**Conclusion**

This final part of the thesis concludes the study discussing its theoretical and methodological contributions, its practical implications, its inherent limitations, and possible avenues for future research.

**1 Contributions**

The starting point of this research was the claim of a possible relevance loss of management accounting and the following debate in business practice and academic research. A review of prior work highlighted that research in this field is rather fragmented and exhibits several research gaps. Accordingly, the purpose of this study is to close selected gaps and gain a deeper understanding of management accountants' business orientation and extended responsibilities. In particular, two research questions were raised:

**Research question 1:** Why do management accountants act as business partners and what is the impact of this practice on management accountants’ contribution?

**Research question 2:** Does the involvement of management accountants in incentive compensation positively influence the effects of incentive compensation systems and, subsequently, firm performance?

In order to answer the two research questions, I decided to follow an empirical research strategy. I derived two research models and corresponding hypotheses and tested the hypotheses using the PLS technique. Dyadic data for the analyses were gathered by means of a questionnaire-based survey with management accountants and general managers of medium- and large-sized German companies from different industries.

Regarding the first research question, the results offer evidence and robust support for the derived hypotheses. The analyses show that especially subjective norms have a stronger impact on the practice of management accountants acting business-oriented than management accountants' attitude. Moreover, the empirical data reinforce the frequently postulated positive effect of management accountants' business ori-
entation since the analysis shows a positive association between management accountants' practice of acting business-oriented and their contribution.

Regarding the second research question, the analyses show positive associations between the involvement of management accountants in incentive compensation, the effort effects of incentive schemes, and firm performance. Simultaneously, the selection effects have a stronger influence on the effort effects than the consequences resulting from an involvement of management accountants. However, the analyses provide support for the claimed positive effects of wider responsibilities of management accountants.

The findings of the study contribute to management accounting research by providing further evidence on the avenue of regaining relevance. More specifically, the study contributes to the growing stream of literature on management accountants' roles in organizations and supports the claim that management accountants' business orientation and wider responsibilities are valuable. The research shows that management accountants can contribute to managerial decision making and that the task bundle of management accountants should also embrace responsibilities which lie beyond their core activities as information providers.

The study contributes to research in the field of management accounting since it responds the call for more research on management accountants. Furthermore, it especially adds to the empirical management accounting research conducted in German-speaking countries by gathering data in Germany and analyzing the responses with advanced statistical techniques.

The research also contributes to literature and business practice as it addresses management problems. In theory and business practice it is partly questioned if management accountants' business orientation is more favorable than management accountants' independence or if management accountants are capable to have extended responsibilities. The results do not provide an answer as to which of these options is better; however, they offer evidence for the positive effects of a business orientation and an involvement in incentive compensation.

The study also contributes to literature since it employs the well-established theory of reasoned action for answering the first research question. Moreover, thoughts of other established theoretical frameworks are used for answering the second research question. Thus, the study is basically consistent with the calls for more theoretically grounded scholarly activities.
Additionally, the present work contributes to literature with the expansion of existing research instruments and the development of some new scales for measuring the theoretical concepts of the study. Statistics on reliability and validity of those instruments disclose satisfactory results and may serve as basis for future activities in this field.

Finally, whereas other work in this stream of research uses case-based or interview-based approaches or exhibits only smaller sample sizes, I have been able to use a relatively large dyadic data set and advanced multivariate statistics which proved to serve well for data analysis. This approach is also consistent with the request of Atkinson et al. (1997), p. 99f., to apply more multi-informant research designs.

2 Implications for business practice

The results of the study may provide insights for management accountants and general managers in business practice. First of all, the findings should spark a stronger business-oriented behavior of management accountants. To enforce such transformations, general managers should clearly communicate their needs and expectations regarding the services of management accountants. Furthermore, findings encourage management accountants to contribute to their organization in broader areas and to play a part in responsibilities beyond their core tasks. Management accountants should propose and signal to general management that they have the required aptitudes and if general managers’ perception of the competencies of management accountants improves, general managers might allocate wider tasks to management accountants.

However, some organizations might fear a reduced level of objectivity or quality of management accountants’ services if management accountants are getting involved in expanded responsibilities. The results of the study may help management accountants to convince general managers, who might expect a more ‘traditional’ role from management accountants, to involve management accountants more strongly in decision-making processes or in additional responsibilities.

Business partnering and expanded responsibilities require, however, management accountants to have adequate competencies in terms of finance know how, a broad set of soft skills, sound business knowledge, and familiarity regarding organization’s functions and operations. Selected management accountants might exhibit relevant expertise but there might also be management accountants requiring proper training. In addition to individual training programs, corporations should review their HR develop-
ment curriculum accordingly and amend it if necessary. Enhanced schedules could, for instance, embrace programs on effective communication or on business topics and could also include joint get-togethers or social events with general managers to strengthen the relationships. However, this does not mean that programs on rather 'technical' management accounting instruments should be removed from the agenda; but it should be highlighted within the programs that business orientation helps and will probably increases the acceptance of the application of these instruments.

3 Limitations

As it is the case for most research activities, limitations have to be kept in mind when drawing conclusions. Basically, there are five aspects to be mentioned which are beyond the limitations typically mentioned concerning the application of questionnaire-based surveys (for example, limited possibility to answer queries from respondents or reduced flexibility).

