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STRATEGIC DECISION MAKING AND INNOVATIVE PERFORMANCE OF MICRO AND SMALL ENTERPRISES*

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Abstract. The aim of the study is to examine the relationship between strategic decision speed and innovative performance of micro and small enterprises. Attention is focused not only on the direct effect of these two variables, but also its mediation by sharing information and at the same time moderating this effect on the one hand by the polychronicity of managers in strategic decision-making, goal congruence and trust in companies. The sample consisted of 244 respondents. Processing using PLS-SEM method in SmartPLS 3.0 software. The direct relationship between strategic decision speed and innovative performance of micro and small enterprises has not proved significant. Information sharing plays an important role in this relationship. The overall positive effect is also amplified by the effective goal congruence and organizational trust in the role of moderators. The importance of polychronicity on the intensity of the investigated relationship was not confirmed.

Keywords: micro and small enterprises; strategic decision making; speed; innovative performance; information sharing; polychronicity; Slovakia

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JEL Classifications: D83, M12, O31

1. Introduction

Innovation is becoming a gradually significant factor in the success of business in the context of increasing globalization and digitalization. They provide companies with the creation of new markets, increase efficiency, competitiveness and even survive in the current pandemic. According to the SBA report (2020), the innovation

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performance of Slovak small and medium-sized enterprises lags behind the innovation activity of enterprises in Western Europe, especially in the area of skills and the amount of innovation.

During the Covid-19 pandemic, innovation activity became essential as the need to respond quickly and flexibly to market changes grew rapidly. Studies show the significant impact of strategic decision-making in innovation processes (Kwaku & Li, 2004; Souitaris & Maestro, 2009; Ghonim, 2020), with its speed dominating strategic decision comprehensiveness, based on the systematic collection and processing of information from the external environment in receiving strategic decisions. The concept of strategic alignment is very often discussed in connection with the implementation of strategy and the dynamics of change (McAdam et al., 2019; Ghonim et al., 2020; Street et al., 2018). This concept seeks to achieve the compatibility of strategic goals with different organizational elements (Chi et al., 2020; Sharma and Behl, 2020) and creates the need for a deeper examination of the relationship between strategic decision speed and innovative performance of small businesses. Goal congruence and trust in the company are variables that can ensure strategic alignment and mediate the effect of strategic decision speed on innovative performance. At the same time, given the size of the surveyed enterprises (micro and small enterprises), it is important not to underestimate the importance and role of an innovative leader (usually owner, manager or expert) and his ability to think polychronely in a dynamic, rapidly changing and stressful environment. We accept the upper echelons theory, which is applicable especially in small businesses, operating in a very complex, ambiguous environment, full of diverse stimuli with the need for rapid response.

The central concept of our study is based on the above facts, the aim of which is to fill the research gap in the knowledge of organizational and individual possibilities of increasing the innovative performance of micro and small enterprises. The main goal is to examine the context of strategic decision speed and innovative performance of these companies. We are interested not only in the direct effect of two main variables, but also in its mediation by sharing information and at the same time in moderating this effect by the polychronicity of managers in strategic decision-making, goal congruence and trust in companies.

2. Theoretical background

2.1 Innovative performance and strategic decision-making

Innovation is a key driver of companies' economic performance (Yang, 2011; Wang et al., 2008; Love and Roper, 2015). Studies have shown their positive correlations with various output variables such as productivity and profit growth (Bowen et al., 2010; Evangelista and Vezzani, 2010), organizational performance (Kim et al., 2018). Their significance is therefore undeniable. Therefore, it is important to examine the factors influencing innovative capability and especially innovative performance.

Strategic decision-making is cited as an important factor influencing innovative performance (Martin-Rios & Ciobanu, 2019; Wei et al., 2019; Gallowaya et al., 2017). However, in micro and small enterprises, strategic decision-making is significantly different from the strategic decision-making of medium and large enterprises. It is significantly associated with the personality of the manager (owner, manager) and is based on the principle of satisfaction, while it is rather a passive, unsystematic and often value and emotional decision-making process (Jankelová et al., 2013). Jocumsen (2004) states that micro and small enterprises use the incremental and Garbage can model in strategic decision-making, which is associated with high time pressure and high environmental complexity.

The results of the Corchuelo Martínez-Azúa et al. (2020) study demonstrate the importance of management and its dynamic response to environmental change in achieving innovation performance. Among other factors Speed plays an important role in strategic decision-making. (Eisenhardt, 2017; Treffers et al., 2020). Other authors (Souitaris & Maestro, 2009, Van de Calseyde et al., 2021; Shepherd et al., 2021) confirmed the important link

between strategic decision speed and firm performance and built on older existing research in this area (Baum and Wally, 2003), according to which faster strategic decision making increases competitive performance in international markets, supports the timely adoption of new products and services and leads to competitive advantage (Cerrato and Piva, 2015; Bakker & Shepherd, 2017; Dykes, et al., 2019).

Similarly, Petrou et al. (2020) state that procedural rationality, which is related to lower strategic decision speed, has a negative effect on the internationalization processes of small and medium-sized enterprises and their innovative performance.

Hypothesis 1: We assume that strategic decision speed is positively related to innovative performance of micro and small enterprises.

Mediation effect of information sharing

Information sharing is an effective tool for small business managers to implement innovations (Pfeffer, 2010). Just the employees who are informed can promote the implementation of changes related to the realisation of innovations in the company (Pfeffer, 2010). Aragon-Correa et al. (2013) even confirm the direct link between activities that promote information sharing and organizational innovation. Information sharing is thus a crucial process because if information is not shared and adapted in the enterprise, then the resources of individuals remain underused in implementing innovative approaches (Srivastava et al., 2006; Vainieri et al., 2010). The study by Gibson et al. (2007) and Roohi et al. (2020) confirmed that information sharing has a unique place among different management practices.

