An entrepreneurial way of looking at the firm-industry debate*

*Tin Horvatinović, Mihaela Mikić, Ivana Kovač***

Abstract

This study advances the firm-industry debate by shedding the assumptions present in current empirical studies. To accomplish this task, two entrepreneurial theories, causation and effectuation, are conceptualised as resource management processes and are hypothesised to carry the effect of industry on business performance. The emerging picture incorporates theoretical improvements into an empirical investigation. The results are based on a sample of entrepreneurs from Croatia, a CEE country with an uncertain environment from a business perspective, which creates the need for entrepreneurial approaches to resource management practices. This makes Croatia and the CEE region valuable boundary conditions for the model.

Keywords: firm effect; industry effect; effectuation; causation; business performance; resource management
JEL codes: L10; L22; L26

1. Introduction

Professor Donald Schön once remarked: "Old questions are not answered-they only go out of fashion". This quote relates to the scientific research stream that ventured to answer whether firms' competitive advantage and business performance are primarily driven by industry structure or by the possession of specific resources. Proponents of the former are members of the structuralist camp (Bain 1951; 1959), while the advocates of the latter are in the resource camp (Wernerfelt 1984; Barney 1991). Many empirical studies were conducted to test the two theories in diverse contexts. Assembled scientific evidence strongly suggests that purposeful resource assembly is more influential than industry forces (e.g. Bini/Nascia/Zeli 2020).

When examining the literature, two meaningful insights emerge from a theoretical stance. First, scholars conceptualised their empirical studies using an either-or stance when testing the effects of industry and resource aspects on business

* Received: 11.11.22, accepted: 13.4.24, 4 revisions.

** *Tin Horvatinović*, (Corresponding author), PhD, Postdoctoral researcher, Faculty of Economics & Business Zagreb, University of Zagreb. Email: thorvatinovic@net.efzg.hr. Main research interests: entrepreneurial decision-making, entrepreneurial finance, entrepreneurial ecosystems.
Mihaela Mikić, PhD, Associate professor, Faculty of Economics & Business Zagreb, University of Zagreb. Email: mmikic@efzg.hr. Main research interests: entrepreneurial decision-making, internationalization, entrepreneurial ecosystems.
Ivana Kovač, PhD, Associate professor, Faculty of Economics & Business Zagreb, University of Zagreb, Email: ikovac@efzg.hr. Main research interests: entrepreneurial decision-making, international economics, entrepreneurial ecosystems.

performance. Second, the same researchers abided by the initial postulates of both camps in restraining the role of managerial initiatives in running the firm. In other words, the permeated field assumptions (Alvesson/Sandberg 2011) are that industry and resources are disparate forces affecting unknown and, to a large extent, managerially uncontrollable processes in the firm (McWilliams/Smart 1995).

Such assumptions are, however, receding from purely theoretical advancements. Conceptual models that have been introduced discarded many assumptions that do not correspond to real-world characteristics (Foss/Hallberg 2017). One example of a theoretical breakthrough is the work of Sirmon, Hitt, and Ireland (2007), who developed a resource management framework that accounts for both environmental shocks and the functions of managers.

Therefore, it is evident that the empirical results do not reflect the contemporary theoretical models. To address this research gap, this paper conceptually re-categorises two approaches to entrepreneurial decision-making, causation and effectuation (Sarasvathy 2001), as resource management processes according to the view of the entrepreneurial opportunities they endorse. Causation and effectuation are applicable to the firm-industry debate for two reasons. First, their theoretical development not only starts from the assignment of resources in developing and managing a firm but also extends to the recommendations for resource deployment. Second, industry composition was initially postulated as a proxy for external uncertainty as the primary explanatory mechanism for causation and effectuation usage (Sarasvathy 2001).

Thus, this paper enhances the literature by proposing a novel theoretical model based on entrepreneurial theories, which is empirically testable and less saturated with underlying assumptions. Showing how the presuppositions of causation and effectuation lead to viewing them both as resource management processes, this study extends the theoretical insight of Michaelis, Carr, Scheaf, and Pollack (2020) that entrepreneurial behaviours are resourceful actions.

As an additional theoretical contribution, this study puts boundary conditions (Sandberg/Alvesson 2021) on the model. The study occurred in the Central and Eastern European (CEE) context, making the theory and the results relevant for CEE entrepreneurs.

Although concepts from a non-CEE context are integrated into a CEE one (Rašković/Dikova/McDougall-Covin 2020), the model is predominantly applicable to an underdeveloped field of research of entrepreneurs in countries that went through a transition in the 1990s (Soulsby/Remišová/Steger 2021). In such environments, the utilisation of often scarce resources is essential (Koveshnikov/Dabija/Inkpen/Vătămănescu 2022). Furthermore, business-related uncertainty is highly present in CEE environments (Hanousek/Shamshur/Trešl 2018).

From these conditions, it follows that the issue of choosing a business strategy is even more pronounced (Manev/Manolova/Harkins/Gyoshev 2015).

An empirical model is tested using partial least squares structural equation modelling (PLS-SEM) and PROCESS approaches. The data was gathered from questionnaires sent to small and medium-sized enterprises (SMEs) operating in the Republic of Croatia. The results show that effectuation positively mediates the relationship between the industry's competitive intensity and business performance. However, causation is not a significant mediator of the same relationship. Moreover, the direct industry effect on business performance is not significant. Therefore, the role of industry in explaining business performance would be misplaced without the theorised indirect effects.

The main contributions of this study are threefold. First, this study broadens the understanding of management phenomena by uniting firm and industry effects into one previously unexplored coherent framework.

Second, given that this study develops causation and effectuation as resource management processes of exploiting entrepreneurial opportunities, it answers the call by Alvarez, Barney, and Anderson (2013) to bring in the discovery-creation view of opportunities into the resource perspective on firms.

Third, this study utilises two foundational theories as guiding principles for theory development, which can be used as a baseline for future research. In contrast, previous scientific inquiries based on SME samples (Esho/Verhoef 2021) explained the firm-industry effect in small ventures with regard to their emerging properties (e.g. Fernández/Iglesias-Antelo/López-López/Rodríguez-Rey/Fernandez-Jardon 2019). Accordingly, the findings of this study add an integrative conceptual contribution since a holistic approach is used to connect two separate concepts (MacInnis 2011). Such an approach is aligned with Cornelissen and Durand's (2014) recommendation to merge other strands of literature into management studies.

2. Literature review and hypotheses development

2.1. Industrial organisation theory and the resource-based view

Industrial organisation scholars maintain that the main factor of the competitive advantage of firms is the makeup of the industry (Bain 1951; 1959). The causal chain starts with industry facets that affect business strategy, subsequently affecting business performance, known as the structure-conduct-performance paradigm. The main idea is that managers of firms try to perceive and analyse principal industrial components and, by doing so, try to align the firm's strategy with a current and forecasted industry environment (Caves 1980).

Barney (1991) advocated for a different stance when he fully expanded the resource-based theory by putting the locus of a firm's competitive advantage inside the firm and not in the external environment. Accordingly, firms which have a long-lasting competitive advantage are those that are in possession of advantageous resources. Once such resources are secured, the management task is shifted to building internal systems oriented to prevent other competitors from copying the executing firm behavioural patterns (Mahoney 1995).

