Entrepreneurial Business and Economics Review

2026, Vol. 14, No. 1

10.15678/EBER.2026.140106

Organisational culture, business model design and performance: Does ambidexterity play a role?

Blendi Gerdoçi, Marco Cucculelli, Daniela Lena

ABSTRACT

Objective: The article aims to explore the relationships between cultural and innovation ambidexterity and novel business model design (NBMD) and trace their influence on business performance in the context of transition economies.

Research Design & Methods: We adopted a cross-sectional survey design using data collected in 2019 from 175 managers and owners of Albanian firms across nine knowledge-intensive sectors. We employed structured questionnaires with validated multi-item Likert scales to measure constructs like ambidexterity, NBMD, and performance, followed by rigorous validity and reliability checks (CFA). The analysis used covariance-based structural equation modelling (SEM) with bootstrapping to test hypothesised relationships and assess indirect effects.

Findings: Our study demonstrates that new business model design can capture the value created by organisational culture and innovation ambidexterity. More specifically, we found a chain relationship between ambidextrous organisational culture, innovation ambidexterity, novel business models, and business performance. These results support the view that, as a dynamic capability, ambidexterity affects performance indirectly through NBMD, while the performance outcomes of cultural ambidexterity are mediated by factors such as innovation ambidexterity and NBMD.

Implications & Recommendations: We identified NBMD as a design theme aligned with contextual ambidexterity that can capture the value-creation potential of this form of innovation ambidexterity. Managers should consider adopting an NBMD when pursuing innovation ambidexterity, while government and development agencies should consider providing grants to start-ups experimenting with novel business models.

Contribution & Value Added: This study represents one of the few attempts to investigate the relationships between organisational culture, capabilities and business models, contributing to the literature that focuses on identifying business models that can support paradoxical strategies, including ambidexterity.

Article type: research article

Keywords: innovation; ambidexterity; business model design; organisational culture; business performance; transition economies

JEL codes: O30, O31, M11, M14, L25

Received: 9 April 2025 Revised: 10 November 2025 Accepted: 18 November 2025

Suggested citation:
Gerdoçi, B., Cucculelli, M., & Lena, D. (2026). Organisational culture, business model design and performance: Does ambidexterity play a role?. *Entrepreneurial Business and Economics Review,* 14(1), 91-111. https://doi.org/10.15678/EBER.2026.140106

INTRODUCTION

Researchers have studied ambidexterity extensively and recognised its importance for improving short- and long-term organisational performance (PERF) (Jansen *et al*., 2008; Ochie *et al*., 2022). Scholars define ambidexterity as an organisational capability to deal with opposing tensions, including alignment vs adaptability, comfort of the past vs uncertainty of the future, flexibility vs efficiency, and exploitation vs exploration of knowledge (March 1991; Tushman & O'Reilly, 1996). Scholars commonly recommend the pursuit of ambidexterity to improve both long-term viability as

well as short-term profit and revenue maximisation (Birkinshaw *et al*., 2016; Brix, 2019; Mura *et al*., 2021). Given the concept's versatility, ambidexterity has attracted the attention of scholars in various disciplines, ranging from technology innovation (Akbari *et al*., 2025), strategic management (Jansen *et al*., 2008), dynamic capabilities (van Lieshout *et al*., 2021), organisation learning (March, 1991; Duan *et al*., 2022), and organisational change (Bell & Hofmeyr, 2021).

Several scholars focus on organisational culture as an antecedent to ambidexterity and emphasise its role in creating a dynamic organisational ecosystem that supports an organisation's ability to manage change, seize opportunities, and achieve growth in a dynamic business environment. In their seminal work, Wang and Rafiq (2014) propose the concept of 'ambidextrous organisational culture' (CULAD), which integrates two core values, *i.e.*, organisational diversity (OD) and shared vision (SV), as the foundation for contextual ambidexterity: fostering diversity in the workplace encourages exploratory action while shared vision contributes to a common understanding and implementation of organisational goals. However, despite the emphasis on promoting both OD and SV, the existing literature on ambidexterity has two major drawbacks, as it often examines one dimension of CULAD and focuses only on developed economies. Therefore, investigating the role of CULAD as an antecedent of contextual ambidexterity in a post-communist transition economy such as Albania, characterised by a collectivist culture and acceptance of power structures, which translates into the prevalence of hierarchical managerial practices within business organisations (Vajjhala & Strang, 2014), is of considerable empirical relevance.

Based on O'Reilly and Tushman (2008), the literature often emphasises that ambidexterity as a dynamic capability does not directly lead to competitive advantage. To capture the value and convert it into revenue streams, Teece *et al*. (2020) propose a four-step approach that identifies business model (BM) change as a mechanism to transform the value created by dynamic capabilities into sustainable competitiveness. With regard to ambidexterity, Kringelum and Gjerding (2018) argue that business model innovation (BMI) acts as an effective mechanism for balancing exploitation and exploration. Thus, given the challenges posed by BMI (Zott & Amit, 2010), developing an initial BM design that is compatible with ambidexterity is critical for a business organisation. In this context, a specific template, scholars proposed the novelty-centred business model design (NBMD). It is considered an optimal design for companies that strive for innovation ambidexterity (INNAD) and balance exploitative and explorative innovation activities to achieve sustainable performance (Božič & Dimovski, 2019). In this study, we aimed to test whether INNAD and CULAD align with NBMD.