First, I selected the theory of reasoned action as theoretical framework to answer research question number one. I am confident that this approach is appropriate for the present research objective which is to analyze the reasons why management accountants act as business partners. Nevertheless, there might also be other predictors of business orientation. Characteristics of management accountants or general managers, for instance the educational background, could influence business orientation or capabilities for wider tasks; these aspects might be, as described in the following explanations on suggestions for future research, a starting point for additional analyses.

Second, I implicitly assume that higher involvement of management accountants is always associated with an increase of the quality of provided services. Taking the discussion of possible concerns of extended tasks of management accountants into account, for example, reduced objectivity due to a higher involvement in managerial decision making, this aspect might reduce the validity of the results.

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269 For example, the work of Naranjo-Gil/Maas/Hartmann (2009) analyzes the impact of CFO characteristics on the use of management accounting innovations and could be a starting point for future research activities.
Third, similar to prior work in this field, I conducted data gathering procedures for the study in a single country, in this case Germany. A possible limitation in terms of generalizability might originate from the fact that roles of management accountants are, at least slightly, different in heterogeneous national or cultural surroundings.\textsuperscript{270}

Fourth, I partly applied newly developed scales in the present research. Even if the instruments exhibit sound reliability and validity statistics, I am aware that they are subject to potential limitations and should be validated in future research activities. The instruments should be further discussed and developed in order to demonstrate appropriateness and to ensure that they capture the relevant subjects.

Fifth, the response rate is lower than desired. Nevertheless, it is deemed acceptable reflecting the complex research design because of the need for dyadic data and the growing number of firms with a policy generally not to participate in survey research.

Reflecting the possible limitations and caveats, I am still confident that the results contribute to management accounting literature and serve as one exhibit for management accounting on its way to regaining and assuring relevance.

4 Suggestions for future research

Although the study offers several insights and findings, the limitations already suggest ample room and potentials to further advance the knowledge in the analyzed field of management accounting research.

First of all, future scholarly activities could extend the findings on the reasons and motifs of management accountants to act in a business-oriented way. Personal characteristics of management accountants and general managers – for instance, aspects on education, career paths, or, as already mentioned, goal orientation of individuals – could be incorporated into the respective research models for future research activities. A starting point for those research activities could also be psychological theories or frameworks like the “Big Five”-factors\textsuperscript{271} for the analysis of personality

\textsuperscript{270} Ref. Ahrens (1996); Granlund/Lukka (1998).

traits or prior management accounting research on knowledge of management accountants.\textsuperscript{272}

A higher business orientation or extended responsibilities might also affect management accountants’ job satisfaction and might be of interest for future research activities. Linking the present research with studies on job satisfaction could (i) respond the call for more research on management accountants’ job satisfaction\textsuperscript{273} and (ii) could also offer evidence for the validity of other management studies suggesting positive associations between participation in managerial decision making and job satisfaction.\textsuperscript{274}

Future scholarly activities could combine aspects of the present study with career paths and promotion criteria of management accountants.\textsuperscript{275} In this regard, potential activities could also pursue prior research on the image of accountants\textsuperscript{276} and link possible changes in accountants’ image with the trend toward business partnering or additionally occupied tasks.

As mentioned before, a possible limitation of the results might be caused due to the fact that the research is conducted in only one country. Since there is no doubt that replication is beneficial,\textsuperscript{277} it might be illuminating to administer a research project across different countries to gain further insights into possible country-specific characteristics and differences. This would also be in line with research on changing roles of management accountants conducted in several countries\textsuperscript{278} or on research on national differences in compensation practices\textsuperscript{279}. In principle, international and cross-cultural studies are regularly suggested in management accounting research and offer room for scholarly activities.\textsuperscript{280}

Moreover, future research activities could validate and further develop the measurement instruments applied in the present research. It may be possible to transfer the

\textsuperscript{272} Ref. Stone/Hunton/Wier (2000).
\textsuperscript{273} Ref. Chenhall (2003), p. 133.
\textsuperscript{274} Ref. Lischeron/Wall (1975), p. 499.
\textsuperscript{275} Ref. Wier/Stone/Hunton (2002).
\textsuperscript{276} Ref. Baldvinsdottir et al. (2009).
\textsuperscript{277} Ref. Lindsay (1995).
\textsuperscript{278} E.g., Sathe (1982), USA; Byrne/Pierce (2007), Ireland; Zoni/Merchant (2007), Italy; Granlund/Lukka (1998), Finland.
\textsuperscript{279} Ref. Jansen/Merchant/Van der Stede (2009).
ideas toward other management disciplines which also encounter a trend of an increasing business orientation, for instance HR.\textsuperscript{281}

Additional research might be beneficial to better understand the causality between activities of management accountants, effects of control mechanisms, and performance. Whereas the cross-sectional data I obtained offers an adequate basis for the present analyses, longitudinal data could offer further insights into the effects of business orientation or extended activities of management accountants. Future research could also address the long-run effects possibly caused by an amended training program for management accountants. Those studies might embrace survey or in-depth case-based research initiatives.

The present research addressed the rather broad aspect of business orientation of management accountants and the particular aspect of an involvement of management accountants in incentive compensation. Future scholarly activities could reaffirm and extend the findings and could analyze an involvement of management accountants in other areas which do not belong to the core activities of management accountants as well. Those could, for instance, embrace corporate functions like marketing or procurement to which management accountants could contribute.

To sum up, the thesis focuses on important aspects for management accounting research and practice. Nevertheless, the conclusion and particularly the last paragraphs on future research potentials, which supposedly cannot be comprehensive, indicate that the field offers a broad set of opportunities for future interesting research endeavors.

\textsuperscript{281} E.g., Ulrich (1997).