

# The Impact of Management Control Systems - Strategy Interaction on Performance Management: A Case Study

Darja Peljhan, Metka Tekavčič

University of Ljubljana, Faculty of Economics, Kardeljeva ploščad 17, SI-1000 Ljubljana,  
darja.peljhan@ef.uni-lj.si, metka.tekavcic@ef.uni-lj.si

We study the interaction between management control systems and strategy and its impact on organisational performance considering the way in which multiple aspects of control systems and dimensions of context combine in a variety of ways to enhance performance. Our purpose is to investigate the relationship among management control systems, strategy and organisational performance in a particular company. The contribution of this study is that it upgrades the existing theory in that it does not only establish a relationship between strategy and management control systems, but also considers how this relationship impacts on organisational performance. The study shows that the combination of performance-driven behaviour and regular use of management control systems leads to improved results. The second contribution of the study is that it incorporates a wider range of controls, including informal controls as being equally important as formal controls, to provide a more comprehensive analysis, as opposed to the majority of prior studies focusing on a more limited range of controls. In this way, this paper contributes to the literature in terms of examination of the broader components of management control systems than was previously done.

**Key words:** management control systems, strategy, levers of control, performance, performance management

## 1 Introduction

In the paper, we study the interaction between management control systems (MCS) and strategy and its impact on organisational performance from contingency theory point of view considering the way in which multiple aspects of control systems and dimensions of context combine in a variety of ways to enhance performance (see also: Chenhall and Langfield-Smith, 1998; Selto *et al.*, 1995). Contingency theory suggests that the design and use of MCS is influenced by certain factors which are internal (*e.g.* strategy) or external (*e.g.* environment) to the company (Hickson *et al.*, 1969; Lawrence and Lorsch, 1967; Woodward, 1965). The basic argument underlying contingency theory is that the organisation neither functions in isolation of the external environment (*i.e.* level of uncertainty may change) nor does it remain static or constant with respect to its internal environment, as for example, size or technology may change (Otley, 1980). As one or more of these factors change, they are likely to cause the company to redesign at least some aspects of its MCS.

We study management control from the Simons' (1995a, 1995b, 2000) four levers of control framework point of view (see: Appendix 1). The four levers of control consist of: diagnostic control systems; interactive control systems; beliefs systems and boundary systems. The Simons' (1995b) levers of control framework combine a focus on strategy with a wider view of the control mechanisms that can be utilised to implement strategy. Control of business strategy is achieved by integrating these four levers of control. The power of these levers in implementing strategy does not lie in how each is used individually, but rather in how they complement each other when used together. These four levers create tension between creative innovation and predictable goal movement. This tension requires managers of effective companies to know how to achieve both high degrees of learning (innovation) and high degrees of control (efficiency) (Simons, 2000).

In this paper, our purpose is to investigate the relationship among MCS, strategy and organisational performance in a particular company. In the study, MCS are defined broadly as systems conveying useful information to assist managers in their jobs and decision-making to effi-

ciently and effectively achieve the desired organisational goals (see also: Anthony and Govindarajan, 2001; Langfield-Smith, 1997; Otley, 1999). Hence, from this viewpoint and also taking into account the recent developments of MCS (see: Peljhan, 2005, 2007), the proposition is that the use of more comprehensive MCS practices and information results in improved company performance. The case study company is a large Slovenian manufacturing company, called Trimo Trebnje, d.d. (henceforth Trimo). The 1992 – 2004 period is investigated. Trimo has been for many years the leading Slovenian company for production and assembly of pre-fabricated steel constructions, and one of the most important European manufacturers of pre-fabricated buildings and living containers. Trimo is a Slovenia-based company achieving its business vision of becoming the leading European company offering complete solutions in the area of steel buildings.

The paper is divided into six sections. Section 1 is the introduction. Section 2 presents the literature review regarding the research area of the paper. Section 3 is the methodological section, introducing case study research method used in the study. The research results are presented in section 4. Further discussion and interpretation of the research results then follows in section 5. A final chapter concludes the paper, summarising the findings and introducing avenues for future research.

## 2 Literature review

Management control systems are both affected by and affect the strategy process itself (Langfield-Smith, 1997; Simons, 1995b). So far, a significant body of literature has explored the effects of strategy on MCS and, to a lesser extent, the effects of MCS on strategy (Dent, 1990; Langfield-Smith, 1997; Shields, 1997). A first line of research has emphasised the effects of strategy on MCS. The concept of strategy has been generally examined at a strategic-choice level, *e.g.* cost leadership *vs.* differentiation (see: Govindarajan, 1988; Govindarajan and Fisher, 1990) and prospector *vs.* defender (see: Hoque, 2004; Simons, 1987a). These conceptualisations generally take strategy as a given. In these studies, MCS are considered for the most part to be strategy-implementation systems and the last step in the strategic management process (Henri, 2006). This conceptualisation of MCS follows a structural approach whereby the perspective is static and the focus is placed on such issues as the presence or absence of specific systems, their technical properties and their design (Chapman, 1997, 1998).

A second line of research has emphasised the effects of MCS on strategy. Mostly, the concept of strategy has also been examined at a strategic-choice level (see: Abernethy and Brownell, 1999; Chenhall, 2005, Chenhall and Langfield-Smith, 2003; Marginson, 2002). These conceptualisations consider strategy as being influenced by MCS. In these studies, the role of MCS in the formulation of strategy is recognised as well as their continuous implication during strategic management process. This conceptualisation of MCS follows a processual approach whereby the

perspective is dynamic and the focus is on such issues as the dialogue and interaction surrounding the use of MCS (Chapman, 1997, 1998).

