

An Influence of Strategic Awareness on Management Control: Evidence from Polish Micro, Small and Medium-sized Enterprises

Joanna Dyczkowska¹, Tomasz Dyczkowski²

Primary submission: 29.10.14. Final acceptance: 12.12.14

Abstract

Purpose: The paper investigates whether employees' strategic awareness influences the shape of management control systems (MCSs) in Polish micro, small and medium-sized enterprises (mSMEs).

Methodology: The study is based on data obtained from 223 companies between November 2010 and January 2012. The quantitative analysis used a set of variables which depicted MCSs: 'goal-setting process', 'control framework' and 'organisation of control'. Strategic awareness was considered an independent variable.

Findings: The results showed positive correlations between strategic awareness and considered variables. Regression models developed by the authors proved statistically valid. The study evidences, that increasing employees' strategic awareness stimulates their participation in goal-setting, contributes to the development of more comprehensive MCSs, or may even imply formalisation of management control.

Research limitations: The study does not include an analysis of the extent to which employees find MCSs useful in their work. This will be considered in future research. Another possible extension of the project is to identify factors which enable the capturing of the dynamic character of MCSs and their changes over time.

Practical implications: The knowledge of MCSs does not explain whether or not the strategic orientation of a company stimulates a need for MCS. Such knowledge may be important to managers who have to face Polish employees' general aversion to control.

Originality: The study contributes to the limited body of knowledge in a scope of relations between employees' strategic awareness and control mechanisms in Polish mSMEs.

Keywords: management control systems, micro, small and medium-sized enterprises, strategic awareness

JEL: L21, M49

¹ Wrocław University of Economics
Corresponding author, correspondence address: Komandorska 118/120 St., 53-345 Wrocław, e-mail: joanna.dyczkowska@ue.wroc.pl.

² Wrocław University of Economics
Corresponding author, correspondence address: Komandorska 118/120 St., 53-345 Wrocław, e-mail: tomasz.dyczkowski@ue.wroc.pl

Introduction

A competitive advantage of business organisations depends more on intangibles such as the knowledge, capabilities and relationships, which are created by employees rather than tangible physical assets (Kaplan and Norton, 2000). Lower-level employees co-create a final value for customers, being a front-line staff responsible for putting a strategy into action. There arises, therefore, a need for the effective communication of a strategy to employees at every level of an organisational hierarchy.

Steiner (1979) maintained that one of pitfalls of corporate planning was a failure to appreciate the necessary involvement of front-line staff. To avoid that pitfall, three conditions must be met. Firstly, employees should have adequate information. Secondly, they must be authorised to make decisions and be rewarded fairly for meeting objectives. Finally, they should have every opportunity to develop the necessary competences (Lawler, 1986; Ledford, 1993; Scott and Tiessen, 1999). Strategic awareness together with a high degree of empowerment contribute to an enhancement of motivation and to employees' commitment to a corporate strategy. Employees may spot business chances and adopt improvements, and in doing so they can shape management control systems.

The main purpose of this paper is therefore to contribute to the limited body of knowledge on relations between employees' strategic awareness and control mechanisms in micro, small and medium-sized enterprises (mSMEs). The authors examine whether or not defining clear strategies and communicating those strategies to employees can affect management control systems (MCSs) in that group of enterprises. Therefore, the influence strategic awareness may have on operational goal-setting will be investigated. The authors will then analyse if a ubiquity of strategies in day-to-day operations makes a need for MCSs more evident, and if so, whether that triggers the formal institutionalisation of MCSs.

Moreover, the current knowledge on MCSs in Polish mSMEs does not explain whether or not the strategic orientation of a company stimulates a need for MCS or if, rather, a deficit of operational data makes managers think about developing MCSs in their companies. Such an answer may be particularly salient to managers of Polish mSMEs who have to contend with Polish employees' general aversion to any control, often perceived as a relic of the 'mind control' of the Communist era. There is therefore a need to create a new business culture in which control epitomises the intention to improve and learn in order to reach common goals. The paper will present results of the authors' research based on quantitative data from 223 Polish mSMEs. The data were collected between November 2010 and January 2012 as part of a broader project on MCSs in Polish companies and institutions.

Theoretical framework

Business strategy

In the management accounting literature, a strategy is considered in terms of strategic patterns (Miles and Snow, 1978), market positioning (Porter, 1980), strategic mission (Gupta and Govindarajan, 1984) and strategic priorities (Chenhall and Langfield-Smith, 1998).

Miles and Snow (1978) distinguish four strategic patterns, which depend on problems that a company may encounter at particular stages of its business life-cycle. Organisations facing entrepreneurial, engineering or administrative problems develop a systematic pattern of behaviour in order to adapt to situational factors. These adaptive decision patterns classify companies into clusters: prospectors, defenders, analysers or reactors. Prospectors are the pioneers in the product and market area (Cinquini and Tenucci, 2008). They focus on product innovation and market opportunities (Jabnoun et al., 2003). Since prospectors are prone to changes, they have informal organisational structures (Stathakopoulos, 1998) and decentralised control systems (Miles and Snow, 1978). Defenders are more likely to concentrate on efficiency and improvements of functions within a narrow scope of their activities. They take care of price, quality, delivery, service, cost control, and try to maintain their niche position on a stable market which is difficult for competitors to enter (Jabnoun et al., 2003). Stathakopoulos (1998) remarks that defenders, unlike prospectors, have formalised organisational structures and centralised control systems. Analysers connect features of prospectors and defenders, since they operate in different product-market domains, whereas reactors respond and make adjustments only when a situation requires any action.

A strategy understood as a market position was introduced by Porter (1980). Porter views a strategy as either a differentiation, a cost leadership or a focus. Differentiation emphasises a product's uniqueness. Uniqueness refers not only to the product features such as quality, innovativeness or design, but also to a delivery system or a quality of post-sales service. An organisation which distinguished itself to establish customer loyalty ought to be better recognised and its products should be better positioned vis-à-vis competitive substitutes (Porter, 1980). An application of the cost leadership attitude indicates that an organisation intends to be the lowest cost producer within its sector, since it may benefit from such factors as the economy of scale, an access to raw materials and first-class technology, or standardized products (Kald et al., 2000; Langfield-Smith, 2007). The focus strategy consists in an orientation on a defined segment of a market respecting: buyer groups, product lines or geographic locations (Kald et al., 2000).

A comprehension of a strategy proposed by Gupta and Govindarajan (1984) applies a life-cycle perspective which assumes that strategic missions in various organisations are contingent on market maturity and the life-cycle phase of the products being offered. Consequently, organisations may employ different archetypes of business strategies: 'build', 'hold' and 'harvest' (Gupta and Govindarajan, 1984). A mission that exemplifies a 'build' strategy aims at increasing a market share and improving its competitive position. Organisations applying such a strategy tend to operate in high growth industries. The 'hold' strategy strives for maintaining market share through quality improvements and marketing campaigns. The 'harvest' strategy, in turn, focuses on maximising short-term earnings rather than on increasing market share. Organisations which formulate missions with a 'hold' message operate in maturing industries; those which apply a 'harvest' one act in declining markets (Kald et al., 2000; Langfield-Smith, 2007).