Information sharing influences feelings of belonging and common purpose (Lee and Markham, 2013), and helps build psychological security and trust at the enterprise level, as employees feel important contributors to strategic decision-making processes. On the other hand, it allows this decision to be accelerated (Mesmer-Magnus et al., 2011; Mesmer-Magnus and DeChurch, 2009). Information sharing is presented in many studies in a positive context with effective individual and organizational performance (DeChurch and Mesmer-Magnus, 2010), but also with creativity and innovation (Hu et al., 2018). At the same time, information sharing plays a key role in times of uncertainty, turbulence or lack of resources (Katakam et al., 2012; Ley et al., 2014; Uitdewilligen and Waller, 2018), which are attributes characteristic of the current pandemic situation. Some authors approach the task of sharing correct and up-to-date information as a tool for achieving business competitiveness and sustainability, while enabling a rapid strategic response to environmental changes and unexpected situations (Ramakrishna, 2016; Ciccullo et al., 2018). Alzoubi (2018) and Alzoubi and Ramakrishna (2020) combine effective information sharing with business agility and flexible and rapid strategic decision-making.

Hypothesis 2: There is a positive link between strategic decision speed and innovative performance of micro and small enterprises, which is mediated by information sharing.

The moderating effect of polychronicity

Research results reflecting the perspectives of strategic leadership suggest that key managers in the creation of strategies and innovation outputs of companies are top managers (Elenkov et al., 2005; Chen, 2020). It is the characteristics of the top manager (e.g. temporal and regulatory focus, positive affect) that are a critical factor in the innovative success of companies (Tang, Li, & Yang, 2015; Tuncdogan, Van Den Bosch & Volberda, 2015; Zhang, Ou, Tsui & Wang, 2017). One of them is polychronicity – a term related to the ability to perform multiple tasks simultaneously. In the case of micro-enterprises and very small enterprises, owners are also managers, often responsible not only for strategic but also for many operational tasks and are in constant time pressure. Chen (2020), Mohammed & Nadkarni (2014) consider polychronicity in terms of managers' preference for multitasking

as the basis for strategic decision-making of small businesses and a factor influencing firm performance. On the other hand, there are also negative views on polychronicity in decision-making (Chen, 2020; Mohammed & Harrison, 2013), which are in line with the comprehensive understanding of this concept in psychology and cultural anthropology, where the concept was first introduced. These risks need to be eliminated in order to avoid fragmented and rather superficial evaluation of problems and to make full use of the positives of polychronicity in strategic decision-making. Chen (2020) e.g. considers polychronicity as a factor influencing innovative performance. Due to the possible dual function of polychronicity, a moderator in the form of operating environments of a firm is needed in this relationship, which determines the increase or decrease of the relationship between polychronicity and innovative firm performance. Some authors consider a mediation model, where the transfer of the effect of polychronicity on the company's performance mediates the speed of strategic decision-making (positive) and its comprehensiveness (negative) (Souitaris & Maestro, 2009). Existing studies also point to the fact that polychronicity, which is closely related to the dynamics and turbulence of the environment, predicts the speed of decision-making (Kantrowitz & Kinney, 2009; Kantrowitz et al., 2012). On the other hand, the results of Chen (2020) show that specifically, the polychronicity of managers is positively associated with firm innovation, especially in larger companies and dynamic environments.

Hypothesis 3: Polychronicity of managers will moderate the effects of strategic decision speed on innovative performance of micro and very small enterprises; specifically, the effects will be stronger when polychronicity is high.

The moderating effect of goal congruence

The concept of strategic alignment is very often discussed in connection with the implementation of strategy and the dynamics of change (McAdam et al., 2019; Ghonim et al., 2020; Street et al., 2018). This concept represents an effort to achieve the compatibility of strategic goals with various organizational elements (Chi et al., 2020; Sharma and Behl, 2020). In micro and small enterprises, knowledge of the vision by all employees includes participation in goal setting and problem solving, as well as the likelihood that individuals will be based on corporate goals when setting individual work goals (Anthony & Govindarajan, 2007). Our intention is to examine this variable from the point of view of effective communication about goals, about their understanding and creating a certain culture that supports the congruence of goals. Merchant and Van der Stede (2012) state that for companies it is employees and their perception that is the key for their ability to achieve financial and also non-financial goals. At the same time, they present several aspects necessary for congruency goals, namely communication and understanding, create direction, motivation, incentives, connection and short-term behavior. According to De Clercq et al. (2011) goal congruence positively affects firm performance and firm innovativeness. Their findings show that the positive impact of flexible strategic decision-making on product innovation increases at a higher level of congruence of objectives. They are also based on the fact that in line with the objectives and the so-called dominant logic leads to better sharing of information and knowledge and thus to increasing innovation. It follows that if there is a goal congruence in the company, the relationship between managers and employees and employees each other are characterized by a higher level of communication and thus higher efficiency in terms of their use in innovation.

Hypothesis 4: Goal congruence will moderate the effects of strategic decision speed on innovative performance of micro and very small enterprises; specifically, the effects will be stronger for higher levels of goal congruence.

The moderating effect of organizational trust

Organizational trust is based on the essence of interpersonal trust, which includes the individual’s confident and positive expectations of the behavior of other employees (Dirks & Skarlicki, 2004). Trust in a small business creates a common attitude and is focused on the whole team. Individuals have more opportunities to interact with each other and with appropriate leadership, trustworthy ties are created that encourage the effort and collaboration needed for high performance (Drescher et al., 2014). The relationship between leadership and trust has been documented in many studies, along with tools for building it (Lau & Liden, 2008; Boies et al., 2015). One of the important tools is communication which according to the study of Boies et al. (2015) creates preconditions for creativity and innovation. Trust plays a strong supporting role in implementing strategic decisions. Wai et al. (2013) point out that organizational trust can bring benefits related to strategic flexibility. With an organizational trust, the manager may make less effort on operational control and focus on strategic processes, seizing opportunities, identifying risks and innovating. Sividas & Dwyer’s (2000) perceive behavioral integration as a consequence of organizational trust, which strengthens the quality and quantity of information exchange, collaborative behavior and speed of strategic decision making processes. Chenli et al. (2019) perceive the organizational trust as a mediator for the relationship of team processes on the decision performance.

According to Atuahene-Gima and Murray (2007) and Dayan et al. (2009) organizational trust increases the willingness of managers to implement risky actions, due to solid foundations it contributes to faster decision-making and transformation of new ideas into concrete actions focused on innovation.

Hypothesis 5: Organizational trust will moderate the effects of strategic decision speed on innovative performance of micro and very small enterprises; specifically, the effects will be stronger for higher levels of organizational trust.

The research model of our study is shown in Figure 1.

