



The role of personnel commitment to strategy implementation and organisational learning within the relationship between strategic planning and company performance

The role of
personnel
commitment

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Marko Kohtamäki

Department of Management, University of Vaasa, Vaasa, Finland

Sascha Kraus

Institute for Entrepreneurship, University of Liechtenstein, Vaduz, Liechtenstein

Markus Mäkelä

Department of Information Technology, University of Turku, Helsinki, Finland, and

Mikko Rönkkö

Software Business Laboratory, Helsinki University of Technology, Helsinki, Finland

Abstract

Purpose – The study seeks to add to the existing body of knowledge on the link between strategic planning and company performance by exploring the mediating role of personnel commitment to strategy implementation and organisational learning. To study the indirect link between strategic planning and company performance, the paper aims to introduce a participative strategic planning construct that may enable firms to: commit personnel to strategy implementation; increase organisational learning; and improve company performance.

Design/methodology/approach – Using data from 160 small and medium-sized Finnish IT companies, the authors conduct an Mplus-analysis.

Findings – The findings indicate that participative strategic planning positively affects personnel commitment to strategy implementation, which thereby increases company performance. However, according to the analysis, participative strategic planning does not impact organisational learning, although organisational learning does have a positive impact on company performance.

Research limitations/implications – The results of this study are generalisable to a dynamic industry context of small and medium-sized IT-firms operating in a small open economy, such as that of Finland.

Practical implications – The results suggest that managers need to involve personnel in strategic planning to increase personnel commitment to strategy implementation. However, because participative strategic planning does not facilitate organisational learning, managers need to determine other ways to facilitate learning at an organisational level.

Originality/value – The paper highlights the role of participative strategic planning, which facilitates personnel commitment to strategy implementation and thus improves company performance.

Keywords Participative strategic planning, Personnel commitment to strategy implementation, Personnel involvement, Organisational learning, Company performance, Mplus, Strategic planning, Finland, Participative planning

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1. Introduction

Most organisations – irrespective of their size, age, or industry – are increasingly faced with the challenge of continuous and dynamic change (Mintzberg and Lampel, 1999; Hitt *et al.*, 2001; Ireland and Webb, 2007). One of the means that firms can purportedly use to cope with rapid and continuous environmental changes is strategic entrepreneurship (SE), a combination of strategic management/planning and entrepreneurial, innovation-oriented behaviour (e.g. Hitt *et al.*, 2001, 2002; Wickham, 2004; Kuratko and Audretsch, 2009). Previous empirical research within the SE domain indicates strategic planning as one of the major constituents of SE (e.g. Kraus *et al.*, 2011).

Prior literature in the fields of strategic planning and strategy processes explores the impact of strategic planning on company performance. However, a vast number of strategic planning studies focus on the direct link between strategic planning and company performance (e.g. Bracker *et al.*, 1988; Lyles *et al.*, 1993; Rue and Ibrahim, 1998; Gibson and Cassar, 2005). Whereas some of these studies have identified a positive relationship between the two constructs, others have found either that a slightly negative relationship exists or that there is no relationship at all between them. Prior studies and meta-analyses suggest that some factors may either mediate or moderate the link between strategic planning and performance, but that only a little empirical evidence exists on these mediating or moderating factors (Hutzschenreuter and Kleindienst, 2007). Further, studies suggest that strategic planning, particularly in dynamic business environments, may contribute to company success, not by providing exact plans, but instead by involving personnel, increasing understanding about strategy and hence enabling strategy implementation (Collier *et al.*, 2004). Building on the extensive body of previous strategic planning and strategy process studies, both in large enterprises and – more recently – in SMEs and new ventures, this paper approaches strategic planning as a participative process.

This study develops a path model in which personnel commitment to strategy implementation and organisational learning mediate the relationship between participative strategic planning and company performance (Grundy and King, 1992; Liedtka, 2000a, b). First, we argue that personnel commitment to strategy implementation mediates the link between participative strategic planning and company performance because participative strategic planning increases personnel understanding of the company's purpose and strategic targets, clarifies why strategies are implemented and creates a sense of shared purpose for employees. Clarifying and explaining strategies and involving personnel in the strategic planning process have been argued (and to some degree shown) to increase personnel commitment to strategy implementation (Floyd and Wooldridge, 1992; Mantere and Vaara, 2008). Furthermore, increased personnel commitment enables more rapid strategy implementation and improves both the strategy-environment fit and, consequently, company performance (Beer *et al.*, 2005). Second, this study suggests that organisational learning mediates the link between participative strategic planning and company performance because organisational learning enables employees to target their learning to support the company in its strategic initiatives. Better learning capabilities enable companies to better adapt to changes in the business environment and hence can improve company performance.

Scholars argue that traditional planning often hinders an organisation's ability to learn rather than facilitates its success (Mintzberg and Lampel, 1999). In this study, we tested this argument by redefining strategic planning in contrast to more conservative definitions, which define strategic planning as a hierarchical top-down process. In this study, we employ the concept of participative strategic planning and define it as "participative and continuous strategic planning that facilitates strategy implementation and organizational learning" (see also Liedtka, 2000a, b). In this paper, we intend to study the following research question using a structural equation model to analyse 160 small and medium-sized IT firms operating in Finland:

To what extent do organisational learning and strategy implementation mediate the relationship between participative strategic planning and the business performance of a company?