Strategic priorities derive from the Porter's concept of market positioning. Chenhall and Langfield-Smith (1998) contended that certain management techniques and managerial accounting practices may reinforce organisation's potential to differentiate its products in terms of quality, flexibility, customer service or a design. Those specific techniques and practices include: quality systems, integrated systems, team-based structures, HRM policies, balanced performance measures, employee-based systems, benchmarking and strategic planning techniques (Chenhall and Langfield-Smith, 1998). Low-price strategies involve explicit management techniques and managerial accounting practices which contribute to achieve a cost leadership position. Those techniques and practices encompass: an improvement of processes, innovations in manufacturing systems, cost accounting, and activity-based techniques (Chenhall and Langfield-Smith, 1998).

Management control systems

In order to implement a business strategy, a company needs a tool: the MCS (Simons, 1987). The comprehension of control has been changing. Anthony's (1965) definition underlined managerial input in exercising control. It emphasised that management control leads to the meeting of corporate objectives, and consequently guarantees that resources are acquired and exploited in an effective and efficient way. The effectiveness of using resources is the extent to which corporate objectives are expected to be reached in a given time-frame; efficiency indicates the level of resourcing which is necessary to reach assumed objectives (Otley, 1999).

Control has been also classified in various ways. The most explicit classification consists of formal and informal control (Anthony et al., 1989). Formal control enforces its systematisation into an organised MCS. Whitley (1999) developed a typology of control

systems in reference to their intrinsic features, including degrees of formalisation, standardisation, centralisation, and a scope of control. For instance, duties, responsibilities, reporting relations and communication may be determined in a form of written documents, suggestive of a degree of formalisation. Processes may be regulated by procedures, indicative of a degree of standardisation. Some functions may be assigned to top management, whereas others remain dispersed throughout an organisational hierarchy, determining the degree of centralisation (Herath, 2007).

The design of MCSs has been affected by several variables which have become topics of interest in older and contemporary studies. Chenhall (2003) listed five contextual variables: external environment (Fisher, 1996; Chong, 1996), technology (Dunk 1992; Daft and Macintosh, 1981; Abernethy and Brownell, 1997; Chapman and Chua, 2000; Ittner and Larcker, 1995; Kalagnanam and Lindsay, 1999), organisational structure (Burns and Waterhouse, 1975; Merchant 1981), organisation's size (Burns and Waterhouse, 1975; Merchant, 1981), strategy (Dent, 1990; Simons; 1987, 1991; Govindarajan and Gupta, 1985; Govindarajan and Fisher, 1990; Abernethy and Brownell, 1999) and national culture (Harrison, 1992; O'Conner, 1995; Snodgrass and Grant, 1986; Ueno and Wu, 1993), whose direct or indirect influences on management accounting or MCSs have been tested since 1970s. Langfield-Smith (1997) remarked, however, that strategy itself was not applied as a contextual variable while considering coupling with MCSs until the 1980s.

Interrelations between business strategies and MCSs

Despite the scientific literature discussing the relationship between strategies and MCSs, no research is directly concerned with the sector of micro, small and medium-sized enterprises (mSMEs). This stems from a conviction that in mSMEs an examination of interactions between strategies and MCS may be questionable. Some enterprises belonging to that cluster may have organised MCSs even though they do not have a long-term direction. At the same time, there are organisations that have developed strategies but that do not seem to need MCSs.

There are three types of linkages between a strategy and MCSs: passive, contingent and active. Kober et al. (2007) remarked that the linkages between strategies and MCSs traditionally seemed to be passive, and that MCS was just an outcome of a business strategy. Later studies used contingency theory as their foundation (Kald et al., 2000). The Contingency-based approach postulated that findings may not have been comparable, since different scopes of strategy typologies were assumed, and different paths of business strategy operationalisation were adopted by organisations (Langfield-Smith, 1997). One premise of this approach is that there is no universal set of strategic options

optimal for all businesses in the same industry (Inamdar, 2012). Henri (2006) pointed out that strategy was comprehended in diverse ways in previous studies. In most of cases it was seen as intended, whereas in fact in many cases creation of a strategy was an ongoing, developmental process (Cinquini and Tenucci, 2008) which produced new strategies adjusted to current conditions.

Conversely, the third group of researchers claimed that MCSs might have the proactive function of shaping a strategy (Hopwood, 1987; Dent, 1990; Marginson, 2002). Marginson (2002) investigated how a design and use of MCSs may influence managers' autonomous attitudes to a strategy. He stated that little research examined effects of formal MCSs on strategies, whereas there were some investigations of how informal control – understood as a management style – may affect emerging strategies (Mintzberg 1987; Mintzberg and Waters, 1982; Mintzberg and McHugh, 1985).

Although many researchers have studied the effects of a strategy on MCSs (Govindarajan, 1988; Govindarajan and Fisher, 1990; Simons, 1987; Govindarajan and Gupta, 1985; Chennhall and Langfield-Smith, 1998) it is, in fact, difficult to state what an impact a strategy may have on a design and use of MCSs due to different comprehensions of a strategy and various ways of describing MCSs (Kald et al., 2000). Moreover, Abernethy and Lillis (2001) argued that a dominant factor in MCSs' design was not a strategy itself, but an organisational structure, comprehending it as a participative decision-making process.

Research design

Research outline

The empirical results presented in this paper derive from a research project on a place and functions of management control in enterprises and institutions. The project assumed that practices concerning planning, control, reporting and internal communication may be pinpointed by observing actual managerial information flow rather than by examining procedures which organisations claimed to have implemented. Most micro and many small organisations do not have comprehensive control methodologies, but still their managers monitor most of the activities within the organisation and have insights into reasons for its economic performance.

This paper presents data on 223 micro, small and medium-sized enterprises (operating mostly in Lower Silesia), collected between November 2010 and January 2012, using

a survey method. The examined enterprises were not selected on a random basis, but on a principle of a personal contact to employees originating from a student/alumni network of the authors' university. The survey forms were in most cases filled in by experienced staff of financial and accounting departments or other business support units (44.4%), those working in core functional areas, including production, logistics, or sales (26.5%), managers or owners (9.4%) as well as by employees with a shorter professional experience (19.7%). The surveys were completed with regard to such (nonexclusive) data sources as own professional experience (53.4%), information from managers (33.6%), information from accounting and control departments (28.3%), information from other employees (20.2%), internal reports (18.4%) or publicly available documents, including financial statements (14.8%).

Table 1 depicts the structure of the examined companies in terms of size and domains of business activity. A size of each class (integer numbers) and its share of the analysed group (percentages) are indicated. Dominant values for each subgroup of companies (rows) appear in bold. The same visual presentation will be used in other tables presented in this paper.

Table 1. Composition of the examined mSMEs group

Subgroup \ Size	micro	small	medium	Total*
farming and food industry	–	4 (50.0%)	4 (50.0%)	8
industrial production	2 (6.5%)	11 (35.5%)	18 (58.1%)	31
construction	1 (5.0%)	12 (60.0%)	7 (35.0%)	20
trade and logistics	9 (19.1%)	27 (57.4%)	11 (23.4%)	47
ICT sector	2 (25.0%)	2 (25.0%)	4 (50.0%)	8
finance and insurance	13 (52.0%)	6 (24.0%)	6 (24.0%)	25
services	35 (40.7%)	31 (36.0%)	20 (23.3%)	86
Total	62 (27.8%)	93 (41.7%)	68 (30.5%)	223

* for two companies two areas of operation were considered as primary ones

Source: own elaboration.

