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Behavioral Supply Management – Supplier Selection „Made in China“

This research project sets out to merge the research streams of supply management and human decision making under the overarching concept of “Behavioral Supply Management” in order to investigate the supplier selection decision making process of German manufacturing companies in China.

By conducting 35 explorative interviews and gathering over 120 questionnaires in the People’s Republic of China, data was collected to answer the following four research questions:

1. Which cognitive biases increase the challenge of selecting a supplier in an emerging market environment?
2. Is there a standardized optimal decision strategy for emerging market sourcing?
3. Can the application of debiasing methods and strategies increase decision quality?
4. Which debiasing strategies are most effective?

Answers to research questions (1) and (2) are found via analysis of qualitative interviews while the answers to questions (3) and (4) are mainly based on statistical analysis.

The work is divided into seven chapters which will be shortly summarized:

Chapter 1 – Introduction

This chapter outlines the increasing importance of the sourcing function within a global market environment due to increased competition and an increasing disaggregation of supply-chains (“outsourcing”) combined with the need for inter-company coordination (“just-in-time delivery concepts”).

Furthermore, the relevant theoretical research foundations, i.e. human decision making, cognitive biases and debiasing theory, are introduced. It is acknowledged that systematic deviations of observable human behavior from normatively ideal behavior have not been sufficiently taken into account by previous research.

Chapter 2 – Theory

This chapter provides an overview of the main research findings in the area of supply management and supplier selection. Starting from the fact that any company with significant sourcing activities needs a sourcing strategy it is shown that popular supplier selection models do not realistically incorporate human behavior. This reduces the applicability of these models. It is shown that existing research findings with regard to human behavior in supplier selection decisions have not fully incorporated the effects of so-called cognitive biases, e.g. manipulations due to the form of presentation of information.

To further illustrate the scope of behavioral flaws a comprehensive list of cognitive biases is given, followed by a display of current research with regard to those debiasing strategies (motivational, cognitive and technological) which promise to mitigate the bias effects.

The chapter ends with a description of the relevant econometric methods used for statistical analysis in subsequent chapters.

Chapter 3 – Introduction of Empirical Research

This chapter intends to explain the motivation, scope, method, process and limitations of the data collection stage of the empirical research project. It is explained why China deserves to be in the

focus of the research project (increasing sourcing volume, especially for German companies) and why the investigations are limited to companies from the manufacturing sector.

Further on, details are given with regard to the sampling process such as identification of target companies and contact approach. This is followed by a description of interview preparation and execution.

Chapter 4 – Qualitative Analysis (Explorative Interviews)

To structure the interviews and to guarantee for consistent information output across all interviews, a standardized interview guideline was developed. Between May 2008 and June 2008 35 interviews were conducted. By applying the interview guideline, all obtained statements of supplier selection decision makers were used to investigate research questions 1 and 2 (see above). This analysis results in the following findings:

1. Which cognitive biases increase the challenge of the purchasing task in an emerging market environment?

For the interviewed German expatriate supply managers in China it holds true that they rely too intensively on information that is readily available to them (Availability Cognition Bias). They do possess more knowledge about the Western culture, private ownership structure and potential suppliers that are located close by compared to knowledge about Eastern culture, public ownership and distant location.

Furthermore, interview analysis reveals that it is very difficult for managers to adjust their beliefs they hold prior to their arrival, e.g. stereotypes and misperceptions with regards to culture and reasoning (Confirmatory Bias). This makes it difficult for them to see emerging market opportunities instead of emerging market threats.

Finally, managers, especially German ones, have to learn that in China “words” are not usually regarded as means of conveying facts, but constitute part of the presentation (example for Presentation Bias). It is very important that managers are made aware of this fact in the early stages of their posting, as failure to do so would lead to the unpleasant surprise that in China “pacta non sunt servanda”.

2. Is there a standardized optimal decision strategy?

It turned out that the real challenge is not to identify the elements of a rigid prescriptive decision process. The main difficulty is rather to find the optimal balance between a standardized process and individual deviations which are required due to the volatile Chinese market environment. Interviewed decision makers know their standard procedures but they find it difficult to figure out the optimal degree of deviation.

Chapter 5 – Quantitative Analysis (Hypotheses Testing)

This chapter analyses the data of the more than 120 collected questionnaires to answer research questions 3 and 4. In the first part of this chapter research hypotheses are derived while in the second part these hypotheses are tested by the use of econometric means such as descriptive statistics, correlation and regression analysis. The resulting findings with regard to research questions 3 and 4 are as follows:

3. Can debiasing increase decision quality?

The necessary precondition to invest company resources into debiasing activities is that debiasing yields a positive effect with regard to the outcome of decisions. Our econometric analysis reveals that supplier choices that result from decision processes which are characterized by high degrees of procedural rationality (i.e. processes that approximate the normative model of rational decision making) are superior. Conclusively, debiasing actions can increase decision quality within the supplier selection process. This finding justifies further research within the field of “Behavioral Supply Management”.

4. Which debiasing strategies are most effective?

Based on the findings of (3.), managers have to know which specific debiasing measures are most effective. It turns out that the supplier selection decision process will be performed most rational when

the process incorporates the elements of decomposing (i.e. the global task is split up into smaller pieces that are performed separately) and accountability (i.e. an organizational environment in which decision makers are held responsible for their supplier choice) (see Figure 2).

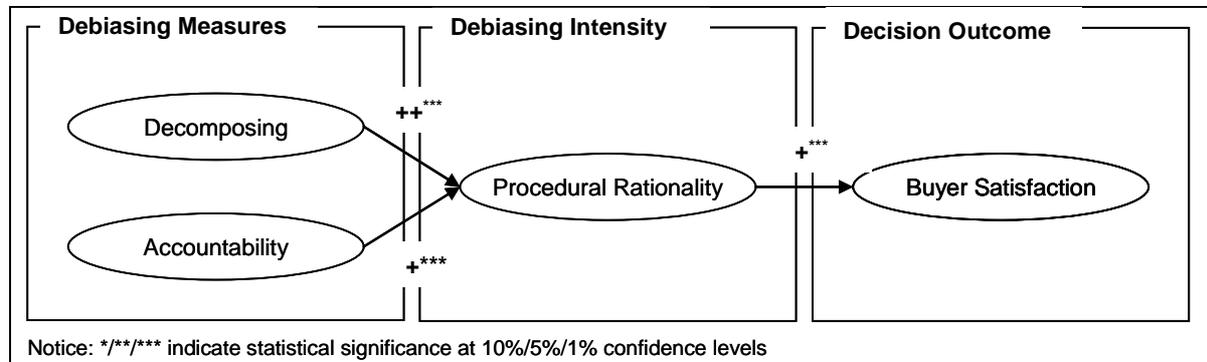


Figure 1: Results of Quantitative Analysis

Chapter 6 – Management Recommendations

In this chapter it is shown how purchasing managers should adapt their decision strategy as to incorporate the findings of this diploma thesis. Finally, an easy to follow itinerary is given. It shows how to align any organization's purchasing department to obtain a decision strategy that systematically reduces the vulnerability to cognitive biases, fosters active debiasing and empowers local employees to act more rationally.

Chapter 7 – Conclusion

In the final chapter it is argued that the academic field of Behavioral Supply Management is yet in its infancy stage and more research is required to fully exploit the optimization potential that can be obtained by aligning corporate purchasing behavior to the (present and expected future) findings in this field. This task is necessary to further strengthen the competitive advantage of German manufacturing companies in an increasingly competitive world where decision biases may seriously impact profit and success potential.