After testing the initial hypotheses, we investigated the mediating roles of INNAD and NBMD in the relationship between CULAD and PERF, as well as the mediating effect of NBMD in the relationship between INNAD and PERF. Although prior research has addressed the mediation between CULAD and PERF, the role of business models as mediating mechanisms that enable both CULAD and INNAD to translate into performance gains remains underexplored.

We tested the hypotheses using survey data from a sample of 175 Albanian companies surveyed in 2019. Notably, the World Economic Forum's report for 2019 classifies Albania as an 'efficiency-driven economy.' Even though the economy has improved overall, the market environment is still characterised by persistent uncertainty. Such a context can be insightful for studying ambidexterity. Scholars see the pursuit of organisational ambidexterity in a turbulent business environment as a means of transforming organisations while maintaining competitiveness in the face of market uncertainties (Alkaabi *et al*., 2024).

As a preview of the results, the study shows that CULAD has a moderate positive effect on contextual ambidexterity, a form of INNAD. In turn, contextual ambidexterity has a positive effect on NBMD and, thus, on PERF. The results of the study align with the arguments of various researchers and support the notion that ambidexterity, like other dynamic capabilities, has an indirect rather than a direct effect on performance. Finally, the indirect effect of CULAD on PERF underscores the mediating role of factors such as INNAD and NBMD in translating ambidextrous culture into performance gains.

This study makes three contributions to this research topic. Firstly, it improves our understanding of the mechanisms for supporting the pursuit (*i.e.*, CULAD) and harnessing its potential (*i.e.*, NBMD) of INNAD in the context of a transition economy. Secondly, by corroborating the relationship between ambidexterity and NBMD, it responds to Wilden *et al*.'s (2018) call to examine how exploration and

exploitation are configured across organisational boundaries, and Smith *et al*.'s (2010) and Stoiber *et al*.'s (2022) call to identify business models that support strategies such as ambidexterity. Thirdly, the study establishes a comprehensive framework that links CULAD, INNAD, NBMD, and PERF by analysing a unique sample of knowledge-intensive service and manufacturing firms.

The article is structured as follows: Section 2 reviews the literature on CULAD, INNAD, and NBMD and presents the hypotheses. Section 3 provides information on the dataset used and explains the methodology applied, the covariance-based structural equations with maximum likelihood estimator (ML-SEM) approach. Section 4 provides an assessment of both the measurement and structural models, followed by the presentation of the results. Finally, in the last section, we discuss theoretical and practical implications and draw conclusions.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Concepts and Definitions

Ambidextrous Organisational Culture

According to Wang and Rafiq (2014), CULAD effectively balances two complementary components: OD and SV. OD refers to a system of values and norms that promotes, acknowledges, and rewards diversity in individuals' perspectives, skills, and knowledge. In doing so, it cultivates creative thinking, autonomy, and innovative behaviour, and supports exploratory learning. On the other hand, SV is defined as a 'set of values and norms that encourage the active participation of organisational members in the development, communication, dissemination and implementation of organisational goals' Wang and Rafiq (2014, p. 62). We should see both dimensions as complementary and mutually reinforcing. Maintaining a balance between OD and SV is crucial to avoid focusing too much on one dimension at the expense of the other and thus falling into the trap of solving problems only with known solutions or steering individuals in different directions when tackling problems (Wang & Rafiq, 2014).

Innovation Ambidexterity

From an organisational learning perspective, INNAD means striking a balance between exploitative and exploratory innovation activities to introduce both incremental and radical innovations that ultimately lead to sustainable and improved performance (Božič & Dimovski, 2019; Nakandala *et al*., 2024). Exploratory innovation, usually considered to be synonymous with radical innovation, focuses on identifying new market opportunities and developing new knowledge for a firm's long-term survival (Asiaei *et al*., 2023). In contrast, exploitative innovation, which is associated with incremental innovation, aims to expand the company's current competitive advantage through efficient management of existing resources, capabilities, and skills (De Silva *et al*., 2022).

Both exploratory and exploitative innovation contribute to PERF, which shows the importance of maintaining a balance between them (Farzaneh *et al*., 2022). An overemphasis on exploratory innovation can lead to risks of obsolescence and additional costs due to failed attempts and dissatisfied consumers, whereas an exclusive emphasis on exploitative innovation may lead to the company falling into the capability trap and not being able to adapt flexibly enough to the market (March, 1991).

