Value co-creation in B2B-Marketing through Virtual Resource Integration

Dipl.-Kfm. Jörg Dauner
Heinrich-Heine-University Düsseldorf
Faculty of Business Administration and Economics
Department of Marketing
Universitätsstraße 1
D-40225 Düsseldorf / Germany

Tel.: +49 (0)211 81-15223
Fax: +49 (0)211 81-15226
E-Mail: joerg.dauner@uni-duesseldorf.de

Jörg Dauner is research and teaching assistant at the Department of Marketing, Heinrich-Heine-University Düsseldorf, Germany.

Value co-creation in B2B-Marketing through Virtual Resource Integration

ABSTRACT

Purpose – This paper analyzes potential competitive advantages through virtual resource integration during the after-sales phase in a B2B setting. Attributes of remote services that are key to co-creating value for manufacturing firms, are identified and evaluated.

Methodology/approach – The paper is predominantly based on a multinationally conducted conjoint analysis, which explores the customer's perception and evaluation of different service processes. This allows for the establishment of an appropriate range of remote services.

Findings – Compared to on-site after sales services, the virtual integration of customer resources through remote services is expected to result in a substantial increase in efficiency and effectiveness. For example through faster and more individualized problem solutions from both the customer's perspective and the service providers. For the customer, the benefits evaluated in relation to the costs involved, offset the the risks associated with implementing communication technology.

Research implications – The transition from traditional machinery and industrial equipment manufacture to a service provider, involves its own unique challenges. Remote services could be an appropriate means to co-create added value, and reduce service costs at the same time for the customer and provider. Future studies could examine the effectiveness of different risk-reducing instruments.

Managerial implications – Service providers need to implement instruments in their marketing strategy, which provide transparency and create trust, in order to reduce perceived risks on the customer's side of the remote service process.

Originality/value – This is believed to be the first time that co-creating value and remote services have been examined in one study.

Keywords – Co-production and Co-creating of Value, Remote Services, B2B

Paper type – Research paper

1. Introduction

In business-to-business (B2B) marketing, for example in the machine and equipment-manufacturing industry, the close buyer-supplier interaction and satisfying of individual customers' needs is a long-term researched phenomenon (Håkansson, 1982; Ballantyne and Varey, 2006). Marketing scholars have discussed closely related value creation in different disciplines as a customer-driven, jointly developed solution process (Anderson and Wynstra, 2010; Payne *et al.*, 2008). It is therefore not astonishing, that value co-creation plays a major role in different marketing approaches such as the lead users concept (von Hippel, 1986), client co-production (Bettencourt *et al.*, 2002), value co-production (Ramirez, 1999; Wikström, 1996), customer participation (Fang, 2004; Chan *et al.*, 2010) or customer integration (Gouthier and Schmid, 2003; Kleinaltenkamp and Jacob, 2002; Frauendorf *et al.*, 2007).

Value co-creation in Service-dominant (S-D) logic consists of two components. The first is the co-creation of value, which is defined as the value that "can only be created with and determined by the user in the 'consumption' process, and through the use of what is referred to as value-in-use" (Lusch and Vargo, 2006, p. 284). Together with the firm, customers are proactive participators in creating value, as opposed to customers being merely passive receivers of the firms created value (Auh *et al.*, 2007). The co-creation of value was introduced predominantly in the field of relationship and service marketing; however it was not until the last seven years that it has been incorporated into the new perspective of S-D logic (Vargo and Lusch, 2004). The co-creation of value seems to be the next frontier in gaining a competitive advantage (Prahalad and Ramaswamy, 2004b). Co-production constitutes the second component of the customer's optional participation in the development process of the firm´s offering (Vargo and Lusch, 2008). In service logic every exchange is 'service dominant', "because goods become service appliances and customers judge the worth of the service they experience from goods as value-in-use" (Ballantyne and Aitken, 2007, p. 363).

