

Competitive Advantage Knowledge Management 2010 Practices in German Companies



Intellectual Capital for Communities
In the Knowledge Economy



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Chemnitz University of Technology







1. Objectives of the study
2. Research design
3. Questionnaire
4. Results
5. Conclusions



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Objectives of the project

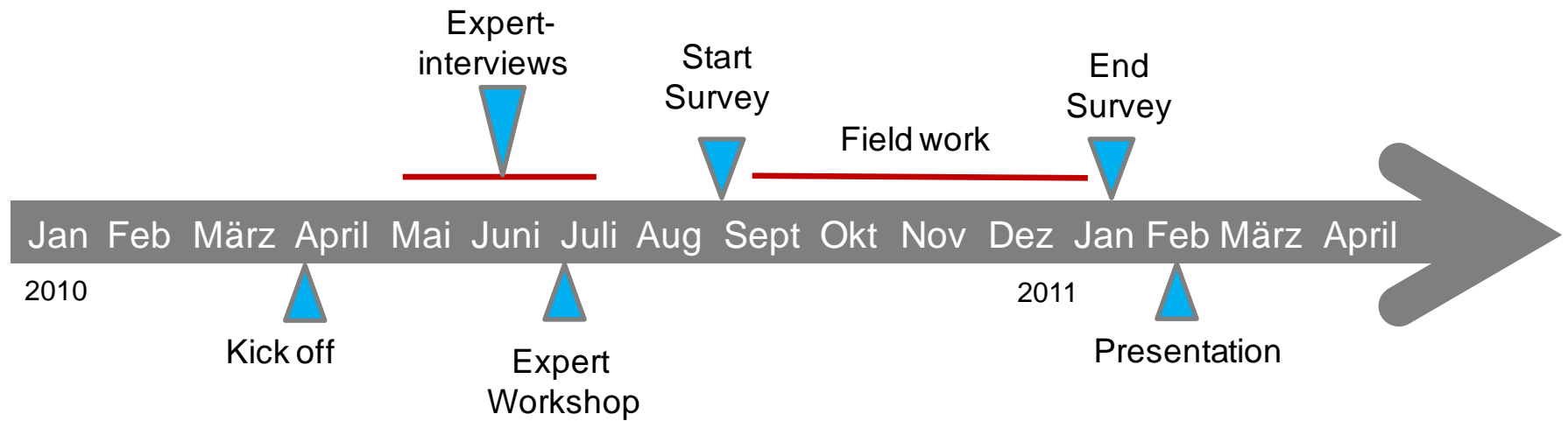


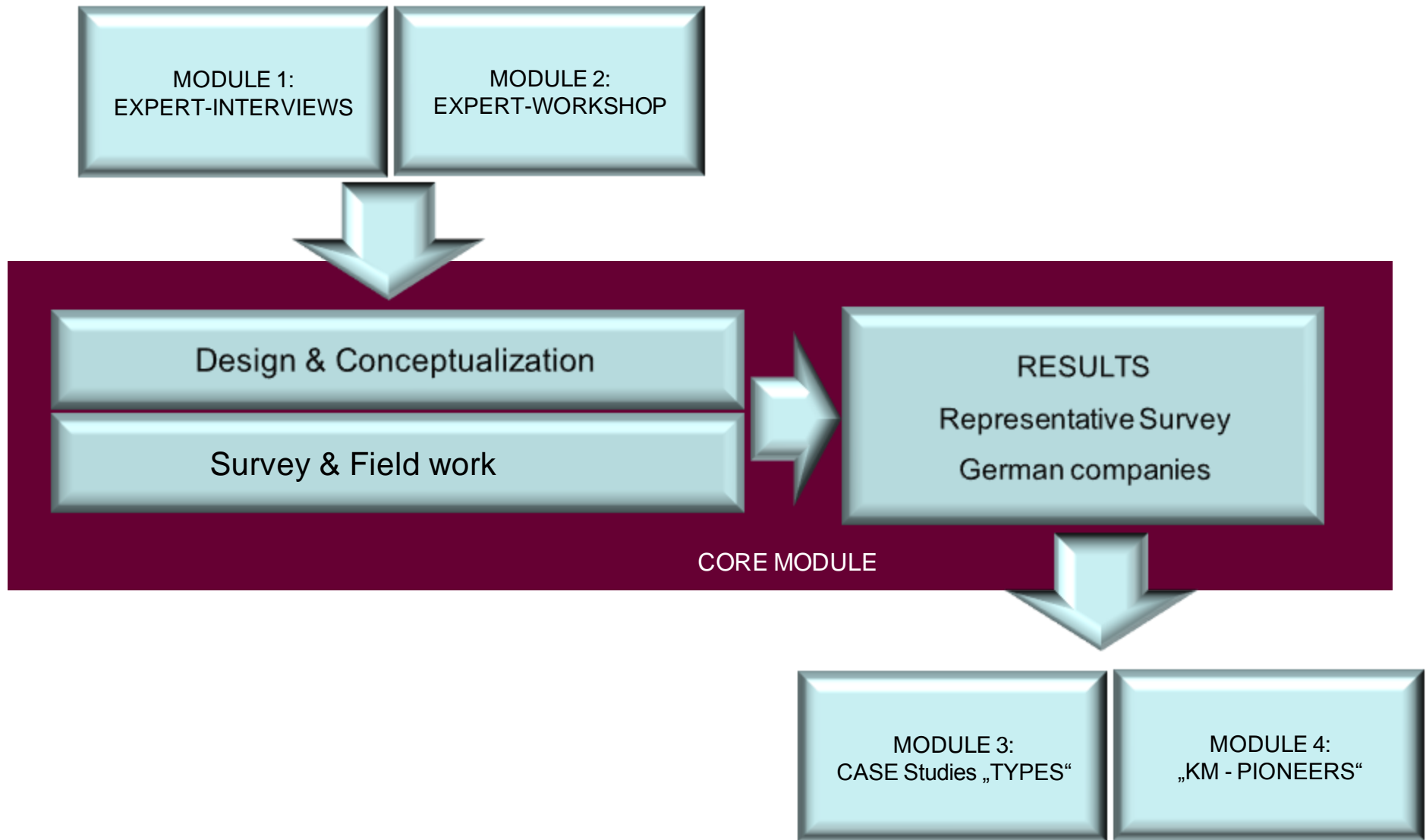
- Longitudinal analysis 2006-2010
- Identify KM practices in German companies
- Specify demands for KM
- Analyse the importance of Knowledge for management practice
- Identify drivers of KM

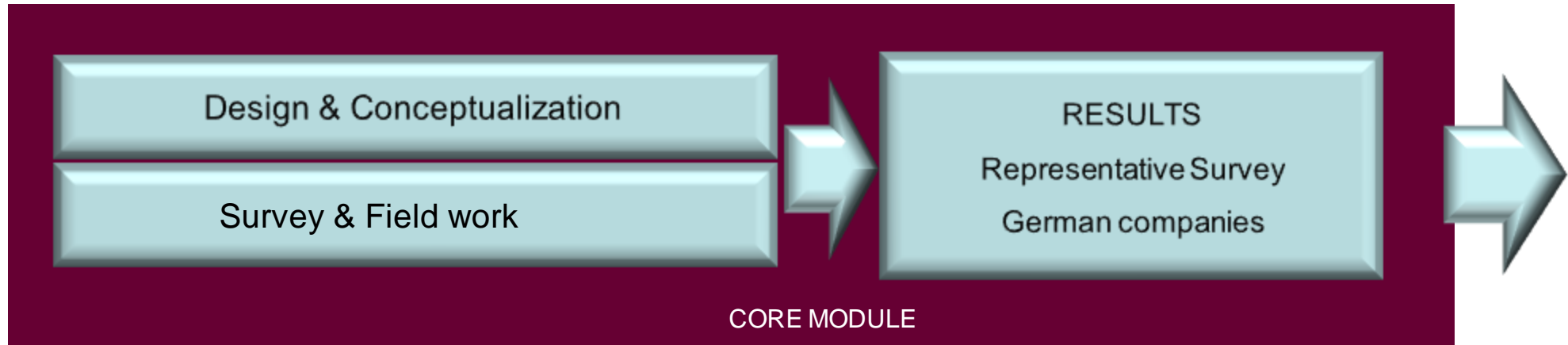


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Time Table of the KM2010 project









1. Objectives of the study
2. Research design
3. Questionnaire
4. Results
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Fragebogendimensionen WM 2010 - 1

1. Interviewees Position in the firm
2. Sector/Industry
3. Discretionary competence at the workplace
4. Number of employees (Arbeitsstätte)
5. Freelance collaborators
6. Enterprise with more subsidiaries
7. Industry - Sector (19)
8. Detailed sector description
9. Central Office
10. Age distribution of the workforce
11. Proportion of graduates in the workforce
12. Absenteeism due to sickness
13. Function and evaluation of HRM
14. Number of employees in HRM department
15. Budget for HR - training
16. Employee motivation (concept of organisational energy) (16)
17. Future challenges of the firm (29)
18. Competitive advantage in relation to competitioners(30)
19. Competitive intensity in the industry
20. Necessity for organisatory change in order to stay competitive
21. Quality Management
22. KM activities and KM needs/METORA– time series (14)
23. KM activities: Knowledge identification/ -creation (35)
24. KM activities: Knowledge diffusion (20)
25. KM activities: Knowledge retention/ - exploitation (14)
26. Learning culture
27. Perceived KM instrumentality/benefit for... (6)
28. Perceived KM benefit for general enterprise success
29. KM- activity (not at all – to a high degree)
30. Innovative capabilities (outputs) (6)
31. Performance indicators (7)

Fragebogendimensionen WM 2010 - 2

- | | |
|---|--|
| 32. Performance indicator i.R. to main competitioners | 48. Duration for the payment of invoices |
| 33. Expected development of number of employees | 49. Accounts for annual planning |
| 34. Categories of turnover in the firm (11) | 50. Controlling |
| 35. Method of accounting | 51. denial of credit in the last 2 years |
| 36. Total assets | 52. Credit – Worthiness 20% annual turnover |
| 37. Capital endowment | 53. Documents (balance sheets etc.) for house bank |
| 38. Equity ratio | 54. Overdrafts of loan limit |
| 39. Pre – tax profit for the year 2009 | 55. Liability in an affiliation group |
| 40. Liabilities/business assets | 56. Existent Ratings |
| 41. Number of customs | 57. Received Rating |
| 42. 50% annual turnover / custom | 58. State |
| 43. Proportion of main customers | 59. Postcode |
| 44. Dependence on main supplier | 60. E-Mail |
| 45. Number of main competitioners | 61. Participation – readiness for further studies |
| 46. Economic situation i.R. to sector | |
| 47. Bad debt losses | |

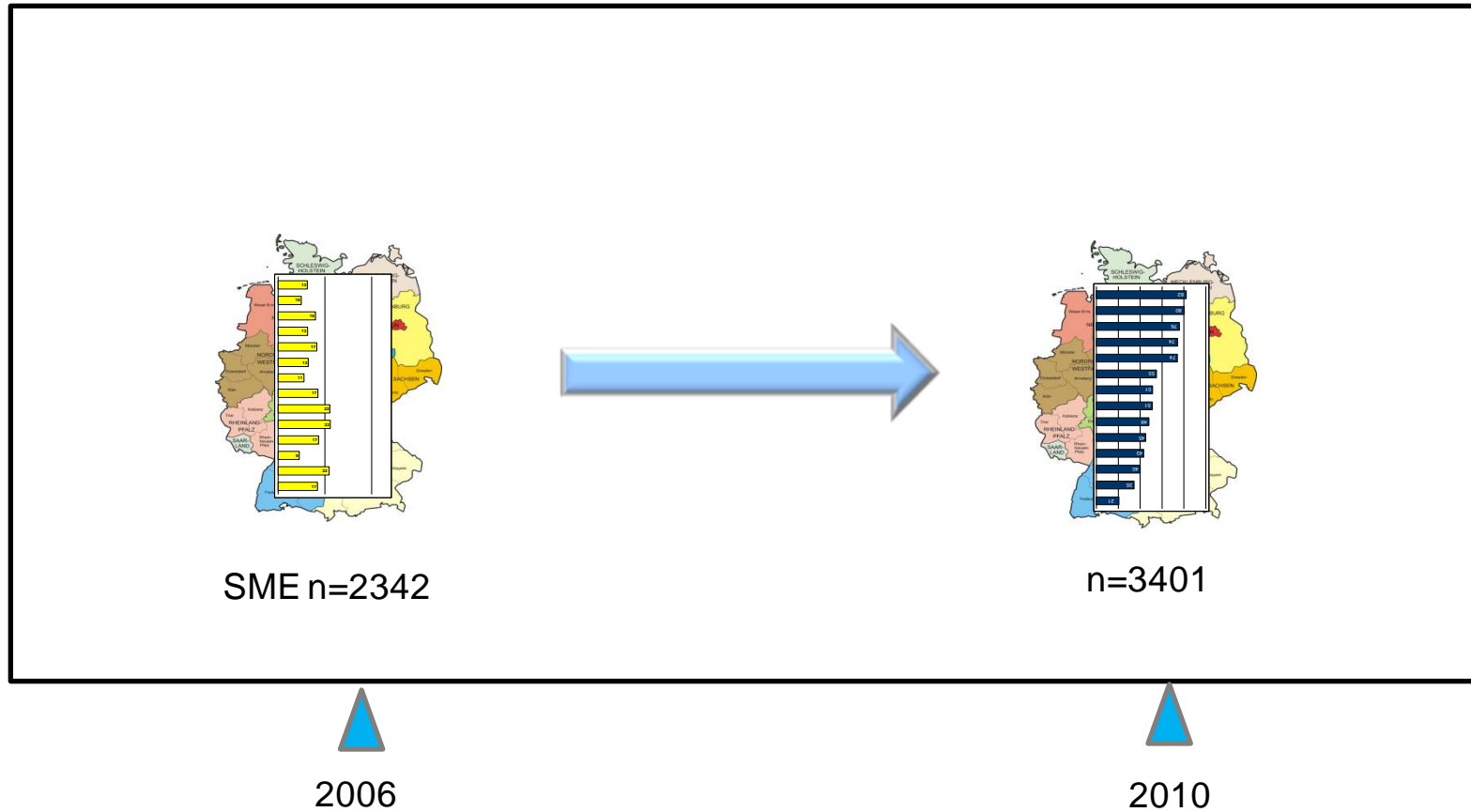


1. Objectives of the study
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Objectives of the project



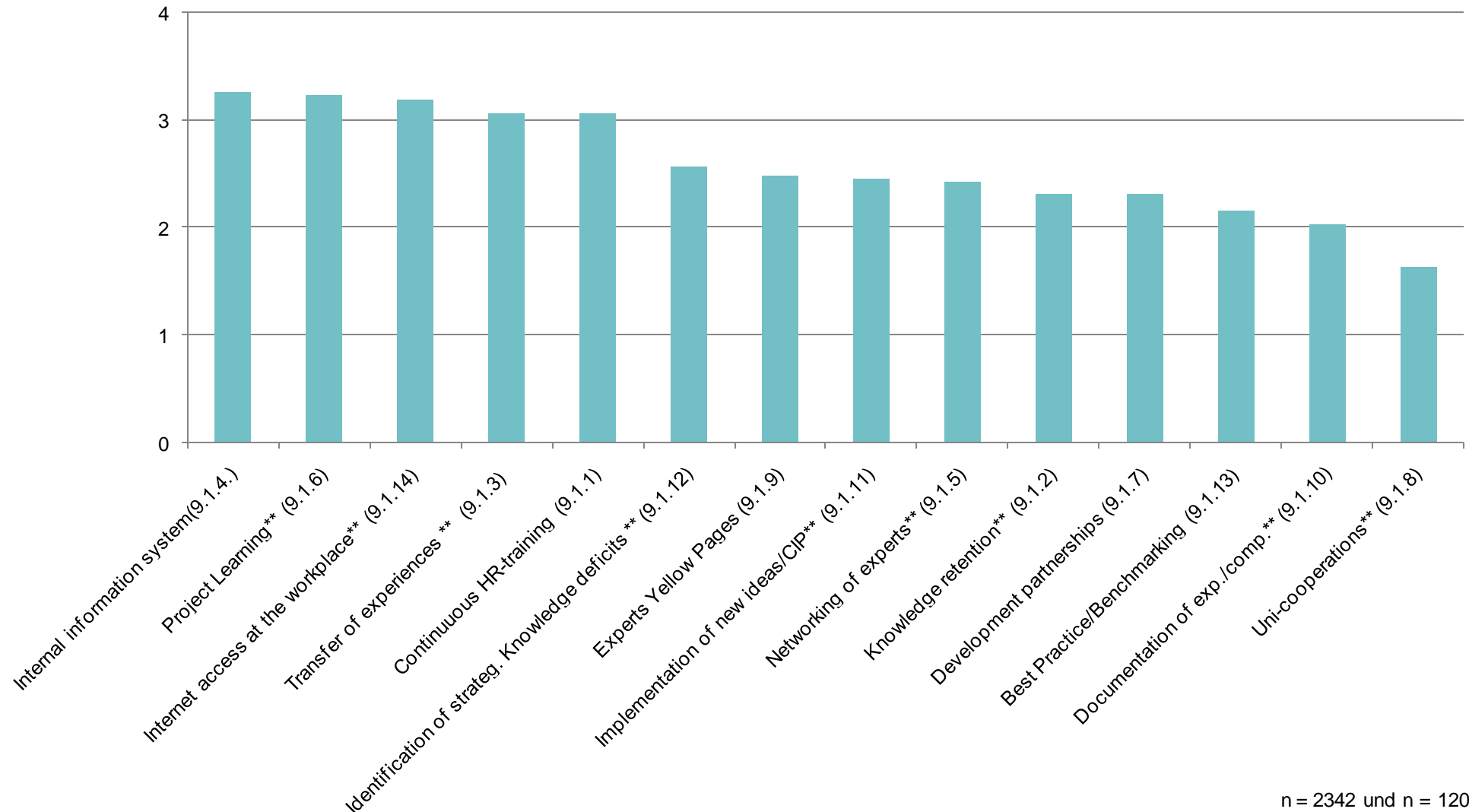
- Longitudinal analysis 2006-2010
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- Specify demands for KM
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- Identify drivers of KM



