Czech Science Foundation – Part PC

Project description

Applicant: Ing. Alena Klapalová, Ph.D.

Name of the Project: Value dimensions and value creation management in reverse flows

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The core of proposed project

Value is one of the most fundamental economic terms and the creation of value is the driving force and the chief purpose of every business enterprise. Value is the output of the value creation process, which means that it is created also through various reverse-flow processes, which have been becoming an ever more significant aspect of a business success. Although the issue of value and value creation as well as the issue of reverse flows attract much attention among foreign economic experts, it has been rather neglected in the Czech Republic so far. Czech researchers and businesses alike currently perceive the issue of value, creation of value and the matter of reverse flows only from a very narrow and limited perspective, and the creation of value through reverse flows has been ignored both by theorists and practicing managers. The purpose of the proposed project is to develop knowledge base of the value concept and its reverse-flow managerial implications and to sum up the findings in a publication that would fill an empty space on the Czech market.

Project aims

The aim of the project is to identify various dimensions of value in the business environment and the process of value creation through reverse flows as seen from the viewpoint of business stakeholders. The project would also like to ascertain the level of awareness and knowledge of value management through reverse flows among Czech businesses and their managers. The main output of the research will be a publication that will sum up the results of the original research as well as the latest international state of knowledge on value and value creation through reverse flows.

Project description

Introduction

The traditional view of the value creation process is based on the vertical flow from the manufacturer to customer, or in the wider view from the enterprises, which procure raw materials and resources to the end consumer. The value created through this unidirectional flow consists of the customer value and business value (resulting from the successful sale of the value created to the customer). This is the basic narrow dyadic relationship between two parties of an economic exchange. The customer value is generally perceived to comprise the qualitative attribute of the product sold, such as its functionality and usability, while the non-tangible values such as time, relations, information and others are usually deemed less important. For the business, the value of the transaction is generally perceived to lie in the

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financial profit (or loss), turnover, or in some cases in the benefit to the goodwill of the business undertaking. However, the value created through the above economic exchange is more complex and comprehensive, and the value creators and recipients include also other stakeholders involved in the process. Although the above-described dyadic relationship acts as the basis for the value exchange, the two main parties to the exchange usually operate within longer and sometimes even much longer chain of suppliers and customers as well as complicated networks of other participants and parties to the transaction, each of which (including customers and end consumers) participates or may participate in the value creation process.

Regrettably, economic analyses of value and the value creation processes frequently neglect the issue of reverse flows. Reverse flows include products (in the broad sense) which move in the opposite direction to normal flows within the logistic chain – i.e. products moving from the customer to the supplier (or the specialized processor). Reverse flows usually include reclaimed products, unsold products from stores, returnable packaging and products after their lifespan (i.e. the waste). Reverse logistic flows are generally perceived negatively, as they usually represent excess costs for business enterprises rather than generate revenue, thus decreasing the planned profits. They also have some other negative connotations in the form of unexpected problems or excess activities which need to be accomplished as a result. Surveys have shown that the costs of the reverse logistics in the USA represent 3 to 4% of the total logistic costs. The implementation of an efficient reverse logistic system thus may cut down up to 10% of the total annual logistic budget (MINAHAN, T. 1998). Despite the difficulties in obtaining the data about the costs of reverse logistic activities, as such data are usually unrecorded by the enterprises, Tibben – Lembke claims that these costs amount to 4% of the total logistic costs (TIBBEN – LEMBKE, R., 2001).

In the EU member countries, the negative perception of reverse logistic flows has also been affected by the strict legislation which forces businesses to accept at least statutory reverse logistic flows (as a part of the environment protection, for instance) or manage reverse flows through outsourcing, and to document these flows, with the corresponding negative effect on the overall costs of production/business transaction. The same statutory requirements apply also to businesses based in the Czech Republic.