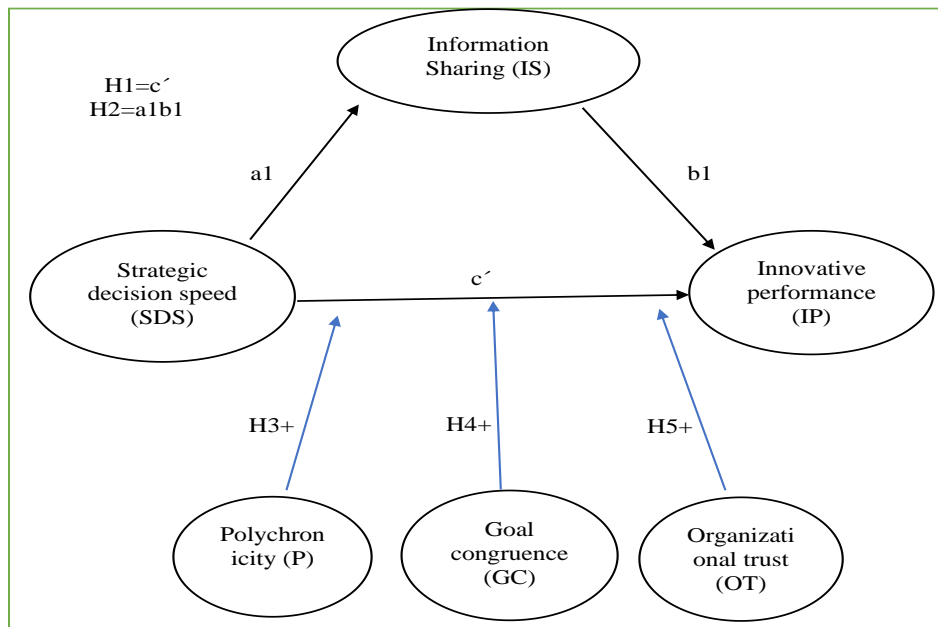


Figure 1. Research model of the study

3. Research objective and methodology

3.1 Data collection and research sample

The business sector in Slovakia is characterized by a high proportion of micro-enterprises, which in 2019 represented 96,9% of all active business entities. More than three quarters (76,1%) of SMEs in 2019 carried out their main business activities in the business services, construction, trade and industry sectors. The number of SMEs increased year on year in all major sectors except trade. Their number increased most dynamically in construction, other services and in the transport and information sector.

All data were collected in the form of a questionnaire survey in micro and small enterprises in Slovakia in February 2021. The managers of these companies were asked to take part in the study and they were acknowledged by the meaning and purpose of the study. The questionnaire was sent to them via the Google Form link and by filling out and submitting it, they agreed with the data processing. Of the 1 600 companies contacted, 244 responses were obtained, representing a return of 15,25%. The average number of employees in enterprises included in the examined sample was 10,28 (min. = 4, max. = 19, SD = 2,91). The representation of sectors was as follows – services 52%, trade 28%, construction 12%, industry 8%. The companies were almost evenly represented from all 8 regions of Slovakia. Their average duration of operation on the market was 13,6 years (min. = 2, max. = 32, SD = 7,56). The average age of managers was 43,3 years (min. = 28, max. = 65, SD = 11,03), 29% of them had a secondary education, 56% a university degree and 15% a third degree university education. In terms of gender, 80% of managers were men and 20% women.

3.2 Measures

The survey was conducted in the conditions of Slovakia.

For establishing semantic equivalence, we used back-translation before administering an instrument (Schaffer & Riordan, 2003). It was translated by bilingual experts from English to Slovak and vice versa subsequently in the event of inconsistencies, the individual items were reworded to establish compliance connotation. Furthermore we preferred using short and simple sentences and repeatedly used nouns instead of pronouns.

Innovative performance (IP) was determined by a variable designed by Cabell et al. (2006). It includes three elements, concerning the 1) introduction of technologically new products developed by the company (totally or partially) into the market, 2) frequency of replacement of old products with others that have undergone significant change and 3) proportion of technologically new or improved products in the turnover of the company. A 5-point scale was used, ranging from (1) for less than the competition to (5) for more than the competition. The reliability and validity of the scale was in their study established.

Information sharing (IS) is operationalized as a scale constructed from the statements of managers on the items, adapted from the study of Ketokivi and Castañer (2004). They evaluated general information sharing and communication of corporate priorities with employees. The intermediate variable IS contains 5 items that are scaled using 5-point Likert type scale (1 – disagree at all, 5 – strongly agree). The validity and reliability of this tool has been verified in many other studies.

Polychronicity is a term that describes the ability to work on multiple activities simultaneously. To measure this variable, we used items from The Polychronic-Monochronic Tendency Scale research, developed by Lindquist and Kaufman-Scarborough (2007). Although the 10-item Inventory of Polychronicity Values (IPV) tool (Poposki

& Oswald, 2010), developed by Bluedorn et al. (1992) and validated in further studies (Hecht & Allen, 2005), we chose the PMTS Scale. The reason is the criticism of IPV because it focuses on the cultural rather than the individual dimension. This tool contains 5 items that explore 2 dimensions, namely preference and belief. A 5-point Likert type scale (1 = strongly disagree; 5 = strongly agree) was used.

Strategic decision speed (SDS) is a variable that we obtained from Schriber & Gutek's (1987) concept of measuring speed in strategic decision making. It contains 3 items, aimed at examining the speed with which companies carry out all aspects of the decision-making process at the strategic level. The variable has been validated by several studies and its excellent psychometric properties have been demonstrated (Souitaris & Maestro, 2009). The Likert scale from 1 to 5 (1 = strongly disagree; 5 = strongly agree) was used for the first two items; at the third item 1 = not at all; 5 = a great extent).

Goal congruence. To measure the variable, we used the tool of Tsaia and Ghoshala (1998) validated in further studies (De Clercq et al., 2011) containing 4 items. Respondents expressed a degree of agreement with the congruence of goals within their company. A 5-point Likert type scale (1 = strongly disagree; 5 = strongly agree) was used.

Organizational trust. This variable was measured using OTI (Organizational Trust Inventory), which was developed by Nyhan and Marlowe's (1997). It contains 4 items related to trust in the company. The authors present this tool as fast and simple with high homogeneity and convergent and discriminatory validity. The Likert scale is from 1 = very low to 5 = very high.