Empirical research has been conducted to determine which position is more defensible. Although there is evidence for the prevalence of industry effects (e.g. Karabag/Berggren 2014; Sheel 2016; López-López/Iglesias Antelo/Sousa 2021), most studies reported the dominance of firm effects (e.g. Andonova/Ruíz-Pava 2016; Bamiatzi/Bozos/Cavusgil/Hult 2016; Takata 2016; Bini et al. 2020). The CEE context is no exception where the pre-eminence of firm over industry effects are found, for instance, in Romania (Belascu/Dumitrescu/Popoviciu/Horobet 2021), Slovenia (Breznik/Lahovnik 2014), Slovakia (Baláž/Jeck 2022), and Greece (Caloghirou/Protogerou/Spanos/Papagiannakis 2004).

Even though not highly represented in the literature, some studies have integrated the industry and firm effects into one framework. For instance, Eriksen and Knudsen (2003) tested the interaction of industry and firm effects. Huang, Dyerson, Wu, and Harindranath (2015) differentiated the two effects in terms of their impact on temporary and sustainable performance.

However, some key issues remain unresolved in all three approaches. First, industrial organisation theory significantly reduces the role of managers (Nayak/Bhattacharyya/Krishnamoorthy 2023). Once the manager envisions the appropriate industry environment for their needs or purposes, the firm's performance is a deterministic aftermath of the set industry forces. Second, regarding the resource-based view, the aspect of business strategy was not taken into account, even though proponents of the resource-based view maintained that resources in themselves would not produce higher performance unless properly utilised (Barney 1991). Lastly, thus far, the combination approach has not explored the direct causal impacts of firm and industry effects.

These considerations are presented in Table 1.

Table 1. Summary of the firm-industry debate

Approach	*Thesis*	*References*	*Issue*
Industrial organisation	■ External environment is a key factor in explaining firm performance.	■ Karabag/Berggren 2014 ■ Sheel 2016 ■ López-López et al. 2021	■ Reduced role of managerial action.
Resource-based view	■ Internal resources are a key factor in explaining firm performance.	■ Andonova/Ruíz-Pava 2016 ■ Bamiatzi et al. 2016 ■ Takata 2016 ■ Bini et al. 2020	■ The process strategy of utilising resources is neglected.
Combination	■ External environment and internal resources jointly explain firm performance.	■ Eriksen and Knudsen 2003 ■ Huang et al. 2015	■ No direct causal influences between the two effects.

Source: Authors' compilation

This paper resolves the issues presented in Table 1 by demonstrating that causation and effectuation theory can be conceived of as resource management processes contingent upon the external environment.

2.2. Effectuation and causation theories

Effectuation and causation theories (Sarasvathy 2001) were introduced to portray entrepreneurial behaviour and have not been used to describe resource management processes thus far. These contrasting theories comprise a useful lens which can reveal opposing information about entrepreneurial conduct when establishing and managing firms. The theories are contrasted by their initial premises, principles, and narratives.

First, the main difference between them is how they view the resource-goal relationship. On the one hand, according to effectuation theory, entrepreneurs start developing their ventures by first looking at their resources, out of which concrete goals are formed. One the other hand, causation theory states that entrepreneurs first indicate their goals and then begin to collect the resources necessary to achieve those goals.

Second, following their initial premises, the principles of both theories are antithetical to each other. The four principles of effectuation theory are affordable loss, strategic alliances, exploiting contingencies, and controlling the future. The four principles of causation are maximisation of expected returns, competitive analyses, exploiting pre-existing knowledge, and predicting the future (Sarasvathy 2001).

Third, the narratives of effectuation and causation assert that they are both conceptualisations of two differing processes. In the effectuation process, entrepreneurs pursue the algorithm of existing resources, followed by courses of possible actions, creating interactions with stakeholders and ending with stakeholder commitment. Thus, entrepreneurs create markets and broaden their resources (Sarasvathy/Dew 2005). Whereas in the causation process, opportunity recognition, evaluation, and recognition are vital components. Once an opportunity is identified, entrepreneurs have to reinforce their resource pool, which in turn aids them in formulating a solution and entering the marketplace (Shah/Tripsas 2007).

Having examined these differences, the next step is to determine empirically whether effectuation and causation theories affect business performance. It has been observed that effectuation and causation enhance business performance (e.g. Smolka/Verheul/Burmeister–Lamp/Heugens 2018; Alzamora-Ruiz/del Mar Fuentes-Fuentes/Martinez-Fiestas 2021). Upon closer examination of these studies, three surprising features are recognised with regards to model construction.

First, only some studies conceptualised effectuation and causation as mediator variables. This observation seems puzzling since the two phenomena, being process-based concepts, are deeply entrenched in statistical mediation's rationale. Second, researchers often bypassed the industry component in their models. When they did incorporate the industry component, it was given a strengthening role, not a causal one (e.g. Wu/Liu/Su 2020). This way of characterising industrial impact is unexpected, given that Sarasvathy (2001) explicitly indicates that when entrepreneurs perceive the environment as unstable or stable, they use effectuation or causation accordingly. Third, the geographical diversification of published articles is confined (Zhang/Li/Sha/Yang 2022). This issue is particularly severe in the CEE setting. Only a handful of authors have grappled with the complexities of applying effectuation and causation theories to the CEE background (e.g. Nowiński/Rialp 2013; Ciszewska-Mlinaric/Obloj/Wasowska 2016; Deligianni/Voudouris/Lioukas 2017).

2.3. Formulating the model

In order to formulate the model, the connection between entrepreneurial opportunities and resources must be examined. Alvarez and Barney (2007) explain that entrepreneurial opportunities can be either discovered or created.

The discovery view conceptualises opportunities as pre-existing in the external environment, such that the main task of the entrepreneur is to recognise those opportunities and exploit them. In the creation view, opportunities do not exist, so the main task of the entrepreneur is to bring them into being (Alvarez/Barney 2007). These two viewpoints have practical consequences for the types of resources that the entrepreneur finds opportune. Under the discovery view,

entrepreneurs acquire highly specialised resources, given that the business path can be known and planned. In contrast, in the creation view, the entrepreneur cannot know the business path beforehand. Thus, the effectual entrepreneur obtains resources that can be applied more broadly and flexibly (Alvarez/Barney 2007).

One's viewpoint is influenced by the theory they adopt. The causation theory is aligned with the discovery view, while the effectuation theory concurs with the creation view (Sarasvathy/Dew 2005). Subsequently, the nature of sought resources by the entrepreneur will depend upon the choice to employ a causation or an effectuation process. In that sense, causation and effectuation are resource management processes that translate the ontology of opportunities into concrete actions of gathering and benefiting from resources.

Per Felin, Kauffman, and Zenger (2023), the causation process is associated with the strategic information acquisition strategy of acquiring resources since it revolves around the ability to predict future circumstances, while the effectuation process is associated with the complementarity strategy of acquiring resources, given that the strategy is concerned with the current resources at disposal. Therefore, this study labelled causation as a discovery resource management process and effectuation as a creation resource management process to underlie the importance of entrepreneurial theory in the firm-industry debate.