2. Theory and hypotheses

2.1 Strategic planning and business performance

In general, in the previous research literature, strategic planning has been considered to be a long-term oriented (at least three-year) activity directed towards future yield potential (Abell, 1980; Freeman, 1984). It is also regarded as substantial, continuous and holistic in nature and is therefore predominantly associated with the highest levels of management. However, the newest strategy research specifically emphasises the role of the involvement of personnel in determining a company's vision, purpose, and organisational form (Liedtka, 2000a, b; Collier *et al.*, 2004; Jarzabkowski, 2008). Unlike strategic management research, strategy work addresses not only visionary concepts, but also concrete actions and the need to involve personnel in the discussion about guidelines and programs for the achievement of the company vision and targets (Mintzberg and Lampel, 1999; Kraus *et al.*, 2006;).

Some authors demonstrate that strategic planning contributes significantly to the success of SMEs (see the meta-analyses by Robinson and Pearce, 1984 and Schwenk and Shrader, 1993). Additionally, a few empirical studies show that survival rates of small firms that use strategic planning techniques are higher than those of non-planning firms (Capon and Farley, 1994; Birley and Niktari, 1995). This is particularly true for start-ups (Castrogiovanni, 1996; Delmar and Shane, 2003). However, the prior research literature also reveals contradictory findings regarding the planning-performance relationship (Hutzschenreuter and Kleindienst, 2007). Studies suggest that the impact of strategic planning is not direct, but the contribution of planning relies on the organizational integration that it generates. Particularly, the participative strategic planning facilitates strategic interactions, increases personnel comprehension about strategy, facilitates strategy implementation and hence enables the company to align its strategic targets and resources with the changing business environment (Collier *et al.*, 2004).

To summarize, prior studies show mixed results on the direct link between strategic planning and company performance. Studies argue that particularly in dynamic environments, the role of strategic planning is to involve personnel in strategic discussions (Collier *et al.*, 2004; Hutzschenreuter and Kleindienst, 2007). The prior research literature lacks empirical evidence on the indirect link between strategic planning and company performance, and specifically on the constructs that mediate

the indirect relationship. Therefore, we set out to study the factors that mediate the planning-performance link. Our intention is to analyse the mediating role of personnel commitment to strategy implementation and organisational learning, whereas the direct impact of strategic planning is only controlled (see Figure 1).

2.2 Participative strategic planning, strategy implementation and company performance

One of the main purposes of strategic planning is to create change within a company (Liedtka, 2000a, b). This argument is based on the logic that by involving personnel, companies can commit organisational members to implement strategic change (Westley, 1990; Purser and Cabana, 1997; Fiegner, 2005; Elbanna, 2008). However, according to an extensive review of strategy-process research (Hutzschenreuter and Kleindienst, 2007), this question has rarely been empirically analysed. Therefore, in the present study, we analyse whether participative strategic planning facilitates personnel commitment to strategy implementation. We define personnel commitment to strategy implementation as the steering effect of the defined strategy, the commitment of personnel to the implementation of strategic decisions, and the alignment of strategy implementation and strategic decisions.

Several scholars suggest that participative strategic planning should influence the success of strategy implementation and thus improve company performance (Grundy and King, 1992; Love *et al.*, 2002; Miller *et al.*, 2004; Collier *et al.*, 2004). Participative strategic planning should increase personnel commitment to strategy implementation because it clarifies and explains company vision and strategy (Liedtka, 2000a, b), fosters comprehension of company strategy (Mantere and Vaara, 2008) and enables management to reach a consensus about strategy (Wooldridge and Floyd, 1990; Judge *et al.*, 1997).

Prior studies suggest that the participative strategic planning process supports the clarification and explication of company vision, strategy and strategic targets (Liedtka,