2006

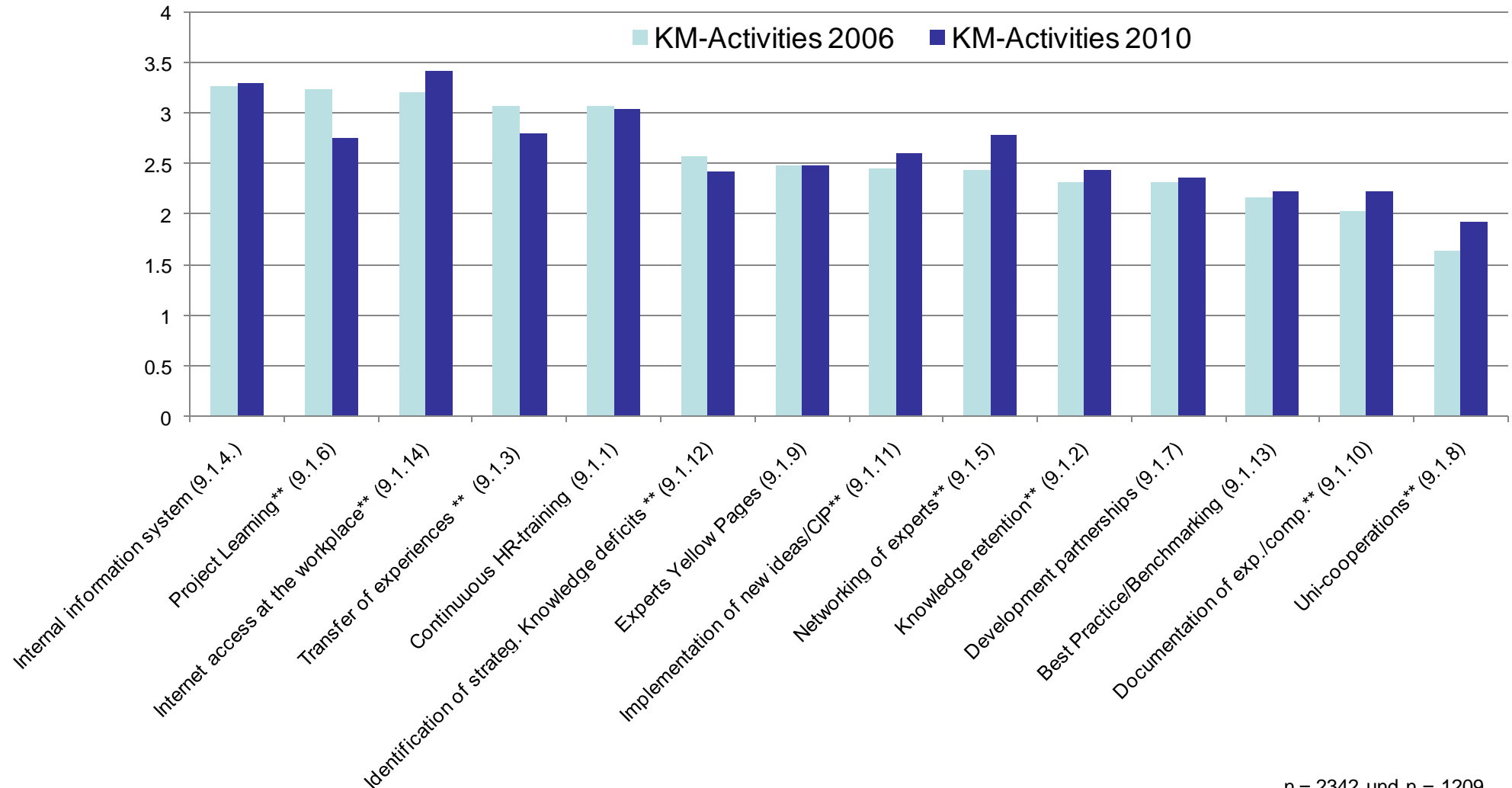
2010

KM activities in SME 2006



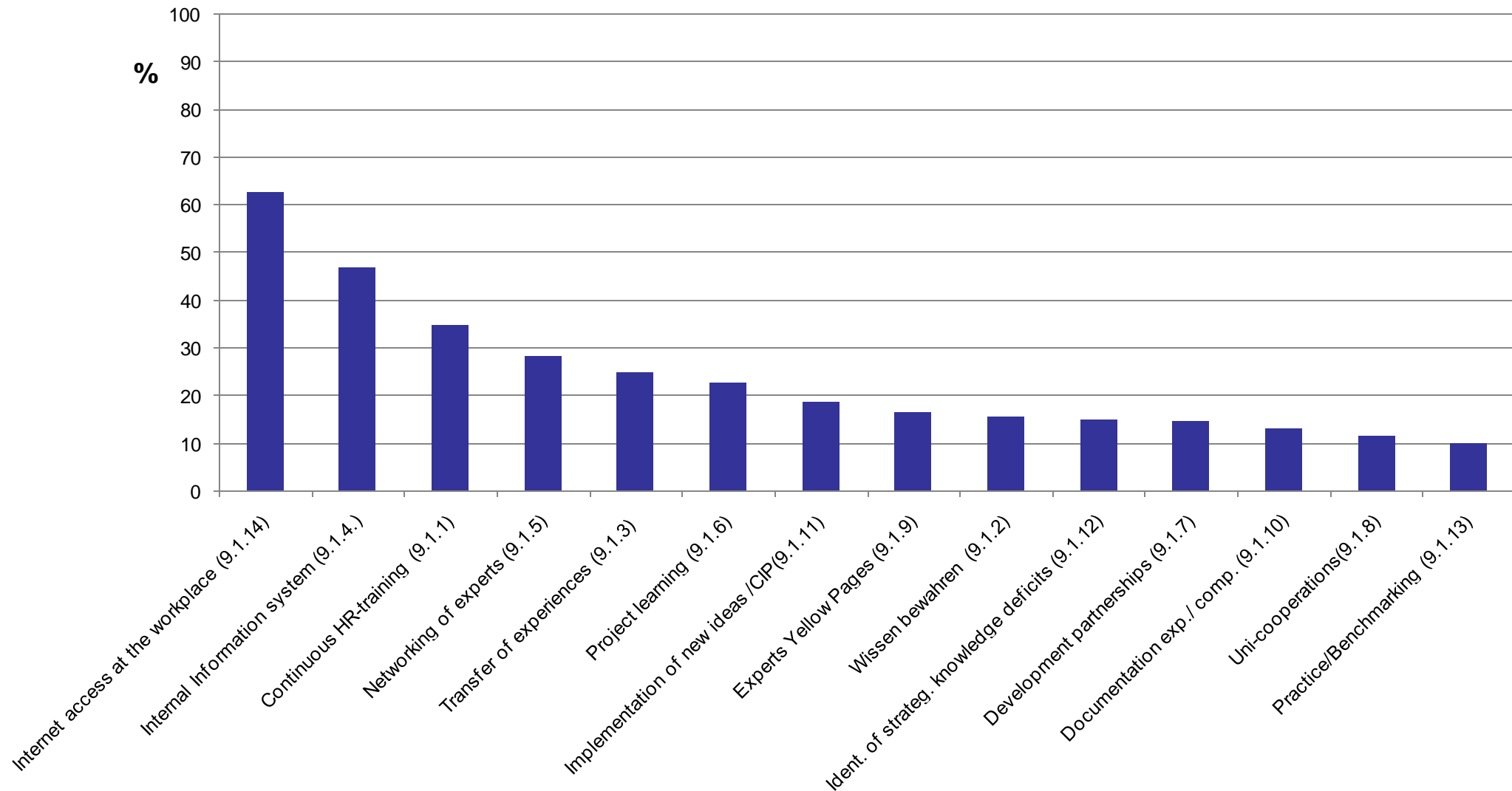
n = 2342 und n = 1209

KM-Activities in SME 2006 und 2010



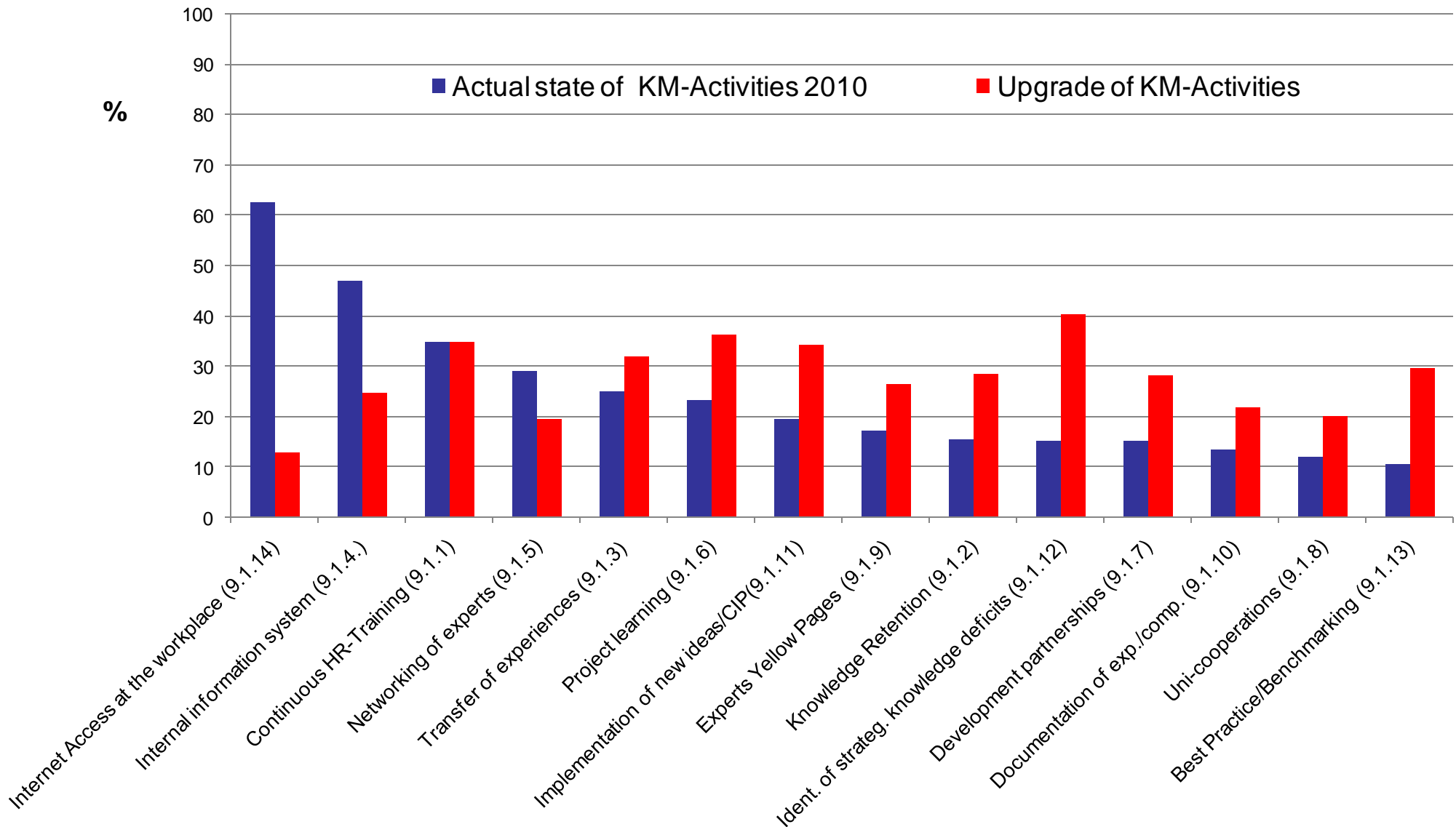
n = 2342 und n = 1209

Knowledge Management in German enterprises 2010/11



n = 1209

Knowledge Management in German enterprises and planned investments 2010



n = 1209

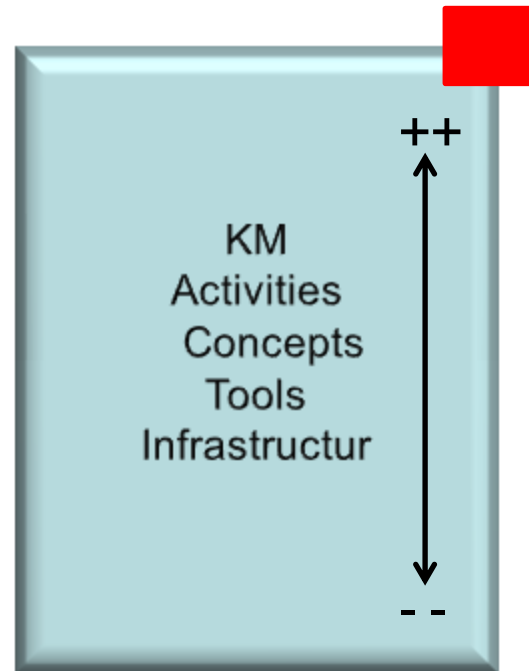
Objectives of the project



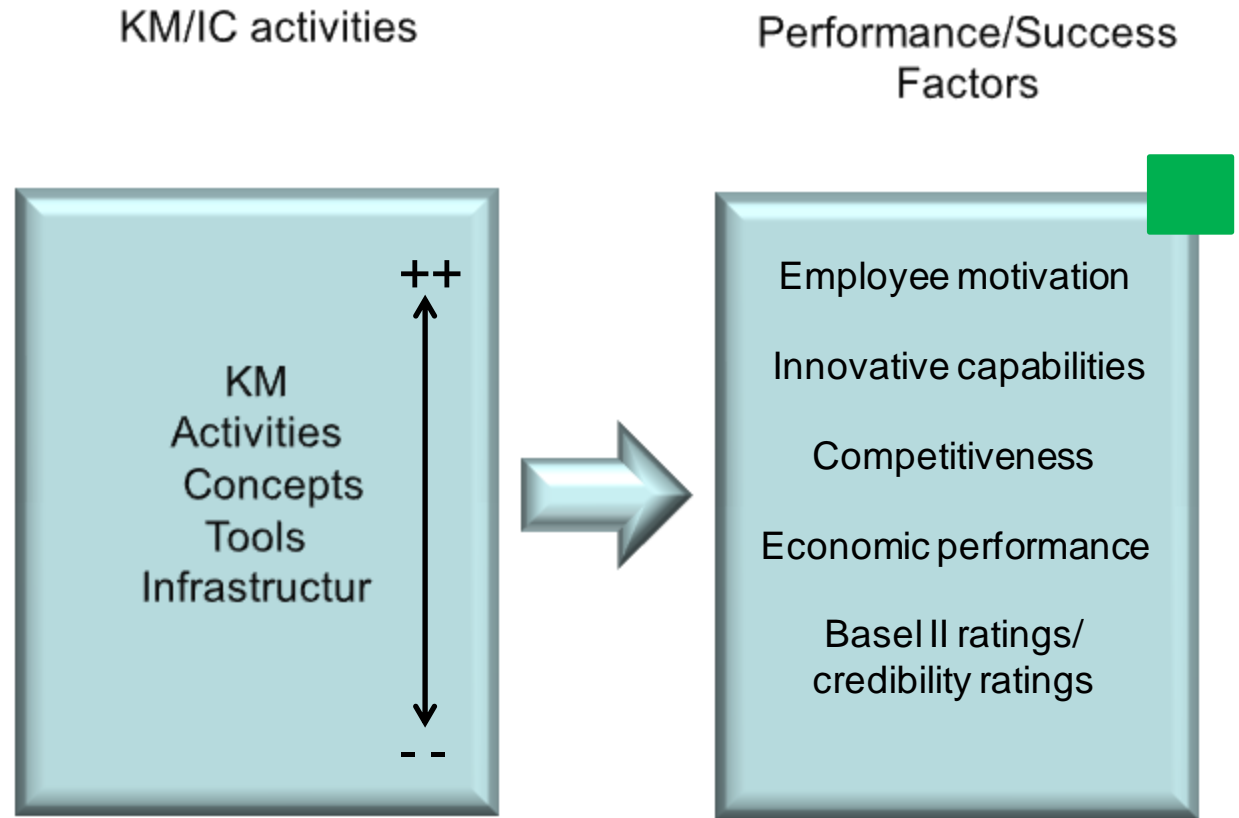
- Longitudinal analysis 2006-2010
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Research Model KM 2010