To summarise the key points so far, the firm-industry debate has mostly been centred around the resource-based view of the firm and the industrial organisation theory, and until now, no research has examined the combination of firm and industry effects from a purely entrepreneurial perspective. Given the alignment of causation and effectuation theories to the nature of entrepreneurial opportunities and resource acquisition, they are conceptualised as resource management processes.

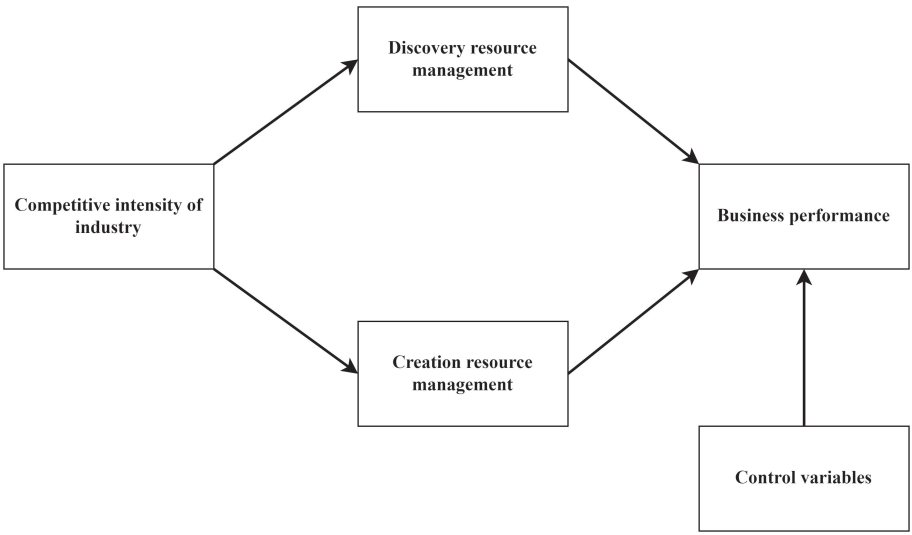
In this conceptual framework, industry characteristics are not secondary. Rather, they are decisive factors that negatively influence the entrepreneur's application of the discovery resource management (causation) process while positively influencing the creation resource management (effectuation) process. Subsequently, the two processes positively influence business performance.

Accordingly, the two hypotheses are stipulated as follows and presented visually in Figure 1:

Hypothesis 1: Discovery resource management negatively mediates the relationship between the industry's competitive intensity and business performance.

Hypothesis 2: Creation resource management positively mediates the relationship between the industry's competitive intensity and business performance.

Figure 1. Proposed empirical model



Source: Authors' compilation

3. Research methodology

3. 1. Study context

The study was conducted in the Republic of Croatia, a CEE country and an EU member state that went through a substantial transition period, starting from the 1990s, from a state plan-based to a market-based economy. Despite the improving institutional framework conditions in Croatia and other CEE countries, they still need to be more conducive to innovative entrepreneurial actions (Smallbone/Welter 2012; Williams/Vorley 2015). Briefly put, the Croatian economy experienced a few transition phases and, as early as 2010, accomplished macroeconomic stability and industry structure comparable to more advanced CEE countries (Stojčić 2012). Still, the lingering effects of a state plan-based economy are felt in terms of a lack of an impactful innovation-oriented political environment (Švarc/Dabić 2019). These impaired political environments create conditions of uncertainty that spill over to the business sector (Hanousek et al. 2018). Once present, uncertainty in Croatia impacts the investment behaviour of firms (Albulescu/Miclea/Suciu/Tămăşilă 2018) and their overall performance (Kropiński 2024). Entrepreneurs in Croatia face greater uncertainty than their CEE counterparts, per data shown in Table 2. Macroeconomic (GDP per capita

and unemployment rate) and entrepreneurial (government support, tax burdens, bureaucracy demands, and societal norms) conditions in Croatia are inferior to conditions in selected CEE countries. Additionally, the perceptions of Croatian entrepreneurs about their environment can alter their behaviours (Harmeling/Sarasvathy 2013).

The inference from all of the above is that Croatian SMEs are an adequate fit to extend and modify the Sirmon et al. (2007) conceptual model.

Table 2. Comparison between Croatia and CEE countries on average from 2020–2022

	Croatia	*CEE average*
GDP per capita	16883.115$	21058.297$
Unemployment rate	7.360	5.565
Governmental support and policies	3.237	4.030
Taxes and bureaucracy	3.214	4.544
Governmental programs	3.844	4.678
Cultural and social norms	3.209	4.545

Source: Global Entrepreneurship Monitor and World Bank data
Note: The sample of CEE countries (Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia) were chosen on the basis of consistency between the time period and variable selection

3.2. Sample composition and data collection

The sample comprises of SMEs by a standard EU definition. SMEs are an acceptable sample for examining firm and industry effects since those effects are significant factors regardless of firm size (Short/McKelvie/Ketchen/Chandler 2009).

The contact information of 2500 SMEs in September 2020 was obtained using the Financial Agency of the Republic of Croatia database through systematic random sampling. Of the mentioned 2500 firms, 245 fulfilled the questionnaire making a response rate of 9.8 %. The questionnaire statistics demonstrate that the sample is representative of the SME population since, for example, the percentage of women entrepreneurs in Croatia (31.73 %) measured by CEPOR (2021) is in close proximity to the percentage of women entrepreneurs in the sample (32.65 %).

All received questionnaires were subsequently examined. First, no unengaged respondents were noticed by checking the standard deviation of their responses and the overall time it took them to complete the questionnaire. Second, the Mahalanobis distance metric detected nine outliers and, by excluding them, made the final sample size 236. This sample size meets the minimal sample size criteria required in the PLS-SEM approach, namely the inverse square root

method and gamma-exponential method (Kock/Hadaya 2018). The sample size also exceeds the threshold value for a statistical power of 0.9 with a medium effect size (Faul/Erdfelder/Lang/Buchner 2007).

3.3. Measures of variables

The approach taken to compute *business performance (BUPE)* is to capture financial and non-financial aspects of performance (Anandan/Gupta 2022) compared to the competition (Vij/Bedi 2016) and uses the entrepreneur's subjective assessment of performance (Vij/Bedi 2016). Four statements that comprise the business performance variable are related to the entrepreneur's satisfaction with the profit margin, sales growth, market share, and return on assets.

Discovery resource management-causation (DIRM) is formed based on the study conducted by Chandler, DeTienne, McKelvie, and Mumford (2011) as a first-order reflective construct.

Creation resource management-effectuation (CRRM) is also computed using the methodology developed by Chandler et al. (2011). This methodology looks at creation resource management as a second-order reflective-formative construct, where the first level consists of *experimentation (EXPE), affordable loss (AFLO), flexibility (FLEX), and pre-commitments (PCOM).*

The competitive intensity of an industry (COII) is determined by three selected statements (Karabag and Berggren, 2014) based on subjective perceptions of the external environment (Panagiotou 2006). The selected statements are: "Customers try to find innovative products in our industry", "There is a new competitive move almost every day in our industry", and "The products and services are out of date overnight".