Almost simultaneous to the theoretical debate of service literature, significant changes to machine and equipment-manufacturing in the marketplace have caused a service revolution. Due to the increasing competitive intensity and the dynamic complexity of customer needs, the industry has strengthened its delivery of comprehensive services, and integrated them with core products to solution-based offerings in order to secure long term-growth (Sawhney, 2006; Jacob and Ulaga, 2008). After-sales services such as repair, maintenance, training or energy consultancy and recovery offer significantly higher margins compared to the decreasing product margins. This is apparent not just once, but throughout the entire lifecycle of the service initiating core product (Cohen *et al.*, 2006). This expansion of the service-intensive solution portfolio reflects the theoretically driven shift from a good- to a solution- (Lindberg and Nordin, 2008) or even service-centered logic (Gummesson *et al.*, 2010). Therefore after-sales-services are not just add-ons to tangible goods, but can dominantly drive economic success. (Vargo *et al.*, 2010).

The purpose of this article is to analyze potential competitive advantages through virtual resource integration during the after-sales phase in a B2B setting. The attributes of remote services are key to co-creating value for manufacturing firms, once different participation levels have been identified and evaluated. Firstly, we define remote services as a special form of post-sold services in the machine and equipment-manufacturing process, and conceptualize their value on both sides of the market. Secondly, we transfer discussed advantages into service attributes, taking into account the intensity of participation in the value co-creation. Thirdly, we conduct a conjoint analysis complemented by a questionnaire to gain insight into how customers evaluate different remote services. Finally, the results of the empirical study are discussed and implications are given.

2. Conceptual Development

No matter how brilliantly machines or equipment is developed and designed, they are subject to deterioration over time, since they operate under certain environmental conditions or stress. This process is difficult to predict, and can cause machine failure or even the shutdown of the entire production process. In any case this leads to enormous cost increases. It is for this reason that regular maintenance enhances the level of reliability during the lifecycle of physical asset (Jardine *et al.*, 2006).

Developments in information, communication and network technology have changed the nature of how services, particular in maintenance are conceived, developed, and delivered (Meuter *et al.*, 2005; Bitner and Zeithaml, 2010). This dynamic process has paved the way for technology-mediated, high interactive services (Bolton and Saxena-Iyer, 2009), which can be jointly designed and delivered everywhere and anytime. In the case of machine, equipment or other high technology manufacturing industries, this innovation creates opportunities for different kind of unique remote services. For example remote surgery (Marescaux, 2001), remote maintenance and repair services (Prahalad and Ramaswamy, 2004a) or the already established remotely delivered IT-Consulting.

Although enterprises are increasingly providing remote services, surprisingly little research has been carried out in marketing that addresses the overall potential and market acceptance (Biehl *et al.*, 2004). Wünderlichs research is one of the few exceptions. She has undertaken fundamental research about the newly emerging subtype of complex remote services. She defines remote services as followed: "*Interactive Remote Services* are services that a provided via technology-mediation to connect service object in a collaborative production process based on a high level of human-to-human interaction between an active provider employee and an active customer employee."(Wünderlich, 2009, p. 24).

Taking this definition into consideration, the fundamental system of machine and equipment-related remote repair and maintenance, consists of the following process steps. First of all remote services require software and hardware-related data from sensors, webcams and monitoring programs. In the case of machine failure, data of the machines condition is sent through a broadband-based information and communication system to the service technicians. The customer has the authority and ability to allow the data of the service object to be transmitted to the remote service provider. In addition to this the customer can also decide, whether the data should be sent continuously, periodically or only on demand. Once instruments have collected and transmitted sufficient data to a service centre, the service technician can analyze and monitor variances to determine the need for maintenance. If applicable he/she can then remotely re-configures the service object (Jonsson *et al.*, 2008).

Because problem identification and solutions vary in their degree of complexity, remote services differ in their level of automation and consequently in the intensity of customer co-production. From basic software updates to the repair of highly customized products, it is always easy to obtain the best result with an automated machine-to-machine interaction. Typical for knowledge-intensive business services (Bettencourt *et al.*, 2005), is the need for the customer to perform intensive, virtual human-to-human interaction and collaboration with the service technician diagnostic or even mechanical task for enhancing the co-creation of value. (Wünderlich, 2009).