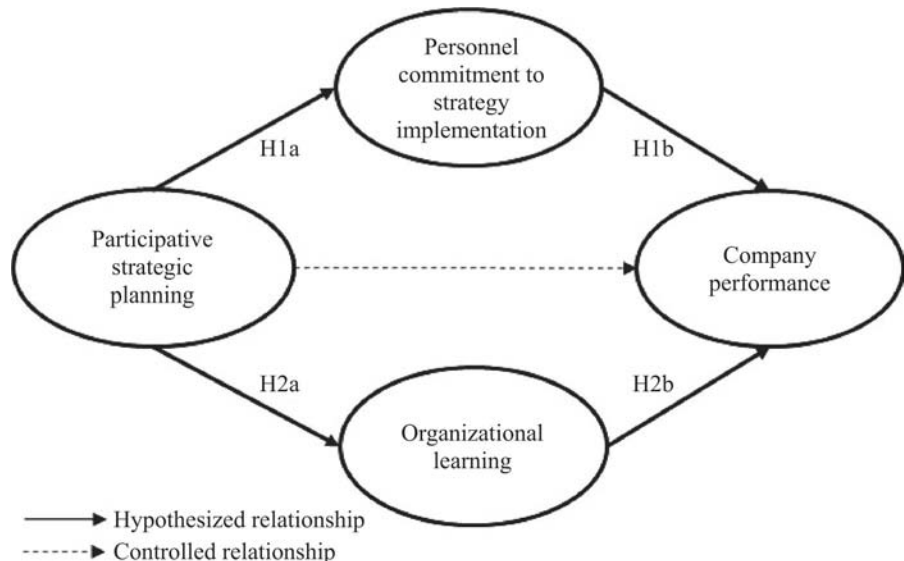


Figure 1.
Conceptual model

2000a, b). The explication of strategy and the involvement of personnel in strategic discussions have been argued to improve personnel comprehension of strategy. A better understanding of company strategy should also engender a feeling of belonging and increase employee willingness to work towards shared business goals (Tonnessen and Gjefsen, 1999). Moreover, an improved understanding of company strategy may also enable individuals to align their own goals to those of the company and thus encourage the feeling that the selected strategic targets (and thus the purpose of the firm) are shared among the personnel (Adler, 2001; Ghoshal and Moran, 1996). In addition, studies argue that the involvement of personnel in the strategic planning process develops cohesion among personnel and supports their joint identification with the firm's overall strategy (Cooper and Daily, 1997; Liedtka, 2000a, b).

Furthermore, personnel involvement in strategic planning may support management in their quest to reach a consensus regarding company strategy. According to this line of thought, a participative planning process may be helpful. In such a process, managers seek to develop a consensus to facilitate strategy implementation. Prior studies highlight the role of consensus in the development of personnel commitment to strategy implementation (Wooldridge and Floyd, 1990; Judge *et al.*, 1997).

Finally, building on these arguments, this study suggests that a company requires participative strategic planning to develop a strategy that aligns behaviour with its strategic vision and targets and commits its personnel to strategy implementation.

H1a. Participative strategic planning will have a positive impact on personnel commitment to strategy implementation.

Prior studies suggest that the ability to implement strategy is one of the keys to company success (Liedtka, 2000a, b). However, as the meta-analysis on strategic planning conducted by Hutzschenreuter and Kleindienst (2007) suggests, there is little evidence of the effects of successful strategy implementation. This remains the case even though a number of scholars suggest that the ability to implement strategies is critical to company performance and that a commitment to strategy implementation plays an important role in implementation success (Wooldridge and Floyd, 1990).

To implement strategies successfully, companies need capabilities to develop these strategies in such a way that their personnel will commit to implementing them and that strategy will steer employees' behaviour in the intended direction. The personnel commitment to strategy implementation has been found to positively affect the success and rapidity of the strategy implementation (Dooley *et al.*, 2000). Commitment increases personnel motivation, shortens the lead time required for strategy implementation and permits rapid responses to changes in the business environment (DeMeyer and Van Hooland, 1990; Dooley *et al.*, 2000). The results of prior studies also support this argument to some extent. For example, Armstrong (1982) found that fostering personnel commitment to strategy implementation improves company performance. However, because the prior literature presents little relevant empirical evidence, particularly from dynamic business environments, this study presents the following hypothesis:

H1b. The commitment of personnel to strategy implementation will have a positive impact on company performance.

2.3 Participative strategic planning, organisational learning and company performance
Organisational learning can be defined as “creating, acquiring, and transferring knowledge and [...] modifying its behaviour to reflect new knowledge and insights” (Garvin, 1993, p. 79). Prior research suggests that participative strategic planning fosters organisational learning. For example, Kim and Mauborgne (1998) argue that personnel involvement in strategic planning may increase trust and social capital among personnel, which may have a positive impact on knowledge-sharing and organisational learning (Hutzschenreuter and Kleindienst, 2007).

The contingency approach suggests that strategic planning may also enable a company to develop a strategy that fits its business environment and resources. Participative strategic planning enables interaction, to develop a shared understanding about strategy and perhaps recognise new business opportunities and allocate resources so that new opportunities can be exploited (Andrews, 1987; Beer *et al.*, 2005). This process of determining strategic fit is by definition an organisational or strategic learning process (Mintzberg and Lampel, 1999).

More specifically, one of the core purposes of a strategy process is to develop and communicate a strategy that states the vision and targets of the firm (Slater and Narver, 1995). The process of identifying and explaining a company’s purpose and strategic targets is an important aspect of organisational learning because it involves organisational members in a strategic dialogue, increases personnel understanding of strategy and steers organisational learning in a specific direction (Gibson and Birkinshaw, 2004). Previous empirical studies of organisational learning suggest that the creation of learning targets is an important task for management in organisations and that effective management can facilitate organisational learning by setting targets (Beer *et al.*, 2005). Hence, we suggest that participative strategic planning may facilitate organisational learning by creating a platform through which management and employees can develop a shared understanding of the company strategy and learning targets. We hypothesise the following:

H2a. Participative strategic planning will have a positive impact on organisational learning.

Finally, prior research emphasises the significance of organisational learning to company performance, especially in dynamic, high-velocity business environments such as the IT industry. For example, Mintzberg and Lampel (1999) argue that companies need targeted learning to maintain a competitive advantage in a continuously changing business environment. Some authors, such as Doz and Kosonen (2008); see also Eisenhardt and Sull, 2001), use the concept of fast strategy to highlight how successful organisations rapidly adapt to changes in the business environment. These studies underline the challenges that a dynamic business environment creates for strategic planning and learning. The majority of scholars agree that companies require organisational learning capabilities, especially in dynamic business environments, to outperform their competitors and thus to remain viable (March, 1991). Prior studies have provided some empirical evidence of the effects of organisational learning on company performance (Gibson and Birkinshaw, 2004; He and Wong, 2004), but further evidence is needed.