All latent variables, measured on a Likert 5-point scale, were subject to statistical scrutiny to remove concerns regarding common method bias. First, Harman's one-factor test detected no common method bias, given that the global factor explained 19.982 % of the variance. Second, the full collinearity assessment results revealed no common method bias. The basis for this conclusion is that the inner model's highest variance inflation factor (VIF) equalled 1.135, where a random variable takes on the role of a dependent variable, which is less than the 3.3 value threshold.

The last set of variables is composed of a single question. This statement refers to the *age of the firm (AGEF), size of the firm (SIZE), work experience (WOEX), obtained education level (EDUC), gender (GEND), and entrepreneurial experience (ENEX*).

3.4. Statistical method and validation procedures

The PLS-SEM method is utilised to test the hypotheses for two reasons. The first reason is that Chandler et al. (2011) explicitly state that effectuation is a second-order reflective-formative construct. This variable composition is unsuitable for regression analysis and should be placed in a PLS-SEM framework (Hair/Sarstedt/Ringle 2019). The second reason is related to the introduced mediation effects. Even though mediation effects can be tested using standard regression models, the impact of measurement errors is less pronounced in PLS-SEM (Hair et al. 2019). The PLS-SEM findings are supplemented with a PROCESS perspective to ensure the robustness of the results.

The analysis of reflective variables starts with assessing Cronbach α and composite reliability. The results of both measures are reported in Table 3. Using the Cronbach α method, only COII and PCOM are borderline constructs with the value of Cronbach α between 0.6 and 0.7. Nonetheless, the internal consistency of all reflective constructs is established by utilising composite reliability, which is considered a superior measure to Cronbach α (Hair 2017). This can be concluded on the basis that composite reliability is above 0.7 (Hair 2017).

Next, values of factor loadings and average variance extracted (AVE) are also displayed in Table 3. The algorithm for containing or dropping an item using factor loadings is adopted from Hair (2017). Two indicators, both from the EXPE construct, were dropped since their loading values were below 0.4. Second, construct validity is confirmed since each construct has an AVE measure value above 0.5.

The last step is to evaluate the Fornell-Larcker and the Heterotrait-monotrait ratio of correlations (HTMT) criteria. Given that the square root of AVE for each construct, shown on the diagonal, is higher than the highest correlation coefficient with other constructs (Table 4) and that HTMT values are below 0.9 (Table 5), the discriminant validity is present in the reflective constructs (Hair 2017).

Table 3. Evaluations of reflective constructs

Construct	*Factor loadings*	*Cronbach α*	*Composite reliability*	*AVE*
DIRM		0.857	0.890	0.536
DIRM1	0.696			
DIRM2	0.774			
DIRM3	0.750			
DIRM4	0.795			
DIRM5	0.686			
DIRM6	0.740			

Construct	*Factor loadings*	*Cronbach α*	*Composite reliability*	*AVE*
DIRM7	0.675			
EXPE		0.710	0.873	0.775
EXPE1	0.878			
EXPE2	Excluded			
EXPE3	Excluded			
EXPE4	0.883			
AFLO		0.807	0.886	0.722
AFLO1	0.854			
AFLO2	0.897			
AFLO3	0.794			
FLEX		0.724	0.829	0.549
FLEX1	0.702			
FLEX2	0.832			
FLEX3	0.749			
FLEX4	0.671			
PCOM		0.697	0.890	0.767
PCOM1	0.885			
PCOM1	0.867			
COII		0.636	0.802	0.575
COII1	0.711			
COII2	0.803			
COII3	0.758			
BUPE		0.888	0.923	0.750
BUPE1	0.891			
BUPE2	0.879			
BUPE3	0.791			
BUPE4	0.900			

Source: Authors' calculation

Table 4. Values of the Fornell-Larcker criteria

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
DIRM (1)	0.732	-					
EXPE (2)	0.345	0.880	-				
AFLO (3)	0.225	0.264	0.850	-			
FLEX (4)	0.481	0.200	0.382	0.741	-		
PCOM (5)	0.237	0.115	0.313	0.589	0.876	-	
COII (6)	0.172	0.266	0.209	0.215	0.251	0.758	-
BUPE (7)	0.288	0.043	0.064	0.396	0.403	0.037	0.866

Source: Authors' calculation

Table 5. Values of the HTMT criteria

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
DIRM (1)	-						
EXPE (2)	0.442	-					
AFLO (3)	0.270	0.353	-				
FLEX (4)	0.590	0.294	0.503	-			
PCOM (5)	0.283	0.166	0.415	0.820	-		
COII (6)	0.228	0.405	0.271	0.303	0.361	-	
BUPE (7)	0.304	0.067	0.080	0.485	0.509	0.099	-

Source: Authors' calculation

The formative aspect is first examined by VIF. Using the value of 5 for VIF as the standard cut-off (Hair 2017), none of the four sub-dimensions exhibit collinearity concerns. However, the sub-dimensions of EXPE and AFLO do not have statistically significant outer weights. Therefore, additional steps are taken (Hair 2017). The outer loadings are below 0.5, requiring the use of a second step, namely testing the significance level of the loading. The results show that the outer loadings are statistically significant. This situation requires author discretion in terms of containing or dropping the construct. Here the recommendation of Chandler et al. (2011) for containing all sub-dimensions is respected because dropping one of these dimensions would distort the theoretical basis of the variable. All information regarding diagnostic checks for the formative variable part is found in Table 6.

Table 6. Evaluation of CRRM second-order formative construct

	VIF	*Outer weights*	*Outer loadings*
EXPE	1.255	0.196	0.338*
		(0.164)	(0.182)
AFLO	1.286	-0.105	0.325**
		(0.136)	(0.141)
FLEX	2.008	0.487***	0.851***
		(0.153)	(0.081)
PCOM	1.607	0.681***	0.895***
		(0.151)	(0.076)

Source: Authors' calculation
*Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

4. Results

The correlation matrix and the causal relationships are presented in Tables 7 and 8, respectively.