Relatively little is known about how customers in general and under consideration of different participation levels evaluate the co-creation in interactive remote service. If customers and providers gain advantages, remote services can be a fruitful source of co-creating value (Jonsson *et al.*, 2008). Regardless of the physical buyer-provider distance, both sides of the market can benefit from time and cost reductions, compared to on-site maintenance and repair. From a customer point of view, remote services increase the availability, flexibility, and productivity of problem diagnosis and problem solution. Due to principal-agent problems, remote services involve their own unique challenges. (Wünderlich, 2009). For example the need to address customer's data security concerns. In order to overcome this problem, providers of remote services have to find ways in which they can create trust, for example by demonstrating to customers that they can intervene in the service process. In order to gain a first impression in how customers evaluated interactive remote services in B2B marketing (Anderson and Wynstra, 2010), we conducted a conjoint analysis with a producer of compounding and extrusion technology in Europe and North-America.

3. Methodology

The conjoint analysis is a valid procedure for measuring customers' preferences on different service attributes and willingness to pay (Gustafsson *et al.*, 2007). We cooperated in an empirical study with a producer of compounding and extrusion technology, who is going to introduce remote services for the first time. Potential attributes and levels were identified from several group discussions and expert interviews with current customers. Finally attributes have been selected with an adapted self-explicated method (Helm and Steiner, 2008). Table 1 shows the attributes and levels. Attributes 1 to 6 represents different integrated data sources, attribute 7 signals the level of security standards, attribute 8 offers possibilities to control the data transmission and in attribute 9 different response periods can be selected. Attribute 10 and 11 present the service process and their results and finally attribute 12 reflects the monthly fee for using the remote service.

	A	B	C	D
1	handled products are analyzed	handled products are not analyzed		
2	feeding units are analyzed	feeding units are not analyzed		
3	drive sections are analyzed	drive sections are not analyzed		
4	process sections are analyzed	process sections are not analyzed		
5	discharge units are analyzed	discharge units are not analyzed		
6	webcam	no webcam		
7	security of data is certified	security of data is not certified		
8	unlimited access to machine data	time-limited access to machine data	customer has to authorize all access to machine data	
9	max. 15 min response time after failure message	max. 30 min response time after failure message	max. 1 h response time after failure message	max. 3 h response time after failure message
10	data analysis is available online in real time	data analysis is sent to you within 6h		
11	processing status is available online	processing status is not available online		
12	$ 330 (monthly fee per machine)	$ 590 (monthly fee per machine)	$ 850 (monthly fee per machine)	$ 1110 (monthly fee per machine)

Table 1: Attributes and levels of the conjoint analysis

In the next step we used a traditional conjoint analysis, based on the common part-worth function in order to evaluate respondents' judgments (Green *et al.*, 2001). Due to the limited number of attributes in the traditional conjoint analysis (Green and Srinivasan, 1990), we constructed partial profiles with an attribute strange of six, constituting the stimuli set. Respondents evaluated profiles through a pair wise comparison on a nine-point likert scale. We decreased the task of evaluating the number of stimuli, by using a modified Fedorov algorithm to generate a D-optimal design (Cook and Nachtsheim, 1980). This reduced the number of possible comparisons to 14 pair wise judgments. The obtained data was then analyzed with an ordinary least-square regression and the validity of the results was tested with R^2. An additional questionnaire was used in the online study to specify the results of the conjoint analysis.

The conjoint analysis and the additional questionnaire were available online in both English and German. Customers were invited using a personal link enclosed in an email. 202 customers from various countries and industries participated in the study, giving us an appropriate sample size and allowing for adequate margin of error on both general and specific issues (Hair, 2010). For example, limited population and niche markets in the B2B area (Binner, 2000).