H2b. Organisational learning will have a positive impact on company performance.

3. Methodology

3.1 Data

The data for the present study were collected from the Finnish information technology industry. The sampling frame of 1,283 IT companies (NACE rev 1.2 code 72) was constructed using data from the business register for *Statistics Finland*, a government agency that collects and updates information concerning all of the registered companies in Finland. We included all of the companies from the Finnish IT industry with more than five employees but fewer than 250 employees. We believe that the data fit this study well, as one of the extensive on-going debates in the strategic management literature has to do with the advantages of fast strategy (Doz and Kosonen, 2008) – forms of strategic planning in dynamic industries of which the IT industry is one example.

Data were collected in the summer of 2008, just before the economic recession began in Finland. The data were collected using both web-based and paper questionnaires. Before sending out the survey, we contacted 160 randomly chosen participants by phone. In these discussions, we outlined the aims of the project and asked the respondents to complete their questionnaires after receiving them. Two weeks after the first data collection phase, a reminder email was sent. In this study, we employed the key informant approach (Kumar *et al.*, 1993). The key informants were typically the managing directors of the companies and were on average responsible for an annual turnover of about 3.6 million (median 3.1 million) euro.

In total, 174 companies responded to our questionnaire of which 14 were excluded because the answers to the questionnaires were incomplete or because the companies did not fall into the target category of small and medium-sized companies. The rest of the questionnaires, which featured no more than 10 per cent missing data, were analysed using multivariate imputation via chained equations (Royston, 2005), with ordered logistic regression used after we had established that the missing data were completely random. Our response rate was 12 per cent, which is consistent with those obtained in similar management studies (Wolff and Pett, 2007). The effect of non-response was tested by comparing the first third of the respondents to the last third with regard to the key study variables and by comparing the respondents to non-respondents with regard to the key study variables (Armstrong and Overton, 1977; Werner *et al.*, 2007). Because the groups of early and late respondents did not differ statistically significantly, the data appear to be sufficiently free of non-response bias. Therefore, the results appear generalisable to the population of small and medium-sized Finnish IT companies.

3.2 Measures and questionnaire design

The study used five-point Likert-scale items to measure the four constructs of the research model: participative strategic planning, organisational learning, personnel commitment to strategy implementation, and company performance. Most of the measures were adapted from prior studies. Where scales consistent with the purpose of this study could not be found, specially formulated measures were used. The items and their means, standard deviations and Cronbach's alpha values are reported in Table I.

The participative strategic planning measurement scale was adapted from Collier *et al.* (2004). The scale measures the extent of strategic planning by capturing various dimensions, including the level of detail of a firm's strategic planning and the precision

Table I.
Items and their means,
standard deviations and
parcels

Variables (all measured on a five-point Likert scale)	Mean	St. dev.	Parcel
<i>Company performance</i> ($\alpha: 0.70$)			
k9a The owners of the business are satisfied with its performance	3.38	1.03	
k9b Our company is doing a good job in keeping its customers satisfied	4.13	.73	
k9c The business is very profitable compared to its competitors	3.26	1.08	k9pl
k9d The business has grown rapidly compared to its competitors	2.93	1.21	
k9e Our company's performance is excellent in comparison to that of its competitors	2.92	1.20	k9pl
<i>Organisational learning</i> ($\alpha: 0.81$)			
K10a Our employees are encouraged to learn from experience	4.19	0.74	
K10b Our employees are encouraged to share knowledge	4.35	0.76	
K10c Our management and employees are continuously encouraged to share their thoughts, goals and ideas	4.08	0.81	
K10d We appreciate trying out new ideas so much that we tolerate occasional errors	4.00	0.93	
<i>Participative strategic planning</i> ($\alpha: 0.92$)			
K20a Our strategy is planned at a detailed level	3.04	1.12	k20p2
K20b We define precisely how we are going to achieve our strategic objectives	2.87	1.01	k20p4
K20c We have defined our strategic planning process precisely so that we will be successful in solving problems that arise	2.52	1.05	k20p4
K20d Our strategy has been presented in a detailed plan	2.63	1.10	k20p3
K20e We analyse multiple alternatives before choosing a strategy	3.27	1.05	k20p2
K20f We analyse potential strategic options in relation to our strategic targets	3.20	1.06	k20p1
K20g We have precisely defined strategic objectives	3.02	1.20	k20p1
K20h We involve our personnel in strategic planning	3.03	1.13	k20p1
K20i We use strategy tools to support planning	2.18	1.16	k20p2
K20j We update our strategy on a continuous basis	3.00	1.20	k20p3
<i>Personnel commitment to strategy implementation</i> ($\alpha: 0.88$)			
K23a Our strategy guides our daily decision-making	3.30	1.13	
K23b Our employees prioritise their tasks based on our strategy	2.90	0.98	
K23c Our personnel commit to implementing our strategy	3.28	1.01	
K23d Our company executes the planned strategy precisely	3.13	1.05	

of its strategic objectives, strategic choice, and explication of its strategy. This study adds three measures to those of Collier *et al.* (2004): the involvement of personnel in strategic planning (Mantere and Vaara, 2008), the use of strategy tools (Whittington *et al.*, 2006), and strategy updates from the company management (Whittington *et al.*, 2006). These three items were added because according to the aforementioned scholars (among others), these issues represent important dimensions of participative strategic planning.