On the other hand, at the same time, reverse flows may act also as a source of value created by the various components of the chain stretching from the end consumer to the manufacturer. The businesses thus involved may benefit from reverse logistic flows both directly with respect to their line of business (this applies to businesses operating in the field of waste management, and waste processing) and indirectly by generating additional profit (through an efficient management of reverse flows) or by generating other types of value, for instance value for innovation processes, value of relations between parties etc. If we stay only at the basic financial value, according to surveys performed in the USA, companies with the most advanced reverse-flow logistic process may be able to obtain up to 64% of the value from the returned products, while other companies may be able to obtain only about 12% of the value. Profitability of the business is thus affected both by actual revenues (obtained value) and by decreased costs on the well management logistics of those flows (Aberdeen Group, 2006).

1. Existing State of Knowledge

The importance of reverse flows for businesses was first emphasized by Winter and Starling thirty years ago (cited in GIL, J.A. et al., 2005). However, only the increasing social pressure and the requirement of corporate responsibility toward customers, consumers and environment, changes in the strategic orientation of companies, internet trade with its higher rate of returned products (supported in the EU zone by statutory time limits for the acceptance of returned goods) and the successful example of those companies which showed that the overhaul and reprocessing of returned products may lead to value creation and even to major profits (DE BRITO, M.P., DEKKER, R., 2002), have actually

encouraged businesses to take more interest in the possibility of the reverse distribution. As mentioned in Gil et al, reverse flows as the subject of reverse logistics can be perceived differently depending on the emphasis or a certain frame of reference which puts stress on the environmental, economic, social or political circumstances and attitudes, or on the type of activities pursued, type of products or the actual components of the supply chain (GIL, J.A. et al, 2005). And yet, in spite of a relatively good working knowledge of the processes involved, our knowledge is not sufficient. For instance, Daugherty et al (DAUGHERTY, P.J. et al, 2001) pointed out the absence of theoretical studies in this area, while the prevalence of the empirical data over theoretical research is also mentioned by Dowlatshahi (DOWLATSHAHI, S., 2000). According to the results of a survey published by Tibben – Lembke, up to two thirds of the companies in the surveyed sample considered the management of reverse flows an important strategic element of the competitiveness management process (TIBBEN – LEMBKE, R., 2001).

Value creation is also a strategic process (BOURGUIGNON, A., 2005) and should therefore be included in the integral system of company management. In other words, it should be reflected in individual management processes of a well-functioning company, integrated in all its strategies, action plans and performance indicators. This is because value is a basic element of any exchange – whether defined in monetary terms or not - and therefore represents a primary connection between the party which makes an offer and party which is interested in accepting it, or in the more specific terms, of an exchange between a buyer and the seller, regardless of the direction of the flows involved. According to Porter, value can be created by differentiation at any stage of the value-creation process, resulting in a product which either decreases customer's costs or increases customer's performance. The driving forces behind differentiation and the main source of value creation include the selection of suitable tactics (which activities to perform and how), interconnections within the supply chain, channel or network, the time, place and sharing of activities, learning, integration, amount and institutional aspects of exchange (PORTER, M., 1993). The process of the creation of value from reverse flows does not necessarily need to result in a specific product, as defined by Porter, it also may result in the creation of some other form or type of value.

The generally accepted definition of the concept of value is much broader abroad than in the Czech Republic. According to Flint et al and Biong et al (cited in FORSSTRÖM, B., 2005), "value represents an exchange between the benefit and loss," while the relation between benefit/loss does not necessarily have to be defined in monetary terms, but also could take the form of competencies, skills, relationships, know-how etc. According to the Industrial Marketing and Purchasing Group, for the customer, value is defined in the form of "solutions for problems and tasks" (FORD, D. et al, 2000).

It is important for a company to have a deep knowledge of the value it creates and of the value its customers demands, i.e. to have a detailed knowledge of all aspects of such value. To learn more about the value, the company must identify the individual **dimensions** (according to some others also elements, functions, attributes or components) of value to allow for the creation of a detailed structure of the wider categories of value. Dimensions of value in this regard represent specific benefits and costs. Expectations of a "certain" value are dynamically generated in the mind of the customer (and of the other party to the exchange) at an abstractly lower level in the form of the Gutman's "means-end" chain (HOLT, S., year unspecified). This means that specific dimensions (attributes) of expectations become a means for the accomplishment of much more abstract consequences, which lead to the fulfilment of final goals (or values). Buttle comments by saying, that customers buy "the expectations of benefit" (BUTTLE, F., 2004). The aforesaid dimensions of value therefore act as a specific representation of certain value, while the consequences are closely connected to the resulting interconnection and functioning of dimensions; this is why the value can have both negative and affirmative dimensions. At the same time, the parties involved in the exchange evaluate not just the consequences – the results and attributes in their static form (such as the individual attributes of a product), but also the actual process of the value acquisition/creation, proceeding in accordance with a

so-called procedural rationality (BROEKHUIZEN, T., 2006). This view likewise integrates the time aspects of value.

