

*Management  
und Wirtschaft  
Studien 68*

Thomas Henschel

# **Risk Management Practices of SMEs**

*Evaluating and Implementing Effective  
Risk Management Systems*



ERICH SCHMIDT VERLAG

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Von

**Dr. Thomas Henschel**

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ERICH SCHMIDT VERLAG

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# Preface

Risk has emerged as an area of attracting increasing interest in the literature. In the past decades, risk was shown to be an inescapable reality of modern business. Until very recently, systematic research into business risk management has been concerned with only large corporations. This book, based on the PhD thesis at Napier University Edinburgh, UK, is the first study of its kind of investigating the current state of risk management practices in German small and medium enterprises (SMEs) and providing a detailed analysis of the main barriers in developing an effective risk management system for SMEs. This book consists of seven chapters, identifies the major elements for the successful development of a risk management framework for SMEs in Germany and provides SMEs agencies and other relevant stakeholders with insights on how to introduce an effective risk management in SMEs.

Risk management is a relatively well-established research topic, but Thomas' book is unusual in its focus on the *integration* of project risk management and business planning with the instruments of performance measurement and the development of a *holistic* risk management framework for SMEs. I am very pleased that Thomas has brilliantly considered the integration as the core of his research and put this as the foundation of this unique book. Through interviews and questionnaires, a blend of quantitative and qualitative approaches, Thomas adopts an effective approach to an investigation of the current state of risk management, business planning and the application of Balanced Scorecard in German SMEs and an in-depth analysis of the components of a holistic risk management.

I hope you will enjoy reading the book as much as I have enjoyed reading his thesis.

Prof Simon Gao, PhD  
Professor of Accounting and Finance  
Napier University Edinburgh, UK

5 May 2008

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I am greatly indebted to the many firms which took part in my survey, especially the interview participants, which spend a great deal of time to answer the questions and provided information.

Thanks are due to the accountancy firm Ernst & Young in Leipzig and Edinburgh which gave me the opportunity to discuss the topics of risk management with experts in this field.

Grateful thanks are also given to the entire staff of the Hochschule Merseburg University of Applied Sciences, Germany for their assistance and support.

I would also thank my friend Dieter Bischoff who provided practical help and good advice at times of great difficulty.

This book is dedicated to my father Helmut Henschel for his ongoing support over so many years. Finally, I would like to thank my wife Ilka Heinze for her forbearance in forgoing my company and attention. It is because of both that I have maintained my confidence during the period of my study and that I was able to complete this research.

Thomas Henschel, May 2008

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# 1 Introduction

The present PhD thesis presents an empirical approach to risk management practices in selected industries of German small to medium-sized enterprises (SMEs). Section 1.1 of this introductory chapter discusses risk management in Germany. SMEs are of great importance in Germany. Therefore it is surprising that they have been neglected in empirical investigations on risk management (Section 1.1.1). Currently (2006), legal and other regulations with their effects on the handling of risks are making insecure German SMEs (Section 1.1.2).

Section 1.2 classifies the terms of risk and risk management and presents the reactive and proactive risk management paradigms. When facing the management of individual projects companies have to deal with both local and global risk considerations, which means the consolidation of single project risk assessments into the company-wide risk management.

Section 1.3 distinguishes SMEs with respect to quantitative and qualitative criteria. Here a variety of definitions exist, in the national as well as in the international context of SME research.

Section 1.4 outlines the research aim and objectives of this thesis. Finally, Section 1.5 summarizes the research approach and the outline of the subsequent chapters.

## 1.1 Background: Risk Management in Germany

### 1.1.1 Risk Management Deficiencies in Small to Medium-sized Enterprises

In 2004, there were a total of 2,915,482 companies in Germany, 99.7% of them being SMEs (according to calculations made by the IfM Institut für Mittelstandsforschung – Institute for SME Research). These SMEs employed 20.1 million people or around 70.5% of all employees in the Federal Republic (Günterberg and Kayser, 2004). The percentage indicates very clearly the significance which SMEs have for Germany.

But apart from constituting the overwhelming majority of all enterprises, German SMEs have a high value in other national economic functions. For example, during periods of high unemployment the employment function of

SMEs becomes one of the main supporting columns of the national economy. Over 80% of the dual training of qualified workers is carried out by SMEs as well. Moreover, because of their flat structures and the resulting flexibility and speed of decision-making, SMEs are extremely innovative and capable of growth. Further, the diversity of the sectors in which SMEs are active represents an opposite pole to the regional mono-structures (De, 2005, p. 242).