Organisational learning was measured using four items that reflect Garvin's (1993) definition of organisational learning. The parameters of the study required us to create a scale compact enough to fit into the questionnaire but one that could be used to measure commonly used dimensions of organisational learning. We thus decided to develop a new scale instead of using a pre-existing one. Four items that measured organisational learning were developed from four dimensions: encouraging learning from experience (Greve, 2003), encouraging the creation of new knowledge and ideas, expressing tolerance for mistakes when testing new ideas (Goh and Richards, 1997), and encouraging knowledge sharing (Slater and Narver, 1995).

Personnel commitment to strategy implementation was measured using four items which were developed in accordance with the parameters of this study because we did not find appropriate or sufficiently compact scales in the previous literature. The scale was developed based on a definition of the construct and items reflecting the ideas of Wooldridge and Floyd (1990); see also Dooley *et al.*, 2000). The items measured various issues related to the commitment to strategy implementation, including the effect of strategy as a form of guidance, prioritisation based on company strategy, employee commitment to strategy implementation, and the consistency of implementation with the strategic plan.

Company performance was measured using four items from Wolff and Pett (2006); see also Gibson and Birkinshaw, 2004). The items measure the overall performance of the company, its growth rate and profitability compared to those of the competition, and owner satisfaction with firm performance based on manager perceptions. The subjective measures used are correlated with objective measures in SME research (Murphy and Callaway, 2004; Carton and Hofer, 2006; Richard *et al.*, 2009).

Principal factor analysis was used to test for potential common method variance. The first factor in the unrotated factor solution explained 58.7 percent of the variance, with all items loading positively on that factor. This test indicated the substantial risk of common method bias and indicated that an explicit modelling approach would be necessary in the subsequent analyses.

In the final step necessary to develop the measures for the constructs, the items were combined into parcels, first via an exploratory factor analysis conducted for each scale and then via the combination of items with high loadings and items with lower loadings (Landis *et al.*, 2000). The process involved the use of four indicators for each construct to avoid identification problems in fitting a measurement model using the explicit method factor. All variables were standardised prior to parcelling. The parcel structure is shown in Table I along with the applicable descriptive statistics. The constructs for organisational learning and personnel commitment to strategy implementation have somewhat two-dimensional structures; each of these two scales includes a component describing the management and a component describing the personnel.

4. Results

4.1 Methods and data analysis

Once the data preparation and screening processes were complete, we conducted structural equation modelling (SEM) using *Mplus 5.1*. We chose latent variable SEM over other possible approaches for two reasons. First, latent variable SEM can be used to control for both random and non-random measurement errors and thus eliminate or decrease attenuation effects and bias due to correlated indicator residuals present when using composite variables and regression analysis (Cohen *et al.*, 2003, chapter 12). Second, SEM provides many more options for addressing method variance issues than does the use of methods that rely on composite variables (Podsakoff *et al.*, 2003).

We began our analysis by estimating and comparing three different measurement models using confirmatory factor analysis (CFA). The first model was a single-factor model including all indicators; the second model was a four-factor model measuring the study constructs. The model fit indicated by the second exploratory factor analysis was superior to that indicated by the first but remained lower than was acceptable due to method variance. To control for the effect of method variance, we used the method factor approach presented by Podsakoff *et al.* (2003) and combined these two models into one model in which each indicator variable was a function of the study's constructs and a method factor. For optimal efficiency, the method factor design should take into account additional indicators that are not used for the study constructs (Richardson *et al.*, 2009). Because the data from this study came from a larger survey, we were able to use such additional items as method indicators: four parcels of six items were designated using a domain-sampling model (see Little *et al.*, 2002). The model provided a better fit than the two previous models had. Based on the modification indices, it became apparent that two indicators of the strategy implementation construct and two indicators of the learning construct were correlated in a way that was not explained by the model. A comparison of the model and the exploratory factor analyses suggested that this was a result of the dimensionality of these constructs. To allow the personnel-related dimensions to co-exist in the model with the main dimensions of these constructs, two error correlations were added to the model (Appendix).

After the CFA, we fitted a structural equation model that contained the hypothesised regression paths. Then, we examined the modification indices and concluded that all significant relationships in the data were modelled and that there was no bias present.

4.2 Assessment of the measurement model

Table I reports the means, standard deviations and parcels for the particular items where appropriate. The table shows that the majority of the items are approximately normally distributed. The only exception is organisational learning in which the scores are clearly left-skewed. This indicates that the items should probably be carefully examined and reworded before a follow-up study is attempted.

Table II presents the fit indices for the final confirmatory factor analysis model and the hypothesised model. The goodness of fit indices, CFI and NNFI, are both clearly above the commonly used 0.9 threshold of acceptable fit. Similarly, the RMSEA and its 90 per cent confidence interval are below the commonly used threshold of 0.08. The χ^2 is nearly significant for the measurement model and significant for the structural model. However, this is normal for models with a large number of indicators

(Hair *et al.*, 2005), and because all fit indices indicate good fit, we can safely assume that the model is appropriate for the data and continue on to examine the path coefficients.