Table 7. Correlation matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	0.732									
(2)	0.423***	-								
(3)	0.172**	0.295***	0.758							
(4)	0.288***	0.443***	0.037	0.866						
(5)	-0.022	0.013	-0.117**	0.047	-					
(6)	0.087**	-0.020	0.018	0.054	-0.181***	-				
(7)	0.056	0.073	0.034	-0.110*	-0.312***	-0.048	-			
(8)	0.114*	0.029	-0.124*	0.067	0.036	0.113**	-0.091	-		
(9)	-0.136**	-0.027	-0.039	0.029	-0.077	-0.018	0.033	-0.061	-	
(10)	0.065	0.090	0.050	-0.109	-0.295***	-0.026	0.728***	-0.027	0.149**	-

Source: Authors' calculation
Note: DIRM=1, CRRM=2, COII=3, BUPE=4, AGEF=5, SIZE=6, WOEX=7, EDUC=8, GEND=9, ENEX=10
*Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.1*
Note: square root values of AVE are on the diagonal

Table 8. Structural model

Causal Relationships	*PLS-SEM*	*PROCESS*
Direct effects		
COII → BUPE	-0.103	-0.096
	(0.067)	(0.070)
DIRM → BUPE	0.136**	0.175**
	(0.061)	(0.081)
CRRM → BUPE	0.434***	0.410***
	(0.077)	(0.091)
COII → DIRM	0.172**	0.135**
	(0.078)	(0.060)
COII → CRRM	0.295***	0.261***
	(0.083)	(0.049)
Indirect effects		
OII → DIRM → BUPE	0.023	0.024
	(0.016)	(0.016)
COII → CRRM → BUPE	0.128***	0.107***
	(0.042)	(0.033)
Control variables		
AGEF → BUPE	-0.008	-0.001
	(0.063)	(0.002)
SIZE → BUPE	0.045	0.001
	(0.066)	(0.002)
WOEX → BUPE	-0.059	-0.008
	(0.076)	(0.008)
EDUC → BUPE	0.017	0.010
	(0.058)	(0.033)

Causal Relationships	*PLS-SEM*	*PROCESS*
GEND → BUPE	0.077	0.152
	(0.062)	(0.114)
ENEX → BUPE	-0.121	-0.010
	(0.087)	(0.009)
R^2	0.253	0.171
N	236	236

Source: Authors' calculation
*Note: Standard errors are in parentheses, *** p<0.01, ** p<0.05, * p<0.1*

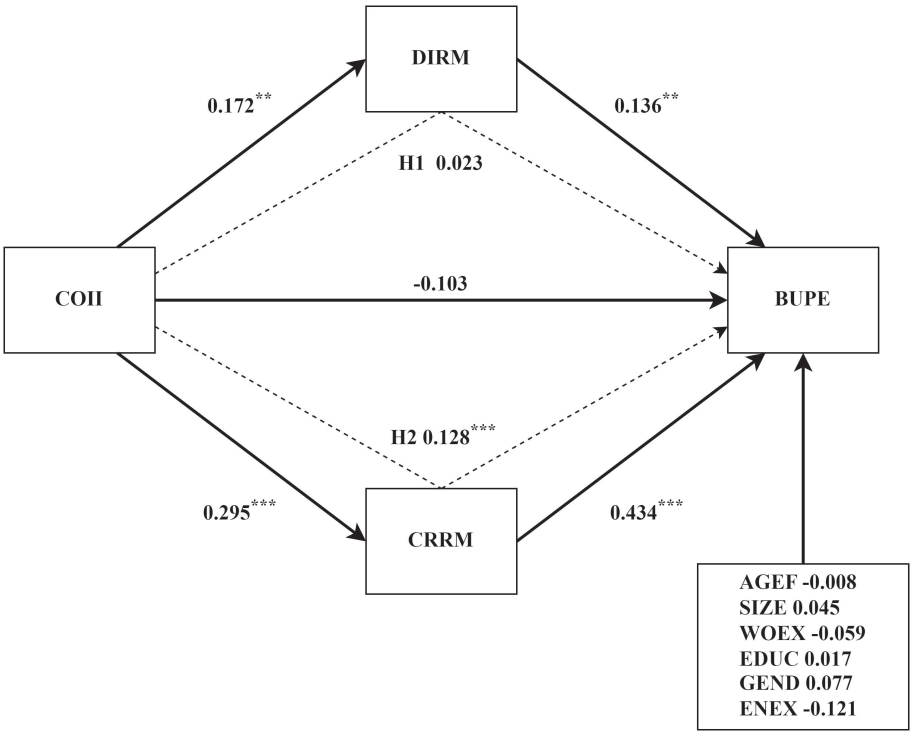
According to Table 8, the indirect effect of the competitive intensity of an industry on business performance through discovery resource management is not statistically significant. Therefore, Hypothesis 1 cannot be confirmed. However, the industry's competitive intensity does have a robust statistically significant indirect effect on business performance through the creation resource management process. Consequently, the creation resource management process is a significant mediator, and given the reported significance, Hypothesis 2 is confirmed. Because the direct effect of industry on business performance is not statistically significant, the results allude to indirect-only mediation (Zhao/Lynch/Chen 2010).

5. Discussion and conclusion

This study took an entrepreneurial viewpoint on the firm-industry debate by examining the impact of the industry's competitive intensity on business performance through causation and effectuation theory, here conceptualised as resource management processes. The results show that the creation resource management process (effectuation) positively mediates the relationship between the competitive intensity of industry and business performance, while the discovery resource management process (causation) does not.

Furthermore, the non-significant direct effect of industry characteristics on business performance conveys an important message concerning methodology structure. Specifically, if only the direct effect of industry characteristics were to be examined, the conclusion would be drawn of the inconsequential nature of industry characteristics for firm success. However, as the results show in Figure 2, industry characteristics do have a more complex role as explanatory mechanisms for business performance.

Figure 2. Results of the empirical model



Source: Authors' calculation
Note: Solid lines are direct effects, while dotted lines are indirect effects
*Note: *** p<0.01, ** p<0.05, * p<0.1*

The model tested in this study complements other studies that examined resource utilisation of CEE entrepreneurs (e.g. Melović/Mitrović Veljković/Ćirović/Backović Vulić/Dabić 2022) but also adds additional insights. The Croatian SME context exhibits signs of high uncertainty, thus creating a background where environmental factors can have significant implications in all phases of the resource management process. As Sirmon et al. (2007) postulate, standard resource management practices might not be adequate in such conditions.

Accordingly, the examination of entrepreneurial resource management practices in Croatia, with its uncertain entrepreneurial conditions, is transferable to similar situations. Therefore, the model supplements the notion that uncertain CEE environments can pressure entrepreneurs into utilising distinct strategies in response to market changes (Manev et al. 2015). It can likewise explain why the concentration level of risk-avoiding strategies can differ between CEE countries (Grünhut/Bodor/Erát 2022).

The findings are applicable to EU and non-EU CEE economies. Regarding the former, integration into the EU had a considerable effect on entrepreneurial activity (Stojčić/Anić/Svilokos 2021). A prime example of such a country is Slovenia. Slovenian and Croatian entrepreneurs share common optimisation-centred management practices (Nedelko/Potočan 2016) and entrepreneurial aspirations (Leković/Berber 2019). Also, entrepreneurs in both countries are providing goods or services to customers of similar traits (Rašković/Ding/Hirose/Žabkar/Fam 2020) and are managing employees of similar profiles (Gashi/Požega/Crnković 2019).

Non-EU CEE entrepreneurs face similar challenges and circumstances. That confidence is supported by studies (e.g. Miočević/Talaja/Alfirević 2021) which have shown that external effects translate to firm operations in a Croatian context similar to other surroundings. Furthermore, most CEE countries implement similar policy frameworks that support targeted societal groups in their attempts to become entrepreneurs (Pilková/Mikuš/Rehák/Pšenák 2022) and exhibit similar levels of institutional and financial development relevant to SMEs (Iwasaki/Kočenda/Shida 2022).