Control variables were as follows: age (in years), management experience (in years), gender (male = 0, female = 1), highest completed education (0 = university no, 1 = university yes), focus (production, services, trade), length of market presence (in years), which were nominated as control variables because of their theoretical relevance and the possibility of their influence on the assessed relationships. CEO polychronicity will be related to firm innovation for larger firms in a positive way, but negatively related to firm innovation for smaller firms (Chen, 2020).

The questionnaire contained a set of 24 indicator variables (Table 1 in Appendix) for the measurement model. We have taken several steps to avoid common method bias as it is a frequent and serious problem in research, . The entries in the questionnaire were randomly scattered and mixed, and the scales of a few answers were reversed and we also divided the questionnaire and organized each part in a different context to facilitate the situation where the respondents were not affected by their previous answers and their thought of the results. Furthermore, we used the calculation of the VIF indicator. In case the VIF occurred greater than 3.3 it is suggested as an indicator of pathological collinearity and moreover an indication that a model may be contaminated by common method bias. Therefore, in case each VIFs result from a full collinearity test are equal to or lower than 3.3, the model can be perceived free of common method bias (Kock, 2015, p.7). After realizing the statistics of collinearity in SmartPLS we discovered that the inner VIF values are all lower than 3.3.

3.3 Data gathering and data analysis

To assess our research model and suggested hypotheses to later investigate the relations between the selected constructs, we used the PLS-SEM method (partial least squares structural equation modeling) (Hair et al., 2014). This method makes it enables the testing of several hypotheses simultaneously within direct and indirect impacts in a complex system (Hair et al., 2011; Ringle et al., 2012; Ringle et al., 2018). We had several motives to decide for it . The first reason we used it is the relatively small size of sample (244). Further motives include the the complexity of the research model, the focus of the study on predicting dependent variables and the use of latent variable scores for predictive purposes. We used the SmartPLS 3.3 software (Roldán and Sánchez-Franco, 2012)

for the assessment of both the measurement model and the structural model. The advantage of this software is that it simultaneously evaluates both models.

4. Results

The PLS model analysis involves of two consecutive stages (Henseler et al., 2015). In the first stage it verifies the reliability and validity of the measurement model and the second stage includes the evaluation of the structural model, which was shown in Figure 1. The models show connections between constructs via a set of paths, which reflects the established hypotheses. The relationships between constructs illustrate the direct, indirect and interaction effects.

4.1 Measurement model

The proposed model meets all the common requirements. The first is the reliability (Table 2 in Appendix), which is met for the reason that all the standardized loadings are higher than 0,70 (Chin, 2010). Simultaneously, the requirement of internal construct reliability is also met. This reliability was monitored by Cronbach's alpha (from 0,936 to 0,949), composite reliabilities (CR) in margin from 0,940 – 0,950 and rho_A (margin from 0,939 to 0,949), all values being greater than 0,70 and less than 0,95 (Hair et al., 2017) and at the same time, the rho_A ranged between Cronbach's alpha and CR (Ringle et al., 2018).

We also assessed the convergent validity by calculating the average variance extracted (AVE), which in our model reaches the level of 0,5 (Chin, 2010) for all constructs, which indicates that the construct explains an average of at least 50% of its item's variance. Finally, we as well subjected our model to a discriminant validity analysis, which we measured with three tools to obtain satisfactory results with at least one of them. For the Fornell-Larcker criterion, not all diagonal values were higher than the off-diagonal elements and for the HTMT criterion a value above 0,9 was also found. Therefore, we also implemented cross loadings (Hair et al., 2012), used in case of problems with discriminant validity. Through crossloading, we verified the loading of factors into parent constructs. We conclude the establishment of discriminant validity.

4.2 Structural model

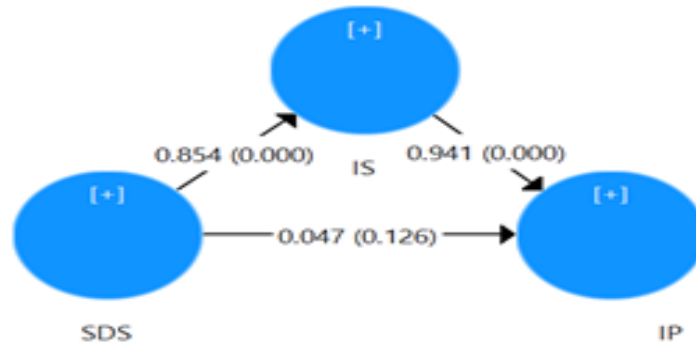
The structural model illustrates the paths hypothesized in the research framework. The model is evaluated on the basis of R2 and Q2 values, which evaluate predictive significance (Hair et al., 2017) and significance of paths. The goodness of the model is determined by the strength of each structural path determined by the R2 value for the dependent variable (Bernal-Conesa et al., 2017). The predictive capability is established because the value of R2 for all variables are over 0,1. Further Q2 proved the predictive relevance of the endogenous constructs. A Q2 over 0 demonstrates that the model has predictive relevance. Our findings show significance in the prediction of the constructs. Moreover, the model fit was measured using SRMR. The value of SRMR was 0,152. SRMR values should be less than or equal to 0,100, indicating an acceptable model fit (Hair et al., 2017).

The direct and indirect effects are recorded in Table 3.

Table 3. Path coefficients, total, direct, and indirect effects

Direct effect SDS and IP – H1						
	Original Sample (β)	Sample Mean (β)	Standard Deviation	T Statistics	P Values	not supported
SDS -> IP	0.047378	0.050500	0.029038	1.631589	0.103396	
1. mediation of IS between SDS and IP – H2						supported
	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values	
IS -> IP	0.940509	0.937656	0.025092	37.482120	0.000000	
SDS -> IP (direct effect)	0.047378	0.050500	0.029038	1.631589	0.103396	
SDS -> IS	0.853986	0.853378	0.017414	49.040176	0.000000	
SDS -> IP (total effect)	0.850559	0.850583	0.019117	44.492614	0.000000	
SDS -> IS -> IP (indirect effect)	0.803181	0.800082	0.024088	33.343026	0.000000	

Notes: IP = Innovative Performance, IS = Information Sharing, SDS = Strategic Decision Speed, $p < 0,05$



Notes: IP = Innovative Performance, IS = Information Sharing, SDS = Strategic Decision Speed, $p < 0,05$

Figure 2. Results of the study mediation model

Hypothesis 1 proposed that SDS is positively associated with IP. The hypothesis has no support. Thus, the direct relationship between SDS and IP was not confirmed in our study. H2 on the positive relationship between SDS and IP, which is mediated by IS has support. The total effect is $\beta = 0,850$, the direct effect $\beta = 0,05$ and the indirect effect $\beta = 0,80$. It is therefore a complete mediation.