When a structure of the research group is analysed, a similar number of companies belonging to micro- and medium-sized clusters (62 and 68 objects respectively) can

be noticed, with an advantage of small enterprises (93 objects, 41.7% of the examined group). The authors are aware that this composition does not reflect the actual profile of the Polish economy, where micro companies are dominant. A sufficient number of objects in each class helps, however, to compare MCSs developed by enterprises of various sizes. A simplified method for qualifying objects to size classes was used. It considered only employment and annual turnover, with standard thresholds. In 70 enterprises where owners or managers did not reveal information on revenues to employees, staff size was treated as the sole criterion.

In terms of business areas, the examined companies fell into seven domains: farming and food industry, industrial production, construction, trade and logistics, information and telecommunication technologies (ICT sector), finance and insurance, and services. The most important categories were services (86 objects) and trade and logistics (47 objects). The medium-sized enterprises accounted for a considerable share of industrial production (58.1%) and ICT or farming and food industries. Small companies were the most common in the construction sector (60.0%) and in trade and logistics (57.4%). Microenterprises dominated finance and insurance (52.0%) and services (40.7%).

The composition of the research group did not entirely correspond with the industrial profile of companies operating in Poland as well as with those acting in the examined region. Based on data from the Yearbook of Labour Statistics 2010 negative differences were noticed for farming and food industries only (-8.4% in comparison to Poland and -2.1% in relation to the region). The opposite tendency was detected in reference to services (+17.8% compared to Poland and +15.4% in relation to the region), finance and insurance sector (+8.2% and +7.8% respectively) and trade and logistics (+5.5% and +4.8% respectively).

Hypotheses

Following Simons (1991), the authors considered an MCS in mSMEs as an interactive tool which forces managers to engage personally and regularly in the decisions of subordinates. It was thus assumed that intended strategies should be communicated downward through the organisation. Moreover, since strategy development may be an evolving process, employees must be kept informed about changes in business strategies. Interestingly, Simons suggested that if an organisation is small and shielded from the need to develop a market strategy, there is little benefit in making selected systems interactive (Simons, 1991). This may be a generalisation; however, it is worth considering whether that opinion applies to Polish mSMEs.

The paper will test three hypotheses.

H1: The higher employees' awareness of corporate strategy is, the more participative a goal-setting process in mSMEs would be.

H2: Employees' strategic awareness in mSMEs affects the way in which management control is exercised.

H3: Employee strategic awareness in mSMEs influences a level of institutional formalisation of management control.

A positive validation of the first hypothesis will require evidence that companies which develop and communicate their strategies to employees will adopt a participative operational planning mode more frequently than those in which strategies are known to executives only or where no strategy is developed at all. Hypothesis H2 will require a clear demonstration that companies with greater strategic awareness cover more control areas within their MCSs, including performance and cost, employees' tasks and work organisation, conformity with legal and internal standards, quality of products or services, as well as reporting for internal purposes. Finally, to test hypothesis H3 it will be necessary to investigate whether strategic awareness stimulates a need to group control activities and delegate them to a special department, position or external consultant.

Research method

The authors used a set of variables which depict MCSs in business organisations: a goal-setting process (GSP), a control framework (CFR) and the organisation of control (OCO), all of which are depicted in Table 2.

In order to measure the participative goal-setting process, the respondents of the survey were asked to answer the first question in Table 2. A similar variable was used by Asel et al. (2010), who applied a degree of autonomy restrictions facing employees. They considered three factors that affect employees' autonomy: pressure on underperforming employees, use of top-down leadership style throughout target setting, and guidelines and codes of conduct for employees exposed to risk.

The second measure – control framework – depicts a type of control. There were five areas of control: (1) performance and cost control, (2) evaluation of employees and organisation of work, (3) legal and formal control, (4) production, service and quality

control, (5) planning, reporting and providing feedback, as well as a situation in which a company conducts no control activities.

Table 2. Description of dependent variables

CHARACTER OF A GOAL-SETTING PROCESS (GSP)		
<i>Q: Does an organisation fix operational goals for particular departments, teams or individual employees? What does this process look like and who participates in it?</i>		
No.	Answers	Score
1.	Employees participate in a goal-setting process	5
2.	Goals are established by senior management in a form of a plan to execute	4
3.	Superiors establish targets for the nearest period	3
4.	Superiors express only general expectations towards employees	2
5.	Employees are expected to perform their duties	1
6.	Employees do not have a scope of their duties defined	0
CONTROL FRAMEWORK (CFR)		
<i>Q: What areas, processes or issues are supervised by a department or a person responsible for control?</i>		
No.	Answers	Score
1.	Corporate performance and cost control	+1
2.	Assessment of employees and organisation of work	+1
3.	Legal and formal control	+1
4.	Production, services and quality control	+1
5.	Planning, reporting and providing feedback	+1
6.	No control activities	0
ORGANISATION OF CONTROL (OCO)		
<i>Q: Is there a department or a person entirely responsible for internal control activities in an organisation?</i>		
No.	Answers	Score
1.	There is a separate management control department	5
2.	Control is executed by external auditors	4
3.	There is a separate control post	3
4.	Control is executed by management or owners of an organisation	2
5.	Control tasks are conducted by assigned persons if necessary	1
6.	No-one is responsible for control	0

Source: own elaboration.

The third measure refers to the level of formalisation. Following Langfield-Smith (1997), formal control encompasses a set of rules, procedures and budgeting systems which serve feed-forward control. Moreover, formal control produces output in a form of feedback to all employees. In order to obtain feedback, an organisation has to monitor a situation, measure performance and analyse variances, since only then can it take corrective or preventive activities and save the intended results (ex-post control).

All the three variables depicting MCSs in mSMEs will be analysed separately as dependent variables of regression models. The models will include strategic awareness as the main independent variable and a set of control variables as indicated in Table 3.

Table 3. Description of independent variables

STRATEGIC AWARENESS (SAW)		
<i>Q: Does an organisation draw up strategic plans and are employees made familiar with them?</i>		
No.	Answers	Score
1.	Strategic plans are drawn up for each area of business activity	5
2.	A strategy is known to employees	4
3.	Strategy is known exclusively to managers	3
4.	There are some general long-term plans developed	2
5.	Planning refers to one-year or even shorter periods	1
6.	An organisation performs day-to-day activities	0
ORGANISATION SIZE (SIZ)		
No.	Option	Score
1.	Medium-sized enterprise (larger)	5
2.	Medium-sized enterprise	4
3.	Small enterprise (larger)	3
4.	Small enterprise	2
5.	Microenterprise	1
LEGAL FORM (LEG)		
No.	Option	Score
1.	Capital company (joint-stock company, limited liability company)	1
2.	Other business forms (partnerships, sole traders etc.)	0

Table 3 (Continued)

PRODUCTION COMPANY (PRO)		
No.	Option	Score
1.	Production company (industrial sector)	1
2.	Other sectors (food, construction, trade, ICT, finance, services)	0
INTERNATIONALISED COMPANY (INT)		
No.	Option	Score
1.	Internationalised company (involved in export activities)	1
2.	Other organisations (acting on a domestic market)	0

Source: own elaboration.

