

Evaluation of the Relationship Between Management Accounting System, Risk Management and Company Performance By Using Structural Equation Model

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Extensive Summary

1. Introduction

The contraction in balance sheet items, increases in production costs, reductions in profit margins and increases in operating risk indicate that manufacturing companies need a more robust management accounting system and corporate risk management practices. The critical information provided by the management accounting strengthens the risk management structure of the business and facilitates the decision making processes of the managers and contributes to the organizational performance. The function that the management accountant has today is affecting many economies and activities, from keeping accounting records to investing, to setting up a strategy, to merging companies. The management accounting system contributes to the development of the right actions and strategies of the company by preparing the accounting data needed by the operator. As emphasized by Chenhall (2003) and Ismail and Isa (2011), a well-designed and efficient management accounting system helps managers improve their firm performance by making accurate and rational decisions. Protecting firm assets under uncertainty conditions is possible through proper design of the risk management system and effective use in business operations. Risk management affects the ability of the firm to accurately identify and mitigate the threats it faces, thereby protecting the firm's portfolio and improving corporate performance.

High technological change causes firms to be exposed to uncertainty and risk exposure increases. In this context, management accounting and risk management are the control and decision support mechanisms for the protection of business assets. While the management accounting system provides information by means of special applications that are included in the rational form of business decisions, risk management contributes to the improvement of firm performance by protecting firm values and assets. In this context, the management accounting system and corporate risk management create value by providing effective use of resources and help improve firm performance. In this context, an analysis of the impacts of management accounting system and risk management on firm performance is of great value for both manufacturers and researchers.

The objective of this study is to present a perspective to managers, production planners and researchers with an accounting perspective, by examining the management accounting system and the implications of risk management practices on firm performance directly and jointly. The study makes an important contribution to the review of production-oriented firms, which are the predecessors of economic development and development, and to the evaluation of a current situation. Secondly, an accurate and detailed understanding of the sub-dimensions of the management accounting system will help practitioners better understand the management accounting practices and effectively design the business management accounting system. The number of studies examining the relationship between risk management and the management accounting system and the common effects of these two factors on firm performance is limited. In this context, the literature makes a significant contribution in terms of the effectiveness of the risk management and management accounting system on institutional performance. The structural equation modeling analyzes included in the study provide important and valuable findings in terms of identifying both the holistic effects and the sub-factors related to the main factors of the research. In this context, research provides an exploratory and premise infrastructure for future studies.

In the second part of the research, literature review where the variables of management accounting system, corporate risk management and firm performance are discussed in detail, and hypothesis development parts where the inter-variable relationships are found. In the third chapter, the theoretical model, which is put forward in the conceptual framework of the research

2. Conceptual Framework and Hypotheses

The number of studies evaluating risk management and management accounting in the same research and evaluating the effect on firm performance is very limited. Rasid et al. (2014) found that both management accounting and risk management improved the performance of the firm. The findings of Collier and Soin (2013) show that management accounting is an important factor influencing risk management. The information generated in the management accounting system opens the way for decision makers to make the right choices by reducing uncertainty. As Kopp (2005) points out, integrated and comprehensive information is an important parameter for effective risk management and for influencing firm outcomes.

In Eker (2009), it has been determined that the in-process management accounting system on a sample of industrial firms is an important and valid factor in improving managerial performance. The results of Gerdin (2005) also show that integrated and integrated information contributes to the firm's qualitative and quantitative performance. According to Bouwens (2002) management accounting information should be considered narrow and comprehensive. Mohamed and Jones (2014) point out that integrated information is one of the most important acquisitions of management accounting and significantly impacts profitability. Lachmann et al. (2013) estimates that an effective management accounting application significantly improves both qualitative and quantitative firm performance. Henri et al. (2016) argues that the cost information provided by the management account affects managerial decisions, and it is stated that the management accounting system has a direct effect on performance. The structuring of risk management makes it easier to standardize and enforce business policies and procedures in a coordinated manner. Vlaar (2006) states that the risk management structure involves both control and coordination functions, thus affecting the faster and more accurate execution of managerial processes. In Fehle and Tsyplakov

(2005), it is stated that the application of risk management in a transparent and standard way can reduce the uncertainties experienced by firms about product pricing and this will have positive effects in terms of taxes. In other words, having a strong risk management structure allows businesses to get rid of uncertainty and reduce risks and improve their organizational performance. Nahm et al. (2003) finds that the risk management structure has a direct impact on decision making processes for production operations and that it is leading the company's success and recommends that the risk management structure be organized in the most accurate manner. Mu et al. (2009) states that the correct and effective use of risk management techniques and strategies is a factor affecting firms' success in developing new products and organizational performance. The diversity of techniques has an important impact on both the internal stakeholder and the external stakeholder. In this context, the following hypotheses have been established.

