Philipp Herzog

Open and Closed Innovation

Different Cultures for Different Strategies

With a foreword by Prof. Dr. Jens Leker

С

GABLER EDITION WISSENSCHAFT

Table of contents

Fi	gures.		XIII				
TablesXV							
A	crony	ms	t XVII				
1	Intr	oduction					
	1.1 Research problem						
	1.2						
	1.3	Research questions and objective ::.<					
2	Inno	ovation and the Open Innovation concept					
	"2.1	Definitions and dimensions of-innovation					
		2.1.1 Innovation					
		2.1.2 Innovation process					
		2.1.3 Innovation strategy					
		2.1.4 Technological and Market.Dimension of Innovation					
		2.1.4.1 Technological dimension	14				
		. 2.1.4.2 Market dimension	17				
	2.2	Closed and Open Innovation — definitions and underlying rationales					
		2.2.1 Closed Innovation	19				
		2.2.2 Open Innovation	21				
		2.2.3 Reasons tevfollow an Open Innovation approach:	23				
	2.3	Two aspects of Open Innovation — technology sourcing and technology					
commercialization		commercialization					
		2.3.1 Technology sourcing					
		2.3.1.1 Internal R&D					
		2.3.1.2 Non-equity alliances					
		2.3.1.3 Equity alliances					
		2.3.1.4 Acquisitions					
		2.3.2 Technology commercialization					
		2.3.2.1 External technology exploitation capability					
		2.3.2.2 Strategic alliances					
		2.3.2.3 Divestment of firm units					
	2.4	Organizational implementation of the Open Innovation concept					
		2.4.1 Ambidextrous organization and Open Innovation for solving the radi	ical-				
		. incremental innovation dilemma					
		2.4.2 The example of Degussa's Creavis Technologies & Innovation					

3	Innovation culture				
	3.1	Corpo	orate culture	59	
		3.1.1	Definition of corporate culture and overview of different research		
			paradigms	59	
		3.1.2	Measuring corporate culture		
		3.1.3	Typologies of corporate culture	65	
	3.2	Innov	vation culture	69	
		3.2.1	Research streams related to innovation culture	69	
		3.2.2	Selected empirical studies on innovation culture and synopsis of major		
			findingsr.	73	
	3.3	Sumn	mary of the literature on Open Innovation and innovation culture	81	
4	Con	ceptua	al framework and hypotheses	83	
4.1 Resource-based approach to Open Innovation				83	
		4.1.1	Resource-based view and relevance of core competencies for		
			Open Innovation	87	
		4.1.2	Resource-based view and the role of asymmetries for Open Innovation		
		4.1.3	Resource-based view and innovation culture for Open Innovation	91	
	4.2	Нуро	otheses development		
		4.2.1	Personal characteristics of employees	95	
		4.2.2	Motivation of employees		
		4.2.3	Attitudes towards external technology sourcing and external		
			technology commercialization	100	
			4.2.3.1 Not-invented-here syndrome	100	
			4.2.3.2 Mot-sold-here syndrome	106	
		4.2.4	Technological opportunism		
			4.2.4.1 Technology-sensing capability	111	
			4.2.4.2 Technology-response capability	112	
		4.2.5	Organizational risk taking	113	
		4.2.6	Freedom to express doubts	116	
		4.2.7	Management support	117	
	4.3	Synth	hesis and implications	121	
_					
5		·	and results		
	5.1		earch setting - the chemical industry		
			Overview of the chemical industry		
			2 General product classification-commodities and specialty chemicals		
			B Innovation beyond molecules - Open Innovation in the chemical industr	•	
	5.2	Sam	ple, data collection, and operationalization of measures		

		5.2.1 Sample and data collection	
		5.2.1.1 Information on survey	
		5.2.1.2 Information on sample	
		5.2.2 Principles of scale construction	
		5.2.3 Selection of variables	
		5.2.4 Reliability and validity of measures	
		5.2.5 Results of construct operationalization	
	5.3	Results of analysis	
		5.3.1 Method	
		5.3.2 Test of assumptions for AN(C)OVA	
		5.3.3 Hypotheses testing	
6	Disc	cussion of findings and implications for theory and practice	
	6.1	Discussion of findings and theoretical implications	
		6.1.1 Personal characteristics of employees	
		6.1.2 Motivation of employees	
		6.1.3 Not-invented-here syndrome	
		6.1.4 Not-sold-here syndrome	
		6.1.5 Technological opportunism	
		6.1.6 Organizational risk taking	
		6.1.7 Freedom to express doubts	
		6.1.8 Management support	
		6.1.9 Overall implications	
	6.2	Managerial implications	
	6.3	Limitations	
7	Sun	mmary and conclusion	
A	ppen	ndices;	
R	lefere	ences.	227