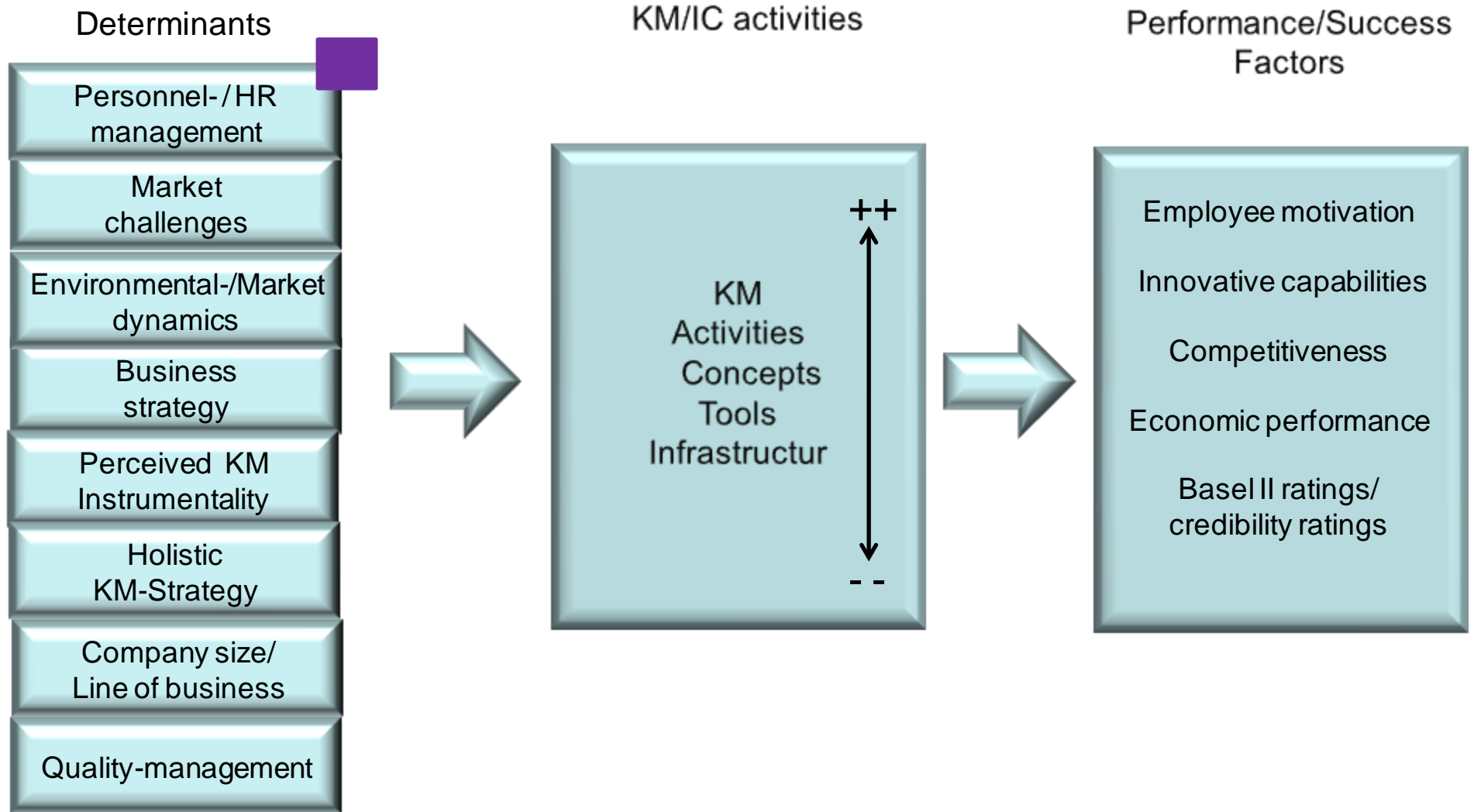
KM/IC activities



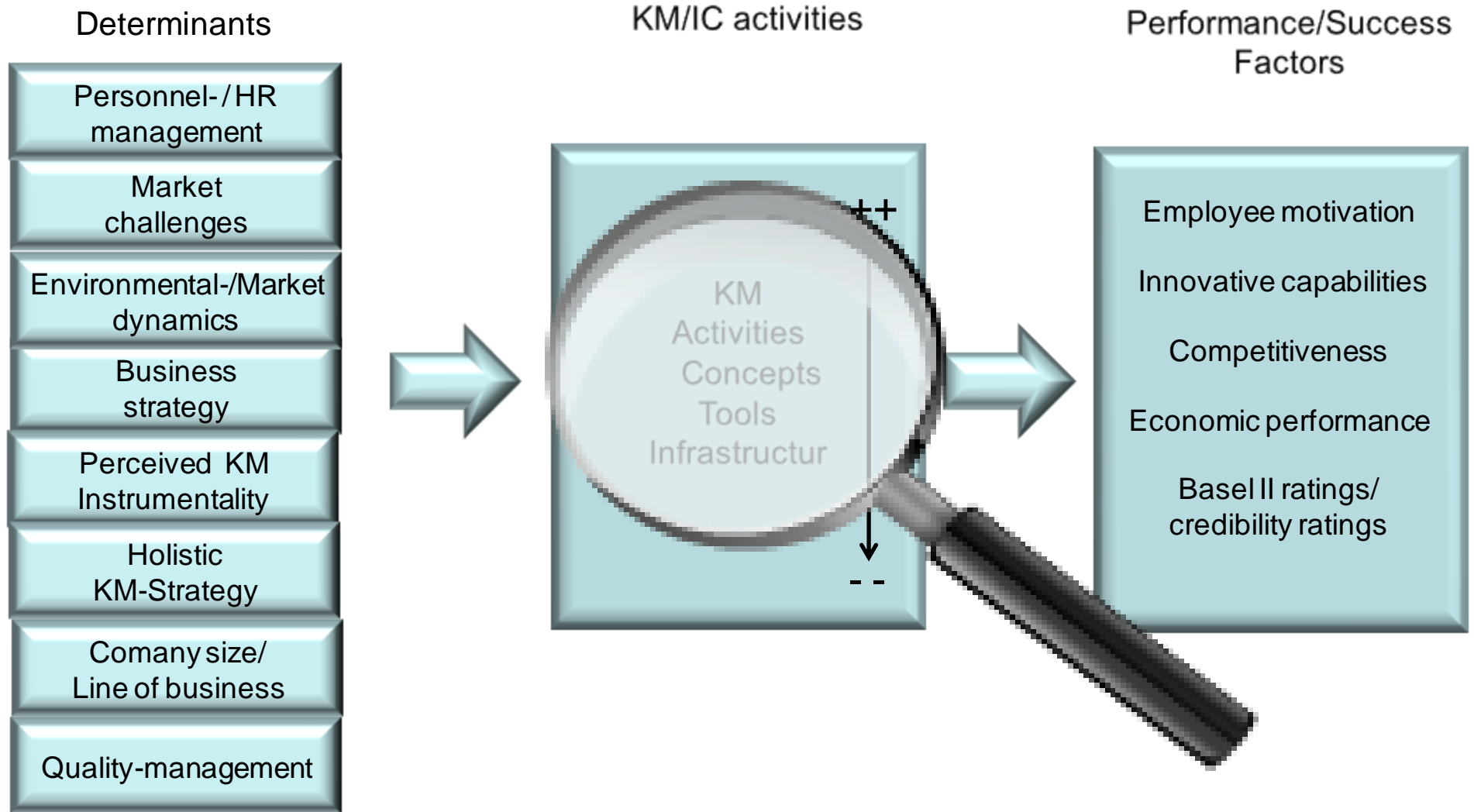
Research Model KM 2010



Research Model KM 2010

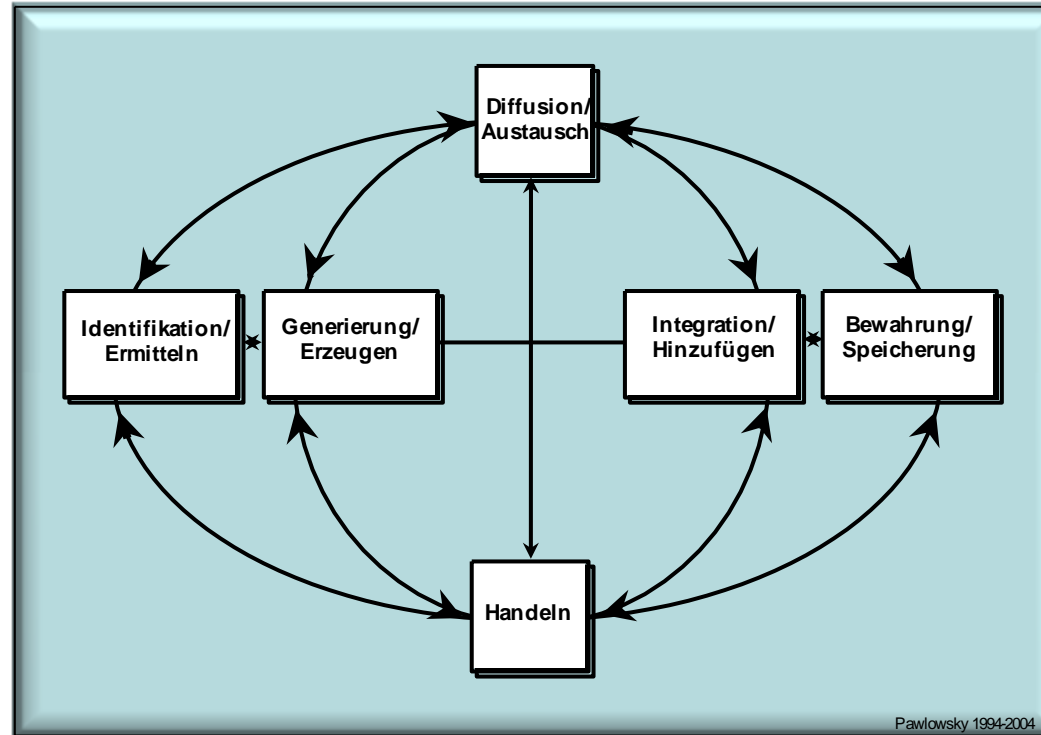


Research Model KM 2010

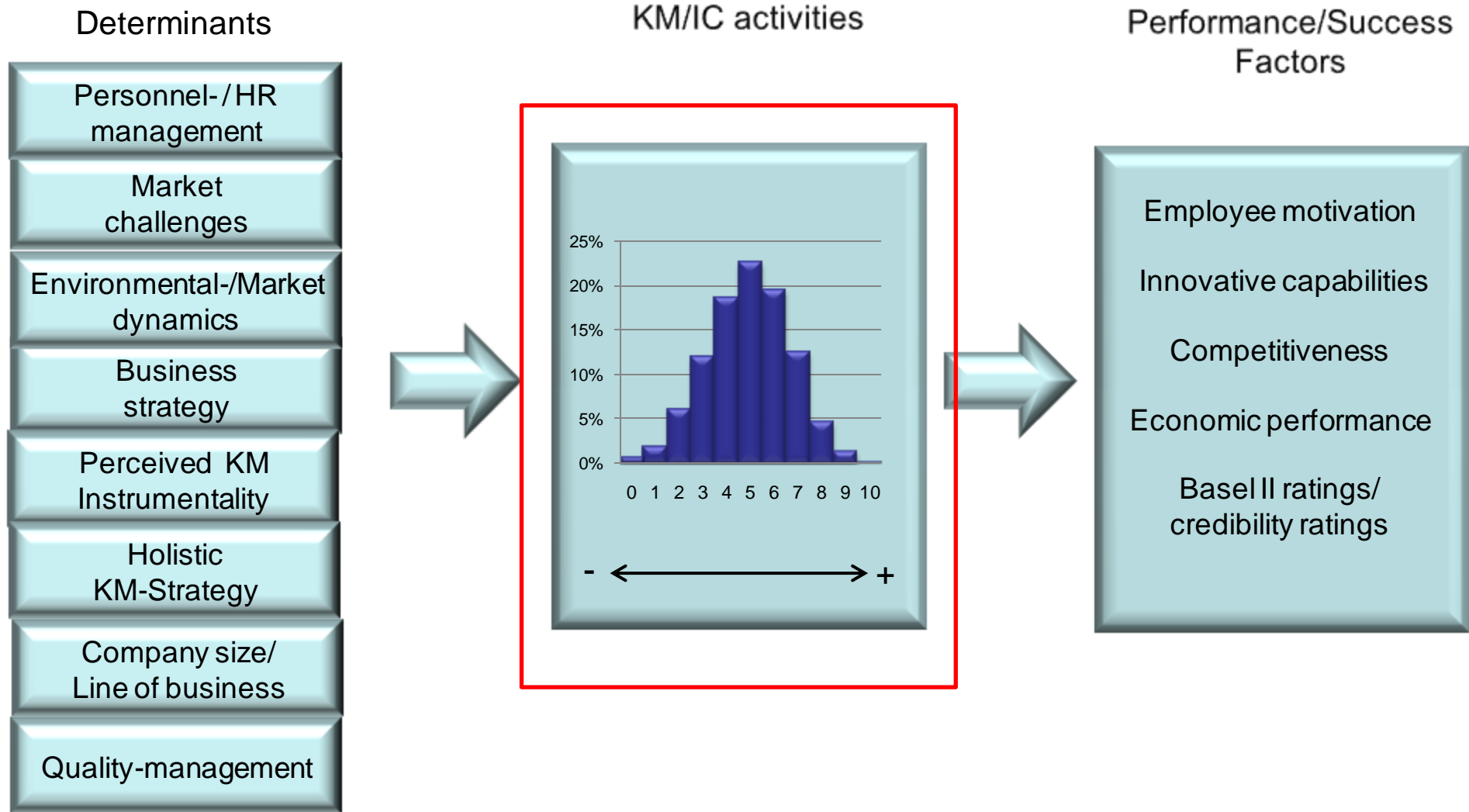


Research Model KM 2010

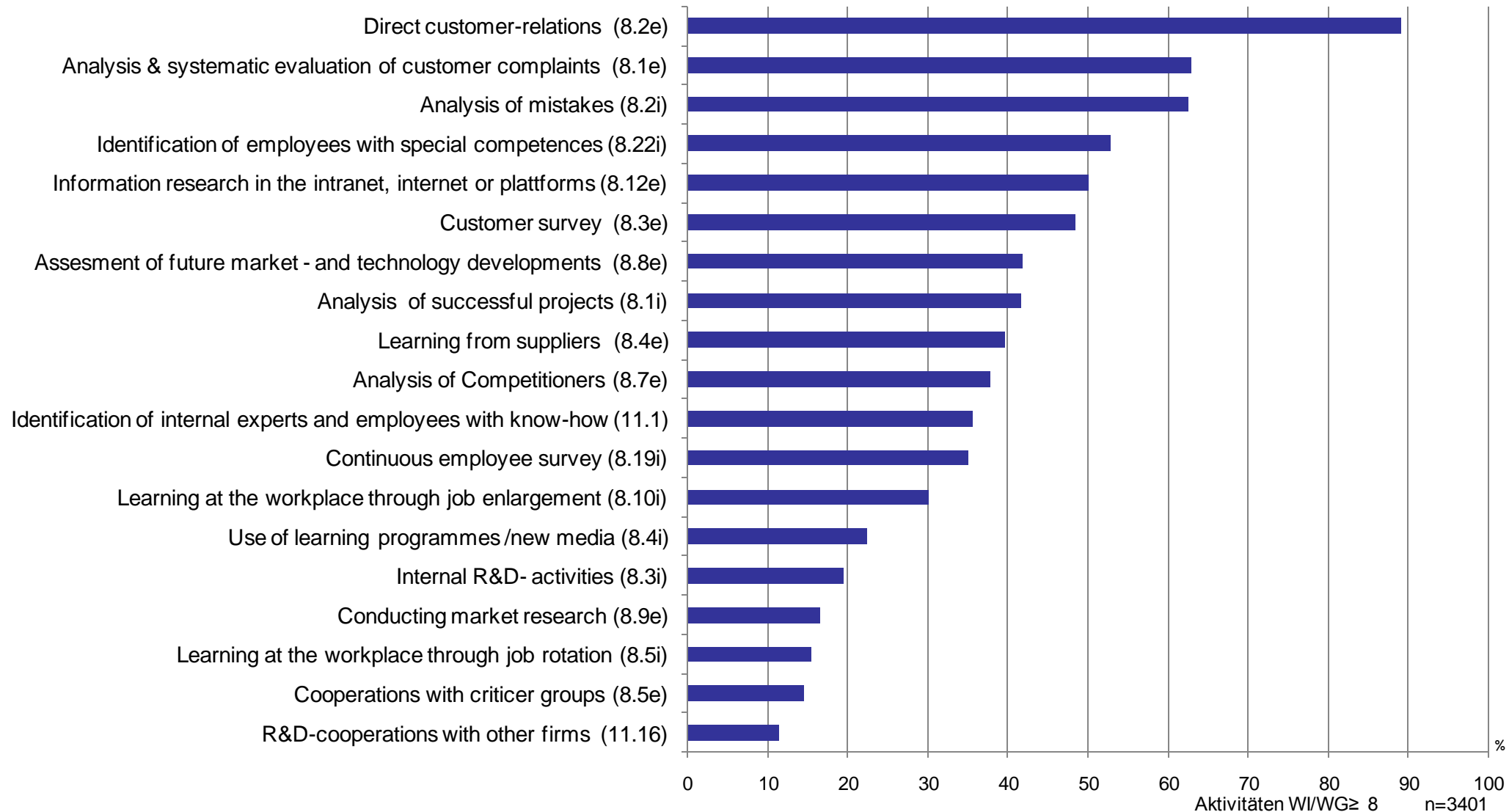
KM/IC activities



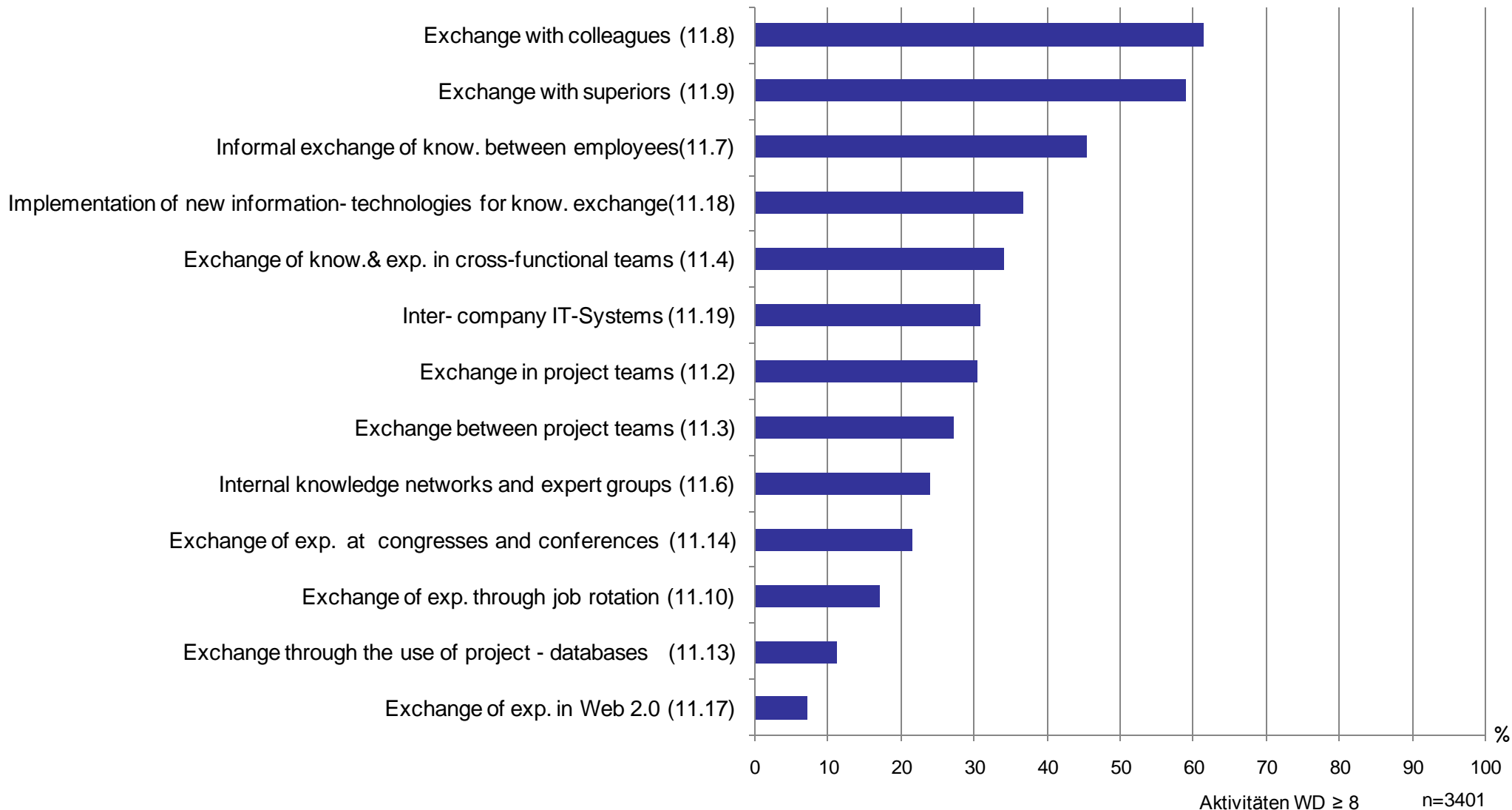
Research Model KM 2010



KM-Activities: Knowledge identification/ -development



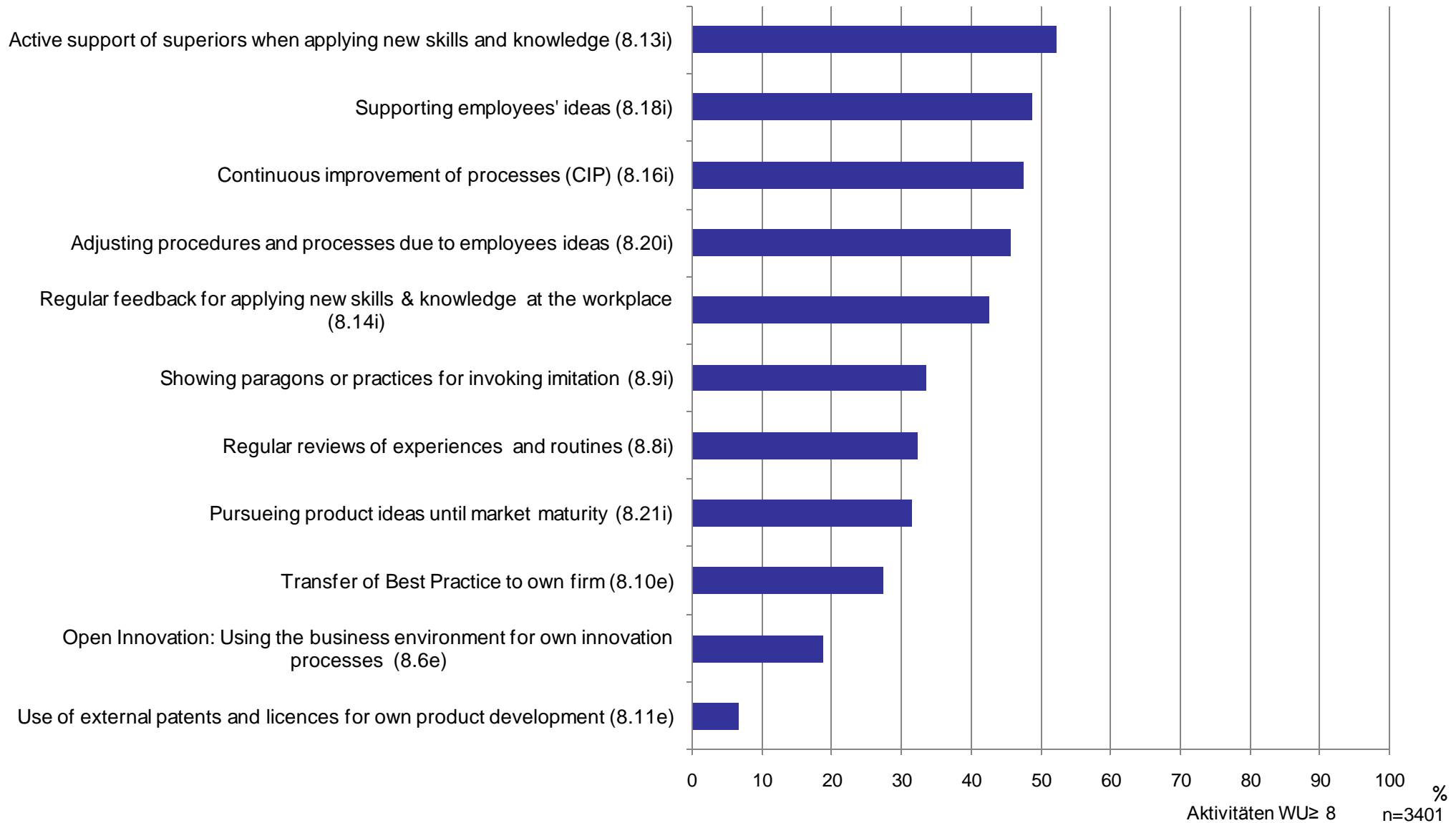
KM-Activities: Knowledge diffusion



KM-Activities: Knowledge retention



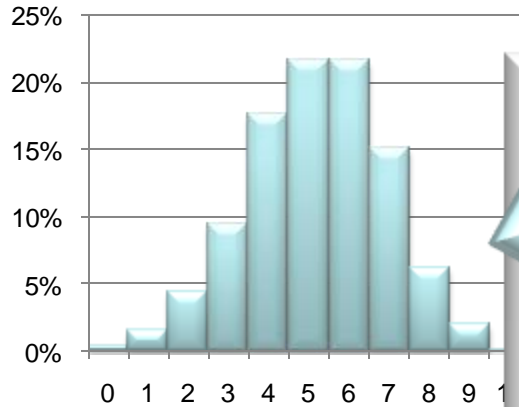
KM-Activities: Knowledge implementation/-use



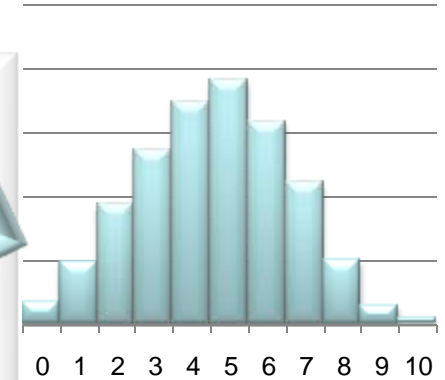
Overall KM-Activities



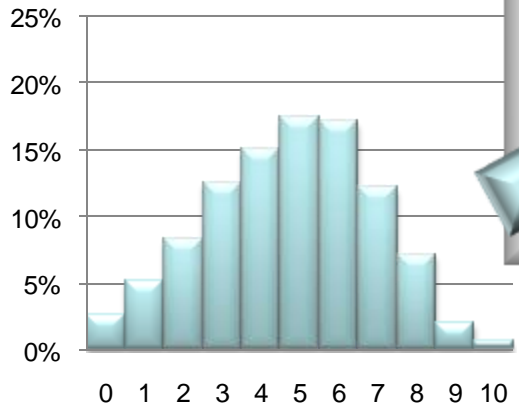
Wissensidentifikation/-generierung



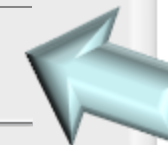
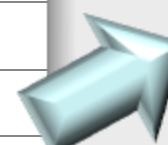
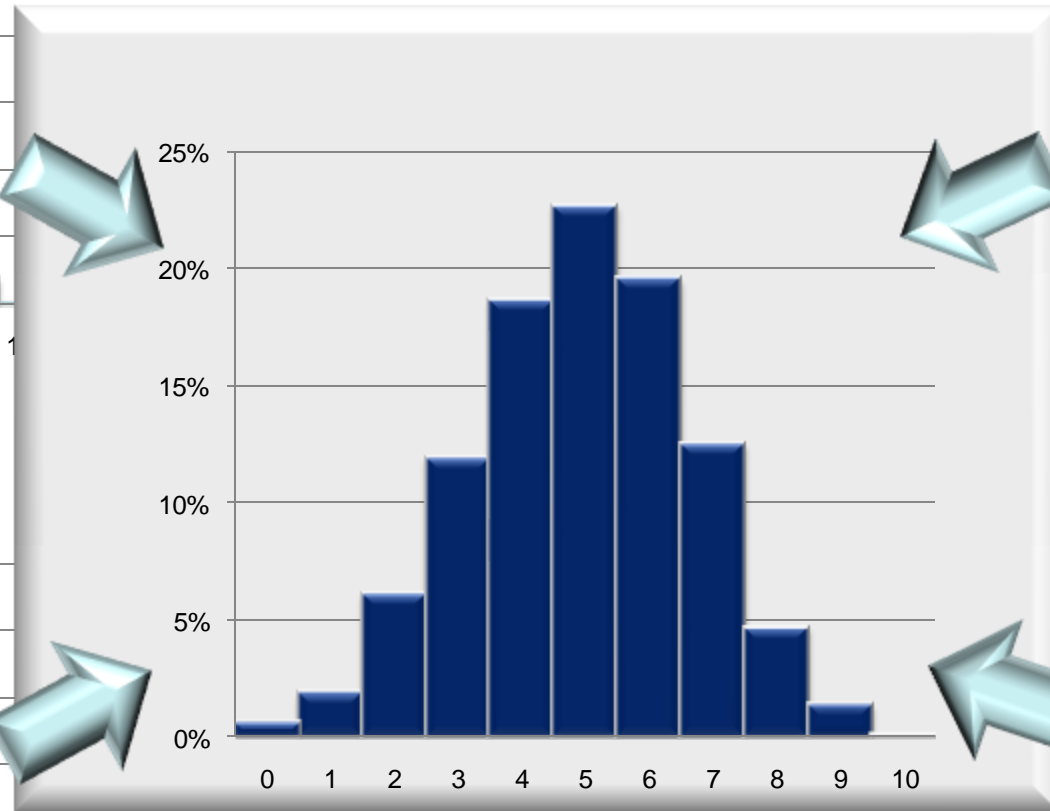
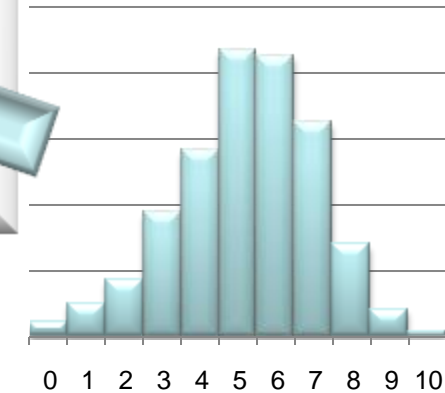
Wissensdiffusion



Wissensbewahrung



Wissensumsetzung



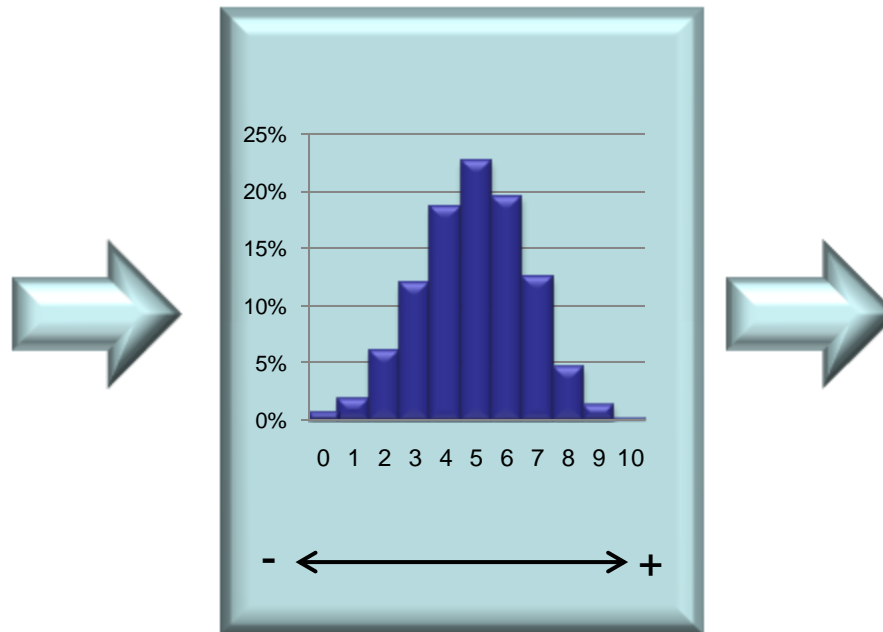
Research Model KM 2010



Determinants



KM Activities

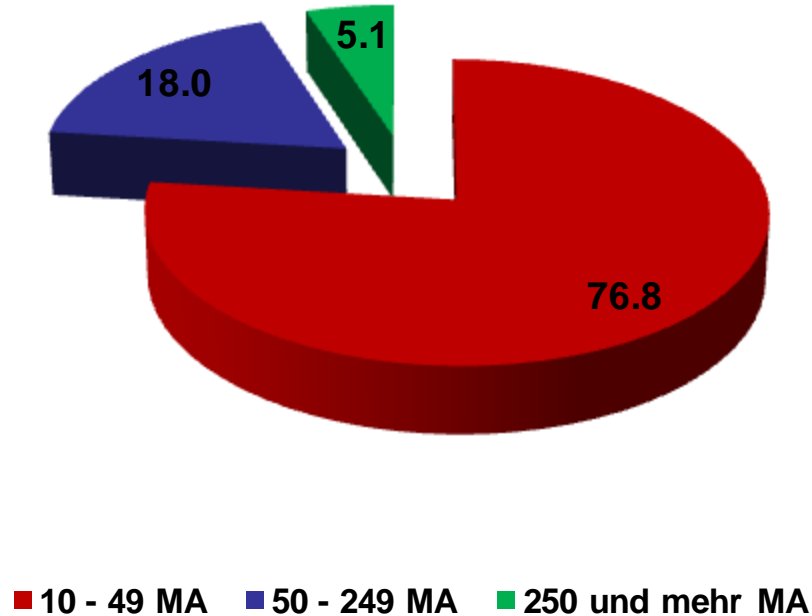


Performance/Success Factors

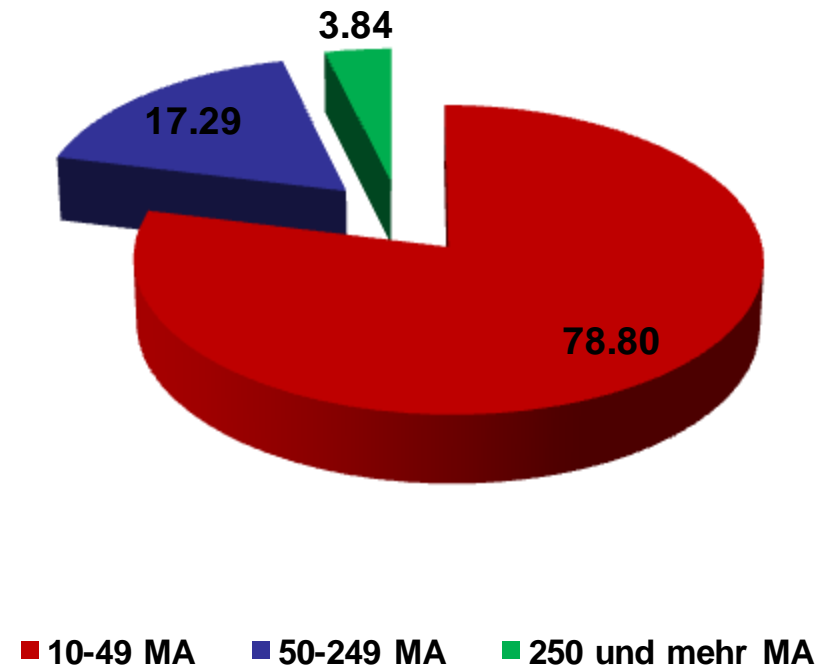


Company size in sample and national distribution

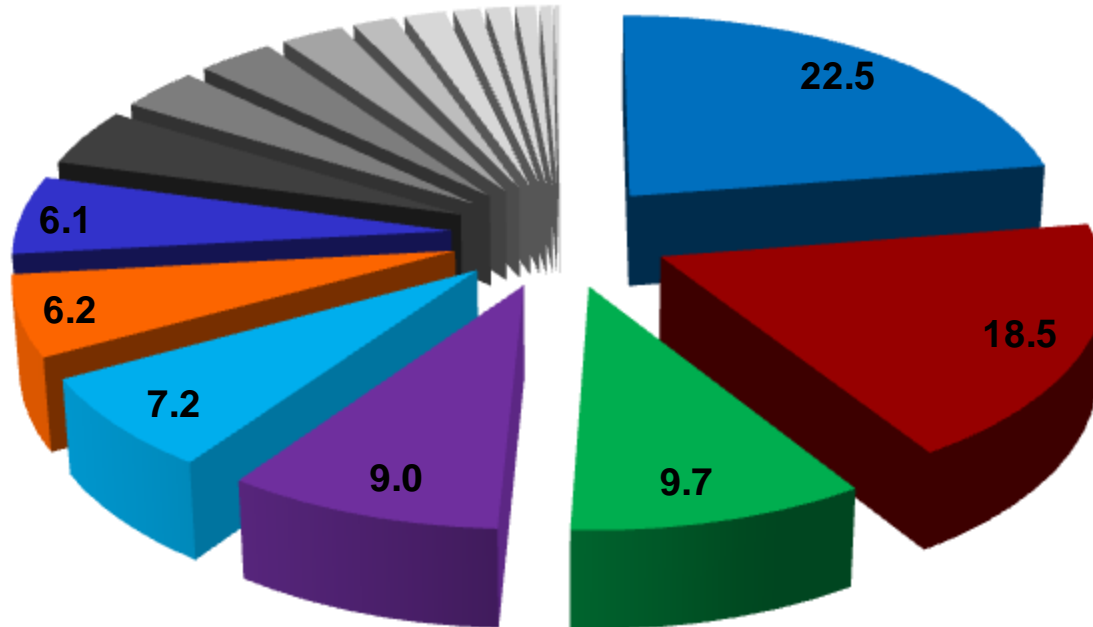
Sample: company size



Distribution of company size in Germany:

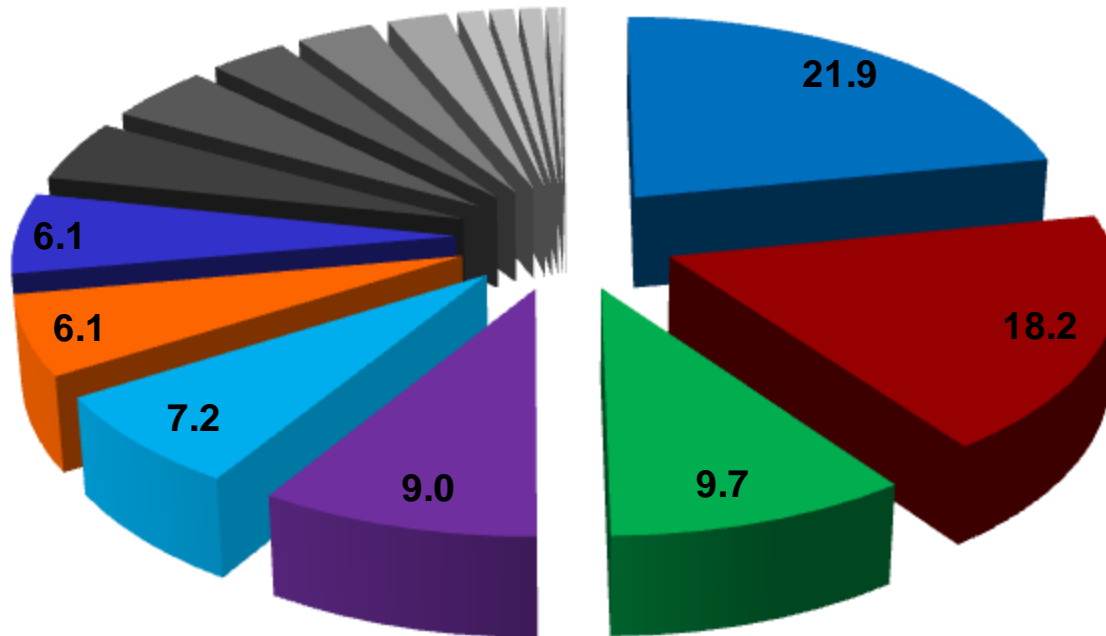


Sample: Line of Business



- Handel; Instandhaltung und Reparatur von Kraftfahrzeugen
- Verarbeitendes Gewerbe
- Gesundheits- und Sozialwesen
- Baugewerbe
- Erbringung von freiberuflichen, wissenschaftlichen und technischen Dienstleistungen
- Verkehr und Lagerei
- Erbringung von sonstigen wirtschaftlichen Dienstleistungen
- Gastgewerbe
- Information und Kommunikation
- Erbringung von sonstigen Dienstleistungen
- Erbringung von Finanz- und Versicherungsdienstleistungen
- Land- und Forstwirtschaft, Fischerei
- Erziehung und Unterricht
- Wasserversorgung etc.
- Grundstücks- und Wohnungswesen
- Kunst, Unterhaltung und Erholung
- Energieversorgung
- Bergbau und Gewinnung von Steinen und Erden