It is therefore all the more surprising that in Germany SMEs have so far been largely ignored in empirical business management research (see Ossadnik et al., 2004; Berens et al., 2005). Concerning the current state of risk management in Germany there are no substantial findings (Kessler, 2000, Kirchner, 2002). The national and international literature also offers only a few proposals how a risk management suitable for SMEs could be designed (Consultation and Research Centre of the Institute of Chartered Accountants in England and Wales – briefly: ICAEW, 2005). This fact is often explained by risk management being a very young branch of business management theory which has yet not developed standards (see, for example, Alquier and Tignol, 2006, p. 277).

According to the IfM and the present author's own calculations based on the 2002 Value Added Tax (VAT) statistics (Federal Statistical Office, 2004), 71.9% of the German SMEs are to be found in the following industry sectors:

- construction
- engineering
- information technology
- auditing, consulting and training
- trade, service and logistics.

The present work will deal with just these five main industries.

It is noticeable that the first four of the above industry sectors concern companies which primarily offer project-based services. Since there are no empirical results on project risk management in SMEs (Guserl, 1996; Troßmann and Baumeister, 2004; Alquier and Tignol, 2006) the characteristics of risk management in project-oriented companies will be given special consideration.

### **1.1.2 Legal Regulations Concerning Risk Management, Basel II**

In Germany, the theme of risk management (not only for SMEs) has moved back into the centre of focus over the years from 1998 until now (2006). The cause was the German Control and Transparency Act (KonTraG, 1998) which

came into effect on the 1 May 1998. The background to the act was a number of spectacular company crises which have occurred over the last few years and which, in the opinion of the lawmakers, were caused by a lack of risk awareness and insufficient control and information mechanisms (see Hornung et al., 1999, p. 317). To safeguard the shareholders' interests in the continuing success and development of the company, the federal German lawmakers, in passing the KonTraG law for the first time, gave legal emphasis to the general management task incumbent on directors of listed joint stock companies and to their duty of care with regard to risk management (see KonTraG, 1998).

Among other things the extension of § 91 of the Joint Stock Companies Act (AktG) requires the board of directors of a joint stock company to ensure the existence of an appropriate risk management system. The board must

“... take appropriate measures, in particular that of setting up an internal control system, so that developments which put at risk the continuing existence of the company can be identified at an early date.” (§ 91 para. 2 AktG)

However, neither the wording of the act nor its reasoning gives information on how the required risk management is to be shaped in detail.

When considering its practical implementation the members of the board of directors, who must exercise the prudence shown by a correct and conscientious director called for by § 93 para. 1-1 AktG, have to orient themselves towards economic aspects (see for example Hornung, et al., 1999, p. 318). Following § 93 para. 2 AktG, should a claim for damages arise any breach of this duty of organization can lead to a sharply increased situation of liability. If no adequate control system has been established, the board of directors may therefore be made personally liable through having violated their responsibility. According to § 317 para. 4 of the German Commercial Code (HGB), from the 1999 financial year onward, the chartered accountants must assess and qualify in their annual audit as to “whether the board of directors has fulfilled the measures incumbent upon them under § 91 para. 2 of the AktG in a suitable form and whether the control system to be set up as described by the act is capable of fulfilling the tasks required of it.”

It is noticeable that in very large firms, while having implemented the risk management requirements according to the KonTraG law, risk management is nevertheless seen more as a compulsory exercise and is therefore not coherently integrated into the current management. It is also in most cases seen as a reactive type of risk management (Federation of European Risk Management Associations et al., 2004; Ernst & Young, 2005). The study by the Federation of European Risk Management Associations et al. (2004) in three European countries (the United Kingdom, France and Germany) revealed that in terms

of the implementation of a company-wide risk management the very large UK companies are significantly more advanced than companies in Germany and France.

Managers in Germany still do not properly appreciate the actual benefits which risk management have for the company itself. That is, that risk management can contribute in particular to the company's value creation and preservation. Thus risk management has already been integrated into the planning and management system in only around a half of the companies investigated (Ernst & Young, 2005, p. 16).