5.1. Managerial implications

Even though both causation and effectuation are present in larger corporations (Parker/Corner/Woodfield/Singh 2019), the practical implications of this study are especially relevant to entrepreneurs managing SMEs in CEE countries. Entrepreneurs in these countries face peculiarities in market mechanisms and institutional environments (Meyer/Peng 2005), which has redefined the boundary conditions of management theories (Meyer/Peng 2016). A profound insight from Meyer and Peng (2005) reveals that, despite the overarching importance of resources, the types of resources that CEE entrepreneurs gather are distinct from their non-CEE counterparts. Thus, CEE entrepreneurs need to be cognizant that, based on their surroundings, the kinds of available resources are likely to be different.

Likewise, the results of this study should prompt CEE entrepreneurs to closely examine the type of industrial environment they are operating in and the type of opportunity they are exploiting. Matching the creation resource management processes with the perceived industry forces can aid CEE entrepreneurs in reducing the adverse effects of external uncertainties. This logic is transferable to non-CEE entrepreneurs, but the appropriate resource management practice relevant to them remains to be tested.

5.2. Implications for future research

The results have implications for possible future research pathways. First, there is the possibility of expanding the context of this study. Recent research has shown that both entrepreneurial resource management practices (Shirokova/Morris/Laskovaia/Micelotta 2021) and firm-industry (Zhang/Hult/Ketchen/Calantone 2020) effects can be context-dependent. Future research could test the proposed relations in a multi-country sample outside the CEE context. Furthermore, future studies could opt for an extended replication approach where moderating effects, located in the external environment of the entrepreneur that affect business operations of SMEs (e. g. Biloslavo/Edgar/Rusjan 2022), would be included. An example is to test for moderating effects of state, effect, and response uncertainty (Ashill/Jobber 2010), amongst others, since the model in this study presupposed a generally uncertain environment.

Second, the survey for this study was sent months after the COVID-19 pandemic started. In such circumstances, the need for entrepreneurs to react to the newly formed environment could have influenced the measures obtained in the survey. For instance, Croatian entrepreneurs adapted their investment plans during COVID-19 (Miočević 2023). However, there is evidence that both causation and effectuation are effective strategies in dealing with turbulences induced by the COVID-19 pandemic (Delladio/Caputo/Magrini/Pellegrini 2023). Therefore, there is a possibility that the intensity of using either resource management process was altered during the time of collecting the survey but that the switching between the two resource management processes did not occur. Accordingly, future studies could repeat the measurements, test the proposed hypothesis, and then extrapolate new insight regarding the formation and utilisation of both resource management processes in uncertain environments not caused by the COVID-19 pandemic.

Third, future studies could also replicate the role given to industry effects and entrepreneurial theories by switching causation and effectuation with bricolage (Baker/Nelson 2005). This approach would test for additional forces driving the business performance of SMEs. Therefore, subsequent studies could investigate whether or not bricolage is another resource management approach that connects industry characteristics and business performance.

5.3. Study limitations

This study contains several limitations. One limitation is that this research was a cross-sectional examination of the postulated hypothesis. Even though the cross-sectional design is a valid approach in business studies (Spector 2019), it has inherent deficiencies, primarily in the validity of the obtained causal inferences. Causal inferences are dependent upon the temporal ordering of predictors and outcomes. Thus, surveying entrepreneurs at one point in time does not

support the temporal ordering of variables and, subsequently, the demonstration of causal effects. In comparison, a longitudinal design can better capture the temporal sequence and increase confidence in the reported results.

The second limitation relates to how the data was collected. Entrepreneurs' assessments used for latent variable construction are based on their perceptions of past and present events. These assessments could be distorted, which may decrease the assurance of the validity of the results.

Regardless of the limitations, the authors hope this study will inspire other researchers further to examine this debate in novel ways.

References

Albulescu, C. T./Miclea, Ş./Suciu, S. S./Tămăşilă, M. (2018): Firm-level investment in the extractive industry from CEE countries: the role of macroeconomic uncertainty and internal conditions, in: Eurasian Business Review, 8, 2, 193–208.

Alvarez, S./Barney, J. (2007): Discovery and creation: Alternative theories of entrepreneurial action, in: Strategic Entrepreneurship Journal, 1, 1–2, 11–26.

Alvarez, S./Barney, J./Anderson, P. (2013): Forming and Exploiting Opportunities: The Implications of Discovery and Creation Processes for Entrepreneurial and Organizational Research, in: Organization Science, 24, 1, 301–317.

Alvesson, M./Sandberg, J. (2011): Generating Research Questions Through Problematization, in: Academy of Management Review, 36, 2, 247–271.

Alzamora-Ruiz, J./del Mar Fuentes-Fuentes, M./Martinez-Fiestas, M. (2021): Together or separately? Direct and synergistic effects of Effectuation and Causation on innovation in technology-based SMEs, in: International Entrepreneurship and Management Journal, 17, 1917–1943.

Anandan, T. R./Gupta, K. P. (2022): Trends in small business performance measurement research: a review of 25 years literature, in: International Journal of Business Performance Management, 23, 4, 422–459.

Andonova, V./Ruíz-Pava, G. (2016): The role of industry factors and intangible assets in company performance in Colombia, in: Journal of Business Research, 69, 10, 4377–4384.

Ashill, N. J./Jobber, D. (2010): Measuring State, Effect, and Response Uncertainty: Theoretical Construct Development and Empirical Validation, in: Journal of Management, 36, 5, 1278–1308.

Bain, J. S. (1951): Relation of Profit Rate to Industry Concentration: American Manufacturing, 1936–1940, in: The Quarterly Journal of Economics, 65, 3, 293–324.

Bain, J. S. (1959): Industrial organization. New York: John Wiley & Sons.

Baker, T./Nelson, R. (2005): Creating Something from Nothing: Resource Construction through Entrepreneurial Bricolage, in: Administrative Science Quarterly, 50, 3, 329–366.

Baláž, V./Jeck, T. (2022): Public Support to Research and Innovation: Do European Resources Boost Innovation Outputs?, in: Journal of East European Management Studies, 27, 1, 106–129.

Bamiatzi, V./Bozos, K./Cavusgil, S. T./Hult, G. T. M. (2016): Revisiting the firm, industry, and country effects on profitability under recessionary and expansion periods: A multilevel analysis, in: Strategic Management Journal, 37, 7, 1448–1471.

Barney, J. (1991): Firm Resources and Sustained Competitive Advantage, in: Journal of Management, 17, 1, 99–120.

Belascu, L./Dumitrescu, D. G./Popoviciu, A. S./Horobet, A. (2021): What Drives Profitability in the Romanian ICT Sector?, in: Amfiteatru Economic, 23, S15, 899–913.

Biloslavo, R./Edgar, D./Rusjan, R. (2022): Strategic Dualities and Business Model Innovation within SMEs, in: Journal of East European Management Studies, 27, 3, 462–486.