The theory of innovation ambidexterity proposes various solutions to the paradox of exploitation and exploration, which include balancing, combining, and simultaneously developing explorative and exploitative innovation activities (Duan *et al*., 2022). This theory posits that firms can achieve ambidexterity either through sequential ambidexterity, *i.e.*, temporarily separating exploration and exploitation activities over time or through structural ambidexterity, *i.e.*, these activities are divided across different departments or units (Ossenbrink *et al*., 2019). Finally, the ability of a firm to concurrently engage in both exploitative and explorative innovation, referred to as contextual ambidexterity, represents an alternative means of achieving such a balance (Duan *et al*., 2022; Farzaneh *et al*., 2022).

Novel Business Model Design

In contrast to traditional product and process design, BM design focuses on the way companies do business, including activities that span organisational boundaries. The activity system perspective of

BM, formulated by Zott and Amit (2010), illustrates the importance of the purposeful integration of interdependent activities conducted by the company or its partners. The system comprises three design elements: *i.e.*, content (which activities to include), structure (how the activities relate to each other), and governance (who executes the activities).

Amit and Zott (2010) proposed four themes for BM design: novelty-centred, efficiency-centred, complementarity, and lock-in. Among these, NBMD has attracted the attention of researchers because it is a powerful design theme for developing a business that enables value creation and capture by innovating existing transactions in novel ways (content), reorganising transaction participants and activities (structure), or introducing new methods for managing transactions (governance) (Zott & Amit, 2007; 2008; 2010).

Research Hypotheses

Academic research recognises the challenges and complexities that organisations face in pursuing INNAD. In particular, research has focused on two main contexts, *i.e.*, the organisation's internal and external environment. From an internal perspective, many studies have confirmed the positive relationships between INNAD and various internal factors, including corporate governance, leadership, and employee characteristics (Zang & Li, 2017; Liu *et al*., 2019; Berraies & Ben Rejeb, 2021). From an external environment perspective, scholars have highlighted the significant effect of factors such as environmental uncertainties and institutional circumstances on INNAD (Wiratmadja *et al*., 2020).

Recent studies have investigated the impact of individual components of CULAD, *i.e.*, OD or SV, on INNAD. For instance, OD, including team heterogeneity and top management team diversity, enhances INNAD (Zhang *et al*., 2021). Similarly, studies have linked SV and beliefs that promote a collectivist culture and cultural embeddedness to the promotion of INNAD. Wang and Rafiq (2014) emphasise the complementary nature of OD and SV, arguing that both dimensions of CULAD jointly facilitate the integration and balance of exploration and exploitation required for contextual ambidexterity. Therefore, we hypothesise the following:

H1: Ambidextrous organisational culture (CULAD) positively affects innovation ambidexterity (INNAD).

Recent studies suggest that successful product innovation, such as incremental and radical product innovation, is also the result of a well-established CULAD. More specifically, OD stimulates individuals to think creatively and to act autonomously and innovatively, thereby fostering new managerial approaches and novel solutions (Wang & Rafiq, 2014). Furthermore, diversity facilitates the acquisition of information about new technologies (Khanagha *et al.,* 2014) and new market trends (Bock *et al*., 2012). Such a propensity to novelty can affect the way firms do business. On the other hand, an SV that promotes the sharing of knowledge and information within an organisation may facilitate the development of new BMs by conferring unity and discipline to organisation members' actions in implementing a novel BM. All these arguments and research findings regarding the two dimensions of CULAD are consistent with the novel nature of the design elements that form the activity system of NBMD (Zott & Amit, 2010). Based on this rationale, we hypothesise that CULAD is consistent and compatible with the activity system of NBMD. Therefore, we hypothesise the following:

H2: Ambidextrous organisational culture (CULAD) positively impacts the novel business model design theme (NBMD).

Consistent with Teece's (2007) sensing, seizing, and reconfiguring framework, scholars conceptualise ambidexterity as a dynamic capability (O'Reilly & Tushman, 2008; Carter, 2015). In the context of business model design, Amit and Zott (2016) argue that the sensing and seizing capabilities foster NBMD. This logic implies a positive association between INNAD and NBMD. It also agrees with dynamic capabilities research suggesting a reciprocal relationship between a firm's dynamic capabilities and its chosen business model (Teece *et al*., 2020).

Using a more granular line of reasoning and focusing specifically on contextual ambidexterity, we can identify an alignment between contextual ambidexterity and NBMD. Stoiber *et al*. (2022) argue that simultaneously pursuing explorative and exploitative innovation reduces structural

barriers and cultural inertia, enabling organisations to discover new opportunities and develop disruptive BMs. Among the design themes, NBMD fits well with contextual ambidexterity outcomes. As noted by Amit and Zott (2016), the NBMD requires managers and the organisation to stay alert in response to signals from the environment to sense and seize opportunities, indicating a propensity to change and avoid path dependencies.

Finally, some empirical studies corroborate these arguments by explaining the mechanism by which exploration and exploitation are balanced. For example, Karmeni *et al*. (2021) demonstrated that the NBMD can facilitate the transition from exploration to exploitation among small and medium-sized enterprises (SMEs), providing further evidence of the compatibility between INNAD and NBMD. Thus, based on the dynamic capability framework, the alignment argument presented above and the recent empirical research, we hypothesised the following:

H3: Innovation ambidexterity (INNAD) positively impacts the novel business model design theme (NBMD).

