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Stephanie Hintze

Value Chain Marketing

A Marketing Strategy to Overcome
Immediate Customer Innovation Resistance



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Foreword

Suppliers of raw materials, parts, and components often face a dilemmatic situation: While severe competition pushes them towards innovation they often have to realize severe barriers to the implementation of their new products. One challenge arises from the fact that purchasing decisions of the immediate customer are often influenced by multiple entities in the value chain, for instance, by engineering consultants or manufacturers of complementary products. This requires the suppliers to target their marketing activities to multiple parties. Another challenge is that the value associated with a new supply may hardly be evident for the immediate customer and becomes more relevant when the raw products get closer to their end applications.

Material suppliers facing this situation may engage in broader marketing activities by not exclusively focusing on the immediate customers. Value Chain Marketing basically consists in addressing the downstream customers and all other entities influencing the purchasing decisions in order to get innovations pulled through the value chain. The present research work investigates Value Chain Marketing and focuses on the relationship between the supplier, his immediate customers, and the downstream customers. This research is conducted in the chemical industry. The suppliers investigated here are specialty chemical companies selling coating and sealing additives to customers that process these additives into intermediate products (e.g. paint and varnish, textile fibers, sealing material, and packaging material). The downstream customers are either OEMs (e.g. automotive manufacturers, shipyards) or brand owners in the FMCG sector.

Relying on this empirical setting, Stephanie Hintze aims at answering three key research questions:

- (1) Which factors impact the applicability and success odds of Value Chain Marketing?

In a pilot study, Stephanie Hintze analyzes suppliers' innovation marketing activities for different application fields of coating and sealing materials. By

this cross-sectional analysis, she is able to identify those contextual factors which make Value Chain Marketing more promising.

(2) Which are viable approaches and activities in Value Chain Marketing?

For the investigation of this question, Stephanie Hintze conducts a thorough multi-case study based on interviews involving representatives of suppliers, immediate customers, and downstream customers. She is able to develop propositions regarding the success odds of different Value Chain Marketing activities.

(3) What are the key success factors for Value Chain Marketing?

The results of the two qualitative studies culminate in a third study by providing the input of an agent-based simulation drawn upon the SKIN model (Simulating Knowledge Dynamics in Innovation Networks). The simulation results allow deriving clear recommendations for doing successful Value Chain Marketing under different conditions.

This research work shows very distinct results which have been achieved by the intelligent use of sophisticated research methods. In particular, the combination of empirical work with an agent-based simulation represents an original and fruitful approach which has hardly been used in innovation and marketing research so far. This work is therefore innovative and contributes significantly to the state-of-the-art knowledge on innovation marketing in complex value chains. As the results will help suppliers of parts and raw materials to increase the success of their marketing activities, the present work also has a clear practical relevance. It shows promising ways to a successful market implementation of supplier innovations. To sum up, Stephanie Hintze has delivered a work containing all ingredients of a formidable and relevant research.

Hamburg, Germany

Christian Lüthje

Preface

This book is based on my dissertation which I have conducted at the Institute of Innovation Marketing at Hamburg University of Technology (TUHH) from 2009 to 2013. It focuses on Value Chain Marketing (VCM), representing a promising marketing strategy to overcome immediate customers' innovation resistance. Suppliers enlarge their target group beyond their immediate customers and address their downstream customers as well by pursuing VCM. In three subsequent studies, I explore the relevance of VCM in real-world examples and deeply analyze the VCM process. I identify the critical factors for supplier's marketing success and compare the performance of VCM trials. The results of my dissertation contribute to the planning and management of suppliers' marketing projects. Suppliers can use the VCM model as a tool to support their strategic decision on how to implement their innovation best.

The successful completion of my dissertation has been made possible thanks to the support of my supervisors, colleagues, friends, and family.