Strategy plays a key role within MCS, yet this role is not fully understood, although a growing body of literature has examined the impact of strategy on MCS (for a review see: Langfield-Smith, 1997). Langfield-Smith (1997) suggests that MCS have to be tailored explicitly to support the strategy of the business to lead to competitive advantage and superior performance. Underlying most accounting research is the assumption that MCS contribute to the successful operation and profitability of the company. Also, there is evidence (Govindarajan, 1988) that high organisational performance results from the matching of an organisation's environment, strategy and internal structures and systems. Miles and Snow (1978) suggest that the strategy choice the company makes will affect its MCS, meaning that different types of organisational plans and strategies will tend to cause different control system configurations. Moreover, scholars (Hope and Hope, 1995; Whittington, 1995) suggest that there is an important link between strategy and MCS and that a congruent match of the two variables is essential to performance.

There are several frameworks that show how companies react in a changing competitive environment (see: Peljhan, 2005). Classifications of Miles and Snow (1978) and Porter (1980) appear to be referred to most in the literature. The typology developed by Miles and Snow (1978) is based on how companies respond to a changing environment and align environment with their company. They identified generic strategies which they labelled defender, prospector, analyser and reactor, where defender and prospector are assumed to be at the ends of the continuum. Miles and Snow (1978) argue that defenders will emphasise cost control, trend monitoring and efficiency rather than scanning the environment for new opportunities. Prospectors, by contrast, will use comprehensive planning and measure performance more subjectively. Considering that many contemporary MCS techniques (*e.g.* BSC, informal controls) appear to be better equipped for dealing with the information requirements of highly innovative companies, we postulate that defenders use contemporary MCS techniques to a lesser extent than prospectors. We argue that what is ignored by much of the past research is the potential for MCS to be used much more actively as a tool for formulating and implementing changes in strategic direction. Therefore, we will use an in-depth longitudinal case study to explore and explain this, at the moment insufficiently researched area, of how companies use MCS to facilitate and support the strategic change process in more detail.

## 3 Methodology

In our study, we have followed a case study methodology (Eisenhardt, 1989; Yin, 2003) as the strength of this method is the likelihood of it resulting in a new or upgraded theory (Eisenhardt, 1989). Case studies were undertaken in the past to investigate the role of the MCS in suppor-

ting and influencing the strategic processes within companies (see: Simons, 1990). Chenhall (2003) argues that the generation of propositions concerning novel relationships concerning MCS, processes and their contextual setting are often best identified and elaborated by using case study methods. Moreover, Henri (2006) indicates that qualitative methodologies would be particularly useful to provide further explanations and new insights into issues concerning relationships between MCS and strategy. This is also one of the reasons we decided to use an in-depth explanatory case study method to investigate the relationship between MCS and strategy.

The in-depth explanatory case study enables generation of exhaustive data on the use of MCS to yield much more insightful theories to be further the basis for the learning of other companies. Furthermore, the goal is to build a new theory or to upgrade the existing one based on the empirical findings. New or upgraded theory is the starting-point for further organisational learning (of other companies). Thus, case-based study results do not lead to "practice from practice" learning but foster "practice from theory (built or re-built on practical experiences)" learning. It is important not to uncritically accept all practice as appropriate, but to carefully document the observed affects of different practices in different circumstances. Ittner and Larcker (2002) argue that field-based research may be the only way to truly understand the antecedents and consequences of management accounting practices. What practice-oriented research can contribute is the ability to refine the theories and empirical tests based on acquired knowledge.<sup>1</sup>

When undertaking the case study, multiple sources of evidence were used. Therefore, data was gathered from formal and semi-formal interviews and observations during site visits and through the participation in Trimo's strategic conferences, from the study of internal and external documents and from professional literature. This enabled us a systematic and comprehensive analysis. Data on Trimo's MCS were collected from various sources, including interviews with top and middle managers, company documents and archival records. The use of multiple sources of evidence enabled verification through triangulation, which is the strength of case research (Noda and Bower, 1996). A major concern of the present study was to triangulate managers' views and opinions with "harder" evidence, such as that obtained from documents and archival records. An interview protocol<sup>2</sup> ensured that the same themes were covered with each interviewee. Construct validity of the interview data was pursued through an "action-research" approach. Eden and Huxham (2002) have argued that an action research setting increases the

possibility of being able to access respondents "theory-in-use", which in itself aids validity in this type of research.

The questionnaire used and the semi-structured interviews were carefully constructed and contained questions to elicit information required to investigate research question and as such, it is assumed that construct validity is high. To avoid possible misunderstandings, respondents (top managers) were provided with descriptions of four levers of control from Simons' (1995b) definitions, translated into Slovene. A particular control system was deemed to exert a particular influence only if this effect could be traced to at least three-quarters of respondents. Interview data were continually cross-referenced with other data sources and cross-checked with the chronology of activities and events that took place during the course of the study. This form of triangulation enhanced the internal validity and reliability of the case study material. Finally, a draft research report was prepared and sent to all interviewees for comment. These were evaluated in order to ensure that reported ideas and propositions aligned with managers' experiences. This increased the construct validity of our research (cf. Atkinson and Shaffir, 1998; Yin, 2003).

## 4 Results

Trimo's history begun in 1961 when the company "*Kovinsko podjetje Trebnje*" was founded, as socially-owned enterprise. The next year saw the beginning of another new company, this one called "*Kovinooprema*". In 1971, both companies and some smaller companies merged to form "*Trimo Trebnje*". The main activity of the new company was production of metal elements and equipment made of stainless steel. In the following years, the former Yugoslavia and third world countries had many infrastructure and other projects, creating a high demand for Trimo's products. The 1980s, however, brought crises in the export markets and the company faced its first major challenge. It responded with the modernisation of the production line and the introduction of new fireproof products.<sup>3</sup> For a short time it seemed that the company overcame its problems but in 1991 Slovenia became independent and the former multiethnic state of Yugoslavia fell apart. As Trimo lost the majority of its domestic (former federal) market it had to suddenly re-orientate towards more competitive foreign markets, especially in the European Union, and the emerging Central and Eastern European markets (see: Šević, 2005).

<sup>1</sup> As case-based method is not so widely used in Slovenia as a survey method, it has to be emphasised that the notion of external validity for case methodology relates to the generalisability of the results to the underlying theory. Therefore, case studies are generalisable to theoretical propositions and not to populations. In this sense, the case study, like experiments, does not represent a sample. Hence, the study's goal was to expand and generalise theories (i.e. analytical generalisation).