Research has firmly established that organisations leverage innovative BM designs to achieve superior performance and gain a competitive advantage (Zott & Amit, 2007; 2008). The reason lies in the capacity of this design to create and capture value. Compared to lock-in, complementarity, and efficiency designs, this BM design has some advantages since it emphasises value creation, while the other designs focus more strongly on value capture (Almeida Costa & Zemsky, 2021). It helps organisations capture the interest of a new client base by capitalising on new ideas, original designs, and innovative technologies, *i.e.*, creating more value (Jin *et al*., 2022). However, Chesbrough and Rosenbloom (2002) argued that this design also performs very well in translating technological innovation into performance gains, highlighting the value capture potential of such a design. Therefore, based on these arguments and following various studies that have already demonstrated the positive effects of NBMD on performance (*e.g.*, Zott & Amit, 2007, 2008; Gronum *et al*., 2016; Gerdoçi *et al*., 2018), we decided to retest this hypothesis to confirm previous empirical research. Thus, we hypothesise:

H4: The novel BM design theme (NBMD) positively impacts business performance (PERF).

The Mediating Role of Innovation Ambidexterity and NBMD on Performance

The norms and values embedded in CULAD promote originality and entrepreneurial behaviour among employees and encourage innovative solutions (Spraggon & Bodolica, 2017). This culture makes it easier for employees to reconcile different perspectives with existing knowledge and pursue creative ideas in line with organisational goals (Wang & Rafiq, 2014). While prior research has explored the mediating role of innovation ambidexterity between CULAD and firm performance, our study advances this line of inquiry by examining the mediating roles of both innovation ambidexterity and novel BM design. We hypothesise that the INNAD and NBMD serve as sequential mediators for CULAD to achieve performance gains.

M1: Innovation ambidexterity (INNAD) and novel BM design (NBMD) mediate the relationship between ambidextrous organisational culture (CULAD) and business performance (PERF).

Notably, INNAD plays a crucial role in achieving competitive advantage by creating a balance between immediate gains and long-term development (Cheng *et al*., 2023), leading to improved business performance, growth, and competitive advantage (Wang & Fang, 2021). However, the mechanisms underlying this effect on PERF have yet to be fully understood. We hypothesise that NBMD serves as a vital value capture mechanism. We find support for this in the theoretical arguments of technological innovation and dynamic capabilities, *i.e.*, the need for a BM to capture the value generated through innovation (Chesbrough & Rosenbloom, 2002), and the notion that dynamic capabilities, such as ambidexterity, affect performance indirectly (Zott, 2003; Teece *et al*., 2020). Therefore, we hypothesise:

M2: Novel BM design (NBMD) mediates the relationship between innovation ambidexterity (INNAD) and business performance (PERF).

Figure 1 illustrates our model. The dotted lines (M1 and M2) represent our hypotheses for serial mediation via INNAD and NBMD, as well as mediation via NBMD, while the other hypotheses (H1, H2

H3, and H4) represent the direct effects.

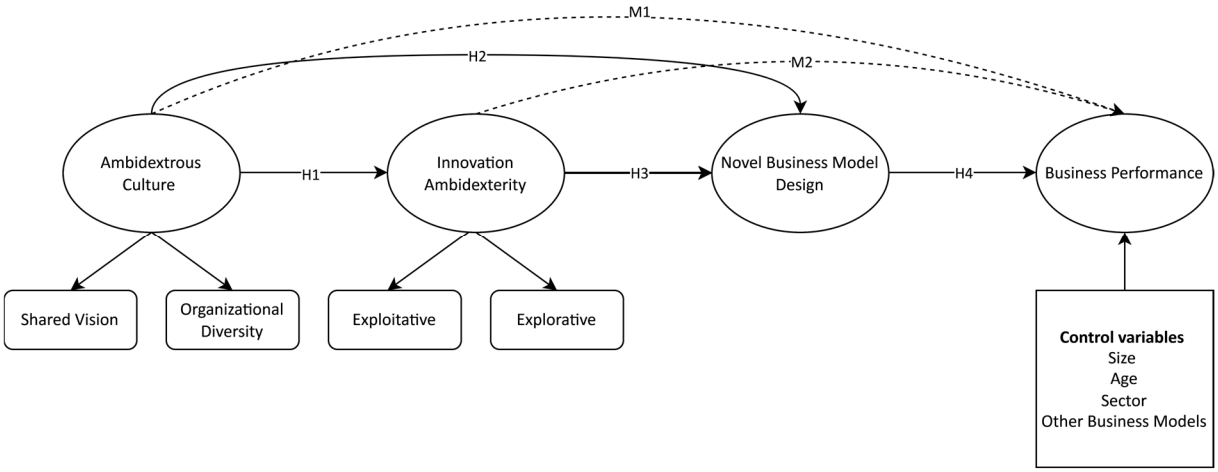

Figure 1. Model and hypotheses
Source: own elaboration.