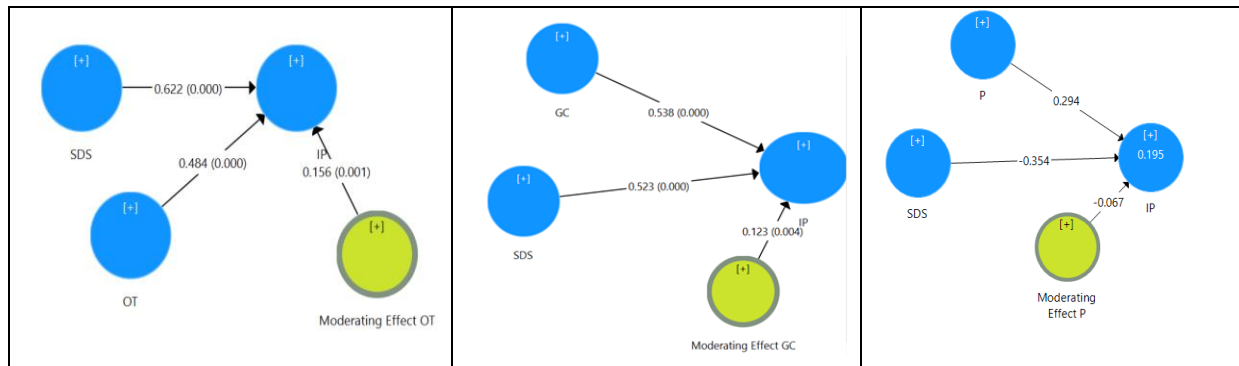
4.3 Moderation effects

Moderation analysis was performed to evaluate the moderating role of OT, GC and P (Table 4). The results revealed an significant moderating role of OT ($\beta = 0,156087$, $t = 3,412530$, $p = 0,000696$) and GC($\beta = 0,122712$, $t = 2,756047$, $p = 0,006064$) on the relationship between SDS and IP. Hypotheses H3 and H4 thus have support. The variables OT and GC increase the intensity of the relationship between SDS and IP. The moderating effect of P was negative, but was not confirmed to be significant ($\beta = -0,067271$, $t = 0,944354$, $p = 0,346501$). Hypothesis H5 has no support.

Table 4. Moderating effects in the investigated model

	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values	
Moderating Effect OT -> IP	0.156087	0.151363	0.045739	3.412530	0.000696	supported
OT -> IP	0.484203	0.487590	0.042659	11.350417	0.000000	
SDS -> IP	0.621805	0.615034	0.060777	10.231010	0.000000	
Moderating Effect GC -> IP	0.122712	0.125371	0.044525	2.756047	0.006064	supported
GC -> IP	0.537524	0.535818	0.055583	9.670646	0.000000	
SDS -> IP	0.523345	0.526328	0.071998	7.268900	0.000000	
Moderating Effect P -> IP	-0.067271	-0.038295	0.071453	0.944354	0.346501	not supported
P -> IP	-0.354294	-0.251547	0.258536	1.371582	0.171145	
SDS -> IP	0.294009	0.296812	0.070107	4.175302	0.000000	

Notes: IP = Innovative Performance, P = Polychronicity, IS = Information Sharing, SDS = Strategic Decision Speed, GC = Goal Congruence, OT = Organizational Trust, $p < 0,05$



Notes: IP = Innovative Performance, P = Polychronicity, IS = Information Sharing, SDS = Strategic Decision Speed, GC = Goal Congruence, OT = Organizational Trust, $p < 0,05$