<sup>2</sup> The interview protocol is not included in the paper due to its length. If required it can be provided by the author.

<sup>3</sup> Before modernisation, Trimo used polyurethane as the filling for the building panels. After modernisation, they have used environmentally friendlier fireproof mineral wool that enables them to penetrate to more demanding markets.

As Trimo encountered many problems at the beginning of the 1990s, a true company turnaround was needed and that also meant the need for a new vision and a different approach to developing and implementing business strategy. The major turnaround of the company was achieved in 1992 when new top management was appointed. Today, Trimo is a joint-stock company with €44,100 value added per employee, internationally-oriented with 74 per cent of exports, mainly in Europe, operating in 50 countries (Trimo, 2006). Their main products include pre-fabricated steel buildings, steel structures, façades, roofs, containers and sound-isolating systems. Trimo's main product is called "complete solutions" and includes a mix of all the products and services Trimo offers, from an idea and draft to the finished building. When looking into Trimo's production programme, there is no similar company in Slovenia. Trimo is the market leader in the area of roofs and façades from mineral wool panels in west and central Europe and in the area of steel constructions in Slovenia (Kranjec, 2003). With its business orientation towards offering complete solutions and with a broad production programme, Trimo cannot be directly compared to any of its competitors that are all manufacturers with relatively focused production programmes (Trimo, 2005c). Trimo builds its strategy of long-term growth of the company on internationalisation (Trimo, 2004). As a result of a successfully implemented turnaround, Trimo has made significant improvements in the way it runs its business that results in the performance increasing year by year. In the period from 1992 to 2004 revenues and value added per employee grew seven times, export grew eight times and the number of employees decreased by 21 per cent (Trimo, 2005a).

In the early 1990s Trimo pursued a defender strategy (Trimo 2005c) as defined by Miles and Snow (1978). It was a company with a relatively narrow production-oriented business scope. They paid primary attention to improving the efficiency of their existing operations and offered more limited products than competitors, and competed especially through costs. They engaged in little product and market development. At the beginning of the turnaround, the company looked at the fundamental question: "What are we really about? – the essence of Trimo", as they strived to set up their vision, mission and strategy in 1993. Today, the emphasis is on the learning organisation. Mission of the company is to facilitate original and complete solutions in the area of steel buildings. The mission reflects itself in the following stakeholder approach directions:

- To assure customers an increase in effectiveness by successful accomplishment of solutions.
- To develop the potentials of each individual within the company.
- To build a financially strong company that delivers adequate ROE growth of the company to the shareholders.
- To be sensitive to the environment and aware of the need to protect it for future generations and to support different social and environmental activities.

On the other hand, in the second half of 1990s, especially since 1998, Trimo has begun to pursue a prospector strategy, continually searching for market opportunities, and regularly experimenting with potential responses to emerging environmental trends. They have become strongly focused on product and market development, but still considering costs as prices of their inputs, especially raw materials, vary a lot. Trimo's strategy can be characterised as differentiation strategy focusing on creating a product or service that is perceived by customers as something unique. When Trimo was in defender stage, it used control systems less intensively than in prospector stage, when they attach a great deal of importance to forecast data in control systems, setting tight budget goals, and monitoring outputs carefully.

In 1998, Trimo achieved the breakthrough in its internationalisation (see: Peljhan, 2005) causing the business to expand. They stated a new vision in 1998 very ambitiously: "To become the leading producer of pre-fabricated buildings in Europe by 2010". In 2001, they redefined it even more ambitiously to "...become the leading European company offering complete solutions in the area of steel buildings". From 2001, the product that differentiates Trimo from its competitors has been called "complete solutions" that Trimo provides to its customers. Although Trimo is a manufacturing company, services (design, projecting, technical service) play very important part in providing the complete solution to their customers. In 2002, Trimo's decision to transform itself from a simple (production) company to the highly technological and engineering company began to show results. The share of low-educated employees has been falling, while the share of the highly educated people has been rising. In 2002, each employee had around 50 hours of education and training. Further, in 2002, Trimo started to implement Balanced Scorecard (BSC) and upgraded Total Quality Management (TQM) programme, which has been the important part of strategic directions of the company from 1992 on. The main novelty was introduction of "Key Files" as the tool they use for facilitating process improvements. Annually, they invest around 3 per cent of revenues in new products' development. In 2003, Trimo launched a new production line for fireproof façade panels to expand the existing selection of façade panels with a new environmentally-friendly product. In 2004, European Foundation for Quality Management (EFQM) recognised Trimo for excellence. Also in 2004, production capacities were increased and production flexibility improved to accommodate the enormous product range, which prompted the construction of a new warehouse for raw materials.

There was a huge effect of strategic change on the decision context in Trimo. The change process created a context where decision-making by top management became increasingly complex and unpredictable as new opportunities altered strategic objectives and changed the priorities placed on those objectives. Abernethy and Brownell (1999) argue that in this situation, top management redefines goals and objectives. This can create a level of uncertainty or ambiguity for subordinates as to the prio-

rities or preferences on which to focus their attention. In addition, the technological and production changes associated with changes in product mix and with new product development, required that new routines be learnt. As Galbraith (1973) notes, these conditions impose additional demands on the organisation's information processing capabilities. That also was the case in Trimo.

At 2005 Strategic Conference, the Managing Director briefly sketched the company's background examining the turnaround of Trimo from 1992 to the present. The basic business concepts of continuous improvement, quality, and customer satisfaction were the key strategies' components for the company's turnaround. The drivers of change for renewal from 1992 on were manufacturing excellence (e.g. productivity and flexibility), responsive product development - the result of an all-pervasive close to the customer philosophy - and extensive "building" of sales network. Trimo's turnaround is a result of the following (Trimo, 2004; 2005d): dedication of each employee to the continuous improvement of the business; development of the highest quality product possible; and the improvement of both internal and external relationships to maintain customer satisfaction. These are simple principles, the most significant of which is each employee's dedication to the concept of continuous improvement, because it is the foundation for other two concepts. Dedication to continuous improvement means never being satisfied with the status quo. It means working every day to improve upon the prior day's performance.