RESEARCH METHODOLOGY

Data Collection and Sampling

We obtained the data in the second half of 2019 from managers and owners of companies in Durres and Tirana, the two most important regions in Albania in terms of economic activity, which are home to 41% of all companies (INSTAT, 2019). We obtained the randomly selected sample from a database of all limited liability firms operating in nine sectors with medium to high knowledge intensity.[1] The sample was heterogeneous, comprising 28.4% of manufacturing, 2% of mining, and the rest of service companies.

The selection of knowledge-intensive firms aimed to capture better and investigate both the phenomena of BM innovation and ambidexterity. Despite such a focus on knowledge-intensive sectors, there was sufficient variability in terms of technology intensity, which helped mitigate potential industry-specific biases (around 80% of cases were below medium levels of R&D, while the rest displayed medium or high levels of R&D). Technology intensity refers to the level of research and development (R&D) investment relative to a given industry's economic output. The OECD's taxonomy of economic activities based on R&D intensity classifies industries into five groups according to the ratio of R&D expenditure to gross value added. Unlike earlier classifications, it encompasses both manufacturing and non-manufacturing sectors, including services, agriculture, and mining (OECD, 2005; Galindo-Rueda & Verger, 2016).

Survey Design and Administration

We developed the questionnaire from the original scales in English. The process included independent translations and a pre-test with several companies.

We administered most questionnaires (62%) through in-person interviews conducted by four trained researchers. We also provided the researchers with written guidelines on how to conduct the interview with the company managers.

The active response rate was approximately 44.4%. To ensure that non-response bias was not a problem in our dataset, we examined potential variations within the existing dataset by comparing early respondents with late respondents. The test holds, and there was no difference between the group organisations' attributes, such as the number of employees, age, or respondents' attributes, such as the number of years of experience in a managerial position (with a p-value range between p=0.12 and p=0.47 for the $\chi 2$ test).

[1] We used the Statistical Classification of Economic Activities (NACE) (European Commission, 2008) to identify sectors with medium to high knowledge intensity.

Measures, Operationalisation, and Data Diagnostics

We measured firm performance (PERF) using five key factors: sales, market share, cash flow, profit, and return on investment (Slater & Olson, 2000; Delaney & Huselid, 1996). Regarding the NBMD variable, we measured it using the original scale developed by Zott and Amit (2007, 2008), which consists of ten items. Following Wang and Rafiq (2014), we conceptualised CULAD as a second-order factor consisting of the components SV and OD. Moreover, we operationalised OD using the three-item scale of Ferner *et al*. (2005), and SV using the four-item scale of Sinkula *et al*. (1997) and Patterson *et al*. (2005), as reported by Wang and Rafiq (2014). Following Liao *et al*. (2018), we conceptualised INNAD as a second-order variable composed of explorative (ERI) and exploitative innovation (EII). We operationalised these two components using the original seven- and six-item scales of Jansen *et al*. (2006) (see Table A.1 in Appendix A).

We measured all constructs using self-reported items rated on a seven-point Likert scale. We included several controls at the company and sector level in the model. Following previous research (*e.g.*, Zott & Amit, 2008; Brettel *et al*., 2012), we controlled for the effect of the log-transformed number of employees (*i.e.*, firm size) and the firm's operational age, expressed as the natural logarithm of years since establishment. We also controlled for the adoption of the different BMs by the firms, using the operationalisation of Pucci *et al*. (2017). We identified three types of business models using a multinomial variable: novel, efficient, and new market business models, thus controlling for the effect of other BMs. Finally, following Brettel *et al*. (2012), we accounted for sector heterogeneity by including a binary variable distinguishing manufacturing from service firms.

To strengthen data reliability, we conducted both ex-ante and ex-post checks for common method bias. This was necessary, as a single respondent, typically the proprietor or a senior manager, represented each firm. Following Podsakoff *et al*. (2003), we pre-tested the questionnaire with experts and managers to avoid misleading questions and ensured respondents' anonymity. Moreover, the common latent factor analysis showed that the difference between standardised regression weights of the unconstrained model and those of the constrained one was minimal (below 0.057) (see Table B.5 in Appendix B).

The characteristics of our dataset also comply with those of a normal distribution, which is essential when using covariance-based structural equations with maximum likelihood estimator (ML-SEM) (Kline, 2011). All skewness values were within the range (-2 and +2), except for just one below the threshold of -2 (-2.085). Similarly, kurtosis levels were also mild, indicating that every item had a univariate normal distribution.