The main independent variable – strategic awareness (SAW) – distinguishes a situation when strategic plans were set for all functional areas and/or a strategy was known to employees (5 and 4 points respectively), to those when a strategy was known to managers only (3 points), or where there were general long- or short-term plans (2 and 1 point respectively) or when an organisation was operating on a day-to-day basis.

The first control variable was organisation size, which also affected management control (Asel et al., 2010). The size of a company was quantified with a five-grade scale of micro, small, and medium-sized companies, and two intermediate levels. The second control variable was the legal status of a company, distinguishing capital companies from partnerships. In the first group there are multiple owners-investors, the other usually consists of family businesses. It is reasonable to investigate whether external control of investors implies more intensive control in companies.

The third control variable was industry affiliation, which was also a control variable in the study of Asel et al. However, the variable used in the authors' model distinguished only industrial production companies from all other business domains. The justification for such a division is that manufacturers are the most frequent users of the MRP and ERP software in Poland, and hence their MCSs should be more developed. Finally, companies which had internationalised their activities were distinguished from those operating strictly within a domestic market. It is reasonable to assume that interactions with foreign partners and an additional risk linked to foreign operations may increase a scope of control within a company.

Research results

Goal-setting processes in Polish mSMEs

In the examined enterprises, the following planning approaches were distinguished: participative (answer 1), top-down (options 2–3), rudimentary (answers 4–5) and ad hoc organisation of work (option 6). The structure of answers is indicated in Table 4.

Table 4. Goal-setting processes in mSMEs

Identified situation Feature	Employees participate in a goal-setting process	Goals are established by senior management in a form of a plan to execute	Superiors establish targets for the nearest period	Superiors express only general expectations towards employees	Employees expected to perform their duties	Employees are do not have a scope of their duties defined
microenterprise	10 (16.1%)	7 (11.3%)	18 (29.0%)	9 (14.5%)	16 (25.8%)	9 (14.5%)
small company	14 (15.1%)	26 (28.0%)	19 (20.4%)	11 (11.8%)	19 (20.4%)	5 (5.4%)
medium-sized company	17 (25.0%)	22 (32.4%)	12 (17.6%)	7 (10.3%)	9 (13.2%)	3 (4.4%)
farming and food industry	1 (12.5%)	1 (12.5%)	1 (12.5%)	2 (25.0%)	2 (25.0%)	1 (12.5%)
industrial production	8 (25.8%)	9 (29.0%)	10 (32.3%)	4 (12.9%)	–	–
construction	3 (15.0%)	5 (25.0%)	2 (10.0%)	4 (20.0%)	5 (25.0%)	3 (15.0%)
trade and logistics	6 (12.8%)	17 (36.2%)	11 (23.4%)	6 (12.8%)	7 (14.9%)	1 (2.1%)
ICT sector	4 (50.0%)	1 (12.5%)	1 (12.5%)	–	–	2 (25.0%)
finance and insurance	5 (20.0%)	6 (24.0%)	5 (20.0%)	5 (20.0%)	4 (16.0%)	3 (12.0%)
services	15 (17.4%)	16 (18.6%)	20 (23.3%)	6 (7.0%)	26 (30.2%)	7 (8.1%)
Total	41 (18.4%)	55 (24.7%)	49 (22.0%)	27 (12.1%)	44 (19.7%)	17 (7.6%)

Source: own elaboration.

Although the answers do not include a dominant option, as none of the six approaches exceeded 30-per cent threshold, the top-down planning (options 2–3) prevailed. Its most formalised version, where employees had to adhere to plans including objectives set by managers, was used in 32.4% of medium-sized companies. It was also a typical way of organising work in enterprises dealing with trade and logistics (36.2%), the construction sector or those active in a finance or insurance domain. Top-down planning was also the most frequent among companies involved in international operations (33.3%).

When the survey forms were analysed, two main versions (with some variations) of top-down planning systems were detected. The first consisted of managerial meetings, where results of closed periods or projects were analysed and on that basis plans for next periods and new projects were set. The second one was characterised by far less transparency – from an employee perspective. All decisions were made in closed meetings of managers, and decisions followed by individual tasks and objectives to be met were communicated to regular employees without explanation.

Another form of top-down planning, less formalised though, consisted in formulating tasks – usually with deadlines – by direct supervisors of employees. This form was frequently used by managers or owners of micro (29.0%) and small companies (20.4%), as it played an important role in identifying operational problems and maintaining an organisational culture. According to some surveys, tasks formulated by supervisors were characterised by a considerable changeability as current priorities were very closely linked to a financial standing of a company. When the latter was not satisfactory, individual objectives became more demanding and tended to be formulated in a more precise way. Tasks were often communicated in spoken form only, during briefing sessions at the beginning of a new period or in a less regular manner – mostly in reaction to sales figures.

A situation when only general expectations toward employees were formulated by managers or owners was similar to the top-down planning approach, but planning activities were formalised in only a rudimentary way. The said situation was the most frequent in microenterprises (14.5%). From employees' point of view such a planning approach was unfavourable, as a scope of tasks to accomplish had been hardly ever precisely defined before a given period. Unfortunately, managers' expectations became very precise in the end, reducing the chances for performance-related bonuses.

Despite being recommended by HRM experts, participative goal-setting was not the most popular form of planning identified in the examined group of enterprises. According to information provided in the surveys, this approach was taken by 18.4% of

companies, with the largest share – 25% – among the medium-sized ones. The detailed reports allowed for the distinguishing of various scopes and models how bottom-up planning was integrated into decision-making systems in particular enterprises.

The most radical situation includes objectives set by employees themselves – especially if they were experienced in their profession – with supervisors' interventions reduced to a discussion and a confirmation of goals. The second form of participative planning had the managers act as moderators, presenting objectives to their employees, answering questions and incorporating staff suggestions into the final versions of plans. Finally, a centralised planning process may be organised. One company appointed a working team of representatives of all major departments. The team formulated a coherent set of objectives for the whole company – negotiating on certain points if necessary – and designated members became responsible for objectives related to their areas of competence.

When the influence of an industrial profile of companies on ways they organised business activities was considered, a supervisor-centred model could be detected in trade and logistics (36.2%). Referring to detailed accounts provided in the surveys, this situation – typical of small companies – was found to have its origins in regular contacts between employees and customers. All such processes were closely monitored. At the same time, participative planning – apart from the ICT sector with too few companies to draw valid conclusions – could be observed in industrial production (25.8% share). That reflected a higher involvement of managers responsible for manufacturing, R&D, supply or sales in planning process.

Control framework in Polish mSMEs

The recognition of assignments allocated to employees or departments accountable for control activities is another factor that contributes to the efficiency of MCS. In this respect the authors distinguished most typical situations, including the monitoring of corporate performance and cost, assessment of employees' performance, verification of documents and procedures, monitoring production or service delivery processes with quality assurance, or planning, reporting and developing internal best practices. A situation when no specific control tasks were formulated was also identified. The answers are presented in Table 5.

Control tasks in the examined enterprises were usually carried out (in 50.7% of cases) in more than one domain. Four control areas were monitored by 10 companies, 44 enterprises executed control over three domains, and in another 59 objects two

control problems were regularly addressed. Thirty-eight companies did not carry out any control activities. This number included 26 enterprises which did not have any manager or owner in charge of control, and three companies, where control activities were accidentally delegated to employees, meaning that no relevant information was generated.