To summarise, key elements of the Trimo's transformation process from 1992 on were the clear vision and business strategy set at the beginning. This vision and strategy have been successfully communicated to all employees. Clearly defined values and norms as building blocks of Trimo's organisational culture helped to shape employee behaviour to fit the new business philosophy of customer orientation, continuous improvements and TQM. The formalised processes of continuous improvements, TQM key files, and care for company property gave employees clear tasks and responsibilities. Consecutive strategic change following the successful turnaround was a change from defender to prospector strategy (see: Miles and Snow, 1978). On the contrary, when turnaround would be unsuccessful, it would manifest itself in a strong resistance to change that was not the case in Trimo. As changes usually induce rational and emotional reactions due to ambiguity felt by participants of the change process, Trimo could not avoid problems of resistance to changes, especially at the beginning (1992-1995) when employees wondered why they need to change the old way of doing things if they all knew the processes very well. Top management has managed to spread the need to change through constant communication and employee training. This awareness of the need to change is the necessary condition for a successful implementation of changes (Kotter, 1996).

In Trimo, they monitor the achievement of strategic goals every six months, while the implementation of annual plans is controlled weekly. Corrective measures are taken as soon as negative deviations are reported.

Employees are informed about the company's results in weekly or bi-weekly departmental meetings, in weekly newsletter (on one page), in quarterly company's magazine, and at annual education days where the Managing Director (MD) presents last years' results and future plans. Trimo modifies its strategy according to the changes in its business environment. They have very good experience with flexible actions as they managed to continually reach or even exceed short- and long-term goals in the last decade. They remain focused on their customers' needs.

Critical success factors that have to be addressed for achieving competitive advantage are people, customers, value added, and environment. These factors are considered in the company as follows (Trimo, 2002):

- *People*: Employees are the key strength of Trimo. Company's power depends on the management and all employees. Values are team work, goal orientation, creativeness, innovativeness, and individual talents.
- *Customers*: Enthusiastic and satisfied customer is the measure of company success. Trimo develops and improves original and complete product and service solutions for its customers.
- *Value added*: Profit and value added growth and cash flow available enable quicker company development.
- *Environment*: They take care of orderly factory and are friendly to their environment. Employees' health is the value accomplished by the healthy way of living.

Trimo began implementing strategic performance management in the prospector period when it realised the importance of aligning all levers of control in the company, so what is critical to the company's success is regularly evaluated and rewarded by using key performance indicators (KPIs). KPIs are used by top management to monitor organisational performance in key strategic areas, as defined by key processes in the company. There are 62 KPIs (cf. Peljhan, 2005). 28 of them are included in BSC. In Trimo, managers consider KPIs once a week at the Management board meeting. In diagnostic control, managers use management-by-exception approach when discussing the reports at the weekly Management board meetings. As Quality Assurance Director (Trimo, 2005b) says: "*Reports contain explanations for KPIs variances and whether they present problems or not*". Only problems (i.e. deviations) are discussed and appropriate actions taken. That the changes trigger revised action plans is reflected in the following Quality Assurance Director statement (Trimo, 2005b): "*In the weekly meetings in which we discuss KPI for each organisational unit (sector) specific decisions are made about what actions we have to take in case of deviations*". Based on observations, we argue that they have been using strategic performance management system quite systematically from 2002 on. In the following years, they will enhance the capabilities of their system by upgrading it to ERP system enabling them to monitor key performance information in real time. Trimo's main performance indicator is value added per employee. This

clearly shows that Trimo is focused on its future development and growth.

Trimo uses balanced measurement systems as a means of communicating to their employees what is important and where the business is heading. Performance measurement systems assist managers in tracking the implementation of business strategy by comparing actual results against strategic goals and objectives (*cf.* Simons, 2000). They use BSC from 2002, although they have measured their performance from financial and non-financial perspective before. At the moment, they are striving to form efficient functional BSCs. They want to focus especially on reducing the number of measures they are currently using. Although the system is well organised, it hasn't yet received the full "buy-in" of some managers as they are still using parallel systems designed in the past. As this is maybe allowed in "transition" period of applying new performance measurement systems, it must not be tolerated when new ERP system will be completely implemented.

One of the major conclusions with regard to Trimo's strategy is that MD's leadership style is a very important determinant of Trimo's successful implementation of the strategy. She is very charismatic and capable of mobilising employees towards achieving common goals. In literature, there are discussions about different types of leaders. When looking into the classification that distinguishes transactional and transformational leadership styles (*e.g.* Bass and Avolio, 1994; Tracey and Hinkin, 1998; Tucker and Russell, 2004), we conclude that she is a true transformational leader with the following characteristics:

- She is a leader of innovation.
- She creates new pathways in an organisation.
- She motivates people to work for a new and greater good and to create change. She appeals to higher motivation and adds to the quality of life in the people and the organisation. She uses authority and power to inspire and motivate people to trust and follow her example.
- She has energy-producing characteristics that generate new changes for the organisation.
- She formulates an inspiring vision, facilitates the vision, encourages short-term sacrifices, and makes pursuing the vision a fulfilling venture.

MD's characteristics of transformational leader were essential in the period of strategic change from defender to prospector strategy. She as a transformational leader (and of course by the help of whole top management team) managed to alter the existing structure of early 1990s and influenced people to buy into a new vision and new possibilities. Based on observations it is concluded that her primary focus since 1992, when she took a managing director position, has been to create a change process continually causing people within the organisation to learn and grow. She builds shared vision and goals and implements them through teamwork and high commitment. Trimo's management believes that fast and open flow of information, ideas and efficient problem-solving are of key importance in order to follow new trends in business and for implementing all the necessary chan-

ges. In order to do that, employees had to change their approach and accept teamwork principles. These principles are used both in managing the company and in actual execution of work.