We further examined the dataset for missing data, unengaged responses, and outliers (Kline, 2011). The proportion of missing data did not exceed 1% for any construct. Little's test showed that our data were missing completely at random (p-value > 0.05). Thus, for latent factors, we used the mode of the surrounding values to impute missing values. We removed one case of unengaged responses since the standard deviation of latent factors was 0; for the rest of the cases, the standard deviation was around 1. We detected and removed thirteen univariate outliers using the modified Z-score approach (Iglewicz & Hoaglin, 1993). We identified multivariate outliers via Mahalanobis distance and excluded twelve cases from the analysis (Kline, 2011). Cook's distance indicated no influential outliers. The resulting final sample comprised 175 firms.

The assumption of multivariate kurtosis was not fully satisfied, despite acceptable multivariate skewness. To ensure robustness, we performed bootstrapping to validate the model and confirm the statistical significance of the estimates.

Survey Sample Properties

The final sample consisted of 63.4% micro and small organisations and 36.6% medium and large firms (see Table 1). Approximately 48% of the firms were less than ten years old, 34% were between 11 and 20 years old, and the remainder were over 20 years old. In terms of industry, 28.6% operated in manufacturing, while the majority (72%) belonged to seven service sectors.

Table 1. Sample descriptives

Characteristics	Valid %; Full sample; (N = 201)	Valid %; Sample without outliers (N = 175)
Sector		
Manufacturing	29.4%	28.6%
Services	70.6%	71.4%
Size of firm		
Micro/Small	62.1%	63.4%
Medium/Large	37.9%	36.6%
Number of employees		
1-9 employees	25.9 %	25.7%
10-49 employees	36.2 %	37.7%
50-249 employees	29.4 %	30.9%
More than 250 employees	8.5%	5.7%
Firm's age		
Ten or less than ten years old	45.8%	48%
11-20 years	34.8%	34.3%
Over 20 years	19.4%	17.7%

Source: own study.

Assessment of the Measurement Model

We first conducted a confirmatory factor analysis (CFA) for the model comprising first-order variables and then a pooled CFA comprising two second-order variables and two first-order variables (Koufteros *et al*., 2009). We tested item validity, internal consistency reliability, and convergent and discriminant validity for both models.

To ensure the validity of our self-assessed, multi-item variables, we checked the loading of the items in each construct. The SV and OD items loaded reasonably high, while six items for NBMD, one for PERF, four for ERI, and three for EII were removed because of low loadings, cross-loadings, and the indication of reliability analysis (Kline, 2011) (see Table B.1 in Appendix B).

CFA model fit statistics were adequate. Chi-square analysis shows that the two models (*i.e.*, first and second order) were not significantly different in terms of fit ($\Delta\chi 2 = 6.599$, $\Delta df = 5$, $p = 0.25$) (see Table B.2 in Appendix B). However, as indicated by Koufteros *et al*. (2009), considering that our second-order model rivals the first-order one, the second-order model constituted the most suitable option.

When estimating the first-order factor model, all retained indicators achieved loadings above the 0.60 threshold, thereby confirming acceptable item validity. In the second model comprising second-order factors, one sub-construct, OD, had a lower loading of 0.55 (see Table B.1 in Appendix B). However, such loading was within the threshold suggested by Hair (2010). Furthermore, the CFA results for both models indicated that the maximum shared variance (MSV) values were lower than the corresponding AVE values (see Tables B.3 and B.4 in Appendix B). In addition, both the AVE values and their square roots exceed the inter-construct correlations, thereby supporting discriminant validity.

To assess construct consistency, we examined Cronbach's alpha, the average variance extracted (AVE), and composite reliability. The Cronbach's alpha values for all first-order constructs were above 0.70. The different outer loadings showed good composite reliability values above 0.796 for first-order factors and above 0.706 for second-order factors (see Table B.3 in Appendix B). In addition, all constructs reported AVE values above the recommended 0.50 threshold (Hair, 2010), supporting convergent validity. Each sub-dimension of the two second-order constructs displayed a significant association with its higher-order factor, confirming the appropriateness of conceptualising and modelling CULAD and INNAD as second-order constructs. Finally, the Bollen-Stine bootstrapping procedure returned a p-value greater than 0.05, indicating that our model fit the data.

Assessment of the Structural Model

Firstly, we assessed model fit and examined linearity. The curve estimations for all the relationships in our model were linear. The fit statistics were good ($\chi2/df = 1.509$ ($\chi2 = 369.806$; $df = 245$); CFI = 0.941; RMSEA = 0.054, Pclose = 0.268; SRMR = 0.063) (Hair, 2010). In addition, the Bollen-Stine bootstrap procedure returned a non-significant p-value ($p > 0.05$), indicating that the model specification was acceptable.

To further assess whether INNAD and CULAD operate as higher-order constructs, we tested a competing model where OD and SV directly predicted EII and ERI. Similarly, EII and ERI were linked to NBMD rather than as components of INNAD. The chi-square statistics of this competing model were $\chi2 = 413.936$, df=235, much worse than the model comprising second-order variables (*i.e.*, higher chi-square statistic and fewer degrees of freedom). These outcomes offered additional evidence that the use of higher-order constructs was warranted.