Line of Business in national distribution (Germany)



- Handel; Instandhaltung und Reparatur von Kfz.
- Verarbeitendes Gewerbe
- Gesundheits- und Sozialwesen
- Baugewerbe
- Erbringung von freiberuflichen, wissenschaftlichen
- Verkehr und Lagerei
- Erbringung von sonstigen wirtschaftlichen Dienstleistungen
- Erziehung und Unterricht
- Gastgewerbe
- Erbringung von sonstigen Dienstleistungen
- Information und Kommunikation
- Erbringung von Finanz- und Versicherungsdienstleistungen
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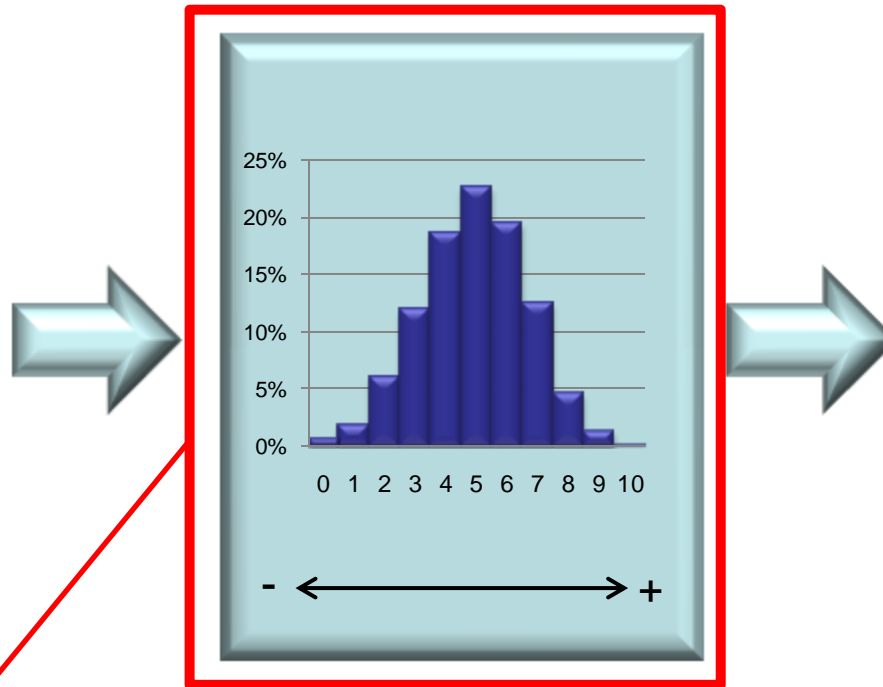
Research Model KM 2010



Determinants



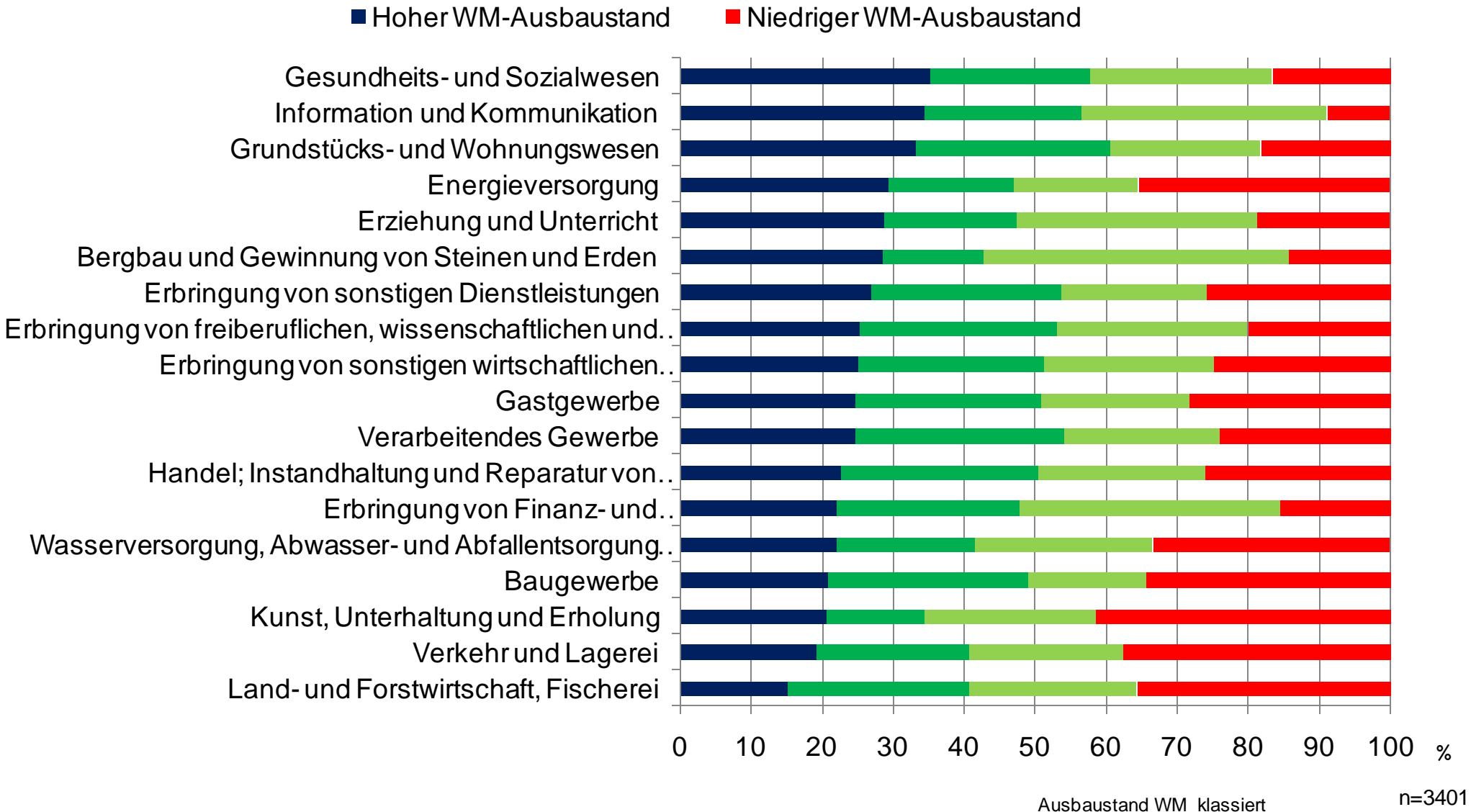
KM Activities



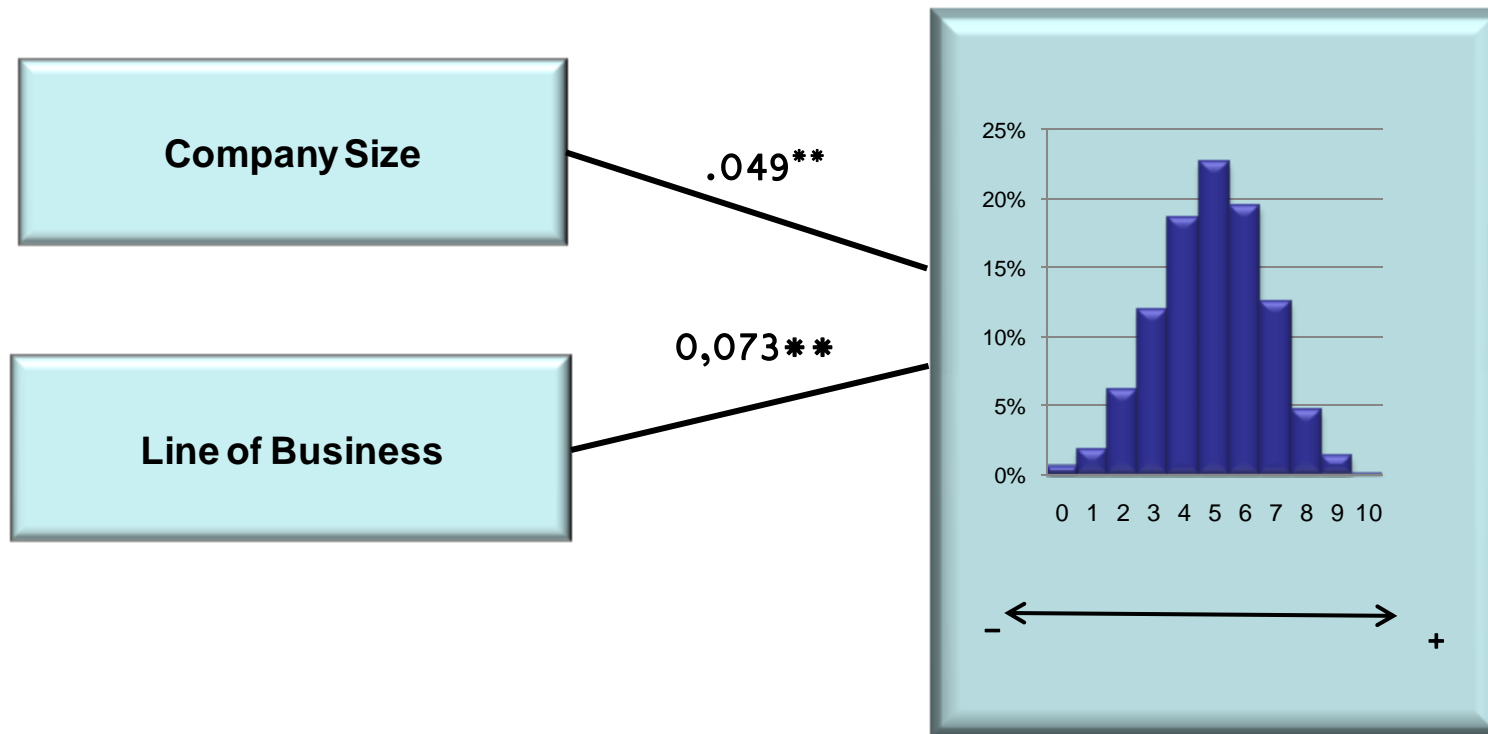
Performance/Success Factors



KM-Activities and Line of Business



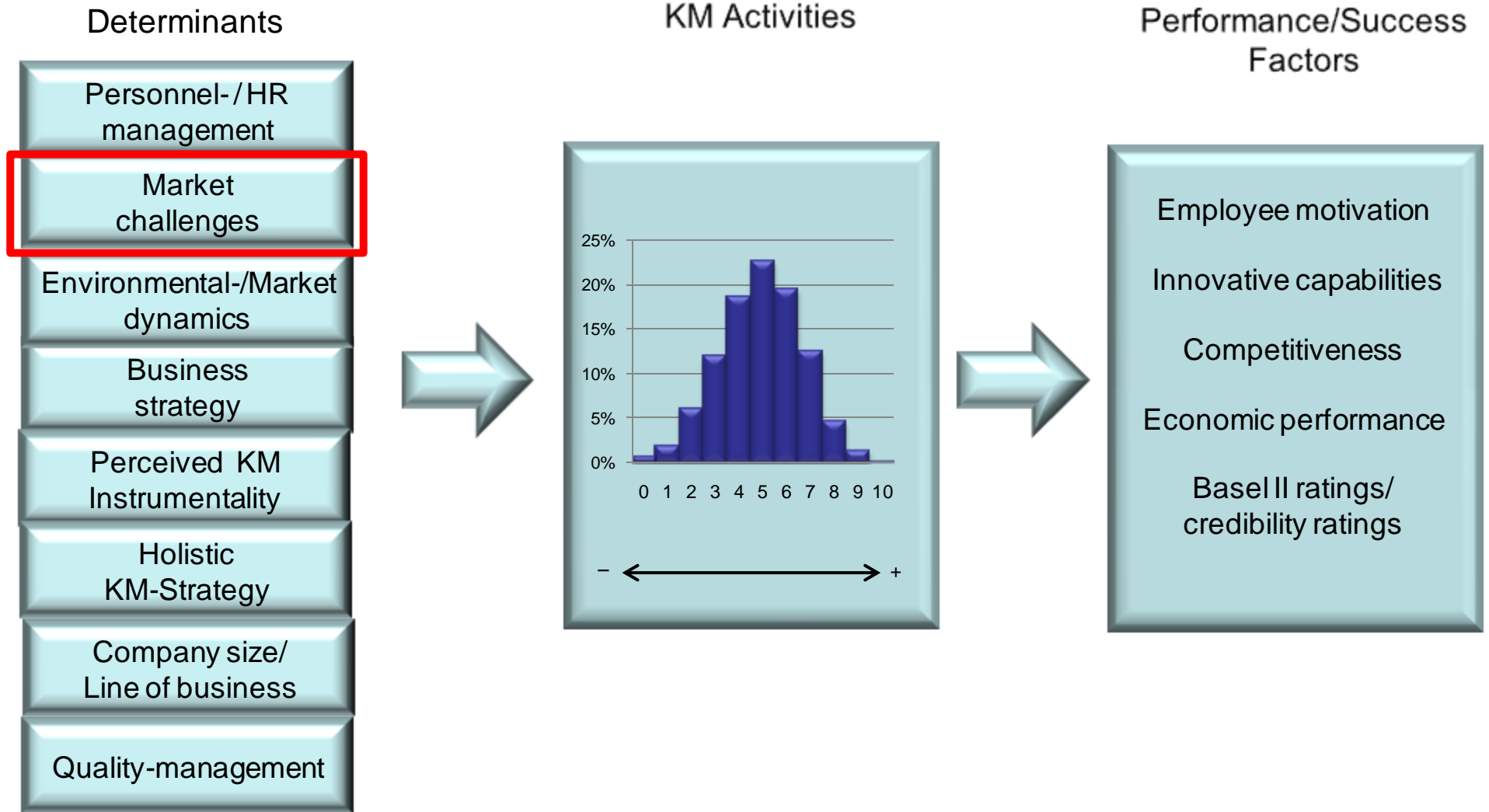
KM-Activities and Company Size/Line of Business



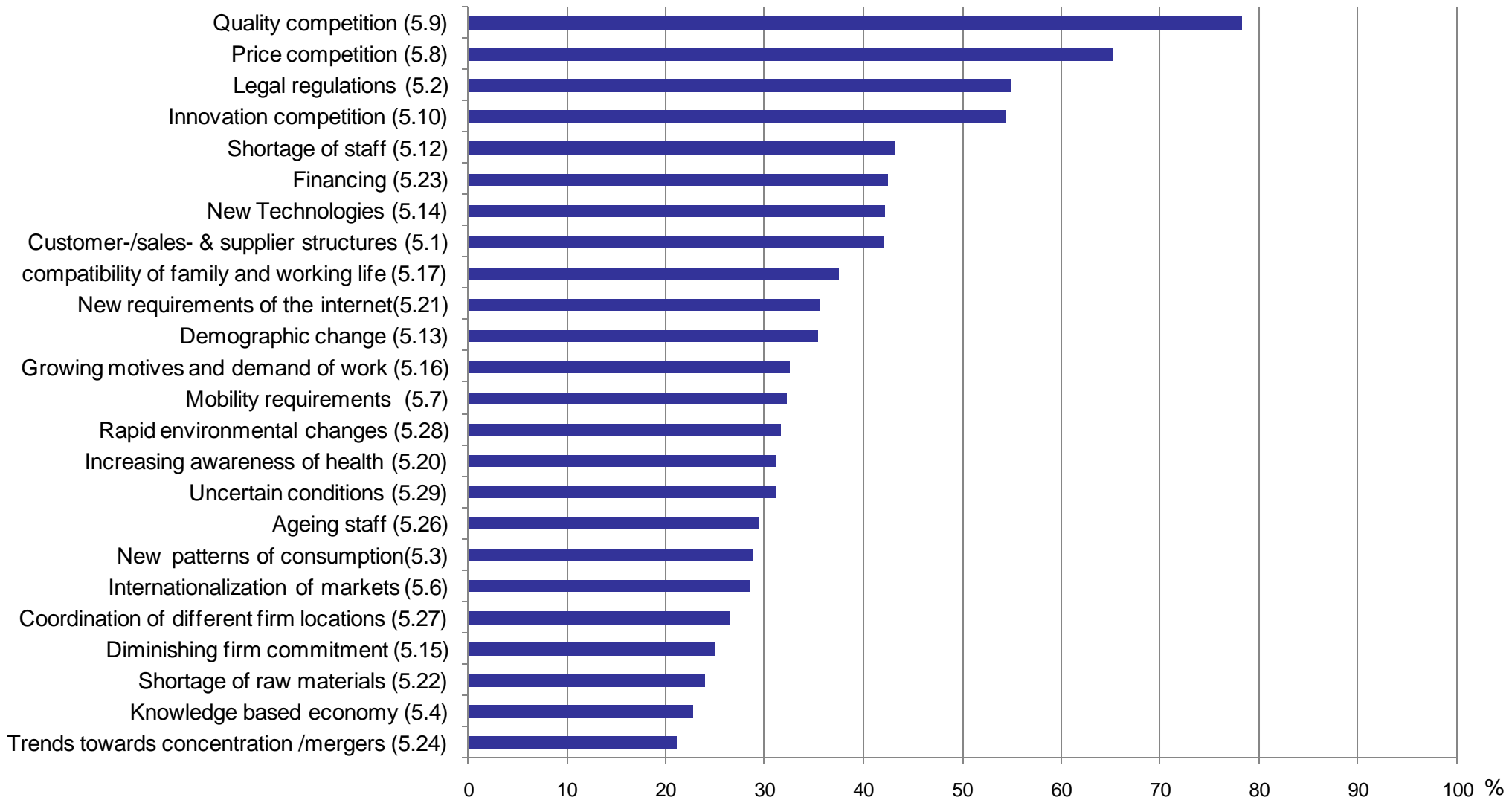
n = 3401

corr R²: .072

Research Model KM 2010

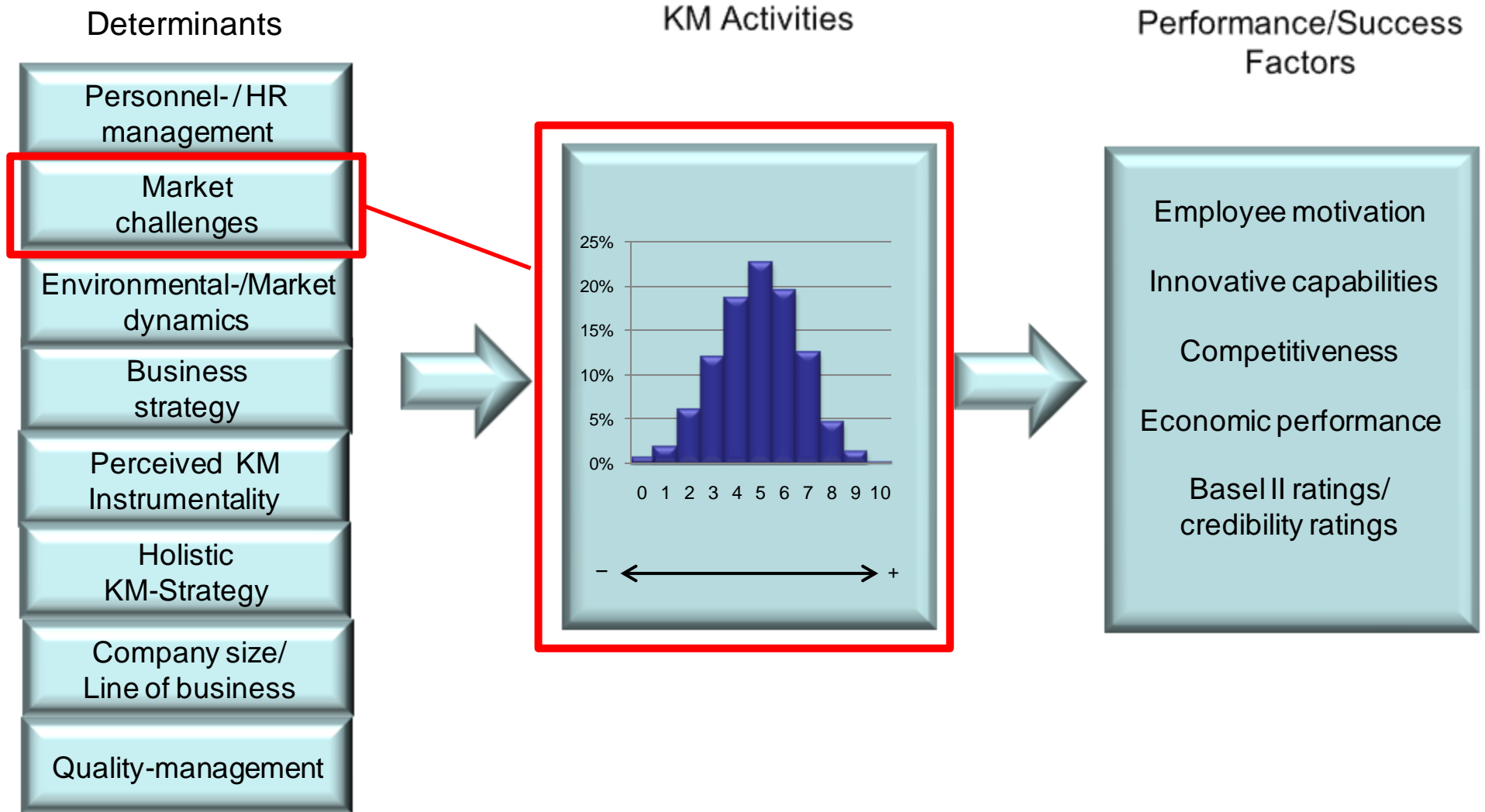


Perceived market challenges (German companies)