4. Findings

After the data had been collected, we estimated the part-worth for each attribute level related to the whole sample and selected segments, as presented in table 2.

attributes and levels	**part-worth**						
	total sample	Europe	North-America	low perceived risk	medium perceived risk	high perceived risk	co-production essential
	n = 203	n = 148	n = 42	n = 45	n = 60	n = 57	n = 127
handled products							
are analyzed	33,45	37,90	12,07	81,042	38,6839	5,3074	18,8522
are not analyzed	0,00	0,00	0,00	0	0	0	0
feeding units							
are analyzed	62,19	51,93	97,15	87,9884	71,3858	14,8607	78,4867
are not analyzed	0,00	0,00	0,00	0	0	0	0
drive sections							
are analyzed	94,35	85,28	127,04	127,7376	123,2303	28,6599	76,563
are not analyzed	0,00	0,00	0,00	0	0	0	0
process sections							
are analyzed	93,50	86,04	123,59	120,0193	98,5045	68,4653	79,2562
are not analyzed	0,00	0,00	0,00	0	0	0	0
discharge units							
are analyzed	61,33	56,48	97,72	76,0251	27,5174	79,6108	59,6345
are not analyzed	0,00	0,00	0,00	0	0	0	0
Webcam							
yes	0,00	0,00	0,00	0	23,1306	0	0
no	12,44	13,65	25,29	2,7014	0	64,7501	16,5438
security of data							
is certified	79,77	81,49	104,62	79,4983	84,1476	110,9244	95,4152
is not certified	0,00	0,00	0,00	0	0	0	0
access to machine data							
unlimited	0,00	0,00	6,61	0	0	0	0
time-limited	32,38	38,09	0,00	6,1746	20,1396	59,1774	40,5899
customer has to authorize	81,27	85,28	36,50	33,3816	97,7069	118,3547	84,8349
response time after failure							
max. 15 minutes	62,40	70,50	70,13	70,6223	25,1246	70,0575	66,5598
max. 30 minutes	60,69	70,12	44,84	66,9561	47,0588	57,5851	58,6727
max. 1 hour	29,59	40,56	0,00	7,7183	0	33,7019	29,4325
max. 3 hour	0,00	0,00	21,84	0	2,7916	0	0
data analysis is available							
online in real time	66,05	73,91	36,79	28,9436	78,5643	74,3034	63,8666
is sent to you within 6h	0,00	0,00	0,00	0	0	0	0
processing status							
is available online	41,17	45,48	44,26	23,9267	7,9761	115,1703	36,5502
is not available online	0,00	0,00	0,00	0	0	0	0
monthly fee per machine							
250 €	193,00	177,38	202,06	188,905	231,5055	169,571	182,5585
450 €	126,09	117,88	115,83	128,3164	131,007	111,1897	135,0433
650 €	70,34	68,04	33,63	70,0434	91,5254	18,3105	77,1401
850 €	0,00	0,00	0,00	0	0	0	0

Table 2: Part-worth and willingness to pay

We identified participants from Europe and North-America to determine market-specific part-worth. Furthermore, perceived risks have been assigned to three categories for a differentiated estimations of preferences. Finally, we estimated the preferences for customers, who have a high level of participation in the co-production process of remote services.

Results show that all participants, particularly in North-America have a high preference for the integration of sensor-related data from drive and process sections. Risk reducing attribute levels are important too. In particular risk-averse customers pay close attention to risk reducing attributes, for example a certified secure data transfer. Customers prefer to have control over the access of machine data, even if they perceive high risk through remote services. Due to their security concerns, they have a higher preference for risk reducing attribute levels. For example selecting attributes such as; No webcam, or the ability to authorize machine data and certified secure data transmission. None of the participants benefit, if their production process is being monitored with a webcam. Compared to the total sample, customers who have realized their co-production tasks have a higher preference level for most of the attribute levels.