Information and knowledge from management is transferred to co-workers at weekly meetings. From there information and knowledge is transferred to different work areas and to other employees. This kind of organisational structure also enables different forms of group work. Teamwork also allows for a better specification of the problems and their faster solving. Most of the Trimo's practices are congruent with those usually described at prevailing best practices: extensive training and communication, decentralised decision making, teamwork and employee involvement in problem-solving, as well as high job security and fair compensation. These practices help Trimo to build their competitiveness through people which is also the underlying principle of Trimo's organisational culture. As such, their approach is difficult to imitate and thus presents a true sustainable source of competitive advantage.

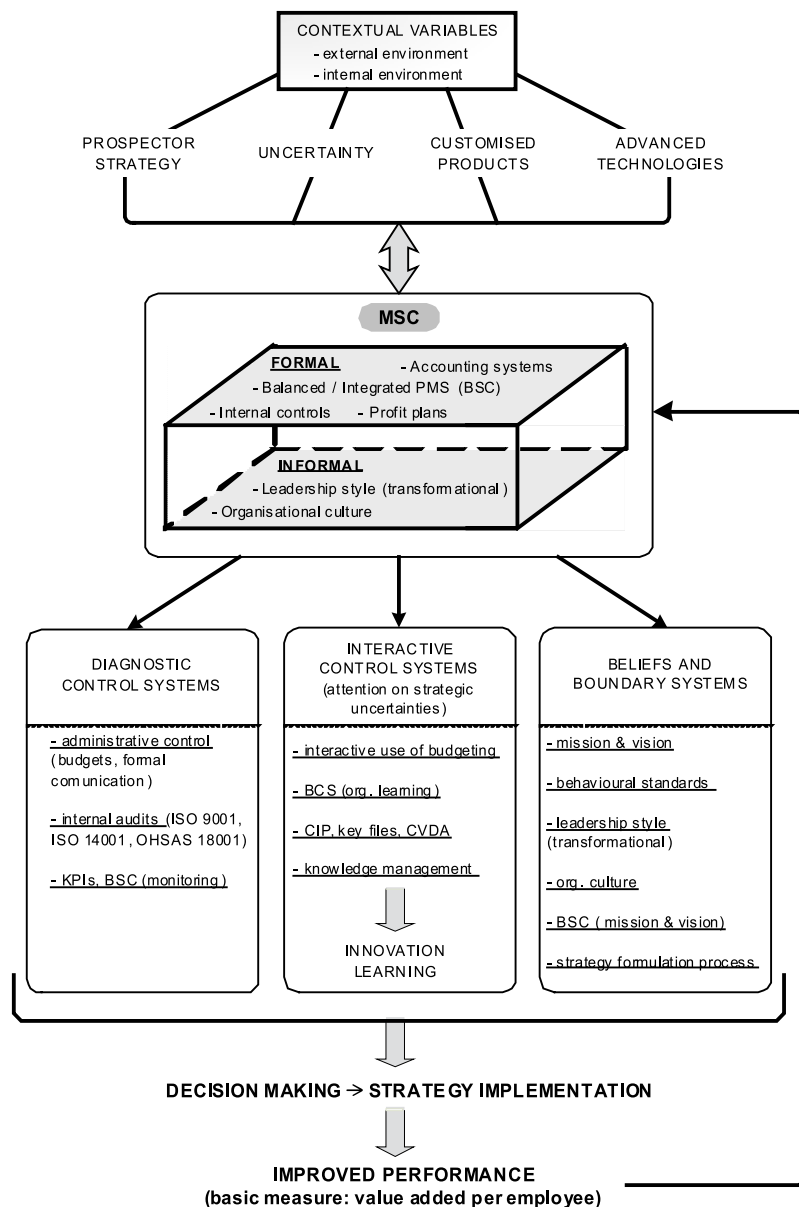
## 5 Discussion

When looking the whole 1992-2004 period, the study's results suggest that Trimo's strategic change from defender to prospector resulted in improved organisational outcomes, as they responded to changed business conditions by altering structural arrangements within the organisation. The present study tested the intervening role of the use of comprehensive MCS between strategy and performance in Trimo during 1992-2004 period. More specifically, the study looked at how the relationship between the strategy moving from defender to prospector and the use of comprehensive MCS evolved during the researched period. It was found that strategy change had a positive relation to Trimo's performance. In addition, as discussed above, strategy change has had a positive relation also to the use of MCS. Trimo has been growth-oriented in the whole researched period (and still is). Also, it has been increasing the usage of more comprehensive MCS practices year by year.

Trimo measures its performance with respect to the key elements of its strategy. Therefore, it uses strategic performance management system (*cf.* Kaplan and Norton, 2001; Simons, 2000). Based on observations, it is argued that they have been using such a system quite systematically from 2002 on. Furthermore, they have enhanced the capabilities of their system by upgrading it to ERP system enabling them to monitor key performance information in real time. Trimo's main performance indicator is value added per employee. This clearly shows that Trimo is focused on its future development and growth. Trimo uses balanced measurement systems as a means of communicating to their employees what is important and where the business is heading. Performance measurement systems assist managers in tracking the implementation of business strategy by comparing actual results against strategic goals and objectives (*cf.* Simons, 2000).

To conclude the discussion chapter, the basic components of the refinement of the existing theory on implications of MCS for organisational performance management are presented (see: Figure 1). The in-depth explanatory case study method has enabled generation of exhaustive data on the use of MCS to upgrade the existing

theories. The upgraded theory is the starting-point for further organisational learning (of other companies) enabling “practice from refined theory” learning. This study has carefully documented the observed affects of different practices in different circumstances.