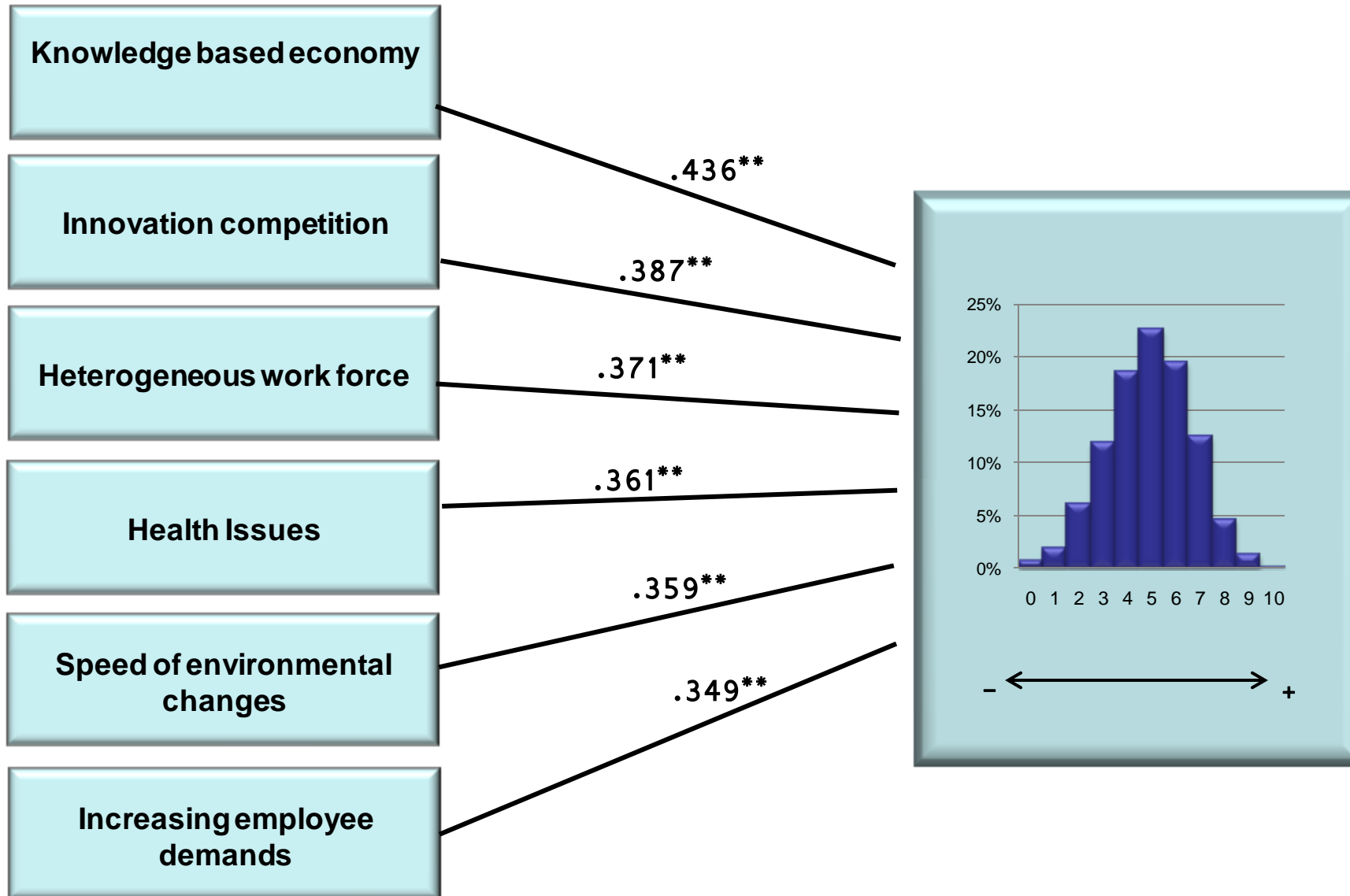


* Herausforderungen ≥ 8 n=3401

Research Model KM 2010

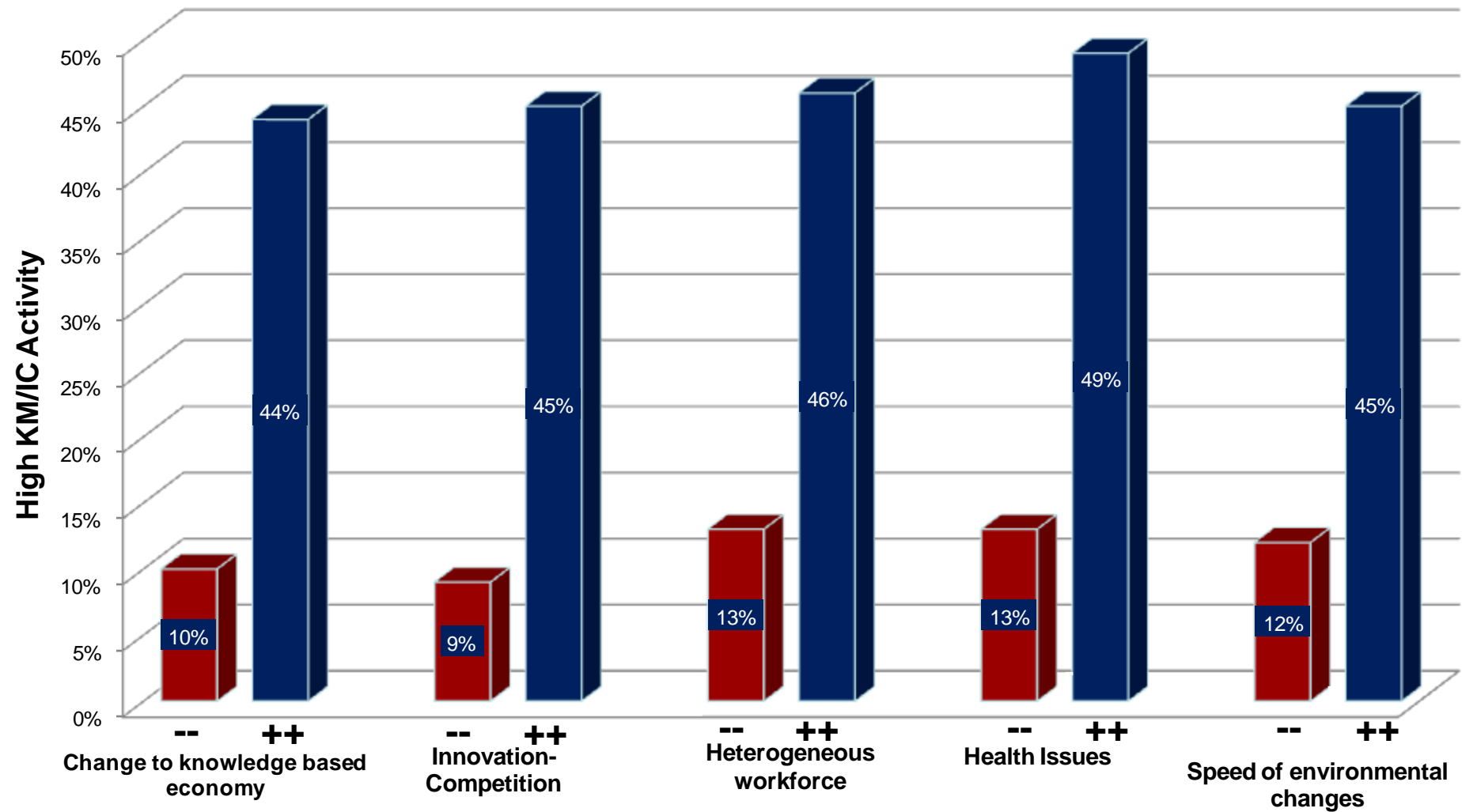


KM Activities and perceived market challenges



n=3401

High KM/IC activity-index and perceived market challenges



n=3401

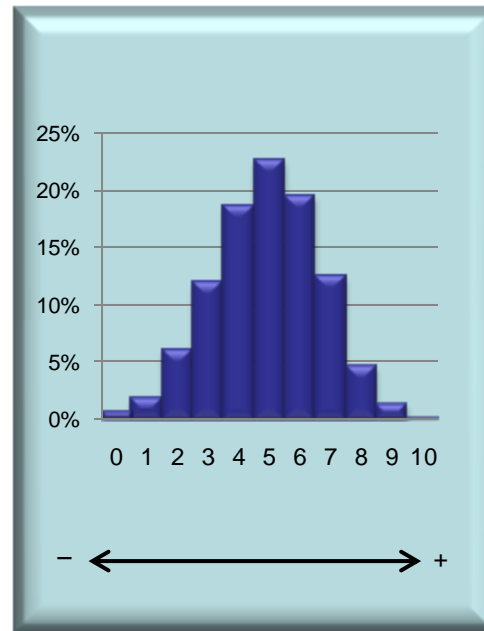
Research Model KM 2010



Determinants



KM/IC activities



Performance/Success Factors



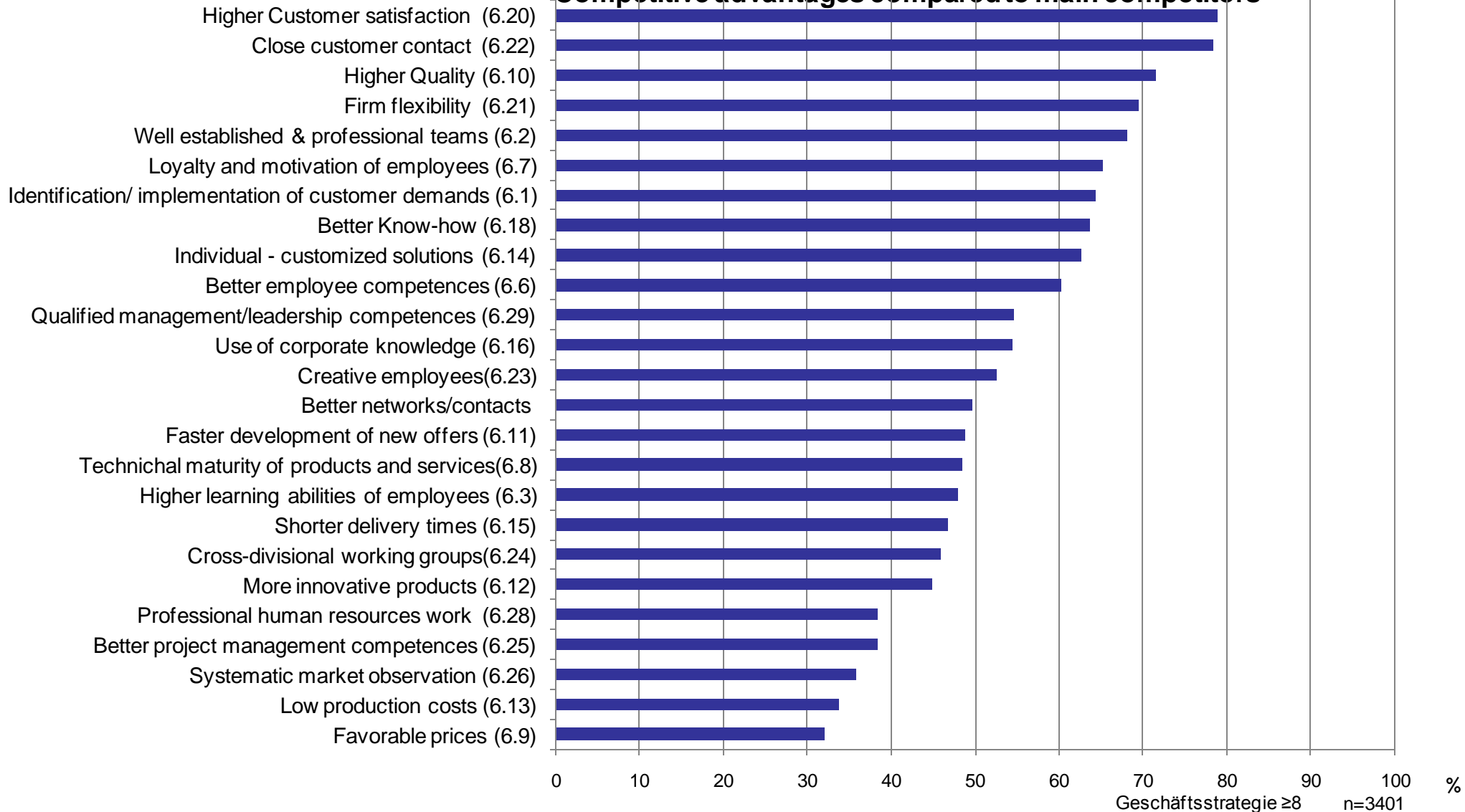
[illegible]

n=3401

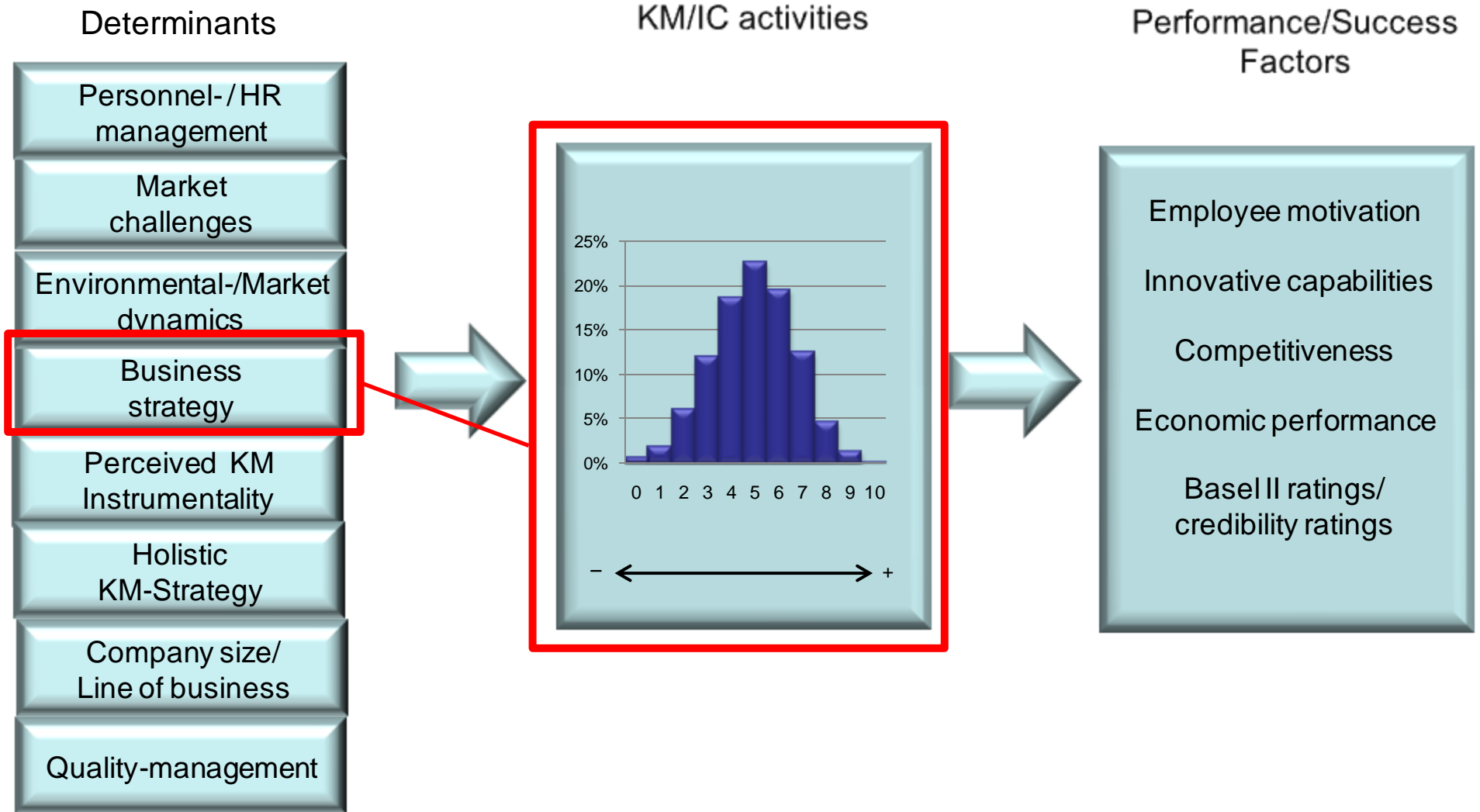
Business Strategy (core competencies) in German companies



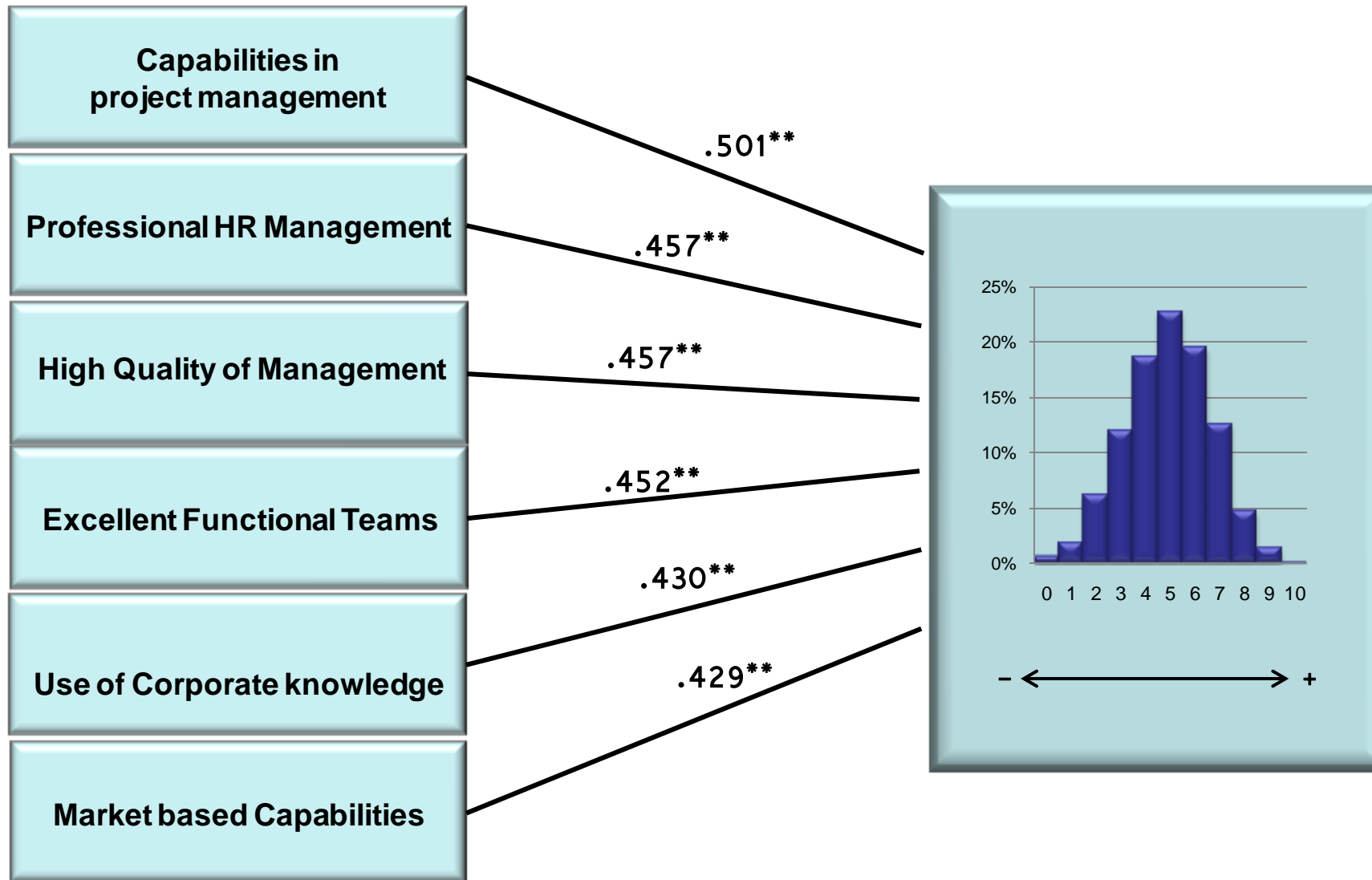
Competitive advantages compared to main competitors



Research Model KM 2010

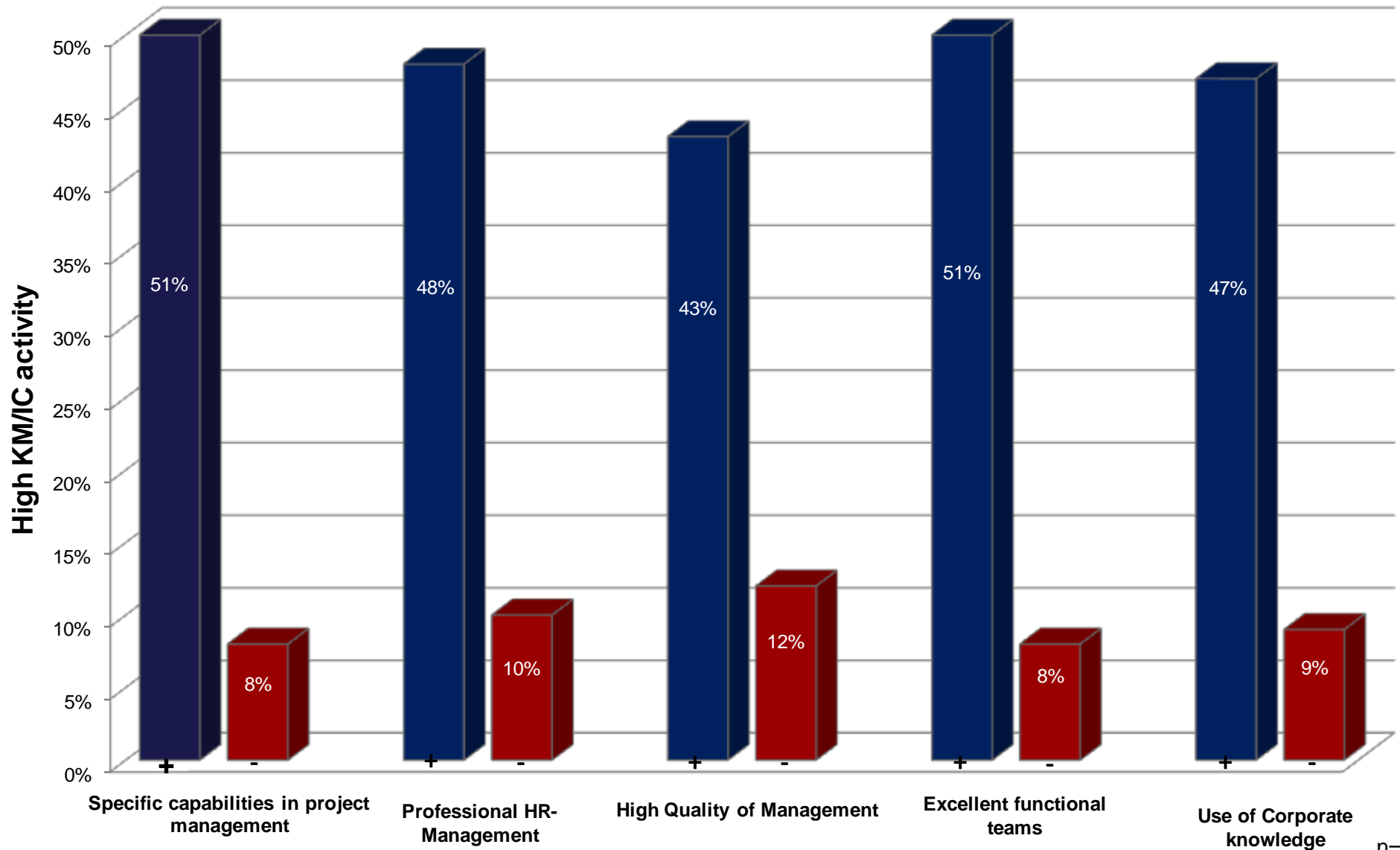


KM/IC-activities and business strategy (competitive advantage)



n=3401

High KM/IC activity-index and business strategy



Factor Analysis – Business Strategy (Core Competence)

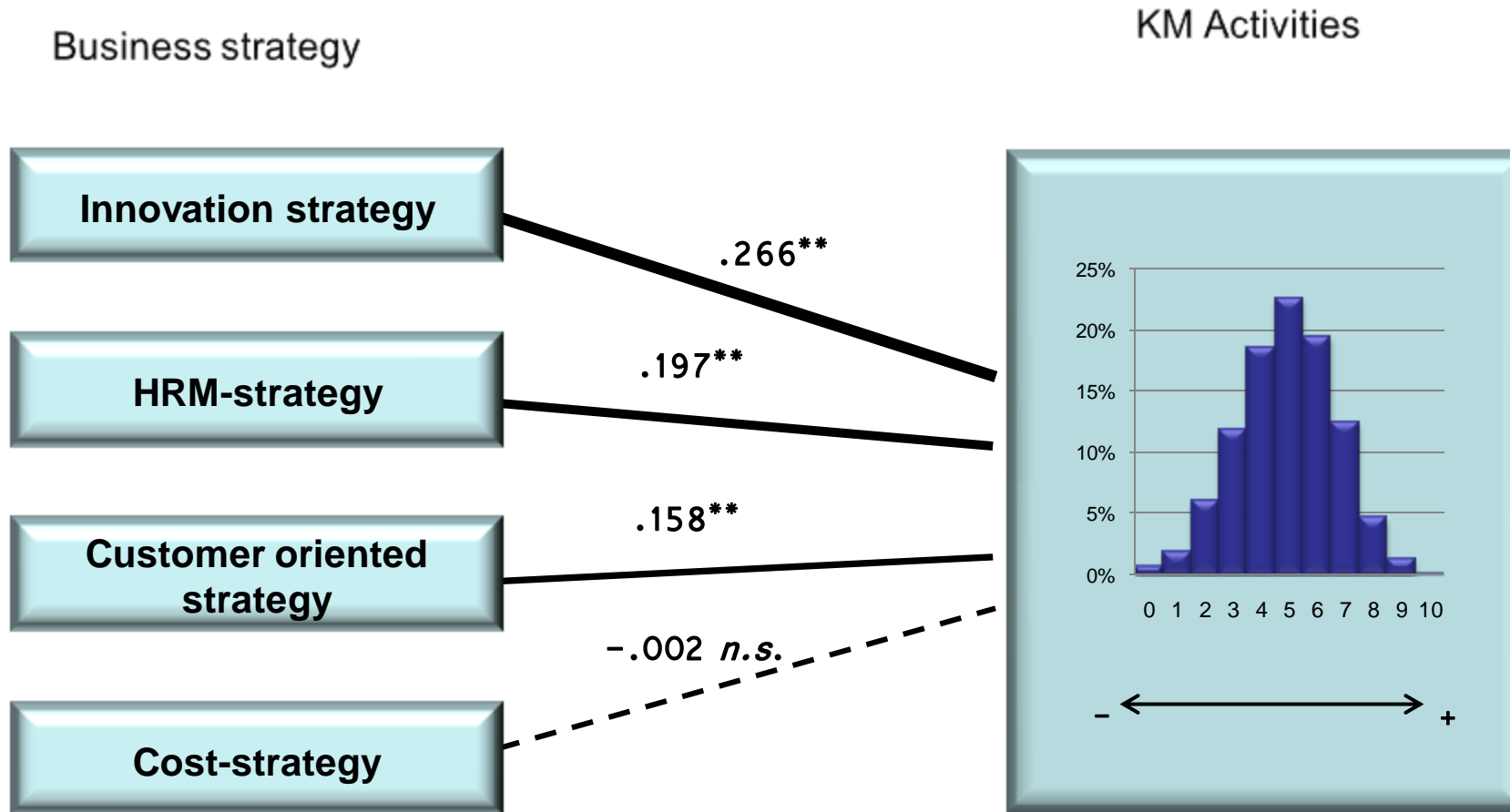
Rotierte Komponentenmatrix^a

	Komponente				
	1	2	3	4	
6.22 Einen besonders engen Kundenkontakt	,838				
6.20 Besondere Kundenzufriedenheit	,787	<div>Customer oriented strategy $\alpha=.831$</div>			
6.21 Wandlungs- und Anpassungsfähigkeit des Unternehmens/Flexibilität	,691				
6.1 Bessere Fähigkeit, Kundenbedürfnisse zu erkennen und umzusetzen	,561				
6.7 Höhere Motivation und Loyalität der Mitarbeiter		,816	<div>HRM-strategy $\alpha=.832$</div>		
6.6 Mitarbeiter mit besseren Kenntnissen und Fähigkeiten als der Wettbewerber		,811			
6.3 Höhere Lernfähigkeit der Mitarbeiter		,767			
6.12 Innovativere Produkte			,879	<div>Innovation-strategy $\alpha=.777$</div>	
6.11 Schnellere Entwicklung neuer Angebote			,786		
6.9 Günstigere Preise als die Hauptkonkurrenz				,879	<div>Cost-strategy $\alpha=.657$</div>
6.13 Geringe Produktionskosten				,764	

Extraktionsmethode: Hauptkomponentenanalyse.
Rotationsmethode: Varimax mit Kaiser-Normalisierung.