Knowing customers' preferences for different attribute levels is equally important in understanding how consumers rate the relative importance of the attributes. The monthly fee is the most important attribute, followed by selected sensor data and security and control related attributes.

attributes	**relative importance of the attributes**		
	total sample	Europe	North-America
	n = 203	n = 148	n = 42
handled products	3,80	4,38	1,24
feeding units	7,06	6,00	9,94
drive sections	10,71	9,86	13,00
process sections	10,61	9,94	12,65
discharge units	6,96	6,53	10,00
Webcam	1,41	1,58	2,59
security of data	9,06	9,42	10,71
access to machine data	9,23	9,86	3,74
response time after failure	7,08	8,15	7,18
data analysis is available	7,50	8,54	3,76
processing status	4,67	5,26	4,53
monthly fee per machine	21,91	20,50	20,68

Table 3: Relative importance of attributes

5. Discussion

Research implications

The study demonstrates that customers have a strong preference for condition-based data of specific machine parts, which are integrated and analyzed during the remote service process. The perceived benefits of the service attributes are influenced by security concerns. Due to information asymmetries between the provider and buyer from a customers' point of view, remote services are credence goods. If the perceived risk can be reduced through screening and signaling, the acceptance of remote services will increase. This would allow the real benefits of remote services to dominate customer preferences. Strong preferences for on demand initiated data transmission indicate that most customers are not ready for a fully automated condition monitoring system. For this customer segment remote service acts more as an assurance, for when they cannot handle the failure on their own rather than a sustainable problem solution.

Managerial implications

From a technological perspective; high-speed broadband, mobile applications, decreasing costs in telecommunication and sensors, innovative network technology are all important milestone in providing a feasible remote service. If service objects are remotely controlled, the provider gets a deep insight into the customer's production process. Building on the findings from the sample, practicing managers have to deal with the perceived risks on customer's side. Customers have concerns, that unauthorized third parties may obtain access to confidential data. Remote service providers aiming to succeed in the market, have to create and demonstrate trustworthiness not only through technology-based security systems. Due to the lack of face-to-face contact, an appropriate design of the virtual service encounter and relationship specific characteristics are important ways remote service providers can increase the use remote services. This strategic orientation would reduce perceived risks and also enhance customers' willingness to pay. Remote service providers should also clearly communicate with customers and offer training to ensure successful participation in technological-mediated co-production and co-creation of value.

Limitation and future research

The primary objective of our paper was to identify attributes that are key to co-create value. Due to the heterogeneity of different industries, the study is limited to the machine and equipment-manufacturing sector. Remote services are characterized through machine specific attributes and attribute levels such as selected sensor data. For security and control related attributes, the findings can be generalized. It is important, that further studies are undertaken using a larger number of participants in order to increase the sample size of selected segments. In relation to this, future research could examine the effectiveness of different risk-reducing instruments. A study could be undertaken, which not only takes single machines into consideration, but evaluates preferences for remote services, which monitors the entire production process.

References:

Anderson, J.C. and Wynstra, F. (2010), "Purchasing Higher-Value, Higher-Price Offerings in Business Markets", *Journal of Business-to-Business Marketing* , Vol. 17, No. 1, pp. 29–61.

Auh, S., Bell, S.J., McLeod, C.S. and Shih, E. (2007), "Co-Production and Customer Loyalty in Financial Services", *Journal of Retailing* , Vol. 83, No. 3, pp. 359–370.

Ballantyne, D. and Varey, R.J. (2006), "Creating Value-In-Use through Marketing Interaction. the Exchange Logic of Relating, Communicating and Knowing", *Marketing Theory* , Vol. 6, No. 3, pp. 335–348.

Ballantyne, D. and Aitken, R. (2007), "Branding in B2B Markets. Insights from the Service-dominant logic of Marketing", *Journal of Business & Industrial Marketing* , Vol. 22, No. 6, pp. 363–371.

Bettencourt, L.A., Ostrom, A.L., Brown, S.W. and Roundtree, R.I. (2002), "Client Co-Production in Knowledge-Intensive Business Services", *California Management Review* , Vol. 44, No. 4, pp. 100–128.