The above analysis applies also to the value and the creation of value in reverse flows. Even here, there exist two basic parties to an exchange, "supplier" and "customer" (depending on the type of the party involved) with their individual aims, motivations, positions etc. Since reverse flows have mostly been studied by disciplines such as reverse logistics, with its analyses of closed-loop supply chains, the relational values and the value management as well as the management of the so-called enhanced supply chain are also deemed important in the research of this issue (FLEISCHMANN, M. et al, 2004).

The depth and scope of research devoted to the concept of value and value creation, as well as the study of reverse flows has been rather limited in Czech Republic so far. The existing sources of information about these topics are likewise lacking in the Czech Republic. There exist several publications devoted to the concept of customer value (such as original Czech publication - VLČEK, R., 2002, translated publication - STORBACKA, K., LEHTINEN, J.R., 2002), and the publications on customer relationship management and marketing management. At the same time, we completely lack publications devoted to the value produced on B2B and B2C markets, about value for other stakeholders and publications about value created through reverse flows. The same applies to the matter or reverse flows and their management. There is probably the only one publication on the Czech market dealing with the issues of reverse flows in a little bit wider range than several paragraphs (see ŠKAPA, R., 2005), although it does not cover many of the areas proposed by this project.

The project proposer is not aware of any research data pertaining to the implementation of reverse flows and the generation of reverse-flow value among Czech businesses. Should such research data exist, they have not been presented to the public so far. The empirical knowledge of the issues involved in the Czech Republic is very low.

2. Definition of research problem

The research problem can be defined as follows:

Companies are required and/or motivated to deal with a certain volume of reverse flows. There exists a growing tendency abroad to consider reverse-flow management as the possible source of major competitive advantage, and businesses have been adopting ever more pro-active attitudes in this matter (GIL, J.A. et al., 2005). Apart from the competitive advantage, reverse flows also offer an opportunity to regain or create value or a set of values for the company. As an example, efficient management of reverse flows has been shown to improve the ROA index (MOLLENKOPF, D, WEATHERBY, H., 2003/2004). The issue of reverse flows and the creation of value through reverse flows has been much neglected in the Czech Republic both among theorists and in the actual business environment. The management of reverse flows has been driven mainly by the legislation, more concrete by the legislation concerning the environmental problems. This reactive approach severely restricts the potential of reverse flows for value creation both for companies and for their stakeholders, whether expressed in the form of direct or indirect benefits (DE BRITO, M P.., DEKKER, R., 2003). The reasons for this state of affair lie mainly in the inadequate transfer of information from the academia into practice, the inadequate interconnection of businesses within a supply chain/network with other stakeholders from the more economically developed countries and in the existence of other barriers and obstacles.

3. Research questions and objectives

The research objectives of the proposed project have been derived from the following questions:

a) For the theoretical section of the project:

Does there exist an adequate knowledge base concerning the issue of value (including different aspects or dimensions of value) and value creation (including the managerial aspects of the value creation process) for various stakeholders in reverse flows? Are there any "white spaces" in the current stage of knowledge? What is the reason for their existence?