Table 5. Control tasks performed in mSMEs

Identified situation Feature	Corporate performance and cost control	Assessment of employees and organisation of work	Legal and formal control	Production, services and quality control	Planning, reporting and providing feedback	No control activities
microenterprise	15 (24.2%)	25 (40.3%)	21 (33.9%)	18 (29.0%)	3 (4.8%)	16 (25.8%)
small company	27 (29.0%)	32 (34.4%)	38 (40.9%)	44 (47.3%)	12 (12.9%)	16 (17.2%)
medium-sized company	25 (36.8%)	21 (30.9%)	27 (39.7%)	27 (39.7%)	15 (22.1%)	6 (8.8%)
farming and food industry	4 (50.0%)	1 (12.5%)	3 (37.5%)	2 (25.0%)	1 (12.5%)	1 (12.5%)
industrial production	16 (51.6%)	8 (25.8%)	14 (45.2%)	18 (58.1%)	10 (32.3%)	4 (12.9%)
construction	7 (35.0%)	6 (30.0%)	6 (30.0%)	7 (35.0%)	1 (5.0%)	6 (30.0%)
trade and logistics	15 (31.9%)	14 (29.8%)	10 (21.3%)	16 (34.0%)	8 (17.0%)	9 (19.1%)
ICT sector	1 (12.5%)	3 (37.5%)	2 (25.0%)	1 (12.5%)	–	3 (37.5%)
finance and insurance	5 (20.0%)	14 (56.0%)	14 (56.0%)	10 (40.0%)	2 (8.0%)	1 (4.0%)
services	20 (23.3%)	33 (38.4%)	37 (43.0%)	36 (41.9%)	8 (9.3%)	14 (16.3%)
Total	67 (30.0%)	78 (35.0%)	86 (38.6%)	89 (39.9%)	30 (13.5%)	38 (17.0%)

Note: more than one answer could be selected.

Source: own elaboration.

The research demonstrated different attitudes to control tasks respecting a company size. The holistic approach was typical in medium-sized enterprises, where the emphasis was

on monitoring production, service delivery and quality assurance. Small entities scrutinised documents and procedures, whereas microenterprises focused on evaluating duties fulfilled by their personnel.

Considering a business domain it became evident that MCSs covering production quality control, compliance with procedures and monitoring economic effectiveness played a vital role in the industrial production sector. The companies of that kind monitored on average 2.26 control areas, with 1.65 for all other domains. Higher operational risk made also internationalised companies monitor 2.08 control areas on average, with 1.67 for enterprises acting locally. Interestingly, companies active abroad prioritised the quality of their products or services (63.9% of cases) more than companies acting on the domestic market (35.3%).

Organisation of control in Polish mSMEs

In order to evaluate managerial information flow in Polish mSMEs the authors also examined who performed the control tasks in the selected group of objects. According to our respondents, the six most typical situations were distinguished (Table 6).

The results lead to the following conclusions. First, managers or owners were most often directly involved in control activities (in 53.8% of all examined mSMEs). This situation was very common in micro and small enterprises (67.7% and 59.1% of cases respectively). Considering all examined companies, in 89 cases the supervision by managers or owners was the sole form of control. In medium-sized companies this situation proved insufficient. Control activities were often delegated to specialised departments (44.1% of cases). This was the most frequent situation observed in the industrial production sector (41.9%).

Creating an institutional framework for management control also included situations where single employees became responsible for planning and running all control procedures in an enterprise, in addition to evaluating performance and relaying their conclusions to managers. This situation was the most frequent among production companies (25.8% of cases).

In one group of organisations, control activities were delegated to external parties – auditors, quality controllers or independent consultants – who supported control tasks in 27 mSMEs. Such external audit encourages employees who participate in control activities, and inspire them to design and implement their own practices (Simons, 1995, p. 85–86).

As many as 13.0% of scrutinised enterprises did not set up any department or appoint a person responsible for control. This situation was most common among companies in the construction sector (30.0% of cases) and in microenterprises (22.6%). Fjałkowska explains that development of MCS does not have to imply changes in organisational structure of small businesses. Making flow of managerial information more efficient is then vital (Fjałkowska, 2006, p. 50–53).

Table 6. Responsibility for control tasks in mSMEs

Identified situation Feature	There is a separate management control department	There is a separate control post	Control is executed by management or owners of an organisation	Control tasks are conducted by assigned persons if necessary	Control is executed by external auditors	No-one is responsible for control
microenterprise	–	1 (1.6%)	42 (67.7%)	5 (8.1%)	5 (8.1%)	14 (22.6%)
small company	12 (12.9%)	9 (9.7%)	55 (59.1%)	11 (11.8%)	14 (15.1%)	11 (11.8%)
medium-sized company	30 (44.1%)	10 (14.7%)	23 (33.8%)	6 (8.8%)	8 (11.8%)	4 (5.9%)
established before 1989	3 (16.7%)	4 (22.2%)	11 (61.1%)	2 (11.1%)	4 (22.2%)	1 (5.6%)
1989-1994	7 (15.9%)	5 (11.4%)	21 (47.7%)	7 (15.9%)	4 (9.1%)	9 (20.5%)
1995-2003	19 (20.9%)	6 (6.6%)	48 (52.7%)	8 (8.8%)	8 (8.8%)	11 (12.1%)
2004-2008	12 (21.8%)	5 (9.1%)	29 (52.7%)	4 (7.3%)	7 (12.7%)	7 (12.7%)
after 2009	1 (7.1%)	–	10 (71.4%)	1 (7.1%)	4 (28.6%)	1 (7.1%)
Total	42 (18.8%)	20 (9.0%)	120 (53.8%)	22 (9.9%)	27 (12.1%)	29 (13.0%)

Source: own elaboration.

Strategic planning in Polish mSMEs

The most important question pertaining to the objective of this paper was to what extent strategic planning was implemented in Polish mSMEs and whether employees were aware of it. The situation identified in the examined group of organisations is presented in Table 7.

Table 7. Strategic planning in mSMEs

Identified situation / Feature	Strategic plans are drawn up for each area of business activity	A strategy is known to employees	Strategy is known exclusively to managers	There are some general long-term plans developed	Planning refers to one-year or even shorter periods	An organisation performs day-to-day activities
microenterprise	3 (4.8%)	10 (16.1%)	2 (3.2%)	13 (21.0%)	2 (3.2%)	36 (58.1%)
small company	14 (15.1%)	32 (34.4%)	14 (15.1%)	13 (14.0%)	12 (12.9%)	23 (24.7%)
medium-sized company	5 (7.4%)	22 (32.4%)	28 (41.2%)	15 (22.1%)	5 (7.4%)	5 (7.4%)
farming and food industry	1 (12.5%)	–	5 (62.5%)	1 (12.5%)	–	1 (12.5%)
industrial production	6 (19.4%)	15 (48.4%)	9 (29.0%)	6 (19.4%)	1 (3.2%)	4 (12.9%)
construction	3 (15.0%)	6 (30.0%)	3 (15.0%)	4 (20.0%)	3 (15.0%)	5 (25.0%)
trade and logistics	5 (10.6%)	11 (23.4%)	9 (19.1%)	6 (12.8%)	7 (14.9%)	15 (31.9%)
ICT sector	1 (12.5%)	3 (37.5%)	1 (12.5%)	3 (37.5%)	–	2 (25.0%)
finance and insurance	–	8 (32.0%)	6 (24.0%)	5 (20.0%)	2 (8.0%)	7 (28.0%)
services	6 (7.0%)	21 (24.4%)	12 (14.0%)	18 (20.9%)	6 (7.0%)	31 (36.0%)
Total	22 (9.9%)	64 (28.7%)	44 (19.7%)	41 (18.4%)	19 (8.5%)	64 (28.7%)

Note: in certain cases more than one answer was selected.