Bettencourt, L.A., Ostrom, A.L., Brown, S.W. and Roundtree, R.I. (2005), "Client Co-Production in Knowledge-intensive Business Services", in Bettley, A. (Ed.), *Operations Management: A Strategic Approach*, Sage, London, pp. 273–296.

Biehl, M., Prater, E. and McIntyre, J.R. (2004), "Remote Repair, Diagnostics, and Maintenance", *Communications of the ACM* , Vol. 47, No. 11, pp. 100–106.

Binner, S. (2000), "Trouble with Conjoint Analysis in International Industrial Markets", in Sawtooth Software (Ed.), *Proceedings of the Sawtooth Software Conference 2000*, Sequim, pp. 23–29.

Bitner, M.J. and Zeithaml, V.A. (2010), "Technology's Impact on the Gaps Model of Service Quality", in Maglio, P.P., Kieliszewski, C.A. and Spohrer, J.C. (Eds.), *Handbook of Service Science*, Springer, New York, pp. 197–218.

Bolton, R. and Saxena-Iyer, S. (2009), "Interactive Services. A Framework, Synthesis and Research Directions", *Journal of Interactive Marketing* , Vol. 23, No. 1, pp. 91–104.

Chan, K.W., Yim, C.K. and Lam, S.S. (2010), "Is Customer Participation in Value Creation a Double-Edged Sword? Evidence from Professional Financial Services Across Cultures", *Journal of Marketing* , Vol. 74, No. 3, pp. 48–64.

Cohen, M., Agrawal, N. and Agrawal, V. (2006), "Winning in the aftermarket", *Harvard Business Review* , Vol. 84, No. 5, pp. 129–138.

Cook, R.D. and Nachtsheim, C.J. (1980), "A Comparison of Algorithms for Constructing Exact D-Optimal Designs", *Technometrics* , Vol. 22, No. 3, pp. 315–324.

Fang, E. (2004), *Creating customer value through customer participation in B2B markets: A value creation and value sharing perspective*, Missouri.

Frauendorf, J., Kähm, E. and Kleinaltenkamp, M. (2007), "Business-to-Business Markets -- Status Quo and Future Trends", *Journal of Business Market Management* , Vol. 1, No. 1, pp. 7–39.

Gouthier, M.H.J. and Schmid, S. (2003), "Customers and Customer Relationships in Service Firms: The Perspective of the Resource-Based View", *Marketing Theory* , Vol. 3, No. 1, pp. 119–143.

Green, P.E. and Srinivasan, V. (1990), "Conjoint Analysis in Marketing: New Development with implications for research and practice", *Journal of Marketing* , Vol. 54, No. 4, pp. 3–19.

Green, P.E., Krieger, A.M. and Wind, Y. (2001), "Thirty Years of Conjoint Analysis: Reflections and Prospects", *Interfaces* , Vol. 31, No. 3, pp. 56–73.

Gummesson, E., Lusch, R.F. and Vargo, S.L. (2010), "Transitioning from Service Management to Service-Dominant Logic: Observations and Recommendations", *International Journal of Quality and Service Sciences* , Vol. 2, No. 1, pp. 8–22.

Gustafsson, A., Herrmann, A. and Huber, F. (2007), "Conjoint Analysis as an Instrument of Market Research Practice", in Gustafsson, A., Herrmann, A. and Huber, F. (Eds.), *Conjoint Measurement: Methods and Applications*, Springer, Berlin, pp. 3–30.