The research objectives would include to:
- ascertain the existing theoretical knowledge of the issues at hand, assess the data and formulate own theoretical conclusions about value and its creation through reverse flows;
-   explore the existing surveys and research devoted to the implementation of reverse flows in business practice;
- use theoretical conclusions and the data obtained from the existing research to draft and prepare a methodology for own empirical research.

b) For the empirical section of the project:

Do companies create value within and from reverse flows? If they do, what kind of value do they create? What are the driving forces and the main obstacles to the process of value creation through reverse flows both in the internal and external environment? What are the main types of reverse flows and methods for the creation of value from reverse flow as implemented by actual businesses? Do any reverse flows exist that companies fail to implement? What are the reasons for such failures? Does a particular business lack the resources required to implement such reverse flows? What are the reasons for the emergence of reverse flows and do these reasons affect the value created and the value creation process? Does the reverse flow management consist of any the strategic, tactical and operational levels? If not, why? Are businesses capable of measuring various dimensions of value created from reverse flows? If they do, what measurements methods and what criteria and benchmarks do they use? What are the reasons to choose a specific measurement method over a different one?

The research objectives would include to:
• study the business environment in the Czech Republic in order to ascertain the current attitudes to various dimensions of value and the various aspects and factors affecting the creation of value through reverse flows
• identify the driving forces behind and main obstacles to process of value creation through reverse flows here in the Czech Republic
• ascertain the motivations behind the implementation of reverse flow management
• ascertain the measurement methods and standards used in the assessment of the value created through reverse flows
• ascertain possible differences in the attitudes to the issue at hand (do the companies with foreign owners or companies from certain industries behave differently than others?) and state the reasons for such differences.

4. Research methods and design

4.1 Research methods and data analysis

To ascertain the existing state of knowledge and the practical experience in the form of published sources the applicant will conduct a background research of the available data. The aim of the research will be to identify various important variables, propose relationships between such variables and arrive at theoretical and conceptual constructions that would assist us in further research and in the interpretation of the research results. The background research will also provide the researcher with a wide range of concepts and relations to compare with the ascertained data.

The collection of empirical data and the acquisition of the information from the background research will require the use of several methods and data collection techniques. During the research a combination of qualitative and quantitative research methods are planned to be used. The method of multiple case studies will be employed as the main qualitative research method, in connection with the research of documents and historical data.

The multiple case study analysis has been selected based on the following reasons:
1. This is an "intensive method", ideally suitable to ascertain the basic factors, processes and relations within a comprehensive framework and interconnections between causes and effects;
2. The proposed research is based on the assumption that a detailed analysis of several cases will provide a better understanding of other similar cases as well as to enable to discover new relationships or facts;
3. This research project works with many variables with limited statistical verifiability, as the variables involved cannot be generalized adequately
4. Responds to the research questions of what, how and why within a certain, well-defined context.

The multiple case-study analysis has also been selected in view of the need to compare the available data and to modify the existing theories. Due to the adopted research objectives, the multiple case study analysis will combine various exploration, descriptive, explanatory and evaluation elements (see also HENDL, J., 2005 or JOHANSSON, J., SPARREDAL, J., 2005).

To gain the better understanding of the Czech environment with respect to the issues at hand, structured questionnaires to acquire the data required (quantitative research) will be applied. To analyze, assess and sum up the data obtained by empirical surveys various classification and relational analytical methods will be used to synthesize and compare the information acquired and ascertain the similarities and differences in the phenomena observed.

4.2 Research sample

The qualitative research leading to the creation of multiple case-study analysis will include in-depth interviews and the study of documentation from a sample of 5 to 12 medium to large businesses (based on the number of employees) with the minimum manufacturing history of 3 years. Questionnaires involved in the quantitative research will be sent to approximately 1500 companies selected based on the structure of the individual sectors of economy.

5. Research schedule

The proposed time period for research makes three years. In the first year, research will be focused on literature reviews of existing theoretical knowledge and on continuing in inquiries which have begun in a very small range in the year 2008. Results from these surveys, together with new theoretical knowledge will serve for the improvement of research methodology for quantitative data collection which is planned to begin in the first year of research as well as for the preparation of qualitative research. The realization of qualitative research and finishing of quantitative research, data analysis

and interpretation of qualitative research and publication activities will be the core of second year. The last year of the project will be concentrated on the final synthesis of all gained information and knowledge in the form of proposed outputs (publications, educational outputs).

The exact time schedule can be seen in the following table.