Source: own elaboration.

A considerable share of examined enterprises has drawn up only short-term plans or reacted to current problems (8.5% and 28.7% respectively). Such situations were observed in micro and small companies, with the narrowest scope of business activity. As many as 58.1% of microenterprises did not consider strategic planning to be necessary.

More than a quarter (28.7%) of employees in the examined enterprises were conscious of the strategies adopted in their companies. The need to communicate a strategy was

recognised by production companies, for which nearly half (48.4%) reported familiarity of staff with corporate strategies. That was the level by at least 10 percentage points higher than for other business domains. Huge differences in information policies between production companies and those active in trade and logistics as well as in services may have derived from the fact that the latter two sectors were very competitive and their situation was turbulent. For that reason companies adapted to a current market situation or kept their strategies secret in order not to lose a competitive edge. At the same time, employees in production companies were much more dependent on the flow of accurate information.

The research enabled identification of a considerable group of enterprises, whose employees were generally aware of their company's strategy, but not its details. Responses indicating 'some general long-term plans' (18.4% of answers) or suggesting that strategic plans were accessible only to managerial staff (19.7% of cases) proved that many organisations still perceived their employees as executors of managers' decisions, not as contributors to business success.

The conviction of employees working in medium-sized enterprises, that only managers should have access to strategic information (41.2% answers) requires explanation. This group of companies consisted mostly of enterprises that had been operating in a market for more than 20 years, in the production sector and involved in international operations. The detailed accounts provided in survey forms suggested a market position of an enterprise being responsible for the observed situation. Medium-sized companies based on local capital only, had to compete with large corporations, often of international provenance. Therefore, the Polish mSMEs treated any piece of information which gave them an advantage on the local market – and especially those related to new contracts, prospective product launches, or new business areas they intended to enter – as secret.

Results of regression analysis

The following section will present results of the OLS regression analysis respecting each element of MCSs: goal-setting process (GSP), control framework (CFR) and institutional organisation of control (OCO), and the independent variable: strategic awareness (SAW), together with four control variables: company size (SIZ), legal status (LEG), involvement in production activities (PRO) and internationalisation of operations (INT). The correlation matrix between all dependent and independent variables was calculated (Table 8). In addition to the values of correlation coefficients, significance levels were computed.

Table 8. Correlation matrix (n=223)

	<i>y1</i>	<i>y2</i>	<i>y3</i>	<i>x1</i>	<i>x2</i>	<i>x3</i>	<i>x4</i>	<i>x5</i>
GSP (<i>y1</i>)	1.000							
CFR (<i>y2</i>)	***0.204	1.000						
	0.002							
OCO (<i>y3</i>)	***0.204	***0.365	1.000					
	0.002	0.000						
SAW (<i>x1</i>)	***0.415	***0.380	***0.300	1.000				
	0.000	0.000	0.000					
SIZ (<i>x2</i>)	**0.143	0.094	***0.396	***0.289	1.000			
	0.033	0.160	0.000	0.000				
LEG (<i>x3</i>)	***0.196	***0.184	***0.199	***0.209	***0.336	1.000		
	0.003	0.006	0.003	0.003	0.000			
PRO (<i>x4</i>)	**0.161	***0.193	***0.216	***0.227	***0.251	0.126	1.000	
	0.016	0.004	0.001	0.001	0.000	0.059		
INT (<i>x5</i>)	0.104	**0.173	***0.260	***0.182	***0.257	***0.226	***0.317	1.000
	0.121	0.010	0.000	0.006	0.000	0.001	0.000	

*significant at 10 percent level; **significant at 5 percent level; ***significant at 1 percent level.

Source: own elaboration.

With respect to the goal-setting process nearly all independent variables, including the control ones, except for INT, proved to be positively correlated. For SIZ and PRO variables, the correlations were significant at the 5% level, whereas for all others a 1% level could be considered. For strategic awareness the correlation coefficient was the highest at 0.415; this is a positive signal in the validation of the H1 hypothesis.

Considering the control framework, only the SIZ variable did not prove to be statistically correlated. However, again, it was strategic awareness for which the correlation coefficient was the highest (0.380), in an auspicious signal in examination of hypothesis H2. Interestingly, but not surprisingly, the correlation matrix showed that

control framework in a company was related to the institutionalisation of control activities (OCO).

Finally, looking at relations between independent variables and the one referring to institutional formalisation of control activities, it should be noted that the latter was significantly and positively correlated with all the analysed factors. The highest correlation coefficient (0.396) could be observed in case of a company size. This relation is in line with common sense, since with increase in company size it is much more likely to find a separate control post or a department. In micro or small companies employees have to be more versatile and able to perform general accounting or financial tasks. Moreover, strategic awareness turned out to be moderately correlated with formalisation of control, with a coefficient level of 0.300. This means that in all three research hypotheses strategic awareness proved statistically important contributors to MCSs in Polish mSMEs.

Statistically significant correlations were identified between the strategic awareness and other independent variables, as well as between control variables. The legal status of a company was found to be related to its size, with a coefficient level of 0.336, and international involvement with a production profile, with a coefficient of 0.317. Both situations may be reasonably explained. A form of a partnership – with an unlimited personal liability – insufficiently protects the interests of owners in larger business. In addition, Polish production companies are much more likely to look for customers abroad than, for example, those trading with goods only.

Having considered the positive results of the correlation analysis the three regression models were developed (Table 9). In each case one of the dependent variables was explained by the set of five independent constructs. Because of the statistically significant correlation between independent variables, variance inflation factors were calculated. Multicollinearity did not prove to be an obstacle to the development of valid regression models.

Analysis of the results of OLS regression shows that each of the developed models proved statistically valid, with moderately low adjusted R² levels ranging from 15.8% to 20.0%. Moreover, in each case strategic awareness has a positive effect on the dependent variables at the significance level of 1%. The examination shows, therefore, that an increasing strategic awareness of employees in Polish mSMEs stimulates staff participation in goal-setting processes, contributes to the development of comprehensive MCSs, or even implies formalisation of control. Nevertheless, that influence is moderately low.

Table 9. Results of regression analysis

Dependent variables Independent variables	GSP	CFR	OCO	Variance inflation factors
Intercept	***2.047	***1.007	***1.147	
<i>p level</i>	0.000	0.000	0.000	
SAW	***0.333	***0.231	***0.157	1.140
<i>p level</i>	0.000	0.000	0.007	
SIZ	-0.024	-0.071	***0.313	1.257
<i>p level</i>	0.737	0.201	0.000	
LEG	*0.364	*0.269	0.098	1.166
<i>p level</i>	0.071	0.085	0.634	
PRO	0.293	0.330	0.276	1.179
<i>p level</i>	0.314	0.143	0.355	
INT	-0.034	0.237	*0.553	1.185
<i>p level</i>	0.901	0.265	0.051	
<i>R</i> ²	18.9%	17.7%	21.8%	
Adj. R²	17.1%	15.8%	20.0%	
<i>n</i>	223	223	223	
<i>F</i> (5, 217)	10.138	9.306	12.125	
<i>p</i> <	0.000	0.000	0.000	
<i>Std. error of estimate</i>	1.385	1.072	1.420	

*significant at 10% level; **significant at 5% level; ***significant at 1% level.