In contrast to the explicit regulation for joint stock companies, no corresponding regulation has been provided for the other enterprises. Based on the reasoning behind the KonTraG law, the prevailing opinion assumes that the law also has a spill-over effect on the duties and obligations of a "prudent businessman" of a any company. According to the governmental substantiation of the KonTraG law, each company has to establish a risk management being in accordance with its size, structure and complexity. Naturally this has strongly made insecure many SMEs how such a risk management should be designed and implemented (Gleißner et al., 2004, p. 10; Münzel and Jenny, 2005; KonTraG, 1998)<sup>1</sup>.

Further uncertainty in SMEs has been provoked by Basel II, the new international equity capital regulations on lending by banks (coming into force on 1 January 2007; Basel Committee on Banking Supervision, 2003). In connection with the evaluation and rating process borrowers are subject to, Basel II demands from the banks to make an assessment as to how the companies deal with the opportunities and risks presented by their development.

The Basel II regulations do not explicitly demand to establish a comprehensive and strictly formalized risk management system (see Basel Committee on Banking Supervision, 2003). Nevertheless, when rating an SME, the lending bank will assess the management accounting instruments and the abilities of management. This covers to determine whether a risk management system has been implemented to a certain extent and whether replacement regulations have been fixed (see Füsler and Heidusch, 2002, p. 61).

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<sup>1</sup> For example, the Higher Regional Court in Düsseldorf required the director of a private limited company to pay damages because – in breach of the legal obligation arising from § 43 para. 1 Private Limited Company Law (GmbHG; "due care and diligence of a prudent businessman") – he had not introduced a risk management system (see judgement of the 26.04.2001, OLG Düsseldorf, file ref. 6 U 94/00). An appeal against this decision was submitted to the German Federal Supreme Court (BGH, II ZR 168/01), although with its decision of 23.06.2003 the German Federal Supreme Court rejected the appeal so that this judgement has since become legally effective.

Many of the small to medium-sized enterprises surveyed by a recent study on management accounting were also directly questioned about the existence of a risk management system. Because of Basel II, they want to introduce improvements, in particular to their management accounting techniques and reporting procedures (Flacke and Siemes, 2005). For SMEs the establishment of a risk management system therefore becomes essential to their survival, since it affects their ability to continue to receive credit from the banks (Wildemann, 2005).

A risk management system is, however, necessary for SMEs, not only because it is required by law or by the Basel II regulations, but rather because it is in the essential interest of the SMEs. The reason is that such enterprises have a high potential to become insolvent and the most frequent causes of insolvency are management errors and weaknesses in the company structure. This is especially true during the first 7 years following the establishment of the company (Dutta and Evrard, 1999; Watson and Everett, 1999; Bretz, 2003; Günterberg and Kayser, 2004).

## **1.2 Classification of Risk and Risk Management**

The discipline of management studies contains no single definition for the term risk. There is agreement that risk is to be seen as something negative and thus should subjectively convey the idea of uncertain developments. The spectrum of definitions<sup>2</sup> to be found in management studies ranges from risk as a synonym for quantifiable or measurable uncertainty (see Knight, 1921, p. 20) up to complex measures of risk such as Leitner's measure of "speculative risk" (see Leitner, 1915, p. 95). In the following chapters risk is to be understood as the danger of losses resulting from a decision. In this respect, risk is also described in a narrower sense as a "speculative risk" (cf. Figure 1.1). Losses are taken to mean net reductions in assets (see Baetge and Jerschensky, 1999, p. 171).

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<sup>2</sup> For a detailed summary and delimitation of the terms for risk applied in literature on management studies see Kessler (2000, p. 40).

