledge transfer
	ICT	Proportion of ICT costs (total costs) Percent of employees who excel at IT
	Managerial processes	Quality of management initiatives (survey) Training days per manager
RC	Customer relationships	Proportion of new customers Customer satisfaction index
	Image	Reputation index (survey) Presence in media
	Supplier relationships	Cooperation with 5 largest suppliers (years) Percent of renown suppliers

The key HC value drivers - Industries

	Utility services	Industry	Mining & Energy	Bank	Media	Telecom & IT	Services
Efficiency	X	X	X	X	X	X	X
Experience	X	X	X	X	X	X	X
Motivation	X	X	X	X	X	X	X
Strategic alignment							
Management competence and leadership							
Expertise					X	X	
Education and knowledge-sharing				X			
Innovativeness							
Social skills							

The key SC value drivers - Industries

	Utility services	Industry	Mining & Energy	Bank	Media	Telecom & IT	Services
Corporate culture				X			
Process & procedural innovation	X			X			
ICT	X		X	X	X	X	
Employees' commun. and interaction	X	X	X		X	X	X
Product innovation development							
Process management	X	X	X				X
Brands and trade marks							
Data bases					X		
R&D							
Tech. opportun. for knowledge transfer and acquision							

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The key RC value drivers - Industries

	Utility services	Industry	Mining & Energy	Bank	Media	Telecom & IT	Services
Customer relationship	X	X	X	X	X	X	X
Relationship with local community	X						
Relationship with media							
Supplier relationship		X	X				
Relationship with banks and finan. Institutions							
Perceived image				X	X	X	X
Relationship with shareholders and investors							
Social involvement							
Relationship with competitors							
Acquisition of external knowledge							

The key IC value drivers - Industries

	UTILITY SERVICES	INDUSTRY	MINING& ENERGY
HC	employee efficiency	employee efficiency	employee efficiency
	employee experience	employee experience	employee motivation
	employee motivation	employee motivation	employee experience
SC	process management	communication and interaction	communication and interaction
	communication and interaction		process management
	ICT	process management	ICT
	Process & procedural innovation		
RC	customer relationship	customer relationship	customer relationship
	relationship with local community	supplier relationship	supplier relationship

The key IC value drivers - Industries

	BANKING	MEDIA	TELECOMM & IT	SERVICES
HC	efficiency	efficiency	efficiency	efficiency
	motivation	experience	expertise	motivation
	experience	motivation	experience	experience
	education and knowledge-sharing	employee expertise	motivation	Employee expertise
			manag. competence and leadership	
SC	corporate culture	ICT	ICT	employees' commun.and interaction
	process and procedural innovation	employees' commun. and interaction	employees' commun. and interaction	process management
	ICT			
RC	customer relationship	customer relationship	customer relationship	customer relationship
	image	image	image	image

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Inter-industry Comparative analysis of IC

DIFFERENCES

- there are no 2 industries with the same key IC value drivers
- key IC value drivers largely select the group of relevant IC indicators
- different groups of IC indicators for industries
- inter-industry variety from the perspective of IC reporting

SIMILARITIES

- common characteristics of IC and the same key IC value drivers
- the basis for the general model of IC reporting and an opportunity for comparing companies from IC perspective

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Contributions

- preliminary diagnostics of organizational IC in Serbia
- refinement of the existing IC reporting methods with respect to unique characteristics of the environment as well as particular facets of different industries
- general model for IC reporting in Serbia simplifies IC measuring, contributes to IC reporting and management in Serbia and enables comparison between different industries
- models for IC reporting within different industries, make IC reporting more precisely and easier for implementation in different industries (inability to compare different industries)
- although these results and models are environment –specific, they might also be of interest for comparison across countries

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If you want to read more about IC reporting in Serbia:

- **the general model for IC reporting in Serbia** (Journal of Intellectual Capital, Vol.10, Issue 4, pp. 573-587, 2009.)
- **models for IC reporting within different industries** ("IC-Based Inter Industry Variety in Serbia", Electronic Journal of Knowledge Management (EJKM), Vol. 7, Issue 4 (Special Issue ECIC, The Netherlans 2009), pp. 425-436, July 2009.)

Thank you.

Your comments please.

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