The first model in Table III shows the results of the confirmatory factor analysis. The table contains three blocks of rows. The first block includes the regression coefficients grouped by each endogenous variable in the model, the second block contains estimated correlations between the constructs, and the third block contains the factor loadings of the indicators for the constructs. The model column displays the correlations and path coefficients of the study constructs and the factor loadings for the constructs as well as the method column loadings for the method factor. The third column displays the residual variance of the indicators. The loadings of the four method indicators were approximately 0.9 for the CFA model and 0.7 for the structural models. These and the two error correlations, which were approximately 0.2, have been omitted from the table to save space. After controlling for the method factor, we found that most items loaded strongly on their respective constructs. The parcel measuring performance and the fourth item, which measures learning had worse loadings than other items. However, we decided to retain these items because the loadings were significant and because using the loadings as the sole criteria in selecting indicators can lead to the problem of including variance that is shared between the items but not related to the model (e.g. social desirability, see Little *et al.*, 1999).

After concluding that the items have convergent validity, we analysed their discriminant validity by comparing the four-factor model with the initial single-factor model and compared the loadings of the method factor to those of the model constructs. These comparisons revealed that the four-factor model fits the data much better than the single-factor model does and that the loadings on the method factor were substantially lower than the loadings on the constructs. Overall, these tests indicate that the chosen items measure four distinct constructs; we can thus safely assume discriminant validity.

4.3 Assessment of the structural model

The path coefficients for model 2 and model 3 were determined. Based on the results associated with model 2, which included all of the hypotheses, we trimmed the non-significant paths from planning to performance and from planning to learning. The non-significant paths indicate that *H2a* is not supported by this study. After this, model 3 was estimated to derive unbiased estimates of the coefficients of the supported hypotheses.

The path coefficients show that participative strategic planning has a significant positive relationship with personnel commitment to strategy implementation (0.702; $p < 0.001$). These results support *H1a*. The model also shows that the relationship between personnel commitment to strategy implementation and company performance (0.471; $p < 0.001$) is statistically significant, demonstrating support for *H1b*. However, the model does not show support for the link between participative strategic planning and organisational learning (*H2a*). Finally, the relationship between

Model	Chi ²	Df	<i>p</i>	CFI	NNFI	RMSEA	90 per cent C.I.
CFA with method factor	194.472	140	0.0016	0.97	0.959	0.049	0.031-0.065
Hypothesised model	223.634	147	0	0.957	0.945	0.057	0.041-0.057

Table II.
Fit indices

	CFA with method factor			Hypothesised model		
	Model	Method	Residual	Model	Method	Residual
<i>Regressions</i>						
Performance on						
Planning				-0.215		
Learning				0.226**		
Commitment				0.471****		
Learning on						
Planning				0.017		
Commitment on						
Planning				0.702****		
<i>Correlations</i>						
Planning with						
Performance	0.189*					
Learning with						
Performance	0.330****					
Planning	0.168					
Commitment with						
Performance	0.379****					
Planning	0.735****					
Learning	0.266**					
<i>Factor loadings</i>						
Performance by						
K9A	0.813	0.332	0.223	0.811	0.349	0.221
K9C	0.683	0.155	0.504	0.663	0.206	0.518
K9D	0.708	0.199	0.453	0.689	0.246	0.465
K9P1	0.476	0.351	0.644	0.43	0.433	0.627
Planning by						
K20P1	0.732	0.453	0.252	0.663	0.553	0.255
K20P2	0.799	0.400	0.196	0.737	0.510	0.197
K20P3	0.797	0.454	0.153	0.719	0.575	0.152
K20P4	0.707	0.361	0.363	0.661	0.447	0.363
Learning by						
K10A	0.800	0.304	0.261	0.726	0.401	0.312
K10B	0.692	0.310	0.418	0.675	0.400	0.383
K10C	0.565	0.371	0.537	0.494	0.493	0.512
K10D	0.397	0.374	0.696	0.327	0.479	0.663
Commitment by						
K23A	0.829	0.264	0.236	0.816	0.333	0.223
K23B	0.766	0.353	0.282	0.718	0.446	0.285
K23C	0.697	0.275	0.433	0.664	0.346	0.439
K23D	0.605	0.311	0.531	0.549	0.398	0.541

Table III.

Estimated parameters

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$, Standardised coefficients

organisational learning and company performance is positive and statistically significant (0.226; $p < 0.05$), indicating support for *H2b*. In summary, the results demonstrate that participative strategic planning has no direct impact on company performance. Instead, the results link participative strategic planning to personnel commitment, which further impacts on company performance. Participative strategic

planning does not appear to have an impact on organisational learning, but organisational learning has a positive and statistically significant impact on company performance.