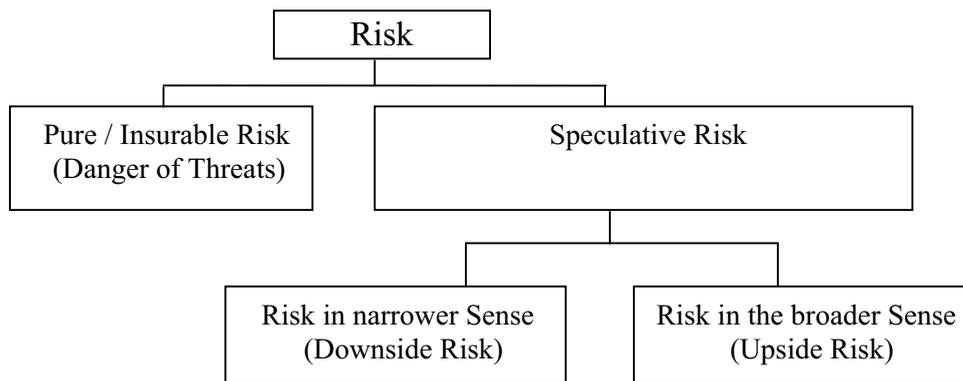


Figure 1.1 Classification of the Term Risk

Source: adapted from Kless (1998, p. 93) and Münzel and Jenny (2005, p. 29)

The acceptance of risk in the latter sense is a feature which is part of the existence of every entrepreneurial activity. A business must identify the risks which it has already entered into and measure, control and adjust them if it wants to ensure its long-term existence (see Hahn, 1987, p. 139). As shown by Figure 1.1, the KonTraG law strictly speaking only covers the pure/insurable risk and from the speculative risk only the downside risk. Of course, as has already been mentioned, entrepreneurial decisions are always associated with risks and opportunities. This clarification has now also been adopted by the lawmakers through § 289 of the German Commercial Code, i.e. that a director's report must include a report on the main risks and opportunities involved in the entrepreneurial development.

The aim of risk management is therefore to control and manage the existing and future risks of a company so that, given reduced risks and continuing opportunities for earnings, the value of a company increases and that there is an assurance that the risk position of a company (i.e. the sum of the risks entered into by a company) does not exceed its risk-bearing ability (Baetge and Jerschensky, 1999, p. 172). The risk-bearing ability is the ability of the company to bear losses arising from the risks it has entered into without becoming insolvent. Risk management is thus an important aspect of value-based management (see Baetge and Jerschensky, 1999, p. 172; Dickinson, 2001, p. 360).

The risk management process basically consists of the following four steps (see Vaughan and Vaughan, 2001):

- identification of risks
- quantification and thus evaluation of risks
- management and control of risks
- continued reporting on the development of risks.

## 1.2 Classification of Risk and Risk Management

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As part of the organization of risk management the company management therefore has to set out the basic strategies for risk management and to nominate the personnel in the company to be responsible for risk identification, evaluation and control.

According to Oehler and Unser (2001) the following four strategies are available as measures for managing and controlling the risk in a company:

- risks can be avoided
- risks can be reduced
- risks can be transferred
- risks can be borne by the company itself.

As Smallman (1996, p. 14) states, the first two of the above strategies can be combined into a cause-related risk policy, which is directed at the risks themselves (proactive risk management). The remaining two can be combined into an effect-related risk policy, which limit the effects of risks entered into (reactive risk management).

In most companies that operate a proactive risk management, all four instruments referred to are employed, although they are given different weightings (Baetge and Jerschensky, 1999, p. 173; Smallman, 1996, pp. 14–15). The structure of such a mix of risk strategies depends on the company's risk preferences, its management and the type of business it is engaged in (see Baetge and Jerschensky, 1999, p. 173).

Once the risk strategy for a company has been fixed the risk fields or risk categories (for which the individual types of risk are to be investigated) must be determined. The general opinion of the literature is that the risk categories can be classified in terms of their sources into direct and indirect risk categories (Hahn, 1987, p. 138; Smallman, 1996, p. 14; Münzel and Jenny, 2005, p. 69).

As Figure 1.2 displays, the direct risks include organizational risks; they can be directly responsible for critical developments because they are directly connected with the company. The direct risks cover for example operational risks, business risks and financial risks.

The indirect risks include the political and economic environment in which the company is embedded, and they primarily involve legal and statutory risks. These risks are described as indirect risks because they work as crisis accelerators and can further increase the critical development of the company caused by the direct risk fields.