Hair, J.F. (2010), *Multivariate Data Analysis: A Global Perspective,* Pearson, Upper Saddle River, NJ.
Håkansson, H. (1982), *International Marketing and Purchasing of Industrial Goods: An Interaction Approach*, Wiley, Chichester.
Helm, R. and Steiner, M. (2008), *Präferenzmessung: Methodengestützte Entwicklung zielgruppenspezifischer Produktinnovationen*, Kohlhammer, Stuttgart.
Hippel, E. von (1986), "Lead Users: A Source of Novel Product Concepts", *Management Science* , Vol. 32, No. 7, pp. 791–805.
Jacob, F. and Ulaga, W. (2008), "The Transition from Product to Service in Business Markets: An Agenda for Academic Inquiry", *Industrial Marketing Management* , Vol. 37, No. 3, pp. 247–253.
Jardine, A.K.S., Lin, D. and Banjevic, D. (2006), "A Review on Machinery Diagnostics and Prognostics Implementing Condition-based Maintenance", *Mechanical Systems and Signal Processing* , Vol. 20, pp. 1483–1510.
Jonsson, K., Westergren, U.H. and Holmström, J. (2008), "Technologies for Value Creation:. An Exploration of Remote Diagnostics Systems in the Manufacturing Industry", *Information Systems Journal* , Vol. 18, No. 3, pp. 227–245.
Kleinaltenkamp, M. and Jacob, F. (2002), "German Approaches to Business-to-Business Marketing Theory: Origins and Structure", *Journal of Business Research* , Vol. 55, No. 2, pp. 149–155.
Lindberg, N. and Nordin, F. (2008), "From Products to Services and back again. Towards a new Service Procurement Logic", *Industrial Marketing Management* , Vol. 37, No. 3, pp. 292–300.
Lusch, R.F. and Vargo, S.L. (2006), "Service-dominant logic: reactions, reflections and refinements", *Marketing Theory* , Vol. 6, No. 3, pp. 281–288.
Marescaux, J.e.a. (2001), "Transatlantic robot-assisted Telesurgery", *Nature* , Vol. 413, No. 6854, pp. 379–380.
Meuter, M.L., Bitner, M.J., Ostrom, A.L. and Brown, S.W. (2005), "Choosing Among Alternative Service Delivery Modes: An Investigation of Customer Trial of Self-Service Technologies", *Journal of Marketing Management* , Vol. 69, No. 2, pp. 61–83.
Payne, A.E., Storbacka, K. and Frow, P. (2008), "Managing the Co-creation of Value", *Journal of the Academy of Marketing Science* , Vol. 36, No. 1, pp. 83–96.
Prahalad, C.K. and Ramaswamy, V. (2004a), *The Future of Competition: Co-creating unique value with customers*, Boston; Harvard Business School Press, Boston.
Prahalad, C.K. and Ramaswamy, V. (2004b), "Co-Creation Experiences. The next Practice in Value Creation", *Journal of Interactive Marketing* , Vol. 18, No. 3, pp. 5–14.
Ramirez, R. (1999), "Value co-production: intellectual origins and implications for practise and research", *Strategic Management Journal* , Vol. 20, No. 1, pp. 49–67.
Sawhney, M. (2006), "Going beyond the Product, Defining, Designing, and Delivering Customer Solutions", in Lusch, R.F. and Vargo, S.L. (Eds.), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions*, New York, pp. S. 365-380.
Vargo, S.L. and Lusch, R.F. (2008), "Service-dominant logic. Continuing the evolution", *Journal of the Academy of Marketing Science* , Vol. 36, No. 1, pp. 1–10.
Vargo, S.L. and Lusch, R.F. (2004), "Evolving to a New Dominant Logic for Marketing", *Journal of Marketing* , Vol. 68, No. 1, pp. 1–17.
Vargo, S.L., Lusch, R.F. and Akaka, M.A. (2010), "Advancing Service Science with Service-Dominant Logic. Clarifications and Conceptual Development", in Maglio, P.P., Kieliszewski, C.A. and Spohrer, J.C. (Eds.), *Handbook of Service Science*, Springer, New York, pp. 133–156.
Wikström, S. (1996), "Value creation by company–consumer interaction", *Journal of Marketing Management* , Vol. 12, No. 5, pp. 359–374.
Wünderlich, N.V. (2009), *Acceptance of Remote Services: Perception, Adoption and Continued Usage in Organizational Settings*, Gabler, Wiesbaden.