Source: own elaboration.

All these facts suggest that the three hypotheses proposed by the authors are positively validated. In hypothesis H3 the relation between strategic awareness and organisation of control has to be, however, accepted with cautiousness as the correlation coefficient presented earlier was moderately low (0.300) and as a size of a company appeared to be a more important factor in shaping the organisation in control of a company.

Discussion

The objective of this paper was to detect whether strategic awareness actually affects MCSs in mSMEs. Positive validation of hypotheses H1-H3 seems to prove this opinion. It is reasonable, though, to examine whether it is possible to develop MCSs without an awareness of strategy or without a strategy at all. Table 10 presents an analysis of a scope of MCSs in relation to strategic awareness represented by a level of the SAW variable.

Table 10. Strategic awareness and management control systems – the summary

Value of SAW	Meaning	Average value of the aggregate MCS measure	Number of objects with the aggregate MCS measure ≥ 3
4–5	strategic plans are set for all functional areas and/or strategy is known to employees	2.958	42
3	strategy is known to managers only	2.520	16
1–2	general long-term or short-term plans are developed	2.292	17
0	no strategy is developed	1.608	6

Source: own elaboration.

The aggregate measure of MCS used in the analysis represents the average value of the three analysed dependent variables: GSP, CFR and OCO. The results presented in Table 10 show clearly that higher strategic awareness was followed by a more comprehensive MCS. The value of the aggregate measure of MCS was by 0.438 higher in companies where a strategy was communicated to employees than in those where a strategy remained known to executives only. Moreover, a difference between the ideal situation and the one when a company developed no strategy was beyond question. This observation substantiates conclusions presented in validation procedures of hypotheses H1-H3, and supports the observations of Kober et al. (2007) that an MSC is an outcome of a strategy, and of Mintzberg and Waters (1982) that companies plan when they have intended strategies. One may add, that when companies plan, they also need to intensify control, and thus MCSs are more developed in businesses which set strategic plans and communicate them to their employees.

Simons' (1991) observation may be discussed here. On the one hand, he claimed that in small companies which did not find it necessary to develop strategies, a planning

system did not need to be participative. That statement proved partly true. On the other hand, the authors' research demonstrated that there were mSMEs for which strategy was important and where participative planning did exist. One may also find some support for Mintzberg (1994) that plans may not cause human commitment but they do commit the organisation to follow them. The authors' research did not look for the involvement of employees in shaping MCSs but demonstrated that the intention to develop an MCS appeared when a strategy was indeed communicated to employees.

Nonetheless, the number of objects where an MCS could be assessed as functional (value of the aggregate MCS metric was higher than or equal to 3) showed that even though good strategy communication helped to develop an MCS, ineffective communication, or even a lack of a strategy, did not make functionality of MCSs impossible. This observation does not exclude the ideas of Abernethy and Lillis (2001) who linked MCSs to participative planning rather than to a strategy itself. This may be the origin of positive correlations between GSP and both CFR and OCO variables.

There was a group of six mSMEs where with no strategy a value of the aggregate MCS measure exceeded 3. That group included diverse companies: two start-ups (financial consultancy and IT software developer), two service providers (a car service and a chain of hair salons), one producer (from the textile industry) and a car dealer. This confirms an observation of Inamdar (2012) suggesting that an MCS may also be developed without a strategy communication, even though this was a rare case.

Conclusion and future research

The analysis presented in the paper proved a relation between strategic awareness and goal-setting, a control framework and an organisation of control in mSMEs operating in Poland. Thus the research hypotheses can be considered valid. It also appeared, however, that other factors, including the size of a company and its legal status or involvement in international operations influenced the shape of MCS. Similarly, a lack of strategic awareness or even a lack of a strategy was not considered a disqualifying factor to develop MCSs. Those observations have to be treated as a limitation in the concluding process.

For these reasons the authors have already initiated the revised second edition of the research. The results will be obtained by June 2015. The new research intends to validate and extend results of the initial study presented in this paper in three ways. Firstly, the authors will obtain the picture of MCSs as it was 3 years after the prior

study. Secondly, the new research will be supported by a qualitative evaluation of planning, control, internal reporting and communication practices in Polish companies. This means that, for example, a situation when top-down operational planning is used in a company may be considered both as a constraining factor to employees' involvement or as an effective method to develop a company budget; what was not precisely evaluated in a current research. The use of a 7-grade scale from: 'the solution is totally wrong' (1) to 'the solution is very good' (7) should lead to more precise conclusions on MCSs in Polish companies. Finally, in the new research the authors capture a dynamic character of MCSs. To achieve this goal the research will examine an occurrence of several organisational changes in a company in a recent period and an assessment of their influence on business operations. The examined factors include changes in ownership, organisational structure, activity profile, scope of activities, employment, remuneration system, as well as modernisation or implementations of assets, IT systems, operational methods or management methods. Each change should be assessed with a 5-grade scale starting from 'it is much worse' (1) to 'it is much better' (5).

Acknowledgments

The authors express their thanks to anonymous reviewers and participants of the 37th European Accounting Association (EAA) Annual Congress 2014, held in Tallinn, for their support and helpful suggestions on the working version of this paper.

References

- Abernethy, M.A. and Brownell, P. (1997). Management control systems in research and development organisations: the role of accounting, behaviour and personnel controls. *Accounting, Organisations and Society*, 22(3–4): 233–248.
- Abernethy, M.A. and Brownell, P. (1999). The role of budgets in organisations facing strategic change: an explanatory study. *Accounting, Organisations and Society*, 24(3): 189–204.
- Abernethy, A.M. and Lillis, A.M. (2001). Interdependencies in organisation design: a test in hospitals. *Journal of Management Accounting Research*, 13: 107–129.
- Anthony, R.N. (1965). *Planning and control systems: framework for analysis*. Graduate School of Business Administration. Boston: Harvard University.
- Anthony, R., Dearden, J. and Bedford, N.M. (1989). *Management control systems*, 6th ed., IL: Irwin, Homewood.
- Asel, J., Posch, A. and Speckbacher, G. (2010). Squeezing or cuddling? The impact of economic crisis on management: control and stakeholder management. *Review of Managerial Science*, 5(2–3): 213–231.
- Burns, Jr. and Waterhouse, J.H. (1975). Budgetary control and organisational structure. *Journal of Accounting Research*. Autumn: 177–203.
- Chapman, C.S. and Chua, W.F. (2000). *Technology, organisational form and accounting*, 25th anniversary conference: Accounting, Organisations and Society. Oxford: Pergamon.