RESULTS AND DISCUSSION

Direct Effects

Table 2 shows the results of the hypothesised relations, unstandardised coefficients, their respective standard errors, standardised coefficients, and the critical ratio.

Table 2. Structural model results for the direction effect

Hypothesis	Path	Est.	SE.	St.est.	CR.	P
H1	CULAD → INNAD	0.409	0.192	0.283	2.128	0.033
H2	CULAD → NBMD	0.218	0.123	0.206	1.769	0.077
H3	INNAD → NBMD	0.363	0.092	0.494	3.955	***
H4	NBMD → PERF	0.474	0.111	0.353	4.289	***

Note: cultural ambidexterity (CULAD), innovation ambidexterity (INNAD), firm's performance (PERF), novel business model design theme (NBMD); '***' $p < 0.001$.
Source: own study.

As illustrated in Figure 2, CULAD exerted a moderate positive effect on INNAD ($\beta = 0.283$, $p < 0.05$), supporting H1. However, its direct effect on NBMD was not statistically significant ($\beta = 0.206$, $0.05 < p < 0.10$), although the coefficient remained positive and in the hypothesised direction. Thus, H2 was not fully supported. Moreover, INNAD showed a strong positive effect on NBMD ($\beta = 0.494$, $p < 0.001$), confirming H3. Finally, NBMD positively affected PERF ($\beta = 0.353$, $p < 0.001$), supporting H4.

Mediating Effects

We assessed mediation using the approach proposed by Zhao *et al*. (2010), who recommend applying bootstrapping to test the significance of indirect effects alongside the direct effect. The results showed that the direct effects of CULAD on NBMD and PERF, as well as the direct effect of INNAD on PERF, were not significant, whereas the corresponding indirect effects were significant (see Table 3). This provided support for the serial mediation hypothesis (M1). Likewise, the analysis above indicated that INNAD did not affect PERF directly, but the indirect effect through NBMD was significant, supporting hypothesis M2.

Table 3. Results of the mediation analysis

Hypothesis	Path	Indirect effect estimate	p-value	Type of mediation
M1	CULAD → INNAD → NBMD → PERF	0.059	0.024	Serial indirect-only mediation
M2	INNAD→ NBMD → PERF	0.176	0.022	Indirect-only mediation

Note: cultural ambidexterity (CULAD), innovation ambidexterity (INNAD), firm's performance (PERF), novel business model design theme (NBMD).
Source: own study.

The results for the control variables, presented in Table C.1 of Appendix C, indicated that firm size positively affects PERF (β = 0.325, p<0.001). Further, adopting other business models negatively affected INNAD and PERF (respectively, β = -0.279, p<0.01; β= -0.121, p = 0.1), although the results for the latter were not robust. Firm's age positively affected PERF (β = 0.188, p<0.05). Finally, operating in the manufacturing sector negatively affected PERF (β = -0.121, p< 0.1). All other control effects were non-significant.

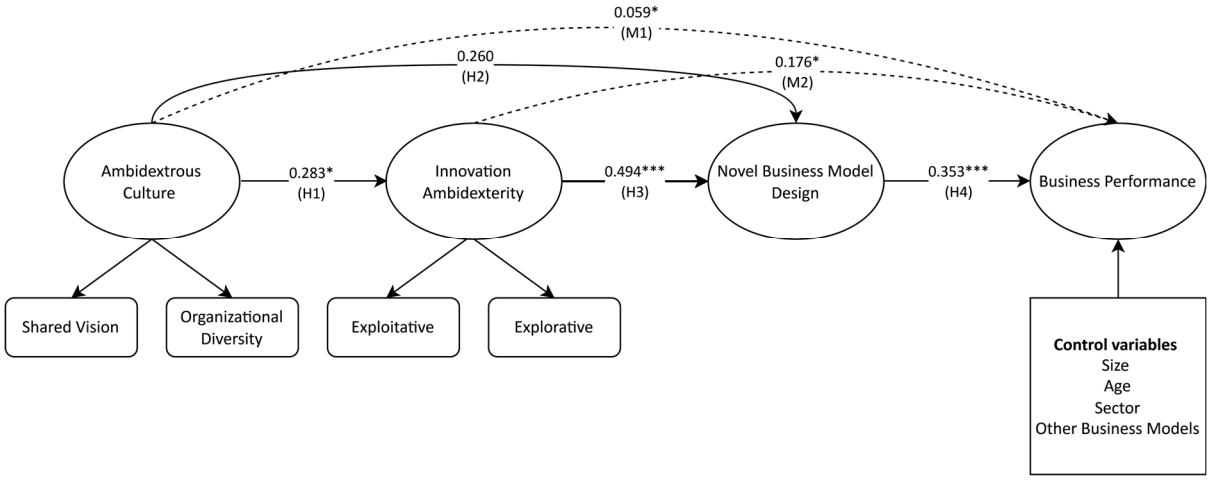

Figure 2. ML SEM results
Note: significant code: '***' p<0.001; '**'p< 0.01; '*'p< 0.05.
Source: own elaboration.