Figure 3. Results of study moderation effects

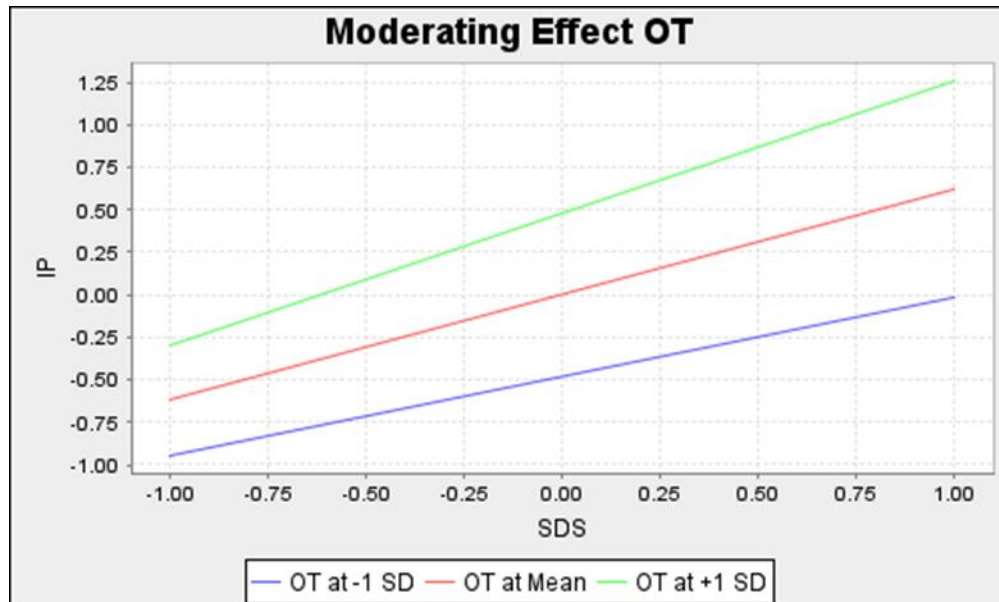


Figure 4. Moderating effect OT → IP

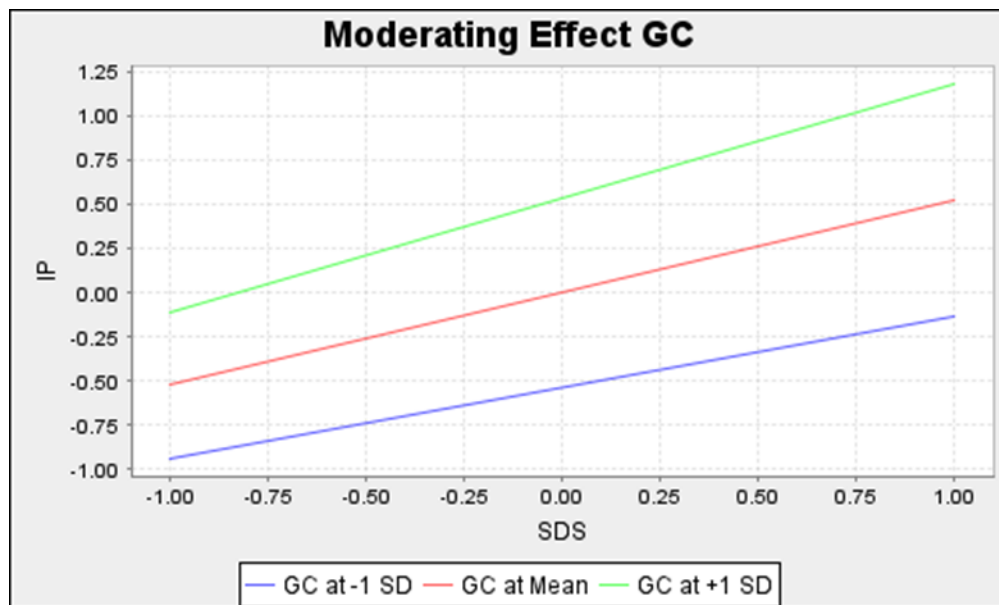


Figure 5. Moderating effect GC → IP

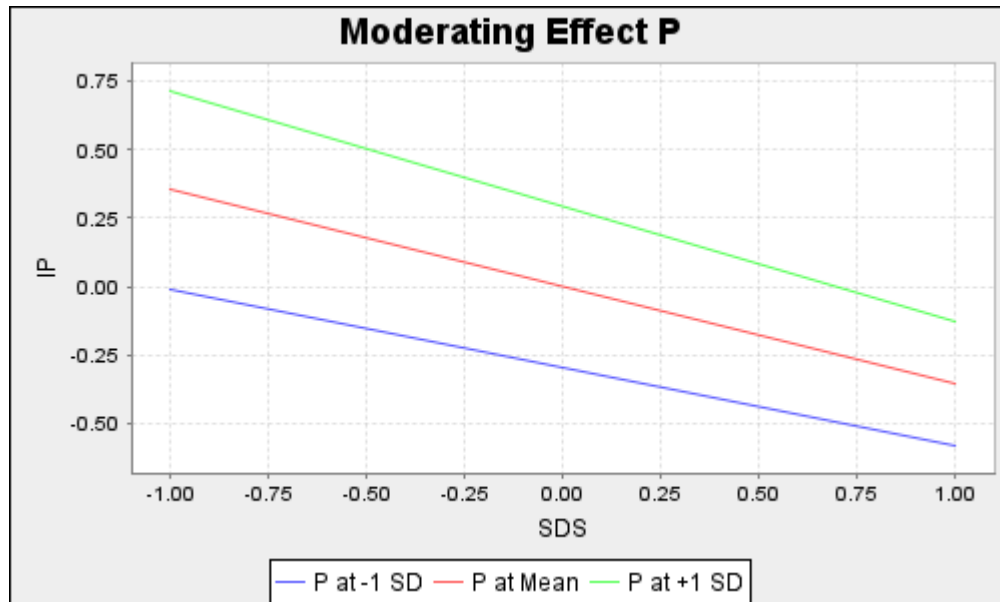


Figure 6. Moderating effect P → IP

A strong and significant moderating effect was identified in the case of OT and GC. These variables act on the relationship between SDS and IP, so with their higher values, the positive effect between SDS managers and the IP of the companies managed by them also grows. The role of P in the examined relationship was not confirmed, which means that the intensity of the relationship between SDS and IP is not affected by the ability of managers to solve several tasks simultaneously.

We were also interested in the extent to which the age and length of the manager’s practice can affect the relationships examined. The results shown in Table 5 show that both variables act as moderators in the relationship between SDS and IP. Although their influence on the intensity of the examined relationship is not very large, it has been proven to be significant. Older managers and managers with longer experience can make better use of SDS to support their own company’s IP.

Table 5. Moderating effects of tenure and age in the investigated model

	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values	
Moderating Effect tenure -> IP	0.074997	0.073620	0.030097	2.491851	0.013031	supported
SDS -> IP	0.862276	0.864260	0.018869	45.698053	0.000000	
tenure -> IP	0.023725	0.024498	0.036637	0.647562	0.517565	
Moderating Effect age ->IP	0.057623	0.055921	0.028899	1.993974	0.046698	supported
SDS -> IP	0.856937	0.859328	0.016325	52.492845	0.000000	
age -> IP	0.027623	0.026519	0.033649	0.820901	0.412094	