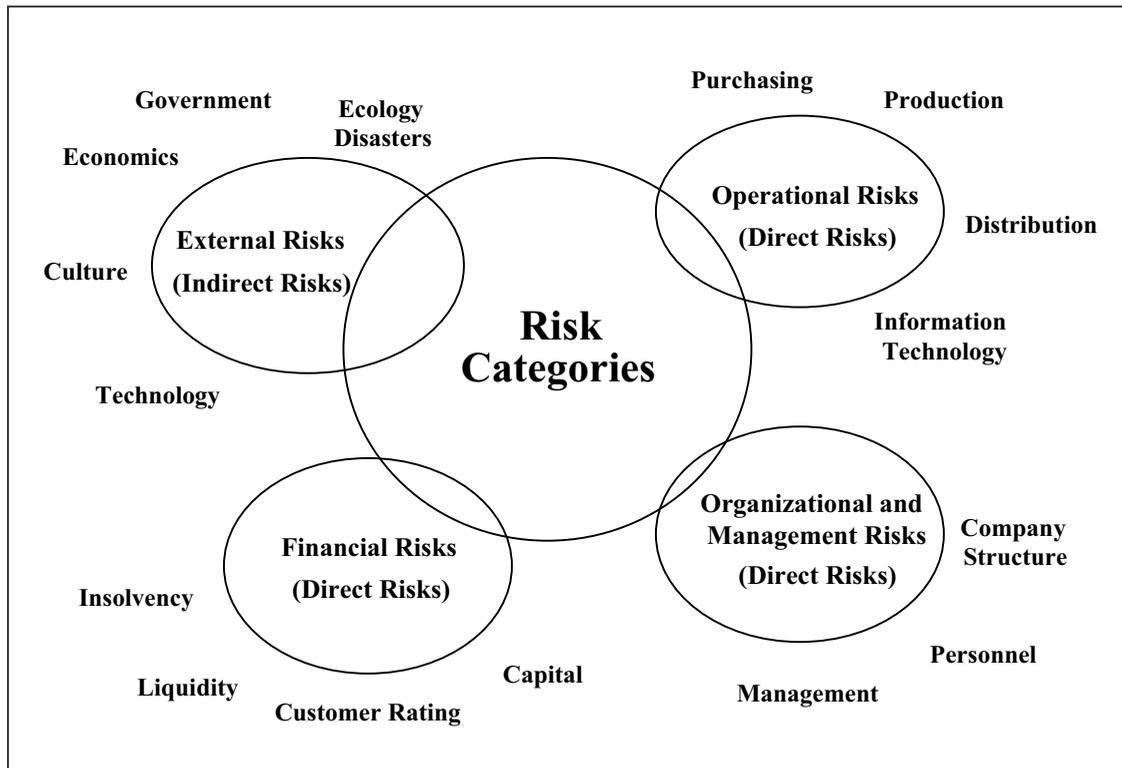


Figure 1.2 The Enterprise's Risk Categories

According to Smallman (1996, p. 15), the various risk fields makes it necessary to operate a holistic risk management system. Smallman argues that a holistic risk management is characterized by three main aspects.

The first aspect is a continuous monitoring of all the sources of risk referred to in Figure 1.2. Here special attention should also be given to what are termed weak signals. Information on risks should be gathered together from the most diverse sources and in particular from the customer and market perspectives. Since to some extent non-financial (i.e. qualitative risks) also play a large role in the risk fields, it is not possible to concentrate only on probability theory and actuarial models. Just as equally must qualitative techniques such as scenario planning or other qualitative techniques be applied here. Nowadays (2006) the literature on modern performance measurement techniques (such as Balanced Scorecard or shareholder value) emphasizes their application for risk management purposes (see for example, Wolf, 2003, p. 85; Romeike, 2005, p. 277; Scholey, 2006; Hudson-Smith and Hudson, 2006).

The second aspect is the combination of qualitative and quantitative techniques on risk assessment and management. The third aspect concerns the organizational learning where one learns from past errors and disasters and where a culture is established in the company allowing for a positive approach to dealing with mistakes and does not punish employees for mistakes. In this

## 1.2 Classification of Risk and Risk Management

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way a knowledge management within the company can also be employed for the purposes of risk management.

A specific feature of a project-based organization is that the management of single projects, the management of a network of internal and external projects and the relationships between the company and the single projects must be co-ordinated (Andersen and Jessen, 2003, p. 457).

Utilizing the existing organizational structures and resources, it seeks to manage the project by applying a collection of tools and techniques. It includes defining the requirement of work, establishing the extent of work, allocating the resources required for the execution of the work, monitoring the progress of the work and correcting deviations from the plan (Munns and Bjeirmi, 1996, p. 81–82).