5. Discussion and conclusion

5.1 Theoretical contribution

Prior empirical studies display mixed results regarding the relationship between strategic planning and company performance. Furthermore, some studies indicate that some factors might mediate this relationship (Hutzschenreuter and Kleindienst, 2007). Therefore, the present study set out to investigate the impact of two possible mediating factors. The research question was defined as the extent to which personnel commitment to strategy implementation and organisational learning mediate the relationship between participative strategic planning and the business performance of an IT company. Based on an empirical investigation of 160 IT firms based in Finland, this study demonstrates that personnel commitment to strategy implementation clearly mediates the relationship between participative strategic planning and company performance but that organisational learning does not. The results contribute to the current strategic planning and strategic entrepreneurship literature by identifying a construct that plays a mediating role in the relationship between participative strategic planning and company performance in a dynamic industry context. This study offers additional evidence that a mixture of strategic and entrepreneurial behaviour (i.e. the ability to implement strategies efficiently) can be regarded as a promising means of coping with a changing business environment.

The results show that participative strategic planning helps company management to commit personnel to strategy implementation that in turn positively affects company performance. We suspect that the effect of participative strategic planning on personnel commitment results from the explication of strategy and the involvement of the personnel in the strategic planning process. Personnel involvement and the explication of strategy increase personnel commitment to strategic planning, which in turn accelerates strategy implementation and increases the efficiency of the implementation process (Collier *et al.*, 2004). This ability to implement strategies in an accelerated process creates an organisation that can rapidly adopt new strategies and adapt strategies and resources to changes in the business environment (Doz and Kosonen, 2008). The ability to adapt that results from the commitment of personnel to strategy implementation improves performance, as it is a factor of the organisation's ability to adapt to changes in the business environment.

However, the empirical results of the analysis do not provide any evidence of the relationship between participative strategic planning and organisational learning. It seems that even though participative strategic planning seems to facilitate personnel commitment to strategy implementation, it fails to increase organisational learning. Nevertheless, organisational learning seems to positively affect organisational performance. It seems that organisations that are capable of learning quickly perform better in a dynamic industry but that participative strategic planning according to these results does not contribute to the dynamic learning capabilities of organisations. That organisational learning explains company performance provides support for the ideas of Mintzberg and Lampel (1999), who suggest that organisations that are able to continuously adapt to changes in the business environment perform the

best. It seems that the ability to learn and implement strategies contributes to the business performance of small or medium-sized IT companies in a dynamic industry.

5.2 Managerial implications

The empirical results suggest that company managers should pay close attention to the nature of their strategic planning. If firms are to achieve higher levels of performance, participative strategic planning should increase the personnel's understanding of the company strategy and commit personnel to strategy implementation. By recognising the existence of these mechanisms, managers can significantly increase the positive impact of participative strategic planning on company performance (Collier *et al.*, 2004). Conversely, if they neglect the role of personnel commitment to strategy implementation, companies may find that their top management plans strategies but fails to implement them. Recognising these mechanisms provides support for successful strategy implementation. Finally, the results also remind managers about the importance of continuous organisational learning as a factor that impacts company performance positively.

In summary, this study suggests that members of all hierarchical levels within an SME should be included during all phases of the strategic decision-making process. The results show that planning increases personnel commitment to strategy implementation and emphasises the importance of this mediating construct for company success. Furthermore, the overall awareness of strategic planning in small firms of all types – not only IT firms – must increase. Most SMEs do not actually use strategic planning in their complex daily business (due to factors, such as missing knowledge or resources), as previous research on the topic has shown (Kohtamäki *et al.*, 2009).

5.3 Limitations and research implications

The present study presents important results that should be considered against the backdrop of certain limitations. First, that the data used were gathered from Finnish small and medium-sized IT companies somewhat limits the generalisation of these results beyond this context. The research model should also be tested with datasets from other industries as well as with international data. Second, the data are cross-sectional; therefore, the results should also be tested using a longitudinal research setting. Third, the measures used in this study reflect respondents' opinions rather than objective facts. Despite the fact that a number of studies show that objective measures are correlated with subjective ones (Murphy and Callaway, 2004; Carton and Hofer, 2006; Richard *et al.*, 2009), the use of subjective measures does leave space for studies measuring constructs by objective measures. Finally, we also believe that further research should continue our search for variables mediating or moderating the relationship between participative strategic planning and performance. Despite the limitations, we believe that these results provide interesting grounds for further debate and empirical research.