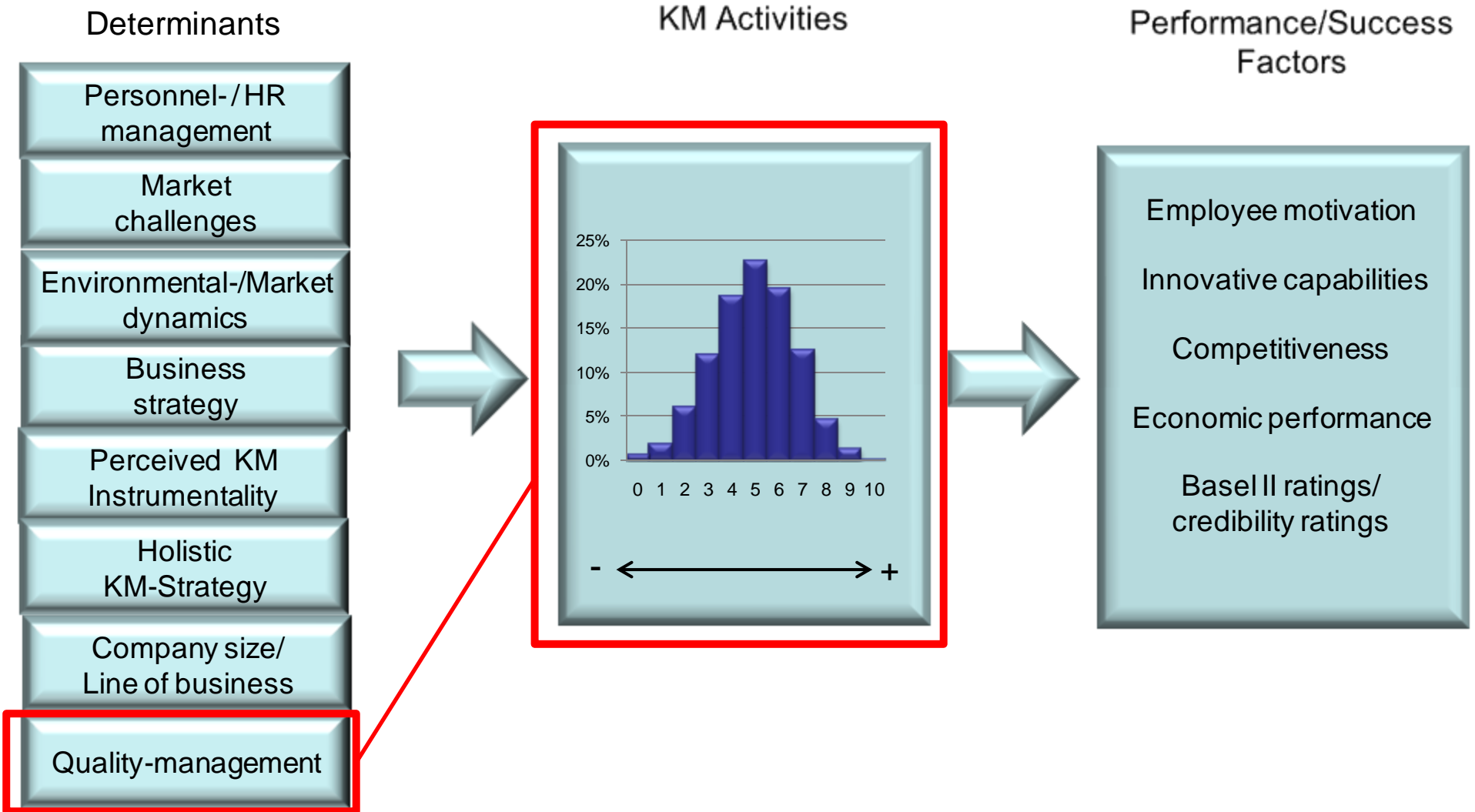
a. Die Rotation ist in 6 Iterationen konvergiert.

KM activities and business strategy (Regression)

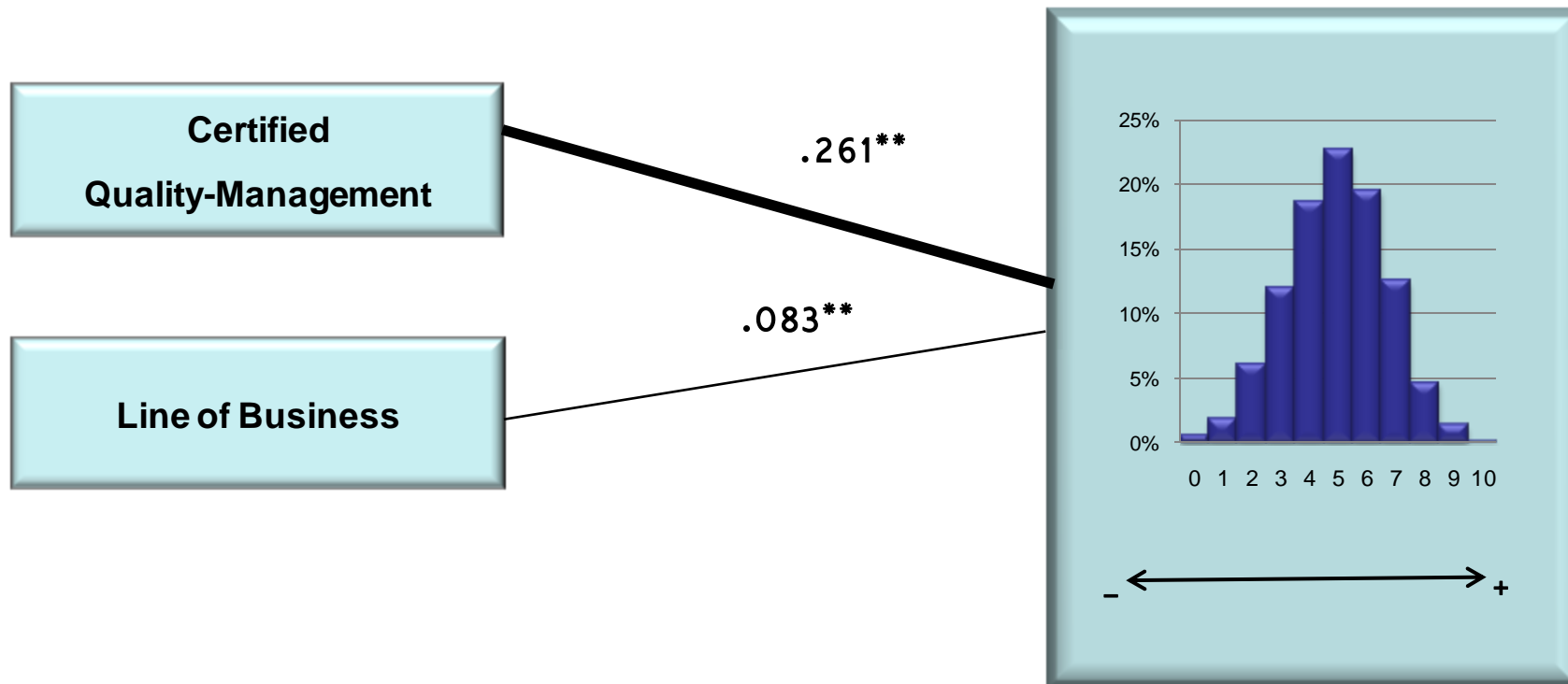


n = 3401 korr. $R^2 = .259$

Research Model KM 2010

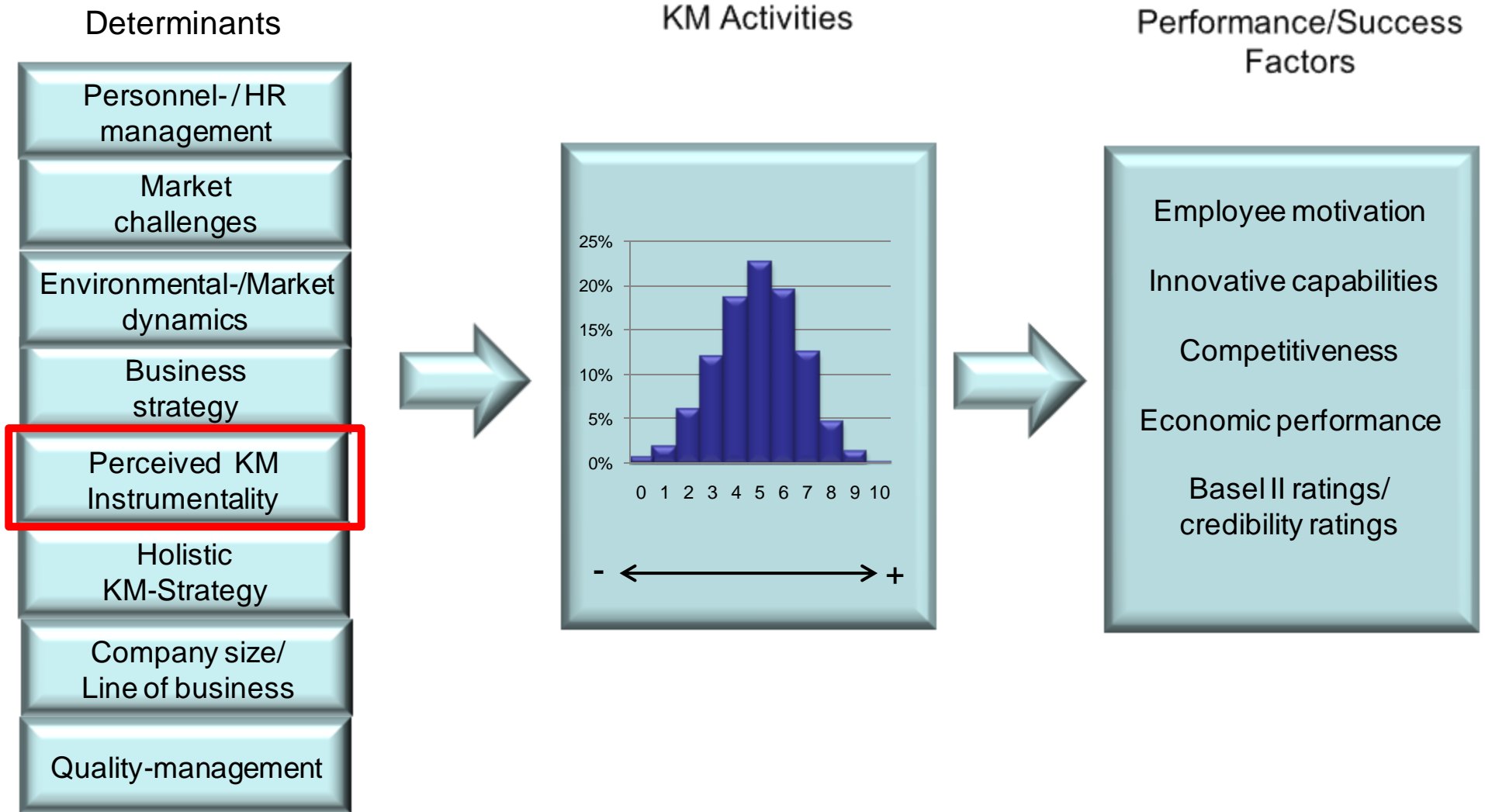


KM-Activities and Quality Management (Regression)

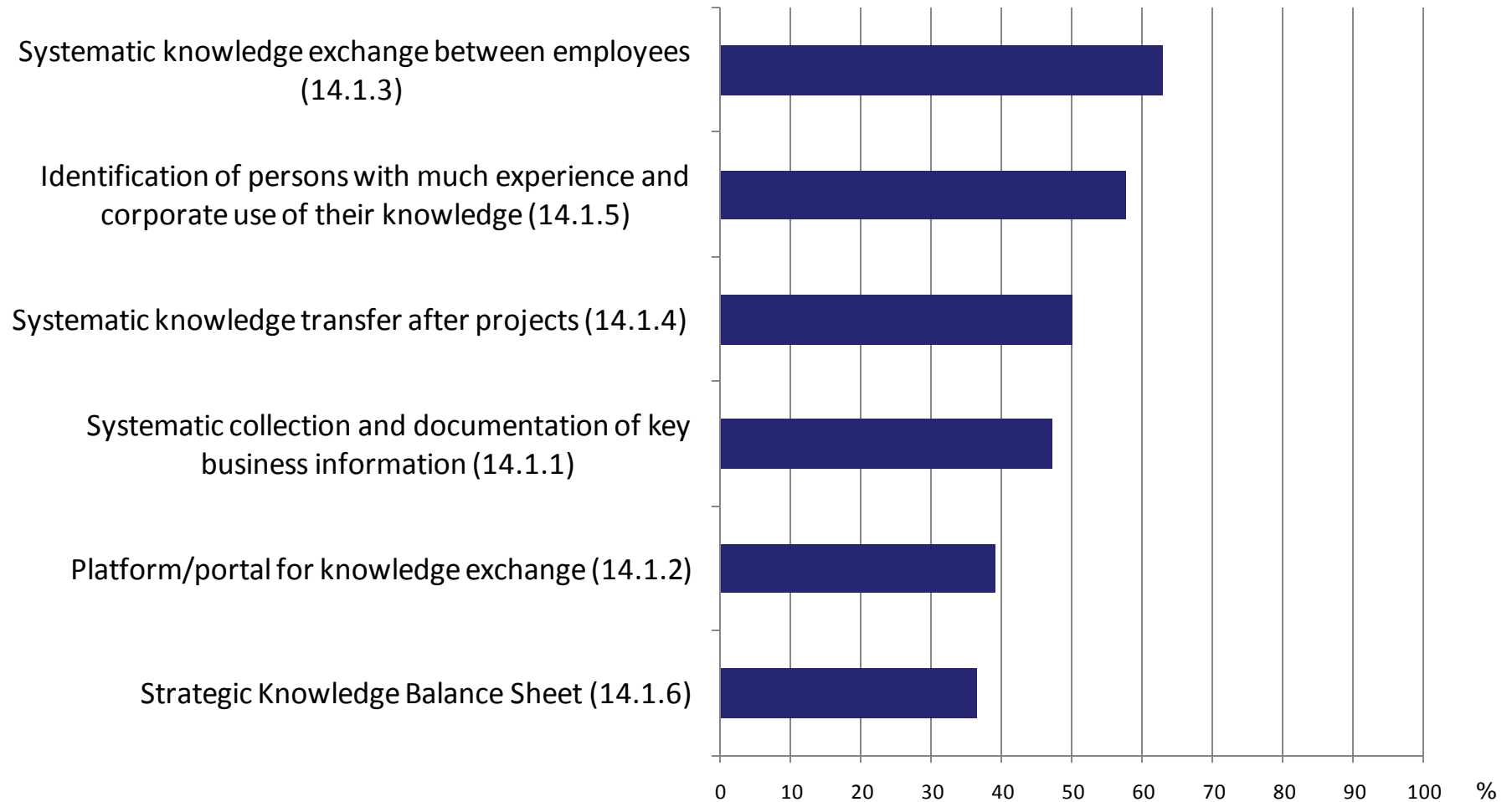


n=3401 korr R²: .072

Research Model KM 2010



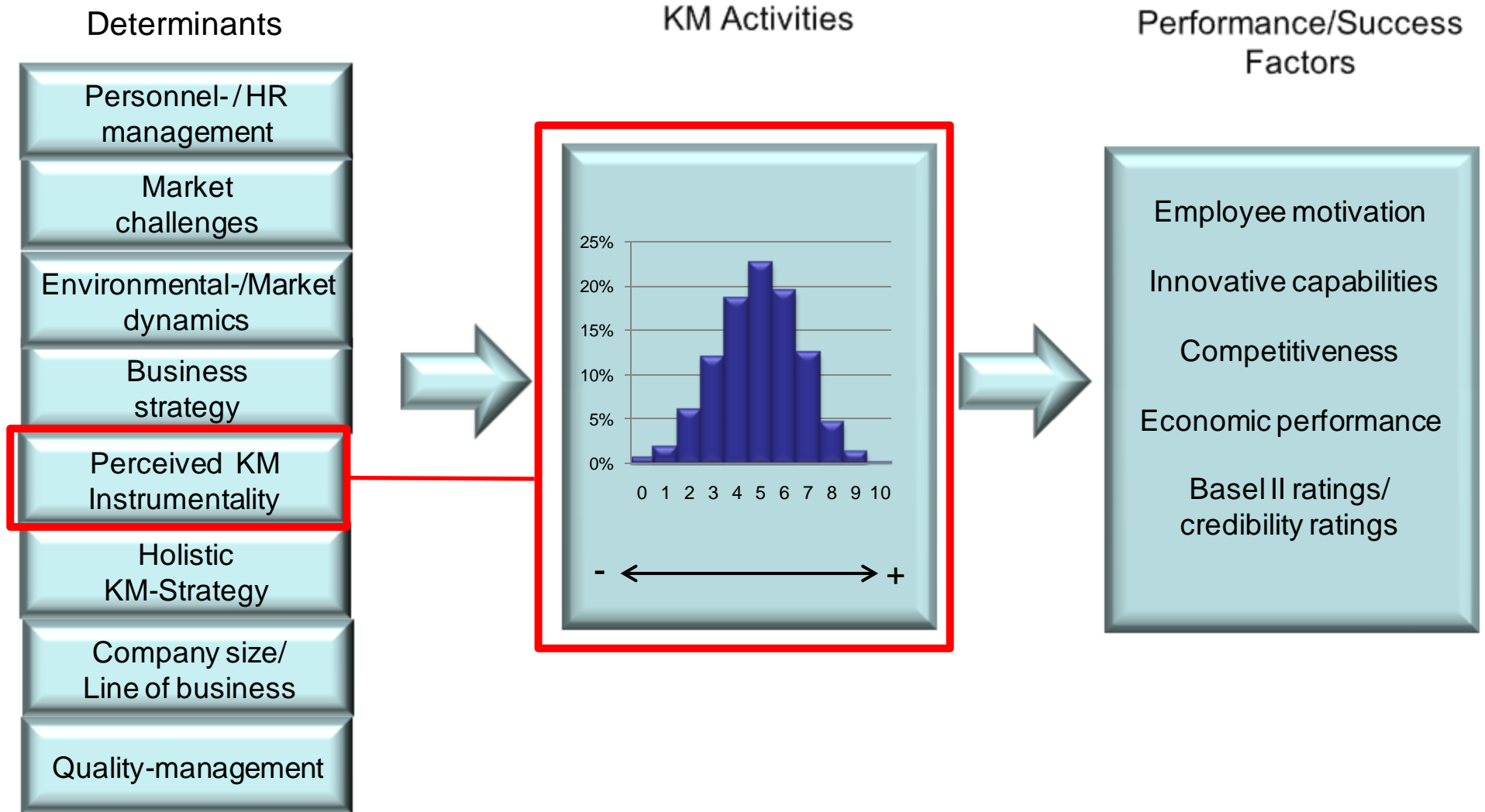
KM Instrumentality (German companies)