H₁: The management accounting system affects firm performance positively and significantly.

H₂: Risk Management Practices affect firm performance positively and significantly.

H₃: The management accounting system and risk management practices together affect firm performance positively and significantly.

3. Sampling, Analysis and Findings

The research universe constitutes from the private manufacturing firms in Istanbul-Turkey. Sample consists of 54 companies that are 21 are machinery / metal and metal goods , 6 are food and beverages, 16 are textile and apparel producers, 8 are electronic and electrical producers, and 3 are chemical and pharmaceutical.

According to statistical values, the firm management accounting system affects the perceived success of the firm positively and significantly ($\gamma = 0.463$ and $p = 0.000$). The change in the obtained gamma value was $\Delta\gamma = 0.025$ according to the result of the previous analysis ($\gamma = 0.438$ and $p = 0.000$). This change confirms that the revised model is structurally more meaningful and achieves a high degree of effectiveness. Therefore, the structural relationship in Hypothesis 1 is statistically verified. As shown in Table 6, the change in the value of the variance was $\Delta R^2 = 2\%$. In other words, with the revision of the model, the structural significance of the structural model increased and the effect of the independent variable on the dependent variable increased. The statistical value of the correlation expressed in hypothesis 2 has reached a higher significance by revising the model. According to the analysis made in the previous step, gamma value and significance were determined as $\gamma = 0,336$ and $p = 0,000$. The findings obtained in the second stage test results show that the difference in the gamma value is $\Delta\gamma = 0.018$. With the elimination of weak parameters, the level of clarification power and meaningfulness of the model has increased. In this context Hypothesis 2 is accepted according to the structural model results. Corporate risk management affects perceived business performance positively and significantly. At the variance level, there is a positive change in the $\Delta R^2 = 1\%$ scale. Hypothesis 3, in which the common effects of the independent variables on the dependent variable were evaluated, was found to be significant according to the revised model results ($\gamma = 0.557$ and $p = 0.000$). The change in the revised model coefficient showed an increase in $\Delta\gamma = 0.028$ compared to the previous step. The variance change detected in this step is measured as $\Delta R^2 = 2\%$. Hypothesis 3 demonstrates that risk management and management accounting are factors that positively affect firm performance. The compliance indices of the revised

model confirm the validity of the theoretical model. The GFI (Goodness Fit Index), which indicates whether a research model is made up of the correct variables and whether the model is theoretically correctly designed, shows that the research model has good structural fit (GFI = 0,96). In addition, the NFI value of a model that measures normality convergence in the context of standardized parameters confirms that the research model has good fit (NFI = 0.991).

Conclusion

The management accounting system influences both the financial and non-financial performance of the firm in a positive direction in a meaningful way through its valuable methods and practices. According to the standardized coefficient of gamma, the magnitude of this effect is 0,463. The improvement of the effectiveness of the management accounting system will have a total impact of approximately 40% on the performance of the manufacturers. The results of this study have confirmed with Pavlatos and Kostakis (2015), Gerdin (2005) and Frezatti et al. (2011). Direct observation of this effect is technically very comprehensive and requires a long term evaluation. However, considering that the management accounting system works in an integrated manner with all the departments of the business, it is possible in practice to have around 40% of the total effectiveness. Managers and accounting practitioners should increase the inclusion of the management accounting system within the firm. Management accounting practice should not be regarded as an activity of the accounting department only. It should be covered by qualitative and quantitative applications in finance, research and development, human resources departments. The relations investigated in sub-hypotheses also show that there are significant and important relationships between the sub-dimensions of management accounting and the financial and non-financial performance of the firm. In this context, the fact that the information provided to the management by the management accounting system is inclusive and timely allows the firm to make the right strategic moves and decisions. According to another finding found in the hypothesis test results, the integration of the management accounting system with the relevant departments of the company increases the level of the non-financial success.

Management accounting and risk management are sub-systems and components of the business with a high reputation. Successful and efficient subsystems that operate in the sense that they are open systems will affect their success in the top system. As a matter of fact, according to the revised results in the structural equality model, the gamma coefficient for the joint effect of the management accounting system and risk management factors on firm performance was realized at the level of 0,557. In the case of variance value, the multiple effect has reached a higher level than the individual effects. Theoretically, the result of this conclusion in business life means; if an enterprise can effectively use the risk management system and the management accounting system effectively, both the economic success of the business will increase and there will be a significant improvement in the company's non-financial indicators. For this reason, enterprises need effective management accounting system and risk management system. The lack of one of these will reduce the manufacture's ability to perform rational and efficient operations.