First, I want to thank Prof. Dr. Christian Lüthje for being my doctoral advisor and supervisor. His openness to new methodological approaches and his visionary thinking provided a unique environment to spark creativity. I benefited from the inspiring discussions, teaching opportunities, and the chances to transfer my knowledge into academic conferences and workshops.

I also thank my doctoral co-advisor, Prof. Dr. Petra Ahrweiler from the EA European Academy GmbH and JGU Mainz, for her generous support during the dissertation process. The many discussions with her and her enthusiasm to simulate the VCM phenomenon by using an agent-based approach have been a great motivation for me.

I am also grateful for the support of my colleagues, some of who have become true friends to me. We had lots of engaging and thoughtful discussions on academia and private matters. I would like to particularly thank Mareike for rigorous academic debates and exchanges as well as for activities beyond academia. My appreciation also goes to Iris who started my interest in agent-based modeling and simulation. I owe further thanks to my students who have supported me, the interview partners whom I talked to, and the firms that took part in my case study.

Finally, I thank my friends for the critical debates, reviewing the manuscript, and especially for being there. Without them it would not have been possible to complete this research project. My greatest thanks go to my family for their love and support during all stages of my life.

Hamburg, Germany

Stephanie Hintze

List of Abbreviations

Content-Specific Abbreviations

ABM	Agent-based modeling
ABS	Agent-based simulation
ANOVA	Analysis of variance
B2B	Business-to-business
B2C	Business-to-consumer
BU	Business unit
c-VCM	Cooperative VCM
DIY	Do it yourself
DMF	Dimethyl formamide
DOE	Design of experiment
ECS	European Coating Show
EU	European Union
FDI	Functionality-driven innovation
FSA	Food Safety Authority
HC	Hydrocarbons
IMO	International Maritime Organization
LISP	List processing language
nc-VCM	Noncooperative VCM
ODD	Overview, design concepts, and details
OEM	Original equipment manufacturer
PDI	Process-driven innovation
PET	Polyethylene terephthalate
PP	Polypropylene
PUD	Polyurethane dispersion
PVC	Polyvinyl chloride
RNP	Really new product

SKIN	Simulating knowledge dynamics in innovation networks
TPE	Thermoplastic elastomers
TÜV	Technischer Überwachungsverein
VCI	Verband der chemischen Industrie
VCM	Value Chain Marketing
VOC	Volatile organic compounds
UV	Ultraviolet

Mathematical Abbreviations

A	Amount of within-field knowledge
b	Big supplier's ratio
c	Capital
$C1_C$	Cost constant 1 in cooperative VCM
$C1_{NC}$	Cost constant 1 in noncooperative VCM
$C2_C$	Cost constant 2 in cooperative VCM
$C2_{NC}$	Cost constant 2 in noncooperative VCM
$Cost1_C$	Cooperative cost 1
$Cost1_{NC}$	Noncooperative cost 1
$Cost2_C$	Cooperative cost 2
$Cost2_{NC}$	Noncooperative cost 2
CV_C	Offered customer value in cooperative VCM
CV_{NC}	Offered customer value in noncooperative VCM
E	Expertise in communication
ECV_C	Expected customer value in cooperative VCM
ECV_{NC}	Expected customer value in noncooperative VCM
EM	Expected message
η^2	Eta squared
IC	Implementation costs
IT	Implementation time
$joint M$	Joint message
K	Knowledge field
m	(Value Chain) Marketing strategy
M	Message
MC	Marketing concept
MC^A	Marketing concept of the applicator
MC^S	Marketing concept of the supplier
MC^{SM}	Joint marketing concept
MS_{error}	Error mean square
n	Newness of innovation
N_A	Number of applicators
N_M	Number of manufacturers
N_S	Number of suppliers
o	Knowledge overlap

ω^2	Omega squared
<i>Partial</i> η^2	Partial eta squared
<i>r</i>	Innovation rate
<i>S</i>	Marketing success
<i>SS</i> _{effect}	Effect variance
<i>SS</i> _{error}	Error variance
<i>SS</i> _{total}	Total variance

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