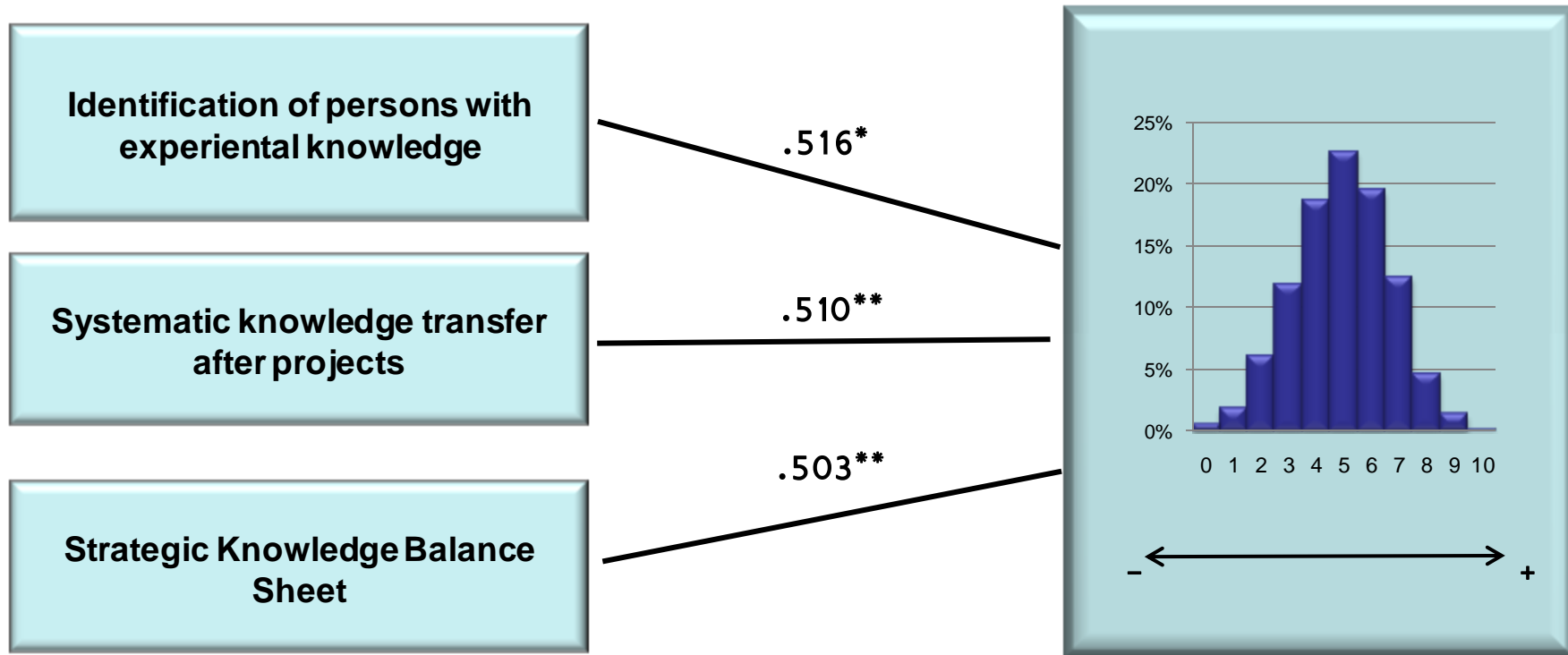
KM Instrumentality ≥ 8

n=3401

Research Model KM 2010

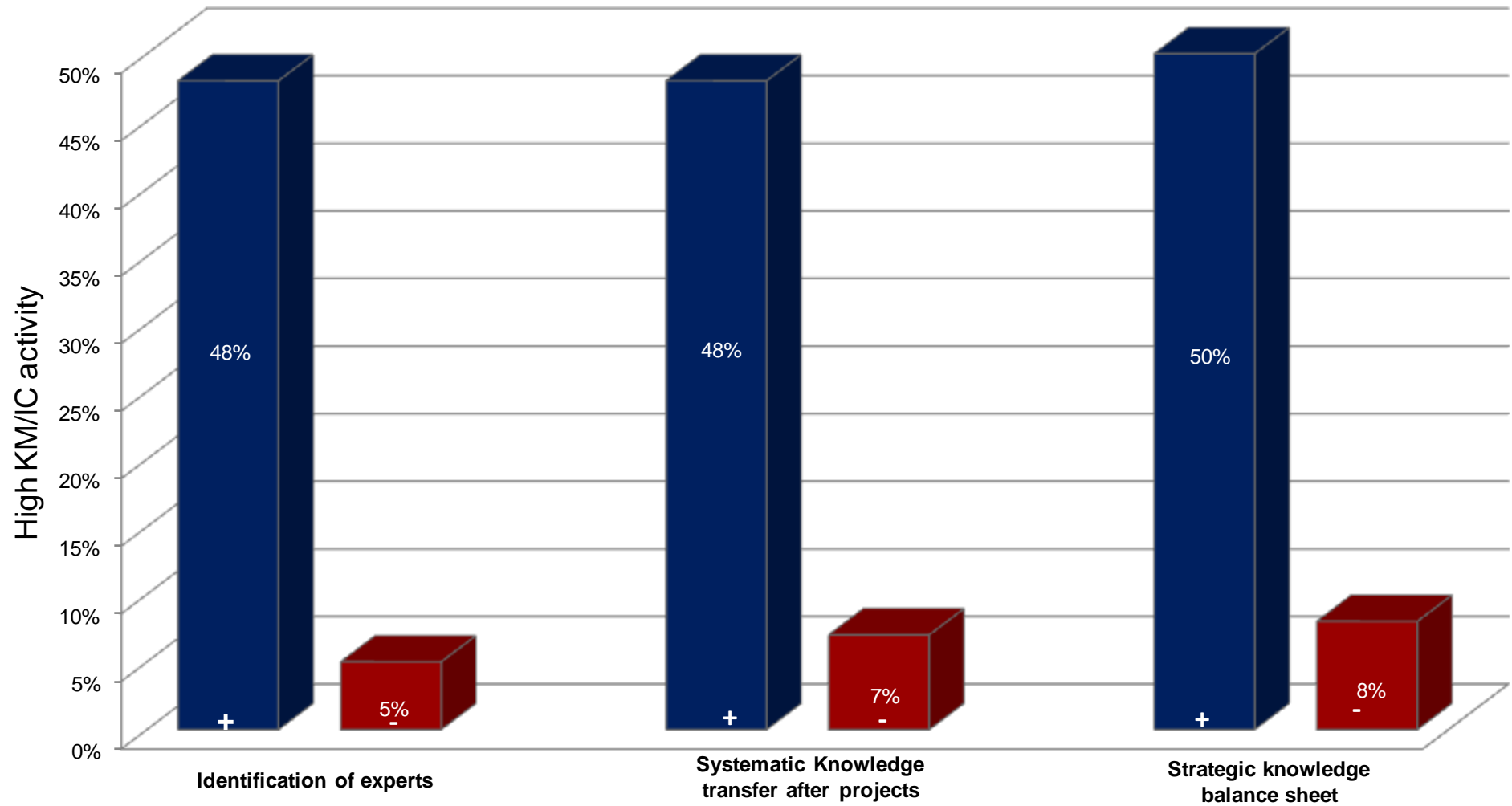


KM Activities and perceived KM Instrumentality



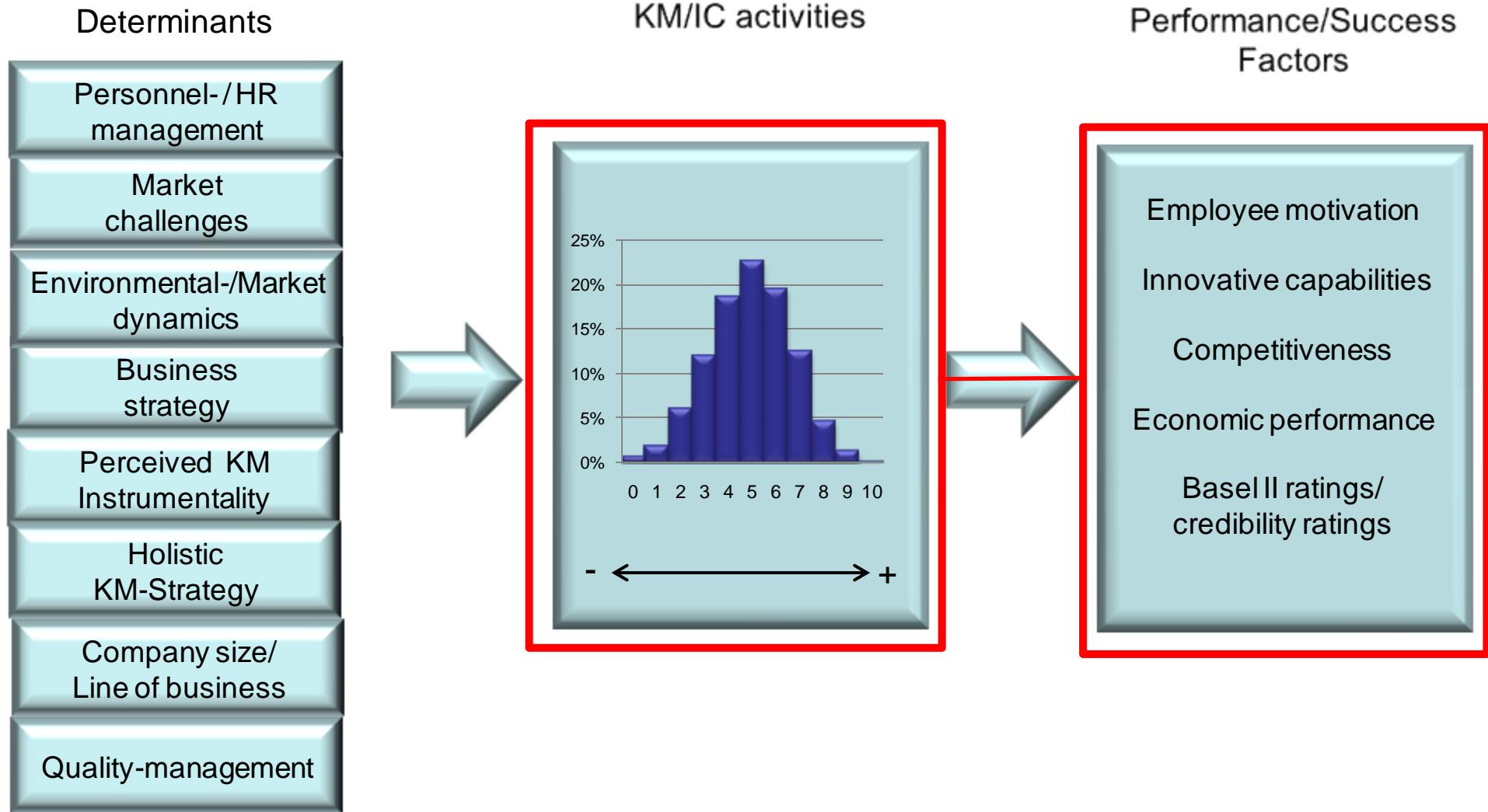
n=3401

KM/IC activities and perceived instrumentality

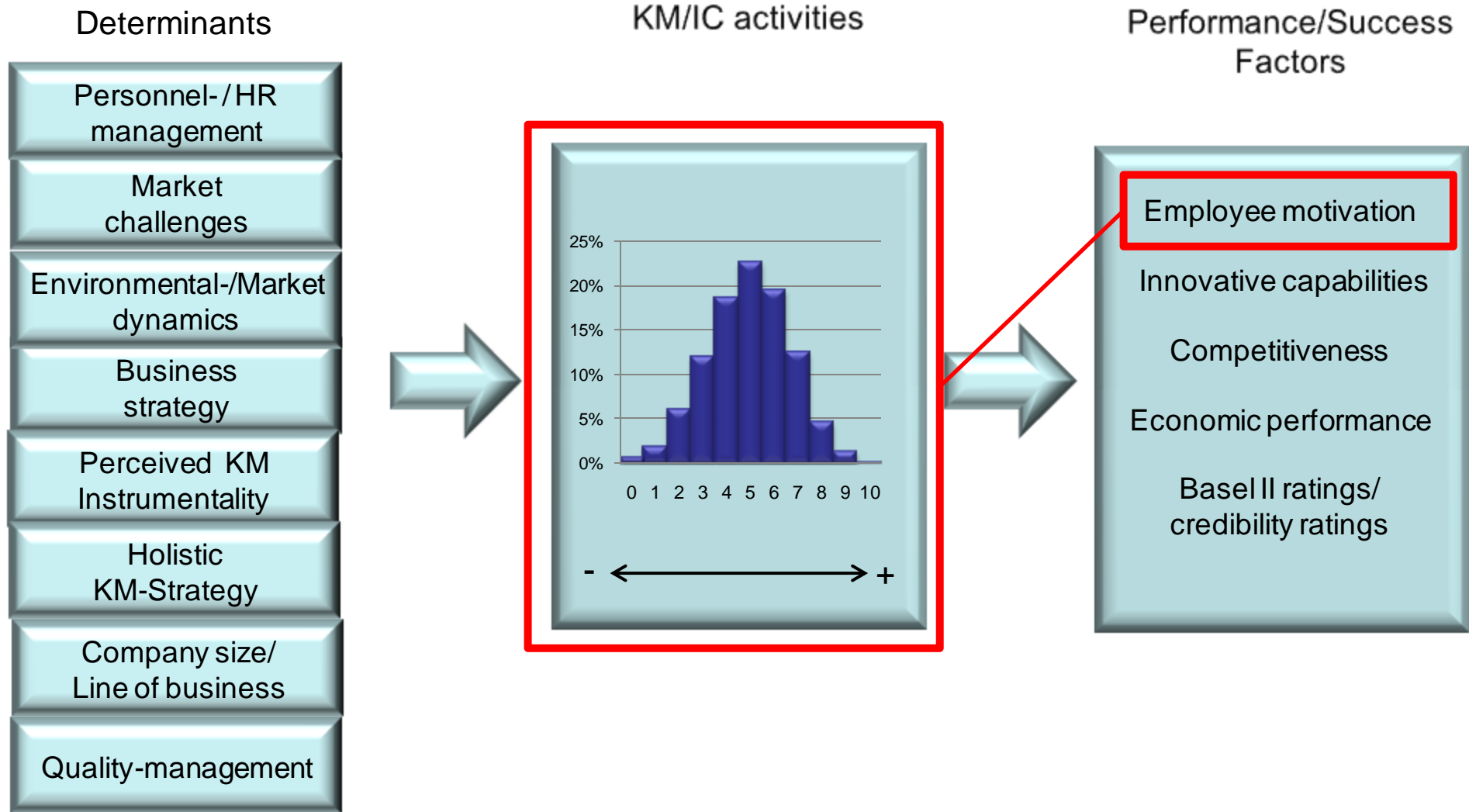


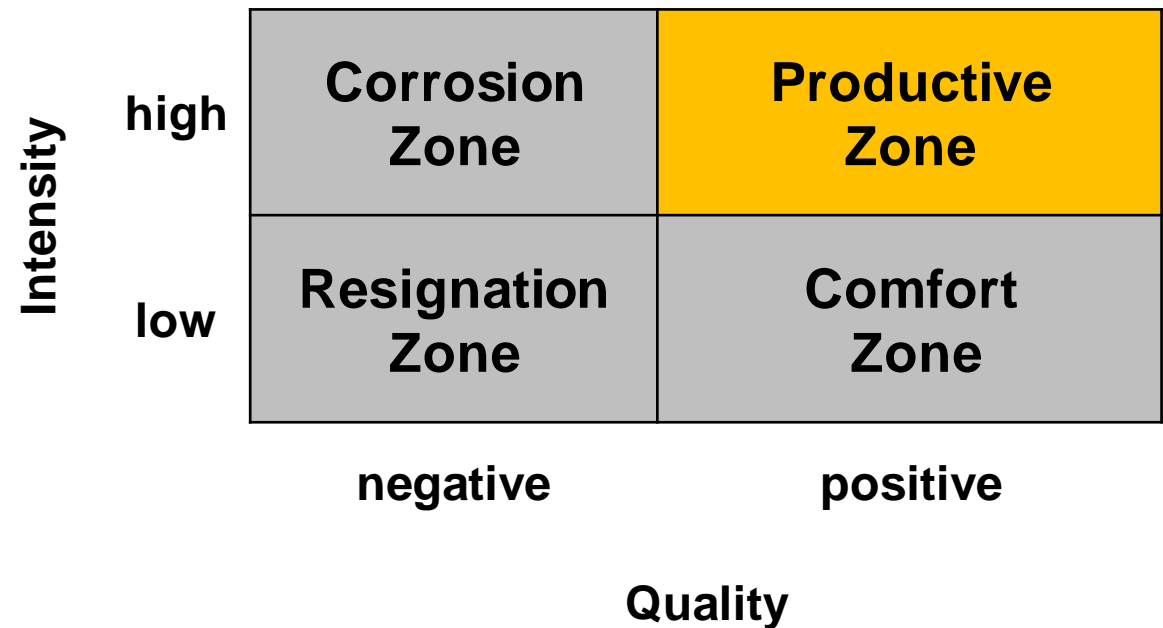
n=3401

Research Model KM 2010

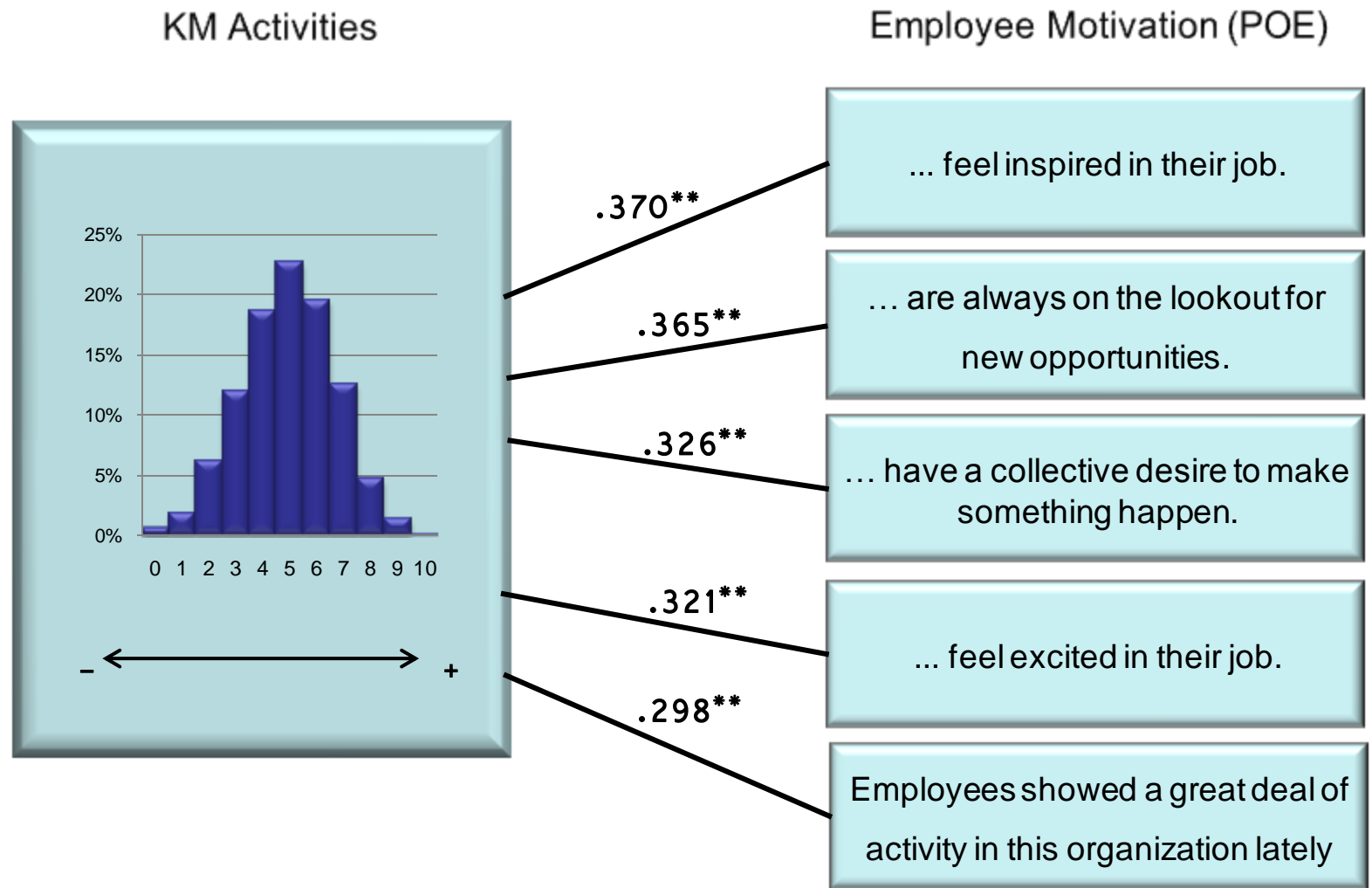


Research Model KM 2010



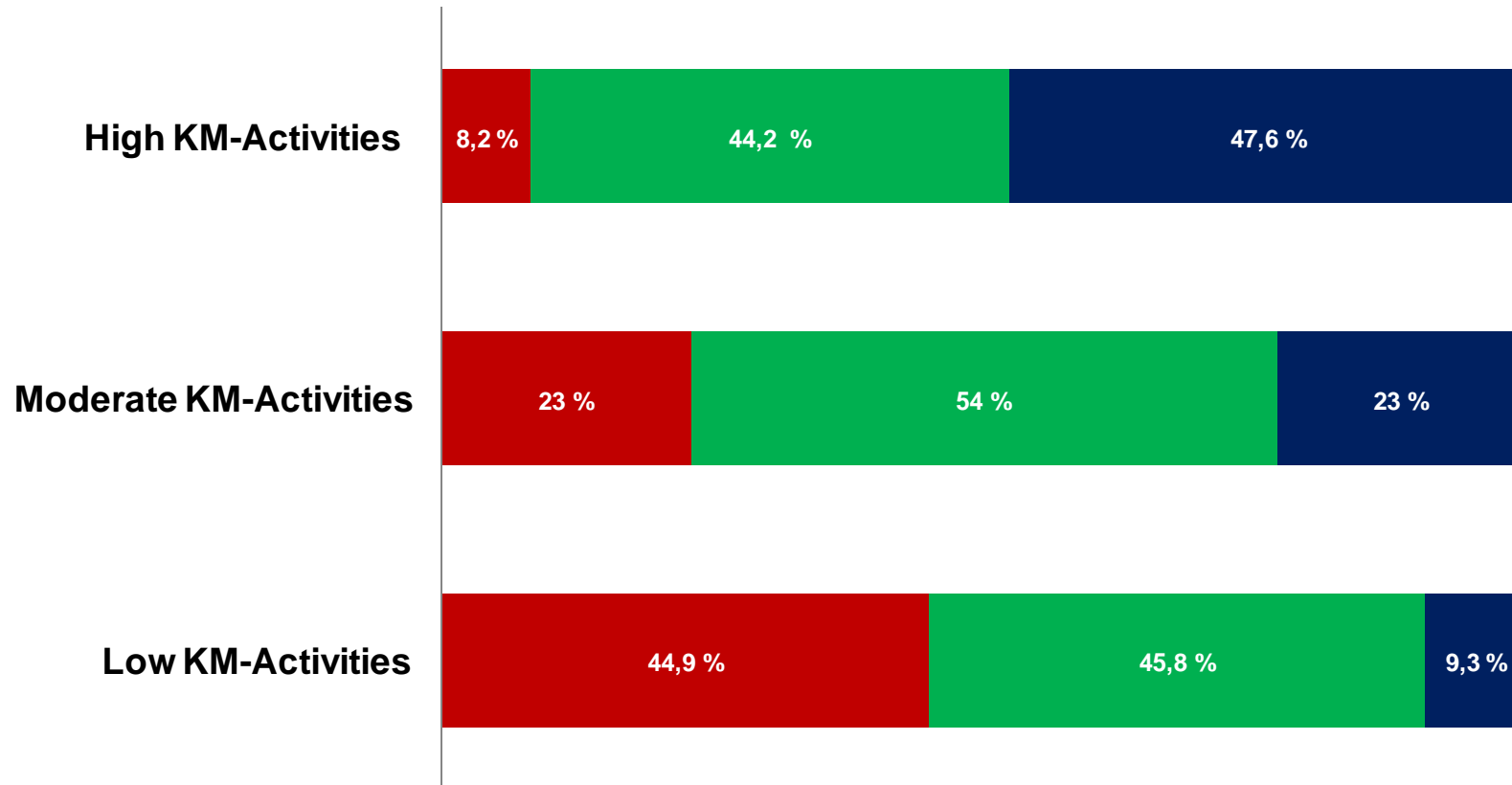


KM- Activities and Employee motivation (POE)



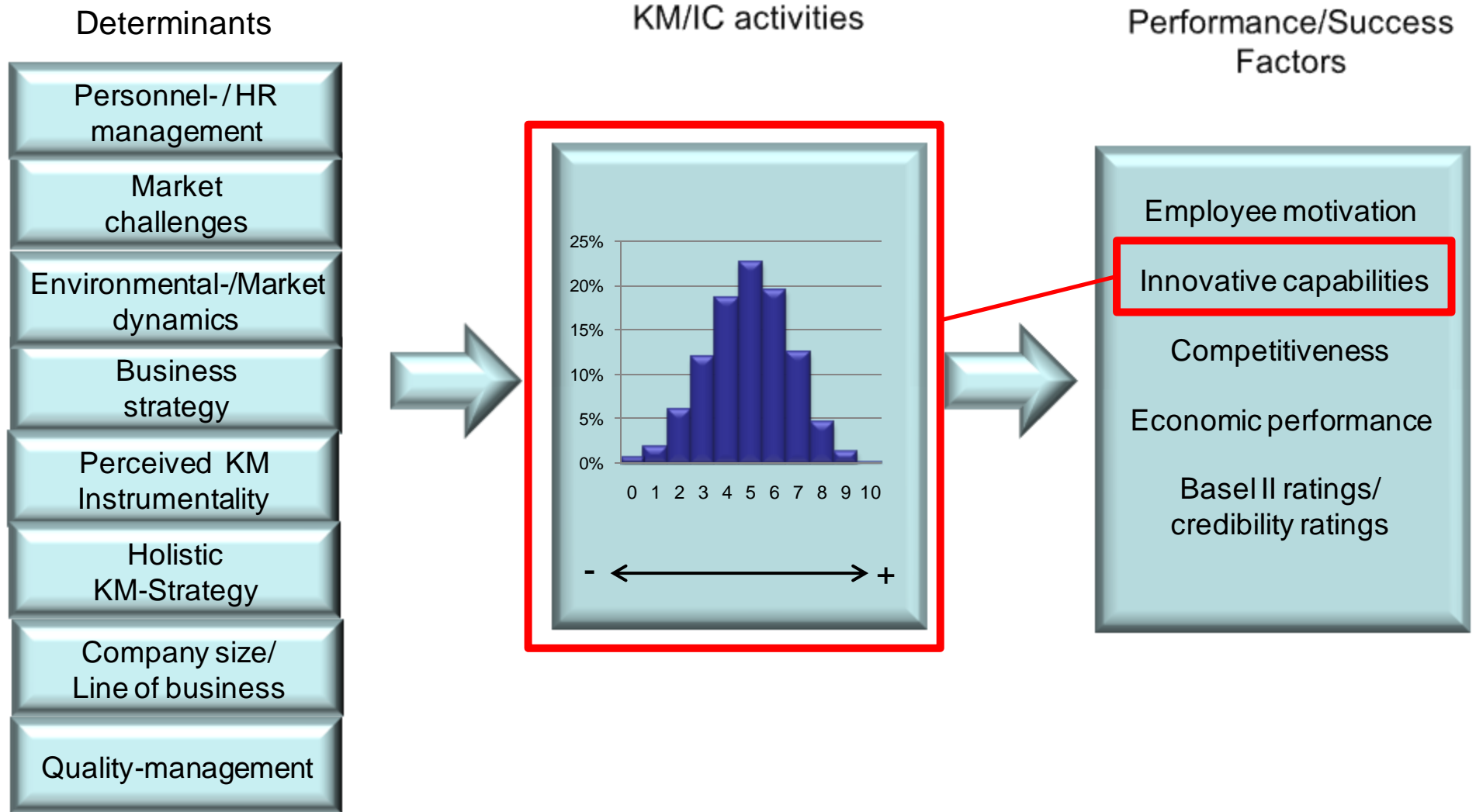
KM- Activities and Employee motivation (POE)