Notes: IP = Innovative Performance, SDS = Strategic Decision Speed, p < 0,05

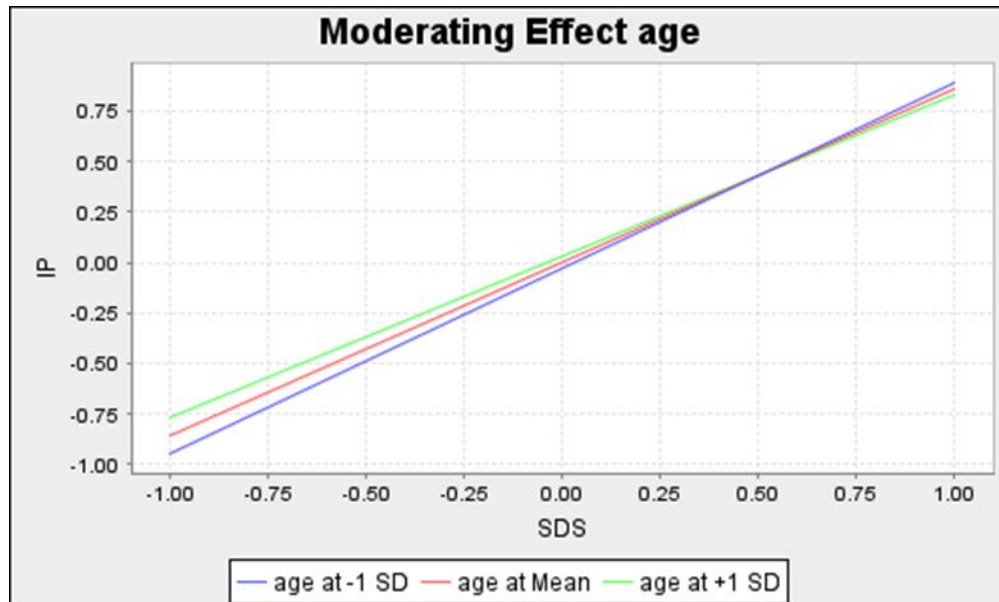


Figure 7. Moderating effect age → IP

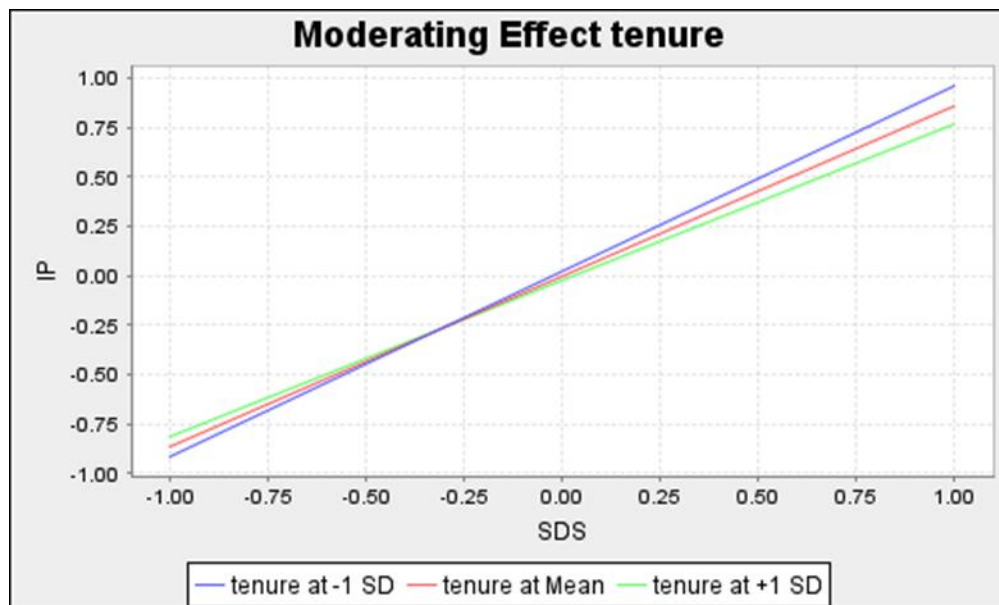


Figure 8. Moderating effect tenure → IP

5. Discussion

Micro and small businesses are often referred to as the „backbone“ of the global economy. The strategic decision-making of micro and very small enterprises is significantly complicated by resource constraints, their low-staff organizational structure and the use of more tacit than explicit knowledge (Shafi, 2020; Marzo & Scarpino, 2016; Fernandes Crespo et al., 2021). Strategic decision-making can help them ensure greater prosperity and sustainable development, either by working together and strengthening their external relations (Shafi et al., 2019), developing innovation capabilities and inner potential (Shou and Shao, 2017; Shafi, 2020; Kim et al., 2018; Liu et al., 2013). The aim of this study is to enrich existing knowledge in several ways. The first is to point out the need for strategic decision-making in the environment of micro-enterprises, which often do not apply it in its rational form (Jocumsen, 2004). Therefore, further dissemination of knowledge about variables and the links with their performance can be beneficial for their sustainable development. Slovakia, as one of the important V4 countries, is not sufficiently cited in the literature in the field of sustainability of micro-business. Our study bridges these gaps in research.

We agree with Kim et al. (2018) that innovation is significantly linked to organizational performance. De Clercq et al. (2011) when examining product innovativeness, they found significant correlations with the size of the company and its age, while higher innovativeness was demonstrated in smaller and younger companies. According to Martin-Rios & Ciobanu (2019) and Wei et al., (2019) strategic decision-making is a significant factor influencing a company's innovative performance. In the case of strategic decision-making, speed plays an essential role, because according to Cerrat and Piva (2015), faster strategic decision-making supports the timely adoption of new products and services and thus leads to a competitive advantage. In our study, the direct relationship of SDS to the IP of micro and small enterprises was not confirmed, but in this relationship, full mediation was identified through information sharing. This means that if management regularly provides employees with information about their own intentions and policies and shares with them information about important changes and achieved results, this has a positive effect on strengthening the innovative performance of the whole company. This is achieved, especially in small companies, by direct involvement and involvement of employees. A probable characteristic of innovation processes in micro and small enterprises is the low degree of formalization. Small and medium-sized enterprises rarely have explicit innovation procedures. Decisions tend to depend directly on the owner and formal planning is also difficult to implement. Knowledge is transferred in the course of work and depends on the abilities of employees (Terziovski, 2010). The opportunities for innovation for SMEs are also shaped by their ability to collaborate and „learn interactively“ (Lundvall & Lorenz, 2007) with other agents in the environment, such as clients, providers and training centers. Therefore, it is extremely important to support employees in participating in business events and interest in innovative development. This fact is also supported by other findings of the research study. According to them, OT, and GC play an important role in the relationship in the role of moderators. A culture of trust promotes open communication, which according to Boies et al. (2015) a prerequisite for innovation. Our findings are consistent with the claims of Atuahene-Gima and Murray (2007) and Dayan et al., (2009), according to which organizational trust increases the willingness of managers to implement innovations, contributes to faster decision-making and transformation of new ideas into concrete actions. Information sharing in micro and small businesses involves all employees knowing the vision and goals, participating in solving business problems, which supports the likelihood that individuals will be based on business goals when formulating their own goals (Anthony & Govindarajan, 2007). It was in the case of congruence of goals that its positive moderating effect on the examined relations was confirmed. Our findings are consistent with De Clercq et al. (2011), according to which goal congruence positively influences firm innovativeness and supports the knowledge about the positive impact of flexible strategic decision-making on innovation at a higher level of goal congruence.

The role of the third moderator examined, polychronicity in the relationship between SDS and IP was not confirmed. At this point, our results contradict the findings of Chen (2020), Souitaris & Maestro (2009) and

Mohammed & Nadkarni (2014), who consider polychronicity to be the basis of small business strategic decision-making and a factor influencing firm performance. Based on the results, we assume that the polychronicity of the manager can affect innovation results rather negatively. Mohammed & Harrison (2013) also draws attention to the risk of polychronicity in decision-making. In our study, the role of polychronicity was not confirmed to be significant, but the negative moderation effect rather points to its hindering effect in the relationship between SDS and IP in small firms.