Bini, M./Nascia, L./Zeli, A. (2020): Environmental Versus Firm-level Determinants of Firm Growth: A Structural Equation Modelling for Micro-level Analysis of Business Group Firms, in: Global Business Review, 1–13.

Breznik, L./Lahovnik, M. (2014): Renewing the resource base in line with the dynamic capabilities view: a key to sustained competitive advantage in the IT industry, in: Journal of East European Management Studies, 19, 4, 453–485.

Caloghirou, Y./Protogerou, A./Spanos, Y./Papagiannakis, L. (2004): Industry-Versus Firm-specific Effects on Performance: Contrasting SMEs and Large-sized Firms, in: European Management Journal, 22, 2, 231–243.

Caves, R. (1980): Industrial Organization, Corporate Strategy and Structure, in: Journal of Economic Literature, 18, 1, 64–92.

CEPOR (2021): Izvješće o malim i srednjim poduzećima u Hrvatskoj – 2021.: „Mala i srednja poduzeća u Hrvatskoj u uvjetima pandemije bolesti Covid-19", Zagreb.

Chandler, G. N./DeTienne, D. R./McKelvie, A./Mumford, T. V. (2011): Causation and effectuation processes: A validation study, in: Journal of Business Venturing, 26, 3, 375–390.

Ciszewska-Mlinaric, M./Obloj, K./Wasowska, A. (2016): Effectuation and causation: Two decision-making logics of INVs at the early stage of growth and internationalisation, in: Journal of East European Management Studies, 21, 3, 275–297.

Cornelissen, J. P./Durand, R. (2014): Moving Forward: Developing Theoretical Contributions in Management Studies, in: Journal of Management Studies, 51, 6, 995–1022.

Delladio, S./Caputo, A./Magrini, A./Pellegrini, M. (2023): Italian Entrepreneurial Decision-Making under Lockdown: The Path to Resilience, in: Management Decision, 61,13, 272–294.

Deligianni, I./Voudouris, I./Lioukas, S. (2017): Do Effectuation Processes Shape the Relationship between Product Diversification and Performance in New Ventures?, in: Entrepreneurship Theory and Practice, 41, 3, 349–377.

Eriksen, B./Knudsen, T. (2003): Industry and firm level interaction, in: Journal of Business Research, 56, 3, 191–199.

Esho, E./Verhoef, G. (2021): Variance decomposition of firm performance: past, present and future, in: Management Research Review, 44, 6, 867–888.

Faul, F./Erdfelder, E./Lang, A.-G./Buchner, A. (2007): G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences, in: Behavior Research Methods, 39, 2, 175–191.

Felin, T./Kauffman, S./Zenger, T. (2023): Resource origins and search, in: Strategic Management Journal, 44, 6, 1514–1533.

Fernández, E./Iglesias-Antelo, S./López-López, V./Rodríguez-Rey, M./Fernandez-Jardon, C. M. (2019): Firm and industry effects on small, medium-sized and large firms' performance, in: Business Research Quarterly, 22, 1, 25–35.

Foss, N. J./Hallberg, N. L. (2017): Changing assumptions and progressive change in theories of strategic organization, in: Strategic Organization, 15, 3, 410–422.

Gashi, L./Požega, Ž/Crnković, B. (2019): Linking Value Dimensions of Employees in South East Europe and Their Potential for Socio-Economic Development: A Cross-Country Comparison, in: Journal of East European Management Studies, 24, 1, 178–203.

Grünhut, Z./Bodor, A./Erát, D. (2022): Value Patterns of Entrepreneurs in Europe: Does the Legacy of the Transition Still Matter?, in: International Journal of Sociology, 52, 5, 352–369.

Hair, J. F. (2017): A primer on partial least squares structural equation modeling (PLS-SEM). Los Angeles: Sage.

Hair, J. F./Sarstedt, M./Ringle, C. M. (2019): Rethinking some of the rethinking of partial least squares, in: European Journal of Marketing, 53, 4, 566–584.

Hanousek, J./Shamshur, A./Trešl, J. (2018): Innovation Decisions in Uncertain Business Environments of CEE Countries, in: Politická Ekonomie, 66, 3, 287–301.

Harmeling, S. S./Sarasvathy, S. (2013): When Contingency is a Resource: Educating Entrepreneurs in the Balkans, the Bronx, and Beyond, in: Entrepreneurship Theory and Practice, 37, 4, 713–744.

Huang, K.-F./Dyerson, R./Wu, L.-Y./Harindranath, G. (2015): From Temporary Competitive Advantage to Sustainable Competitive Advantage, in: British Journal of Management, 26, 4, 617–636.

Iwasaki, I./Kočenda, E./Shida, Y. (2022): Institutions, Financial Development, and Small Business Survival: Evidence from European Emerging Markets, in: Small Business Economics, 58, 3, 1261–1283.

Karabag, S. F./Berggren, C. (2014): Antecedents of firm performance in emerging economies: Business groups, strategy, industry structure, and state support, in: Journal of Business Research, 67, 10, 2212–2223.

Kock, N./Hadaya, P. (2018): Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods, in: Information Systems Journal, 28, 1, 227–261.

Koveshnikov, A./Dabija, D./Inkpen, A./Vătămănescu, E. (2022): Not Running out of Steam after 30 Years: The Enduring Relevance of Central and Eastern Europe for International Management Scholarship, in: Journal of International Management, 28, 3, 100973.

Kropiński, P. (2024): Uncertainty in Central and Eastern European markets. Evidence from Twitter-based uncertainty measures, in: Post-Communist Economies, 36, 3, 382–403.

Leković, B./Berber, N. (2019): Determinants of Early Stage High-Growth Entrepreneurship: Evidence from South East Europe Region, in: Journal of East European Management Studies, 24, 2, 347–369.

López-López, V./Iglesias Antelo, S./Sousa, C. M. P. (2021): Firm and industry effects: The importance of sample design, in: European Business Review, 33, 3, 491–504.

MacInnis, D. (2011): A Framework for Conceptual Contributions in Marketing, in Journal of Marketing, 75, 4, 136–154.

Mahoney, J. T. (1995): The management of resources and the resource of management, in: Journal of Business Research, 33, 2, 91–101.

Manev, I. M./Manolova, T. S./Harkins, J. A./Gyoshev, B. S. (2015): Are pure or hybrid strategies right for new ventures in transition economies?, in: International Small Business Journal: Researching Entrepreneurship, 33, 8, 951–973.

Mason, E. (1939): Price and Production Policies of Large-Scale Enterprise, in: The American Economic Review, 29, 1, 61–74.

McWilliams, A./Smart, D. L. (1995): The Resource-Based View of the Firm: Does It Go Far Enough in Shedding the Assumptions of the S-C-P Paradigm?, in: Journal of Management Inquiry, 4, 4, 309–316.

Melović, B./Mitrović Veljković, S./Ćirović, D./Backović Vulić, T./Dabić, M. (2022): Entrepreneurial Decision-Making Perspectives in Transition Economies – Tendencies towards Risky/Rational Decision-Making, in: International Entrepreneurship and Management Journal, 18, 4, 1739–1773.