■ Low employee motivation ■ Moderate employee motivation ■ High employee motivation



n = 1209

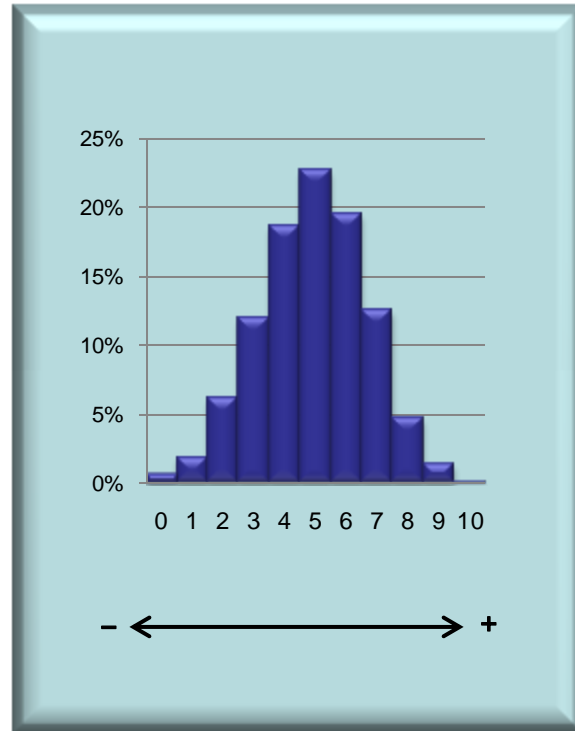
Research Model KM 2010



KM-Activities and Innovative capabilities



KM-Activities



Innovative capabilities

Competitive advantage through new processes and methods

.474**

new management approaches in comparison with main competitors

.440**

first to market with new applications/services/products

.415**

...first on market with innovative products in comparison with main competitors

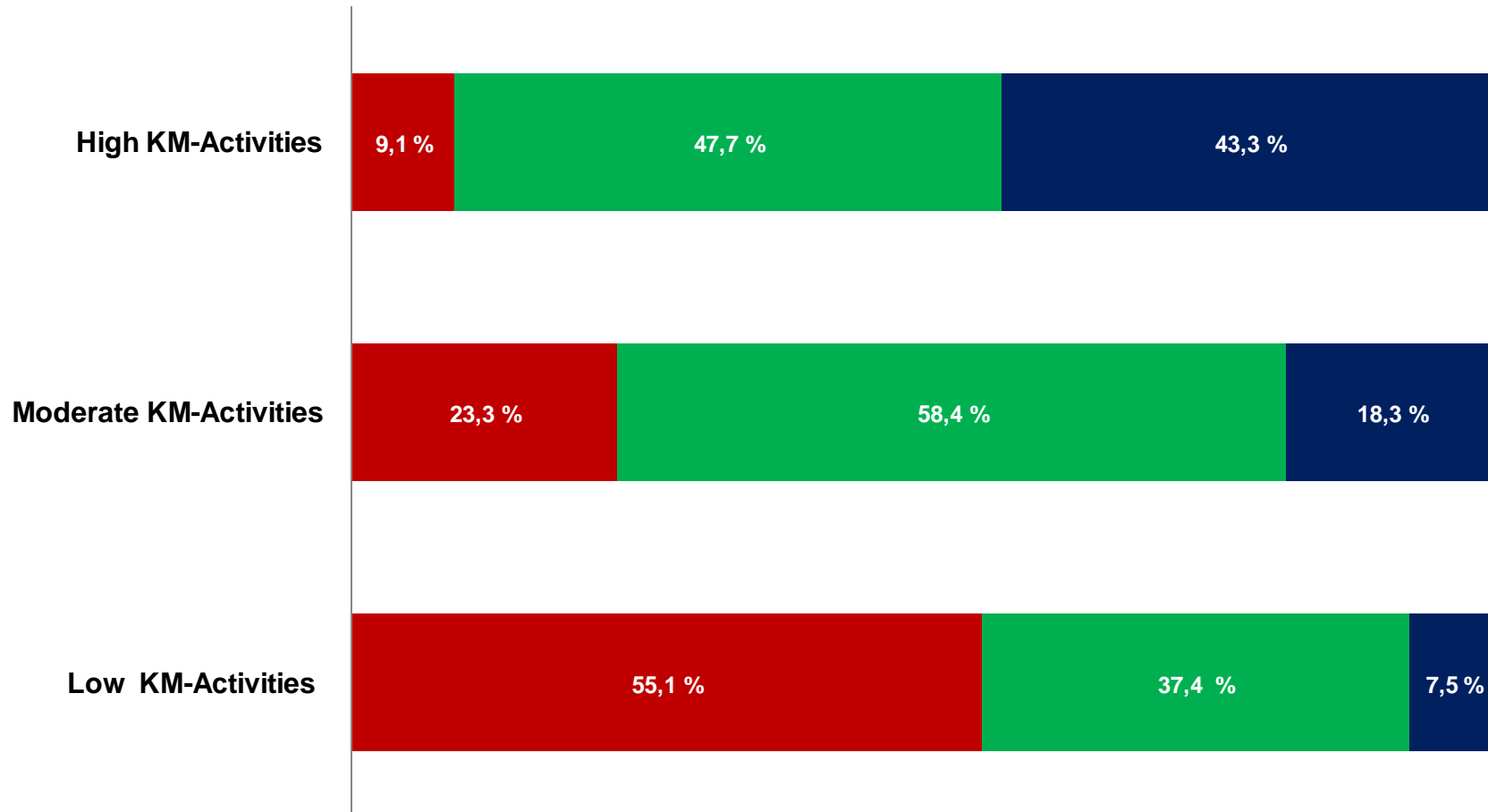
.403**

n=3401

KM-Activities and Innovative capabilities

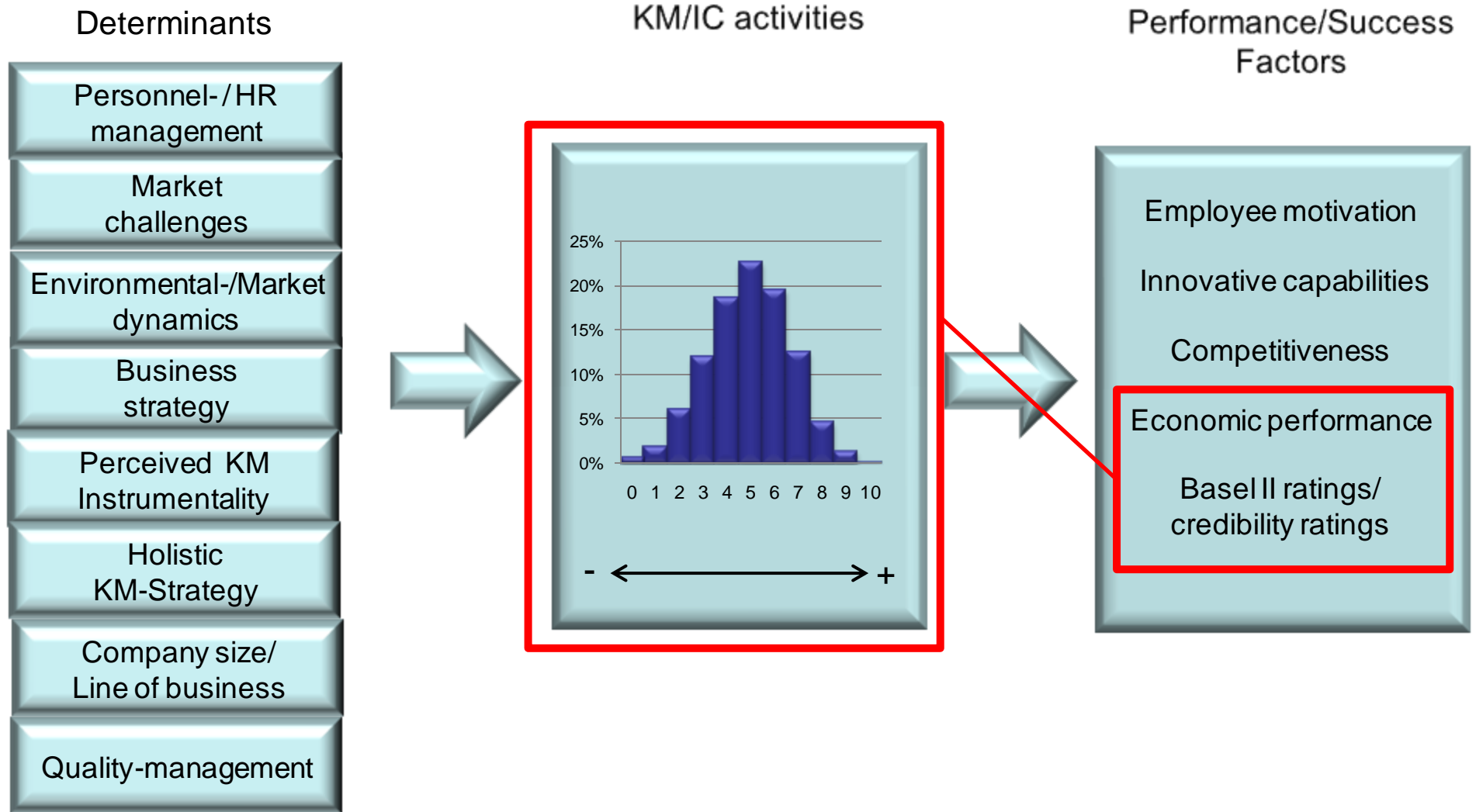


■ Low Innovative Capabilities ■ Moderate Innvoative Capabilities ■ High Innovative Capabilities



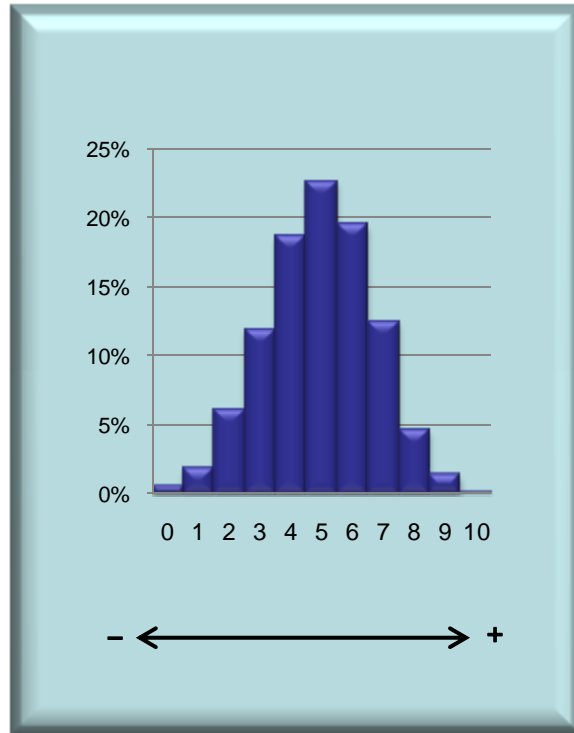
n=3401

Research Model KM 2010



KM-Activity and business performance indicators

KM Activity



Business Performance

Market share
last 3 years

.187**

Quantity of customers
last 3 years

.142**

Return on capital
last 3 years

.140**

Company profits
last 3 years

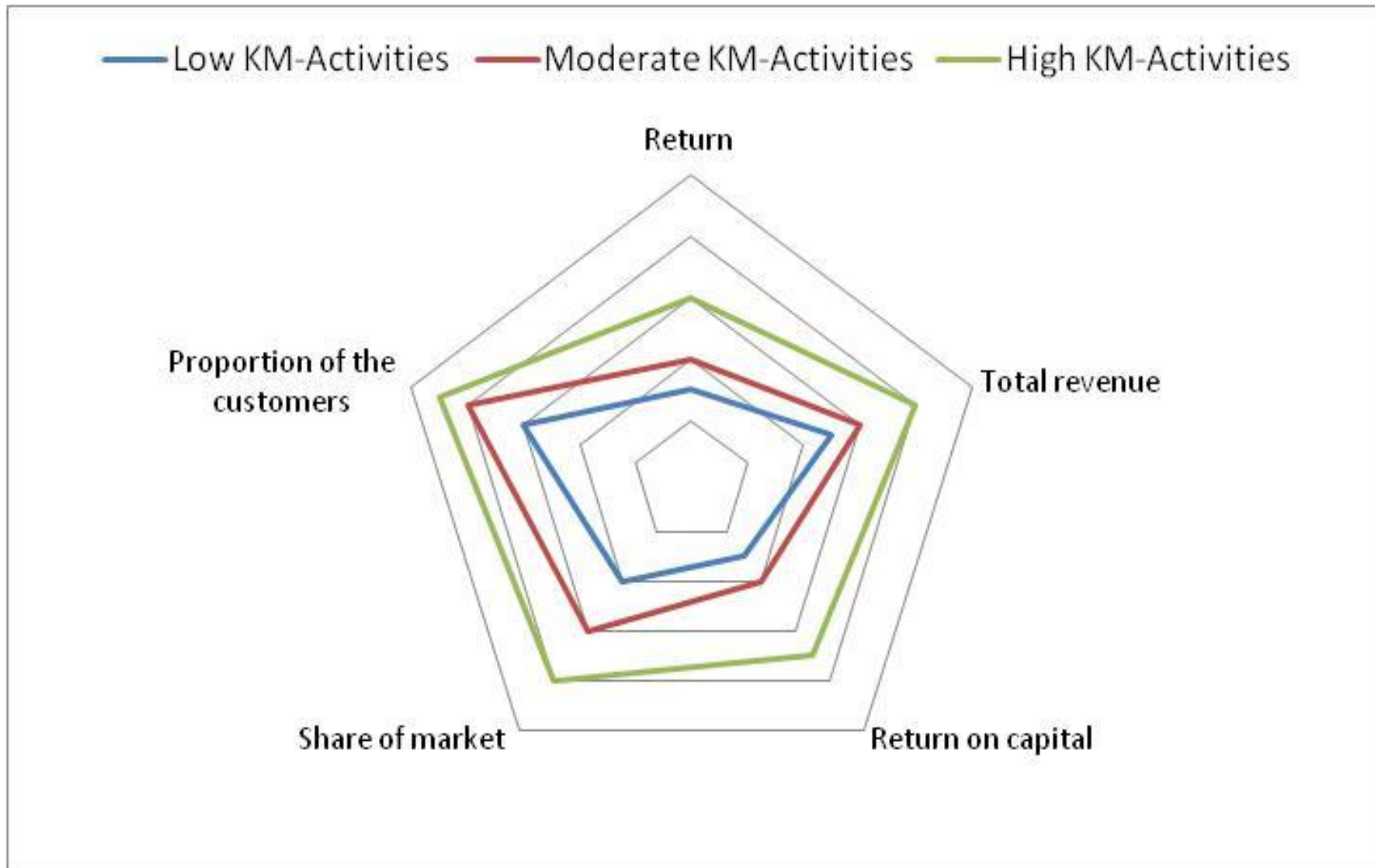
.126**

total revenues
last 3 years

.116**

n=3401

KM-Activity and business performance indicators



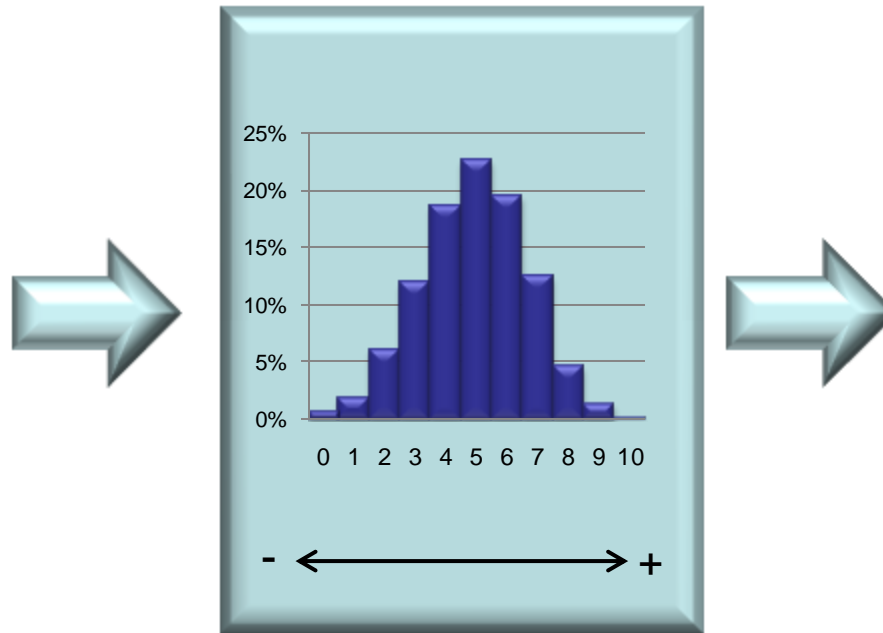
Research Model KM 2010



Determinants



KM/IC activities



Performance/Success Factors



Explanatory Model KM/IC Management

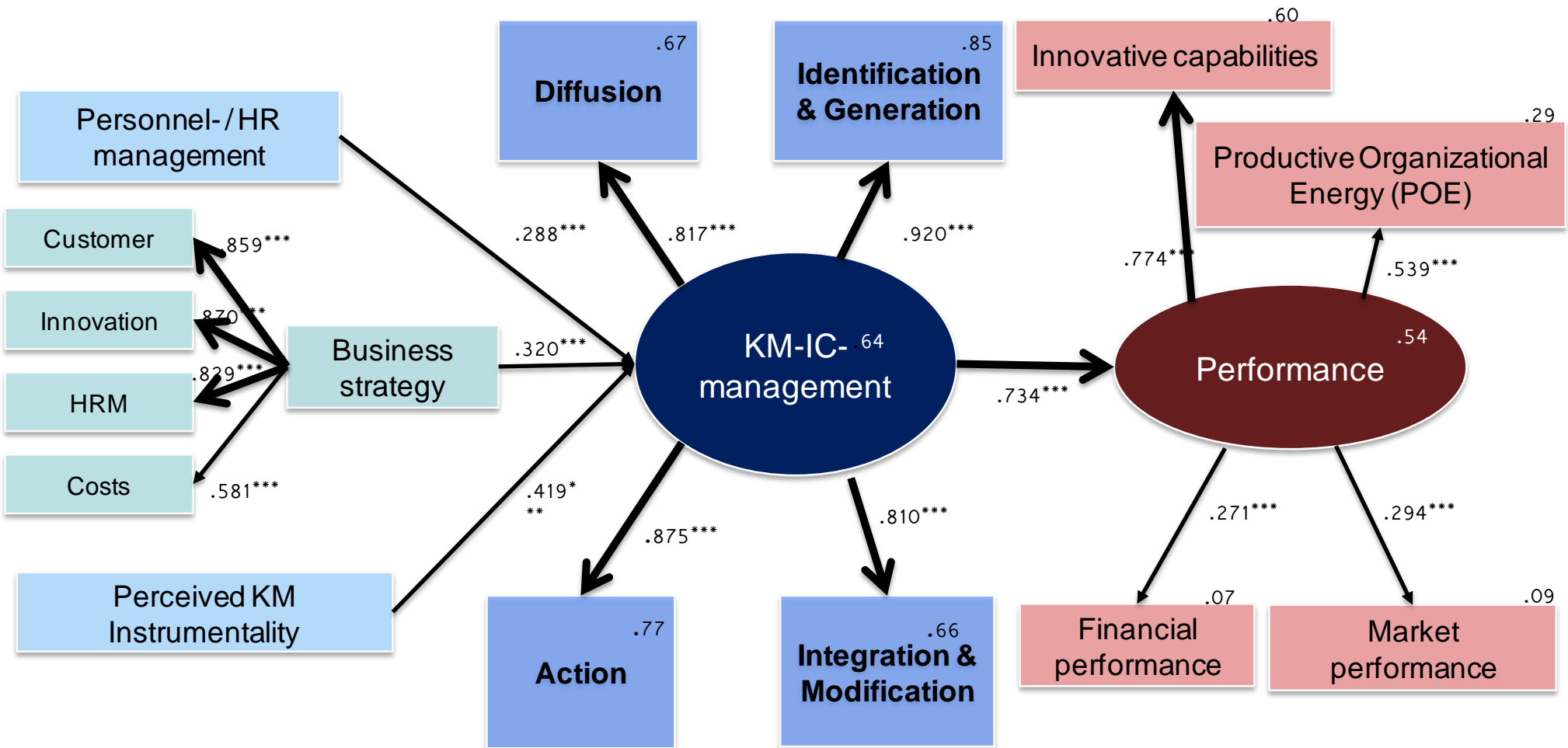
(Structural Equation Model)



Determinants

KM-Activity

Performance



*** = ,001 n=3401

Explanatory Model KM/IC Management

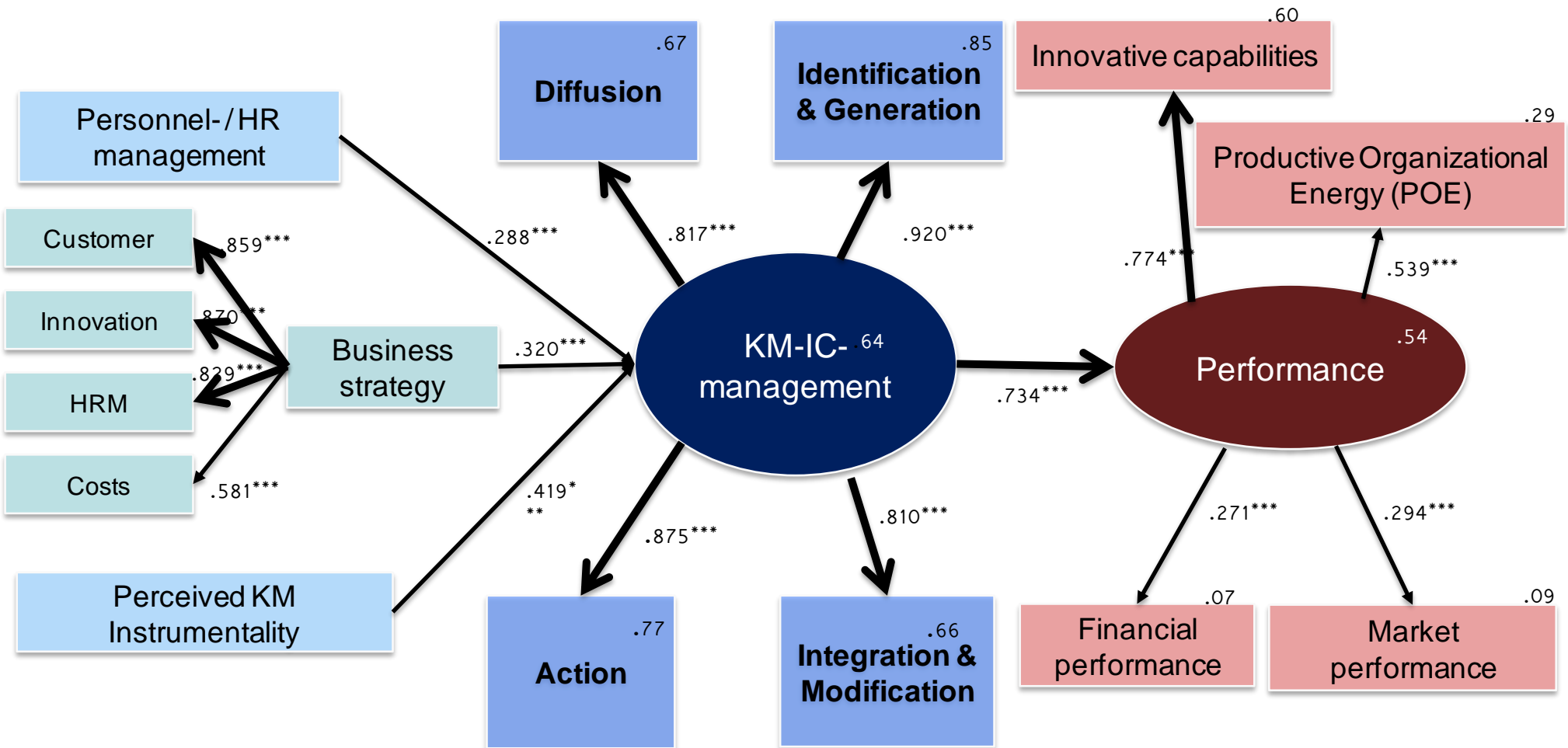
(Structural Equation Model)



Determinants

KM-Activity

Performance



*** = ,001 n=3401



1. Objectives of the study
2. Research design
3. Questionnaire
4. Results
5. Conclusions

Conclusions



- KM Activities differ less according to company size and lines of business than corporate strategies and core competencies
- KM ist especially effective in supporting knowledge intensive, strong HR driven, quality oriented strategies
- Instrumentality of KM shows especially in relation to employee motivation and innovative capabilities
- KM Activities are significantly correlated with performance indicators

Thank you for your attention!

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