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Appendix

	Mean	St. dev.	k9a	k9b	k9c	k9d	k9e	k10a	k10b	k10c	k10d	k20a	k20b
k9a	3.38	1.05											
k9b	4.13	0.73	0.43										
k9c	3.56	0.87	0.61	0.40									
k9d	3.26	1.08	0.65	0.34	0.50								
k9e	2.92	1.20	0.30	0.17	0.30	0.29							
k10a	4.18	0.78	0.34	0.27	0.18	0.28	0.06						
k10b	4.32	0.84	0.24	0.16	0.13	0.21	0.18	0.65					
k10c	4.07	0.85	0.34	0.28	0.25	0.27	0.20	0.55	0.53				
k10d	4.00	0.95	0.17	0.19	0.14	0.21	0.23	0.43	0.41	0.60			
k20a	3.03	1.11	0.23	0.17	0.27	0.16	0.33	0.19	0.21	0.16	0.08		
k20b	2.86	1.00	0.21	0.21	0.30	0.18	0.32	0.18	0.16	0.18	0.09	0.81	
k20c	2.50	1.03	0.15	0.11	0.25	0.18	0.27	0.14	0.12	0.26	0.21	0.65	0.77
k20d	2.61	1.09	0.19	0.04	0.21	0.20	0.36	0.16	0.14	0.23	0.12	0.72	0.73
k20e	3.24	1.06	0.13	0.13	0.09	0.17	0.19	0.29	0.17	0.28	0.25	0.46	0.42
k20f	3.18	1.08	0.16	0.27	0.12	0.23	0.24	0.25	0.14	0.24	0.15	0.47	0.49
k20 g	3.02	1.20	0.27	0.08	0.23	0.27	0.29	0.26	0.18	0.24	0.04	0.71	0.65
k20 h	3.01	1.14	0.09	0.04	0.06	0.15	0.17	0.27	0.22	0.23	0.19	0.42	0.43
k20i	2.19	1.16	0.13	0.02	0.23	0.16	0.29	0.10	0.04	0.11	0.09	0.45	0.47
k20j	3.00	1.20	0.19	0.09	0.14	0.15	0.37	0.29	0.15	0.20	0.24	0.50	0.49
k20k	2.81	1.32	0.21	0.11	0.17	0.17	0.31	0.25	0.16	0.12	0.13	0.53	0.49
k20l	3.42	1.25	0.18	0.15	0.24	0.22	0.26	0.29	0.23	0.31	0.33	0.45	0.45
k23a	3.12	1.04	0.40	0.21	0.29	0.30	0.29	0.32	0.15	0.25	0.10	0.63	0.58
k23b	3.31	1.13	0.30	0.10	0.16	0.19	0.30	0.29	0.15	0.17	0.11	0.54	0.58
k23c	2.90	0.98	0.34	0.18	0.31	0.22	0.23	0.29	0.12	0.18	0.05	0.49	0.49
k23d	3.28	1.01	0.28	0.21	0.13	0.18	0.11	0.39	0.23	0.30	0.20	0.41	0.44

Table AI.
Correlation matrix of the items

	St														
	Mean	dev.	k20c	k20d	k20e	k20f	k20g	k20h	k20i	k20j	k20k	k20l	k23a	k23b	k23c
k9a															
k9b															
k9c															
k9d															
k9e															
k10a															
k10b															
k10c															
k10d															
k20a															
k20b															
k20c															
k20d	2.61	1.09	0.78												
k20e	3.24	1.06	0.37	0.47											
k20f	3.18	1.08	0.41	0.48	0.78										
k20g	3.02	1.20	0.60	0.72	0.55	0.56									
k20h	3.01	1.14	0.44	0.53	0.47	0.47	0.58								
k20i	2.19	1.16	0.52	0.59	0.34	0.29	0.44	0.42							
k20j	3.00	1.20	0.37	0.46	0.53	0.57	0.54	0.52	0.47						
k20k	2.81	1.32	0.49	0.55	0.44	0.42	0.60	0.50	0.47	0.55					
k20l	3.42	1.25	0.39	0.44	0.41	0.41	0.54	0.46	0.26	0.44	0.60				
k23a	3.12	1.04	0.44	0.54	0.35	0.40	0.69	0.37	0.30	0.50	0.55	0.48			
k23b	3.31	1.13	0.38	0.49	0.49	0.52	0.67	0.45	0.36	0.63	0.56	0.48	0.73		
k23c	2.90	0.98	0.34	0.41	0.37	0.42	0.53	0.33	0.32	0.45	0.43	0.45	0.65	0.65	
k23d	3.28	1.01	0.33	0.39	0.33	0.39	0.47	0.44	0.20	0.38	0.36	0.42	0.61	0.57	0.69

Table AII.
> Correlation matrix of
the items

About the authors

Marko Kohtamäki is a Professor in the research group “Networked value systems” at the University of Vaasa. He takes special interest in services, strategy work and business networks of technology companies and holds a DSc degree in management and organization from the University of Vaasa. Kohtamäki has published in several distinguished international journals, such as *Strategic Entrepreneurship Journal*, *International Journal of Technology Management* and *Management Decision*. Marko Kohtamäki is the corresponding author and can be contacted at: mtko@uwasa.fi

Sascha Kraus is Assistant Professor (Research) for Entrepreneurship at the University of Liechtenstein. Also, he is an Extraordinary Professor for Entrepreneurship at Utrecht University, The Netherlands, and a Guest Professor at the Autonomous University of Barcelona, Spain, and the University of Twente, The Netherlands. Before his current positions, he was an Evald and Hilda Nissi Foundation International Fellow at the University of Vaasa, Finland, and a Substitute Professor at the Salzburg University of Applied Sciences, Austria.

Markus Mäkelä is Professor at the University of Turku and also leads the business development activities of the engineering industry projects of Sitra, the Finnish Innovation Fund. He has previously worked at, among others, Columbia Business School, Helsinki University of Technology, and London School of Economics and Political Science. His main research interests are currently in the management and organization of high technology companies’ marketing,

product development, strategy process, and manufacturing. He holds a DSc degree in industrial management from Helsinki University of Technology and a DSc degree in international business from Helsinki School of Economics.

Mikko Rönkkö is a doctoral candidate at Helsinki University of Technology, where he currently works as a research manager. His previous academic positions include researcher and PhD student at University of Turku. His current research interests are growth of high technology ventures and statistical research methods. He has founded and acted as a CEO of two start-up companies. He holds a MSc degree in industrial engineering and management from Helsinki University of Technology.

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