Legend:

Abbreviation	Meaning
BSC	Balanced Scorecard
CIP	Continuous Improvement Process
CVDA	Cost-Value Driver Analysis
KPI	Key Performance Indicator
MCS	Management Control System(s)
PMS	Performance Measurement System(s)

Figure 1: Implications of MCS for organisational performance management in Trimco

Considering the diffusion of the use of MCS in Trimo, the conclusion is drawn that this company does not fit in the frames of recent research results in Slovenian companies that traditional management tools are dominating the more recently developed and more strategic-oriented practices (e.g. Peljhan *et al.*, 2005; Tekavčič and Peljhan, 2003). Also, when considering the 1992-2004 period, the trend seems to be towards increasing use of the latter type. The findings of the present study indicate that Trimo systematically uses comprehensive MCS information and practices. Trimo began implementing strategic performance management in the prospector period when it realised the importance of aligning all levers of control in the company, so what is critical to the company's success is regularly evaluated and rewarded by using KPIs. Hence, in the discussion of theory refinement proposals we focus on companies pursuing prospector strategy orientation, operating in uncertain environment, producing innovative customised products with advanced technologies; all these characterise today's complex business environment.

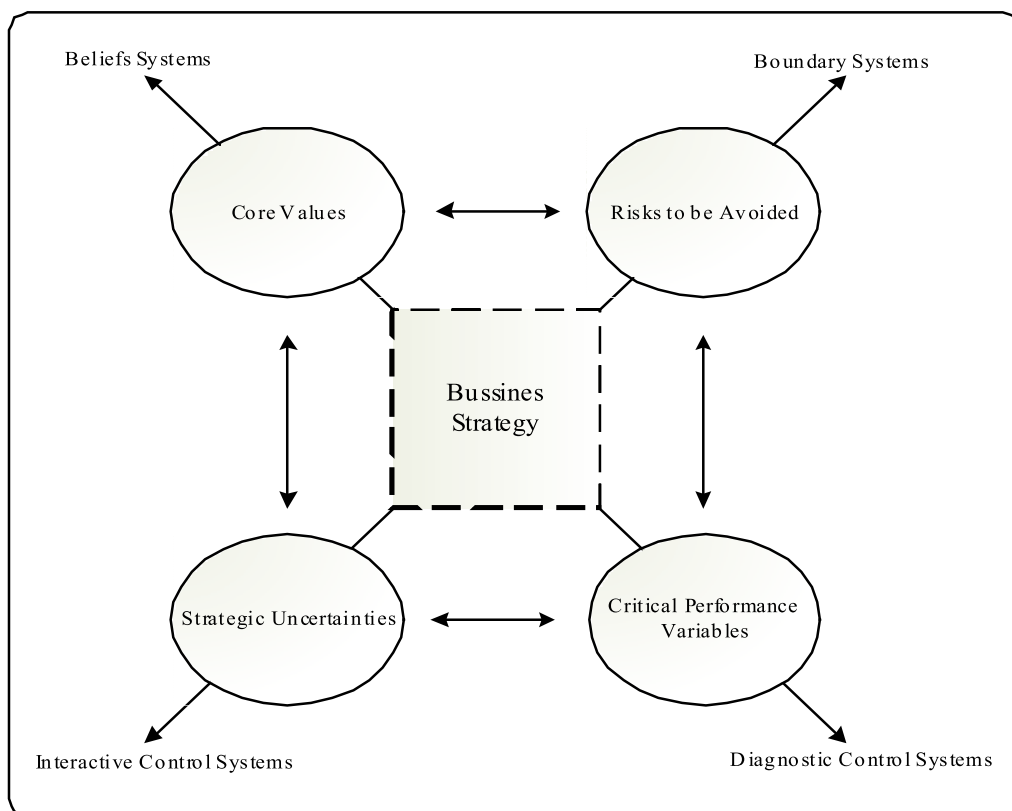
First, this study upgrades the existing theory in that it not just establishes a relationship between contextual and MCS variables, but also considers how this relationship impacts on organisational performance. It is argued that managers and other employees need to display performance-driven behaviour (*i.e.* goal-oriented behaviour) for efficient and effective management control to be achieved. This research shows that the combination of

performance-driven behaviour and regular use of MCS leads to improved results. We identified factors that influence positively performance-driven behaviour and can be used also by other companies (for more details on this see Peljhan, 2005).

Second, research in accounting has paid much attention to the role of MCS to emphasise control and, to a lesser extent, to stress flexibility. To date, most of the empirical research has focused on issues related to the diversity of measurement (*i.e.* the use of broad set of financial and non-financial measures) and has overlooked the use of MCS as a whole. Therefore, this study fills this void as it considers the importance of holistic use of formal and informal MCS that make cause-and-effect relationships transparent and keep managers from sub-optimising by improving one measure at the expense of others.

Third, one of our important research conclusions for further refinement of the theory is that organisational culture has been overlooked in recent MCS studies. We would like to emphasize that elements of culture are considered as informal controls which act as a starting point for the design and use of formal control systems. This study concludes that control systems are material artefacts or pattern behaviour influenced by the underlying value structure that creates meaning in the organisation. Therefore, this study argues, that current MCS theory has to be refined in considering more informal controls, like organisational culture and leadership style, as catalysts of

#### Appendix 1: Four Levers of Control



Source: Simons 1995a.



efficient formal controls. Implications of MCS for organisational performance management can be properly explored and explained only when paying regard to both, formal and informal controls.

## 6 Conclusion

Ideally, the role of strategy is dynamic, involving managers in continually assessing the way combinations of environmental conditions, technologies and structures enhance performance. This study's conclusion is that MCS influence the implementation and monitoring of strategies, providing feedback for learning and information to be used interactively to formulate strategy further. Few studies in MCS have investigated these issues (see: Simons, 1987b, 1991, 1994), rather, most have been restricted to identifying MCS that are appropriate for different strategic models (Chenhall, 2003). Therefore, the findings of the paper fill this void. The important contribution of this study is that it upgrades the existing theory in that it does not only establish a relationship between strategy and MCS, but also considers how this relationship impacts on organisational performance. The study shows that the combination of performance-driven behaviour and regular use of MCS leads to improved results.