We agree with Merchant and Van der Stede's (2012) assertion that, for businesses, it is employees in particular who are critical to the ability to achieve stated goals. This is even more true in the micro and small business environment. If they want to survive in a competitive environment, they should observe the innovative activity of their own employees and their involvement in strategic processes. Promoting a culture of openness, enabling the sharing of information and employee participation in corporate affairs, seem to be appropriate tools. This approach also results in goal congruence, which has also been confirmed as a factor with a positive impact on a firm's innovation performance. The implementation of all these factors and their interaction can contribute to a synergistic effect in the environment of small enterprises, which will result in an increase in their innovative activity.

Conclusions

An important aspect of this paper is that it offers new contexts for decision speed with innovative performance. Previous theory has mainly focused on the relationship with firm performance. Although the study did not confirm a direct relationship between SDS and IP, so the speed of strategic decision-making alone is not sufficient to support innovation performance, it showed that by involving information sharing into the strategic processes of small enterprises, it is possible to influence their innovation activity. At the same time, the results of our study confirm that the intensity of the relationship between SDS and IP can be further positively influenced through organizational trust and congruence of goals. For small businesses, this is a challenge to implement a culture of openness and trust, from which they can significantly benefit from supporting their own innovation activity.

At the same time, the study contributes to evolving research in the field of strategic decision-making for micro and small enterprises by examining the polychronicity of top managers as individuals. Previous studies (e.g. Souitaris & Maestro, 2009; Ling et al., 2016) have addressed polychronicity as a feature of a senior management team in the context of strategic decision-making in large companies and highlighted its positive effects. Our findings did not demonstrate the effect of polychronicity on the relationship between SDS and IP. Its importance in the role of moderator has not been confirmed as significant, but the negative moderation effect draws attention to the risk of using polychronicity in the case of serious strategic decisions.

Despite their key role in economic development, micro-enterprises remain under-represented in the scientific literature on strategic decision-making. The results of our study therefore partially contribute to filling this gap and at the same time open prospects for further research in this area.

Limitations

Our research study has several limitations. The first is a relatively small sample of respondents (244) and its limitation to Slovak conditions. On the other hand, it includes companies from all over Slovakia, which could support the generalization of results for this region. At the same time, given the content of the discourse and the reflection of global challenges in the small business sector, we assume that our study can also enrich the scientific discussion within the wider space. A limitation of the research may as well be the non-use of the pilot survey as one of the best practices for the verification of the validity and methodological soundness of the

constructs used. Though, we used additional recommendations that we perceived sufficient. Even though we used several measures to mitigate common method bias, they did not use data from various sources. We obtained the data from the managers of the companies and we are aware that collecting data from numerous sources, i.e. asking not only managers but also employees, could raise the objectivity of the research. Finally, in addition to the factors concerned in this study, there may be other factors that may affect the examined relationships. Our model operated with sectional rather than longitudinal data, which may be not be able to reflect the real causal relationship due to the time-lag effect and the usage of panel data may well be the future direction.

Despite these limitations, we consider that the gained results contribute to the extension of knowledge in several ways. Our findings broaden our understanding of how IS fundamentally affects the relation of SDS and IP, in addition to the role of GC and OT in maintaining the innovative performance of small businesses. Building a culture of trust and honesty seems to be a highly functional strategy in encouraging their innovation and competitiveness.

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Appendix

Table 1. Researched variables and their items

Innovative performance (IP)		Polychronicity (P)	
IP1	Introduction of technologically new products developed by the company (totally or partially) into the market.	P1	I prefer to do two or more activities at the same time.
IP2	Frequency of replacement of old products with others that have undergone significant change.	P2	I typically do two or more activities at the same time.
IP3	Proportion of technologically new or improved products in the turnover of the company.	P3	I am comfortable doing more than one activity at the same time.
		P4	I like to juggle two or more activities at the same time.
		P5	Doing two or more activities at the same time is the most efficient way to use my time.
Information sharing (IS)		Strategic decision speed (SDS)	
IS1	The company's management regularly informs employees about important changes.	SDS1	I prefer and tend to take my time when making strategic decisions.(r)
IS2	The company's management regularly informs employees about the overall policies and goals.	SDS2	I generally believe in making quick strategic decisions.
IS3	The company's management regularly informs employees about the method of evaluating the company's performance and about the achieved results.	SDS3	Please tick the extent on which your company places on: speed when planning or thinking about strategies.
IS4	The company's management regularly informs employees about the plans of its departments.		
IS5	The company's management regularly informs employees about the requirements related to the performance of their work.		
Goal Congruence		Organizational trust	
GC1	In our company I and the employees have a similar vision regarding how things should be done in the organization.	OT1	My level of confidence that this organization will treat me fairly is high.
GC2	I and employees think alike on most issues with respect to the organization.	OT2	The level of trust between supervisors and workers in this organization is high.
GC3	Most of our objectives are fully aligned.	OT3	The level of trust among the people I work with on the regular basis is high.

Table 2. Loadings, Reliability and Validity

	Construct/indicator	Factor Loading	Composite reliability (CR)	rho_A	Cronbach's alpha	Average Variance Extracted (AVE)
IP	IP1	0.881	0.962	0.962	0.954	0.761
	IP2	0.902				
	IP3	0.911				
P	P1	0.907	0.940	0.924	0.920	0.759
	P2	0.913				
	P3	0.842				
	P4	0.813				
	P5	0.799				
IS	SI1	0.922	0.973	0.965	0.965	0.878
	SI2	0.928				
	SI3	0.937				
	SI4	0.942				
	SI5	0.956				
SDS	SDS1	0.912				
	SDS2	0.854				
	SDS3	0.913				
GC	GC1	0.912	0.933	0.911	0.903	0.776
	GC2	0.937				
	GC3	0.838				
	GC4	0.832				
OT	OT1	0.893	0.954	0.935	0.935	0.838
	OT2	0.940				
	OT3	0.944				
	OT4	0.875				

Notes: IP = Innovative Performance, P = Polychronicity, IS = Information Sharing, SDS = Strategic Decision Speed, GC = Goal Congruence, OT = Organizational Trust

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