- Chenhall, R.H. (2003). Management control systems design within its organisational context: findings from contingency-based research and directions for the future. *Accounting, Organisations and Society*, 28: 127–168.
- Chenhall, R.H. and Langfield-Smith, K. (1998). The relationship between strategic priorities, management techniques and management accounting: an empirical investigation using systems approach. *Accounting, Organisations and Society*, 23(3): 243–264.
- Chong, V.K. (1996). Management accounting systems, task uncertainty and managerial performance: a research note. *Accounting, Organisations and Society*, 21(5): 415–421.
- Cinquini, L. and Tenucci, A. (2008). Strategic management accounting and business strategy: a loose coupling. *Journal of Accounting and Organisational Change*, 6(2): 228–259.
- Daft, R.L. and Macintosh, N.J. (1981). A tentative exploration into the amount and equivocality of information processing in organisational work units. *Administrative Science Quarterly*, 26(2): 207–244.
- Dent, J.F. (1990). Strategy, organisation and control: some possibilities for accounting research. *Accounting, Organisations and Society*, 15: 3–25.
- Dunk, A.S. (1992). Reliance on budgetary control, manufacturing process automation and production sub-unit performance: a research note. *Accounting, Organisations and Society*, 17(3–4): 185–239.
- Govindarajan, V. (1988). A contingency approach to strategy implementation at the business-unit level: integrating administrative mechanism with strategy. *Academy of Management Journal*, 31(4): 826–853.
- Govindarajan, V. and Gupta, A.K. (1985). Linking control systems to business unit strategy: Impact on performance. *Accounting, Organisations and Society*, 10(1): 51–66.
- Govindarajan, V. and Fisher, J. (1990). Strategy, control systems and resource sharing: effects on business-unit performance. *Academy of Management Journal*, 33(2): 259–285.
- Gupta, A.K. and Govindarajan, V. (1984). Business unit strategy, managerial characteristics, and business unit effectiveness at strategy implementation. *The Academy of Management Journal*, 27(1): 25–41.
- Harrison, G.L. (1992). The cross-cultural generalizability of the relation between participation, budget emphasis and job-related attitudes. *Accounting, Organisations and Society*, 17: 1–15.
- Henri, J.F. (2006). Management control systems and strategy: A resource-based perspective. *Accounting, Organisations and Society*, 31(6): 529–558.
- Herath, S.K. (2007). A framework for management control research. *Journal of Management Development*, 26(9): 895–915.
- Hopwood, A.G. (1987). The archaeology of accounting systems. *Accounting, Organisations and Society*, 12(3): 207–234.
- Fisher, K. (1996). The impact of perceived environmental uncertainty and individual differences on management information requirements: A research note. *Accounting, Organisations and Society*, 21 (4): 361–369.
- Fjałkowska, D. (2006). Konieczność i kierunki zmian w strukturze organizacyjnej przedsiębiorstwa implikowane wdrażaniem controllingu. *Prace Naukowe Akademii Ekonomicznej im. Oskara Langego we Wrocławiu*, 1125.
- Inamdar, S.N. (2012). Alignment of strategy with structure using management control systems. *Strategic Management Review*, 6(1): 1–26.
- Ittner, C.D. and Larcker, D.F. (1995). Total quality management and the choice of information and reward systems. *Journal of Accounting Research*, 33(Supplement): 1–34.

- Jabnoun, N., Khalifah, A. and Yusuf, A. (2003). Environmental uncertainty, strategic orientation, and quality management: a contingency model. *Quality Management Journal*, 10(4): 17–31.
- Kalagnanam, S.S. and Lindsay, R.M. (1999). The use of organic models of control in JIT forms: generalizing Woodward's findings to modern manufacturing practices. *Accounting, Organisations and Society*, 24(1): 1–30.
- Kald, M., Nilsson, F. and Rapp, B. (2000). On strategy and management control: the importance of classifying the strategy of the business. *British Journal of Management*, 11: 197–212.
- Kaplan, R.S. and Norton, D.P. (2000). *Strategy-focused organisation. How balanced scorecard companies thrive in the new business environment*. Boston, MA: Harvard Business School Press.
- Kober, R., Ng, J. and Byron, J.P. (2007). The interrelationship between management control mechanisms and strategy. *Management Accounting Research*, 18: 425–452.
- Langfield-Smith, K. (1997). Management control systems and strategy: A critical review. *Accounting, Organisations and Society*, 22(2): 207–232.
- Langfield-Smith, K. (2007). A review of quantitative research in management control systems and strategy. In: C.S. Chapman, A.G. Hopwood, M.D. Shields (eds.), *Handbooks of management accounting research*, Vol. 2, Amsterdam, Elsevier.
- Lawler, E.E. III (1986). *High involvement management*. San Francisco: Jossey-Bass.
- Ledford, G.E. Jr. (1993). Employee involvement: lessons and predictions. In: J. Galbraith, E.E. Lawler, III & Associates (eds.), *Organizing for the future the new logic for managing complex organisations*. San Francisco: Jossey-Bass.
- Marginson, D.E.W. (2002). Management control systems and their effects on strategy formation at middle-management levels: evidence from a U.K. organisation. *Strategic Management Journal*, 23(11): 1019–1031.
- Merchant, K. (1981). The design of the corporate budgeting system: influences on managerial behaviour and performance. *The Accounting Review*, 4: 813–829.
- Miles, R.E. and Snow, C.C. (1978). *Organisational strategy, structure, and process*. New York: McGraw-Hill.
- Mintzberg, H. (1987). Crafting strategy. *Harvard Business Review*, 65(4): 66–75.
- Mintzberg, H. (1994). Rethinking strategic planning: part I: pitfalls and fallacies. *Long Range Planning*, 27(3): 12–21.
- Mintzberg, H. and Waters, J.A. (1982). Tracking strategy in an entrepreneurial firm. *Academy of Management Journal*, 25(3): 465–499.
- O'Conner, N. (1995). The influence of organisational culture on the usefulness of budget participation by Singaporean-Chinese managers. *Accounting, Organisations and Society*, 20: 383–403.
- Otley, D. (1999). Performance management: a framework for management control systems research. *Management Accounting Research*, 10: 363–382.
- Porter, M.E. (1980). *Competitive strategy*. New York: The Free Press.
- Scott, T.W. and Tiessen, P. (1999). Performance measurement and managerial teams. *Accounting, Organisations and Society*, 24: 263–285.
- Simons, R. (1987). Accounting control systems and business strategy: an empirical analysis. *Accounting, Organisations and Society*, 12(4): 357–374.
- Simons, R. (1991). Strategic orientation and top management attention to control systems. *Strategic Management Journal*, 12: 49–62.
- Simons, R. (1995). *Levers of control: How managers use innovative control systems to drive strategic renewals*. Boston: Harvard Business School Press.

- Snodgrass, C. and Grant, J.H. (1986). Cultural influences on strategic planning and control systems. *Advances in Strategic Management*, 4: 205–228.
- Stathakopoulos, V. (1998). Enhancing the performance of marketing managers - aligning strategy, structure and evaluation systems. *European Journal of Marketing*, 23(5–6): 536–558.
- Steiner, G. (1979). *Strategic planning. What every manager should know*. New York: The Free Press.
- Ueno, S. and Wu, A. (1993). The comparative influence of culture on budget control practices in the United States and Japan. *International Journal of Accounting*, 28: 17–39.
- Whitley, R. (1999). Firms, institutions and management control: the comparative analysis of coordination and control systems. *Accounting, Organisations and Society*, 24(5–6): 507–524.