The second contribution of the study is that it incorporates a wider range of controls, including informal controls (e.g. organisational culture, leadership style) as being equally important as formal controls (e.g. accounting systems, BSC, profit plans, internal controls), to provide a more comprehensive analysis, as opposed to the majority of prior contingency studies focusing on a more limited range of controls. In this way, this paper contributes to the literature in terms of examination of the broader components of MCS than was previously done.

Consistent with the research design and methodology, the scope of this research is limited in the following respects. First, one of the problems in writing this paper was deciding where to draw the boundaries among different disciplines (i.e. accounting, general and strategic management, HRM, manufacturing and operations management, marketing, and organisational behaviour) as the area of MCS represents an important and wide-ranging topic. Second, only one company was studied due to depth and breath of the research project. Third, both the industry and site were selected based on the preset criteria for selection (see: Peljhan, 2005). Directions for future research stem from the paper's findings as well as from missed opportunities that indicate opportunities for future research. It would be worthwhile to conduct a longitudinal study on a wider sample of companies to study how and why they change their strategic orientation and the use of MCS and how this has impacted their decision-making, actions and performance management. This study can combine case-study as well as survey methods. The role of the present study is that it provides an impetus for future researchers to address these issues and to move beyond existing models of control.

## References

- Abernethy, M. A. & Brownell, P. (1999). The role of budgets in organizations facing strategic change: an exploratory study, *Accounting, Organizations and Society*, 24: 189-204.
- Anthony, R. N. & Govindarajan, V. (2001). *Management Control Systems*, 10<sup>th</sup> ed., McGraw-Hill Irwin, Boston.
- Atkinson, A. A. & Shaffir, W. (1998). Standards for Field Research in Management Accounting, *Journal of Management Accounting Research*, 10: 41-68.
- Bass, B. M. & Avolio, B. J. (eds) (1994). *Improving Organizational Effectiveness through Transformational Leadership*, Sage, Thousand Oaks.
- Chapman, C. S. (1997). Reflections on a contingent view of accounting, *Accounting, Organizations and Society*, 22: 189-205.
- Chapman, C. S. (1998). Accountants in organizational networks, *Accounting, Organizations and Society*, 23: 737-766.
- Chenhall, R. H. (2003). Management control systems design within its organizational context: findings from contingency-based research and directions for the future, *Accounting, Organizations and Society*, 28: 127-168.
- Chenhall, R. H. (2005). Integrative strategic performance measurement systems, strategic alignment of manufacturing, learning and strategic outcomes: an exploratory study, *Accounting, Organizations and Society*, 30: 395-422.
- Chenhall, R. H. & Langfield-Smith, K. (1998). Adoption and benefits of management accounting practices: an Australian study, *Management Accounting Research*, 9: 1-19.
- Chenhall, R. H. & Langfield-Smith, K. (2003). Performance measurement and reward systems, trust and strategic change, *Journal of Management Accounting Research*, 15: 117-143.
- Dent, J. F. (1990). Strategy, Organisation and Control: Some Possibilities for Accounting Research, *Accounting, Organizations and Society*, 15: 3-25.
- Eden, C. & Huxham, C. (2002). *Action Research. Essential Skills for Management Research*. Editor: Partington, D. London: Sage Publications.
- Eisenhardt, K. M. (1989). Building Theories from Case Study Research, *The Academy of Management Review*, 14: 532-550.
- Galbraith, J. R. (1973). *Designing Complex Organizations*, Addison-Wesley Publishing Company, Reading.
- Govindarajan, V. (1988). A contingency approach to strategy implementation at the business-unit level: integrating administrative mechanisms with strategy, *Academy of Management Journal*, 31: 828-853.
- Henri, J. (2006). Management control systems and strategy: A resource-based perspective, *Accounting, Organizations and Society*, 31: 529-558.
- Hickson, D. J., Pugh, D. S. & Pheysey, D. C. (1969). Operations Technology and Organization Structure: An Empirical Reappraisal, *Administrative Science Quarterly*, 14: 378-397.
- Hope, T. & Hope, J. (1995). *Transforming the Bottom Line*, Nicholas Brealey Publishing, London.
- Hoque, Z. (2004). A contingency model of the association between strategy, environmental uncertainty and performance measurement: impact on organizational performance, *International Business Review*, 13: 485-502.
- Ittner C. D. & Larcker, D. F. (2002). Empirical managerial accounting research: are we just describing management consulting practice, *The European Accounting Review*, 11: 787-794.
- Ittner, C. D., Larcker, D. F. & Randall, T. (2003). Performance implications of strategic performance measurement in finan-