Year Activity Date

year	activity	date
2011	Literature review	January - June
	Forming of theoretical knowledge base for research and publication	April – September
	Conducting quantitative research	June - October
	Design of qualitative research	September – October
	Analysis of quantitative research results	October - November
	Conducting of pre-test (qualitative research) and evaluation of its results	November - Dec.
	Publication activities	June - December
2012	Realization of qualitative research	January – February
	Analysis of results (qualitative research)	February –April
	Interpretation of results and publication activities	April - December
	Synthesis of all gained information and knowledge	January - June
	Forming of final output of project	July - December

6. Assumed benefits

Purpose and benefit of proposed research can be seen as follows:

1. Formulation of summarized theoretical conclusions about value and its creation through reverse flows as perceived from the multi-dimensional managerial viewpoint for Czech business environment. The research will also identify and describe the methods, techniques and instruments for the management of value in reverse flows.

2. Examination and analysis of issues affecting the existence of various dimensions of values as perceived by different stakeholders and the examination and analysis of the creation of value through reverse flows as implemented by Czech businesses, identification of possible differences and/or gaps and the statement of reasons for such differences/gaps;

3. Publication (book and articles) of a study on the topic which will include the practical discussion of suitable methods, techniques and instruments for the management of value in reverse flows.

7. Proposed outputs

The outputs of the proposed research are:

• Presentation of theoretical knowledge and results of empirical research at conferences, workshops for practitioners interested in the topic of research.
• Publication of theoretical knowledge and results of empirical research in scholar and professional journals and at scientific conferences.
• A book dealing with value and value creation in reverse flows

• Organization of educational seminars about value creation in reverse flows - the gained knowledge will be applied in the sphere of methods and instruments, which are useful in value identification process, in value creation process, in evaluation and controlling value in different stakeholders.

The planned outputs ranking according the Methodology of research and development evaluation (Czech Research and Development Council):

B   -   authored book - 1x   - 2012
J   -   journal article - 3x   - 2011 – 2012
D   -   contribution to the proceedings of a meeting   - 2x - 2011-2012

8. Cooperation with the foreign research institutes

The applicant has started to cooperate with the U.S. Georgia Tech University, College of Business in the field of reverse logistics management, in the year 2009 spent one week of study in Göteborg University and in the year 2011 intends to address experts from (no more existing) REVLOG - The European working group of reverse logistics – for some potential areas of cooperation.

9. Professional experience and qualification of the applicant

The applicant, Ing. Alena Klapalová, Ph.D. works at the Department of Business Management at Faculty of Economics and Administration, Masaryk University). In 2007 she defended her dissertation on subject of value and value creation in B2B chains and networks. She utilizes this knowledge in her educational activities (Marketing and Quality Management courses). Dr. Klapalová has long-term experience with research as a team-member of several GAČR-supported projects as well as a member of several faculty–paid research projects. Beside her work for university she has experience with research as the team leader in her past career. In the year 2008 she has initiated faculty internal research activity focused on value creation and value perception in reverse flows management with several outputs of existing survey results (proceedings contribution).

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Czech Science Foundation – Part PD1

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2007: Masaryk University, Faculty of Economics and Administration, Ph.D.
1982 – 1986: University of Economics, Bratislava, Faculty of Business, master degrese

Working experience:
1987 – 1990: Research Institute of Tourism and Common Boarding, Bratislava, researcher
1993 – 1996: Bata´s University, Zlín, lecturer
Since 1996: Masaryk University, Department of Business management, junior assistant and assistant (since 2007)

Participation on research projects:
The long–term professional interest of A. Klapalová focuses on marketing, international and intercultural marketing, small and middle enterprise management and economics, quality management, strategic management and operation management. She has co–operated on several research project as follows:
1994 – 1996: Transformation Marketing (GACR), team member
1999 – 2001: Multifactor analysis of the company's successfulness (GACR), team member
2005 – 2007: Simulating and Inhibiting Factors of the SMEs founding and development in the Czech Republic (GACR), team member
Since 2005: Research on Competitiveness of the Czech economy (Internal grant of ESF MU), team Member
Since 2007: Research on Value and value creation in reverse flows on B2B markets ((Internal grant of ESF MU), co-researcher