Meyer, K./Peng, M. (2005): Probing theoretically into Central and Eastern Europe: Transactions, resources, and institutions, in: Journal of International Business Studies, 36, 6, 600–621.

Meyer, K./Peng, M. (2016): Theoretical foundations of emerging economy business research, in: Journal of International Business Studies, 47, 1, 3–22.

Michaelis, T. L./Carr, J. C./Scheaf, D. J./Pollack, J. M. (2020): The frugal entrepreneur: A self-regulatory perspective of resourceful entrepreneurial behaviour, in: Journal of Business Venturing, 35, 4, 105969.

Miočević, D. (2023): Investigating Strategic Responses of SMEs during COVID-19 Pandemic: A Cognitive Appraisal Perspective, in: BRQ Business Research Quarterly, 26, 4, 313–326.

Miočević, D./Talaja, A./Alfirević, N. (2021): Disentangling performance outcomes of a firm's innovativeness: A resource-advantage perspective, in: Journal of East European Management Studies, 26, 3, 392–414.

Nayak, B./Bhattacharyya, S./Krishnamoorthy, B. (2023): Integrating the dialectic perspectives of resource-based view and industrial organization theory for competitive advantage – a review and research agenda, in: Journal of Business & Industrial Marketing, 38, 3, 656–679.

Nowiński, W./Rialp, A. (2013): Drivers and strategies of international new ventures from a Central European transition economy, in: Journal of East European Management Studies, 18, 2, 191–231.

Nedelko, Z./Potočan, V. (2016): Management Practices Utilization in Organizations – A Comparison between Catching-up and Well-Developed Economies, in: Management: Journal of Contemporary Management Issues, 21, 1–20.

Panagiotou, G. (2006): Managerial cognitions of competitive environments: A strategic group analysis, in: Management Research News, 29, 7, 439–456.

Parker, J./Corner, P. D./Woodfield, P. J./Singh, S. (2019): Developing Endogenous Innovations: Corporate Entrepreneurship and Effectuation, in: Entrepreneurship Research Journal, 1–20.

Pilková, A./Mikuš, J./Rehák, J./Pšenák, P (2022): Differences and Similarities between Key Drivers of Youth and Senior Starting Entrepreneurs in Central and Eastern European Countries, in: Post-Communist Economies, 34, 8, 1054–1082.

Rašković, M./Dikova, D./McDougall-Covin, T. (2020): International Business with Central and Eastern Europe: From Tyranny of History to Revisited Laboratories of Learning, in: Journal of Business Research, 180, 417–420.

Rašković, M./Ding, Z./Hirose, M./Žabkar, V./Fam, K. (2020): Segmenting Young-Adult Consumers in East Asia and Central and Eastern Europe – The Role of Consumer Ethnocentrism and Decision-Making Styles, in: Journal of Business Research, 108, 496–507.

Sandberg, J./Alvesson, M. (2021): Meanings of Theory: Clarifying Theory through Typification, in: Journal of Management Studies, 58, 2, 487–516.

Sarasvathy, S. (2001): Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency, in: The Academy of Management Review, 26, 2, 243–263.

Sarasvathy, S./Dew, N. (2005): New market creation through transformation, in: Journal of Evolutionary Economics, 15, 5, 533–565.

Shah, S. K./Tripsas, M. (2007): The accidental entrepreneur: The emergent and collective process of user entrepreneurship, in: Strategic Entrepreneurship Journal, 1, 1–2, 123–140.

Sheel, A. (2016): SCP-relevance and class-effect in performance – A comparative analysis of restaurants and petroleum firms, in: International Journal of Hospitality Management, 52, 33–45.

Shirokova, G./Morris, M. H./Laskovaia, A./Micelotta, E. (2021): Effectuation and causation, firm performance, and the impact of institutions: A multi-country moderation analysis, in: Journal of Business Research, 129, 169–182.

Short, J./McKelvie, A./Ketchen, D./Chandler, G. (2009): Firm and industry effects on firm performance: A generalization and extension for new ventures, in: Strategic Entrepreneurship Journal, 3, 1, 47–65.

Sirmon, D. G./Hitt, M. A./Ireland, R. D. (2007): Managing Firm Resources in Dynamic Environments to Create Value: Looking Inside the Black Box, in: Academy of Management Review, 32, 1, 273–292.

Smallbone, D./Welter, F. (2012): Entrepreneurship and institutional change in transition economies: The Commonwealth of Independent States, Central and Eastern Europe and China compared, in: Entrepreneurship & Regional Development, 24, 3–4, 215–233.

Smolka, K./Verheul, I./Burmeister–Lamp, K./Heugens, P. (2018): Get it Together! Synergistic Effects of Causal and Effectual Decision–Making Logics on Venture Performance, in: Entrepreneurship Theory and Practice, 42, 4, 571–604.

Soulsby, A./Remišová, A./Steger, T. (2021): Management and Business Ethics in Central and Eastern Europe: Introduction to Special Issue, in: Journal of Business Ethics 174, 4, 739–746.

Spector, P. E. (2019): Do Not Cross Me: Optimizing the Use of Cross-Sectional Designs, in: Journal of Business and Psychology, 34, 2, 125–137.

Stojčić, N. (2012): Two Decades of Croatian Transition: A Retrospective Analysis, in: South East European Journal of Economics and Business, 7, 2, 63–76.

Stojčić, N./Anić, I./Svilokos, T. (2021): The Entrepreneurial Gains from Market Integration in the New EU Member States, in: Small Business Economics, 57, 3, 1–20.

Švarc, J./Dabić, M. (2019): The Croatian path from socialism to European membership through the lens of technology transfer policies, in: Journal of Technology Transfer, 44, 5, 1476–1504.

Takata, H. (2016): Effects of industry forces, market orientation, and marketing capabilities on business performance: An empirical analysis of Japanese manufacturers from 2009 to 2011, in: Journal of Business Research, 69, 12, 5611–5619.

Vij, S./Bedi, H. S. (2016): Are subjective business performance measures justified?, in: International Journal of Productivity and Performance Management, 65, 5, 603–621.

Wernerfelt, B. (1984): A resource-based view of the firm, in: Strategic Management Journal, 5, 2, 171–180.

Williams, N./Vorley, T. (2015): Institutional asymmetry: How formal and informal institutions affect entrepreneurship in Bulgaria, in: International Small Business Journal: Researching Entrepreneurship, 33, 8, 840–861.

Wu, L./Liu, H./Su, K. (2020): Exploring the dual effect of effectuation on new product development speed and quality, in: Journal of Business Research, 106, 82–93.

Zhang, Y./Hult, G. T. M./Ketchen, D. J./Calantone, R. J. (2020): Effects of firm-, industry-, and country-level innovation on firm performance, in: Marketing Letters, 31, 2–3, 231–245.

Zhang, Y./Li, Z./Sha, Y./Yang, K. (2022): The impact of decision-making styles (effectuation logic and causation logic) on firm performance: a meta-analysis, in: Journal of Business & Industrial Marketing, 1–17.

Zhao, X./Lynch, J. G./Chen, Q. (2010): Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis, in: Journal of Consumer Research, 37, 2, 197–206.