- cial services firms, *Accounting, Organizations and Society*, 28: 715-741.
- Kaplan, R. S. & Norton, D. P. (2001). *The Strategy Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment*, Harvard Business School Press, Boston.
- Kotter, J. P. (1996). *Leading Change*, Harvard Business School Press, Boston.
- Kranjec, S. (2003). Trimo želi postati vodilni v Evropi [Trimo wants to be the European leader], *Finance* (Priloga), 28 October: 20.
- Langfield-Smith, K. (1997). Management control systems and strategy: a critical review, *Accounting, Organizations and Society*, 22: 207-232.
- Lawrence, P. R. & Lorsch, J.W. (1967). *Organization and environment: managing differentiation and integration*, Harvard University, Cambridge.
- Marginson, D. E. W. (2002). Management control systems and their effects on strategy formation at middle-management levels: Evidence from a U.K. organization, *Strategic Management Journal*, 23: 1019-1031.
- Miles, R. E. & Snow, C. C. (1978). *Organizational Strategy, Structure and Process*, McGraw-Hill Book Company, New York.
- Noda, T. & Bower, J.L. (1996). Strategy making as iterated processes of resource allocation, *Strategic Management Journal*, 17(7): 159-192.
- Otley, D. T. (1980). The contingency theory of management accounting: achievement and prognosis, *Accounting, Organizations and Society*, 5: 413-428.
- Otley, D. T. (1999). Performance management: A framework for management control systems research, *Management Accounting Research*, 10: 363-382.
- Peljhan, D. (2005). *Management Control Systems for Organisational Performance Management: A Case of a Slovenian Company*, PhD Thesis, University of Ljubljana, Faculty of Economics.
- Peljhan, D. (2007). The role of management control systems in strategy implementation: The case of a Slovenian company, *Economic and Business Review*, 9: 257-280.
- Peljhan, D., Tekavčič, M. & Kosi, U. (2005). Advances in Performance Measurement: Evidence from Slovenian Companies, *3<sup>rd</sup> International Conference on 'Accounting and Finance in Transition'*: CD Proceedings. University of Greenwich, Business School: London.
- Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, The Free Press, New York.
- Selto, F. H., Renner, C.J. & Young, S. M. (1995). Assessing the Organizational Fit of a Just-In-Time Manufacturing System: Testing Selection, Interaction and Systems Models of Contingency Theory, *Accounting, Organizations and Society*, 20: 665-684.
- Shields, M. D. (1997). Research in management accounting by North Americans in the 1990s', *Journal of Management Accounting Research*, 9: 3-62.
- Simons, R. (1987a). Accounting control systems and business strategy: An empirical analysis, *Accounting, Organizations and Society*, 12: 357-374.
- Simons, R. (1987b). *Planning, Control, and Uncertainty: A Process View*. In: *Accounting and Management: Field Study Perspectives*. Editors: Bruns, W. J. Jr. & Kaplan R.S. Boston: Harvard Business School Press.
- Simons, R. (1990). The role of management control systems in creating competitive advantage: new perspectives, *Accounting, Organizations and Society*, 15: 127-143.
- Simons, R. (1991). Strategic orientation and top management attention to control systems, *Strategic Management Journal*, 12: 49-62.
- Simons, R. (1994). How new top managers use control systems as levers of strategic renewal, *Strategic Management Journal*, 15: 169-189.
- Simons, R. (1995a). Control in an Age of Empowerment, *Harvard Business Review*, 73(2): 80-88.
- Simons, R. (1995b). *Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal*, Harvard Business School Press, Boston.
- Simons, R. (2000). *Performance Measurement and Control Systems for Implementing Strategy*, Prentice Hall, Upper Saddle River.
- Šević, Ž. (2005). A Puzzle of Emerging Markets: A Systemic 'Surprisingability', *Managerial Finance*, 31(12): 1-10.
- Tekavčič, M. & Peljhan, D. (2003). Insights into managerial tools related to cost management in Slovenian companies, Rijeka Faculty of Economics, *Journal of Economics and Business*, 21(1): 83-99.
- Tracey, J. B. & Hinkin, T. R. (1998). Transformational Leadership or Effective Managerial Practices? *Group & Organization Management*, 23: 220-236.
- Trimo (2002). Business Excellence Report.
- Trimo (2004). Semi-formal interviews with Managing Director and her presentation at the 2004 Strategic Conference, Bled, 6-7 February 2004.
- Trimo (2005a). Managing Director's presentation at the 2005 Strategic Conference, Bled, 4-5 February 2005.
- Trimo (2005b). Interview with Quality Assurance Director, 7 June 2005.
- Trimo (2005c). Interview with Managing Director, 28 June 2005.
- Trimo (2005d). Business manual, 9<sup>th</sup> ed.
- Trimo (2006). Annual Report 2005.
- Tucker, B. A. & Russell, R.F. (2004). The Influence of the Transformational Leader, *Journal of Leadership and Organizational Studies*, 10(4): 103-111.
- Whittington, R. (1995). *What is Strategy - And Does it Matter?*, Routledge, London.
- Woodward, J. (1965). *Industrial Organization: Theory and Practice*, Oxford University Press, London.
- Yin, R. K. (2003). *Case study Research: Design and Methods*, 3<sup>rd</sup> ed., Sage Publications, Thousand Oaks.

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**Darja Peljhan** is an assistant professor at the Department of Management and Organization at the Faculty of Economics, University of Ljubljana. Her research interests are in management control systems and performance management. She attended many international conferences, where she presented papers in her research area and published several articles in Slovene, European, and US journals.

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**Metka Tekavčič** is an associate professor at the Department of Management and Organization at the Faculty of Economics, University of Ljubljana. She is the Head of the Institute of Management and Organisation. Her research interests are in cost management and performance measurement. She attended many international conferences, where she presented papers in her research area and published several articles in Slovene, European, and US journals. She is a member of editorial boards in several professional journals from her research field.

**Vpliv vzajemnega delovanja managerskih sistemov nadzora in strategije na obvladovanje uspešnosti poslovanja: študija primera**

V prispevku proučujemo medsebojno delovanje managerskih sistemov nadzora in strategije ter njegov vpliv na uspešnost poslovanja. Naš namen je raziskati odnos med managerskimi sistemi nadzora, strategijo in uspešnostjo poslovanja v izbranem slovenskem podjetju. Prispevek pričujoče raziskave je v tem, da nadgrajuje obstoječo teorijo, ker se ne osredotoča le na proučevanje odnosa med stategijo in managerskimi sistemi nadzora pač pa upošteva tudi vpliv tega odnosa na uspešnost poslovanja podjetja. Ugotovili smo, da kombinacija ciljno usmerjenega vedenja ter redne uporabe managerskih sistemov nadzora vodi do boljših poslovnih rezultatov. Drugi prispevek raziskave je v tem, da vključuje širok nabor kontrolnih mehanizmov, saj upošteva tudi neformalne oblike nadzora kot enakovredne formalnim. S tem omogoča celovitejšo analizo kot prejšnje raziskave s tega področja, ki so se osredotočile na bolj omejen nabor kontrolnih mehanizmov (predvsem formalnih). Na ta način članek nadgrajuje obstoječo literaturo s področja proučevanja managerskih sistemov nadzora.

**Ključne besede:** managerski sistemi nadzora, strategija, vzvodi nadzora, uspešnost poslovanja, obvladovanje uspešnosti poslovanja