The development of a single project is divided up into 4 phases, forming the so-called project life cycle:

- conceptualization: identifying and defining possible projects, feasibility study to determine whether a project can be worked on with the existing personnel, know-how and resources
- planning: decomposing the project into its constituent parts, in terms of cost, quality, time, activity duration
- execution: successful completion of the project, ongoing monitoring of project, evaluation process
- termination: project close down and hand over, post-project review.

According to Ward and Chapman (1995), the project life cycle is a convenient way of conceptualizing the generic structure of projects over time. During each phase the resources employed, the conflicts with other projects and the rate of expenditure can be tracked. For risk management purposes, breaking down the four phases into detailed stages may highlight sources of project risk.

Project-based businesses exhibit the special feature of “local” and “global” risk management. In these companies the risk fields discussed in Figure 1.2 are to be identified at the level of each individual project as well as for the overall business. As a rule, the indirect risks do not play such a strong role in the individual projects. But instead there is the problem of combining the observations of the individual project-related risks into an overall risk position for the entire company (what is known as the duality of risk management, see also Guserl, 1999, p. 428). This situation is displayed in Figure 1.3.

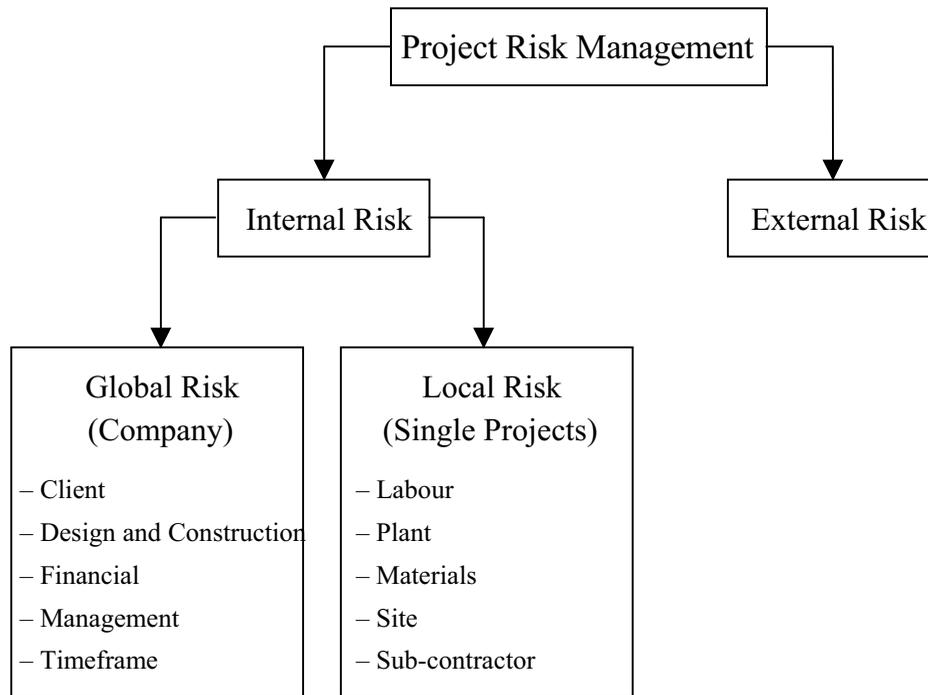


Figure 1.3 Breakdown of Project-based Risk Management

Source: adapted from Tah and Carr (2000, p. 109)

### 1.3 Definition of Small to Medium-sized Enterprises (SMEs)

In commerce and politics the term “Mittelstand” or “the German Mittelstand” is often applied – what exactly does it mean?

In Germany, the term Mittelstand is very widespread. Interestingly, there are no direct equivalents in English or French for the expression. This fact is due to the situation that in the German economy an understanding of Mittelstand is more qualitative than associated with certain size classes (De, 2005, p. 236).

In order to bridge the gap to actually specified criteria the term Mittelstand can be covered by the English language expression “SME – small and medium-sized enterprise.” Thus in the present thesis the term Mittelstand will be taken as synonymous with SME and with the companies which fulfil the corresponding criteria.

In terms of the definition of SME the literature distinguishes between theoretical (qualitative) and operational (quantitative) criteria for definitions (Curran and Blackburn, 2001, p. 22; Krämer, 2003, pp. 8–11; De, 2005, pp. 172–176). In the economic sector therefore there is no common definition for small and medium enterprises. The most precise definition for small and

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