Discussion

Our findings regarding the INNAD-NBMD relationship provide empirical evidence for the proposed argument that NBMD, with its novel activities, structure, and governance (Zott & Amit, 2010), provides a good fit for contextual ambidexterity, a form of INNAD, that requires flexibility at organisational and individual (worker) level, *i.e.*, the adaptation of the organisational context and elimination of structural barriers (Stoiber *et al*., 2022). Furthermore, from a dynamic capabilities perspective, our results indicate that INNAD might drive the BM design choices (O'Reilly & Tushman, 2008). As indicated by O'Reilly and Tushman (2008), changing rigid hierarchical structures or routine-based processes and avoiding path dependencies to use the ambidexterity capability effectively requires the alignment of the firm's BM. In this study, we empirically showed that NBMD is very compatible with this form of ambidexterity. From a network perspective, given the boundary-spanning nature of BMs, our findings on the relationship between INNAD and NBMD provide some validation, albeit without exploring the mechanisms, for the propositions of Wilden *et al.* (2018) and other authors (*e.g.*, Lucena & Roper, 2016) that optimising conflicting aspirations of exploration and exploitation can arguably be achieved across organisational boundaries through partners, suppliers or customers. Finally, these results corroborate recent empirical research that points to NBMD as a mechanism that can balance exploration and exploitation (Karmeni *et al*., 2021), especially among SMEs, in contrast to some other researchers who assume that the implementation of such strategies requires competing, separate BMs (*e.g.*, O'Reilly & Tushman, 2013).

The results of our mediation analysis for the INNAD-NBMD-PERF chain relationship support our hypothesis of only indirect mediation. From the perspective of technological innovation, our results show that NBMD constitutes an excellent mechanism for capturing the value created by INNAD. This provides further evidence for Chesbrough and Rosenbloom's (2002) argument that a BM is required to appropriate the value created through innovation and convert it into a profit stream. From a dynamic capabilities perspective, our findings are consistent with numerous arguments suggesting that dynamic capabilities influence firm performance indirectly (*e.g.*, Zott, 2003; Teece *et al*., 2020). Finally, the study results are consistent with much of the empirical work that identifies NBMD as a value driver of PERF (e.g., Zott & Amit, 2007, 2008; Markides, 2013; Wei *et al*., 2017; Gerdoçi *et al*., 2018).

Our study further proves that an ambidextrous culture, which relies on the orchestration and synergy of seemingly incompatible components, *i.e.*, OD and SV, can flourish even in the context of a transition in a post-communist country characterised by a culture that shows high acceptance of power structures (Vajjhala & Strang, 2014). While the prevalence of hierarchical managerial practices within business organisations in Albania ensures discipline that leads to efficiency and continuous improvement (*i.e.*, SV component), constituting the basis for exploitation, our analysis shows that some organisations can still nurture characteristics aligned with exploration (*e.g.*, flexibility, creativity, and risk-taking associated with SV). Such results indicate that ambidextrous culture is a very 'resilient' concept that one can apply in other cultural contexts, such as transition economies. In post-communist countries, organisations are often subject to the dual challenge of maintaining stability while adapting to changing economic and social conditions. As noted by Kousina and Voudouris (2023), this duality recalls the role of ambidextrous culture as a particularly valuable skill in these transitional contexts, where legacy bureaucracies coexist with the need for modernisation and responsiveness. Moreover, as in developed and emerging economies, an ambidextrous culture leads to similar outcomes, *i.e.*, fostering innovation ambidexterity and, perhaps, the adoption of novel business models. Although our results on the proposed relationship between CULAD and NBMD are not robust enough, they suggest compatibility between CULAD, NBMD, and INNAD. Further, our mediation analysis results suggest that CULAD can lead to performance gains conditional on the ability to simultaneously engage in exploration and exploitation while introducing NBMD. Finally, from a methodological perspective, our study validates Wang and Rafiq's (2014) approach to examining CULAD and INNAD as higher-order constructs.

CONCLUSIONS

We set out to study the relationship between ambidextrous culture and contextual ambidexterity, *i.e.*, a form of innovation ambidexterity, in the context of a transition economy and the role of novel business model design in transforming ambidexterity value creation potential into performance gains, responding to the call of Smith *et al*. (2010) and Stoiber *et al*. (2022) to identify business models that can support strategies such as ambidexterity. Using a unique dataset of Albanian companies, our study corroborates previous findings that propose cultural ambidexterity as a higher-order construct that helps integrate and balance exploration and exploitation. Given the context and the sample composition, our study supports previous findings that cultural differences, the economic development level of the country, or the type of industry do not affect such a relationship. Most importantly, our study identifies NBMD as a design theme aligned with contextual ambidexterity, compatible with cultural ambidexterity and able to transform the value-creation potential of this capability into performance gains. We believe these findings hold important implications for both scholars and practitioners.

Practical Implication

Our study has some practical implications. Since many empirical studies have confirmed that ambidexterity is essential for firms' short-term performance and long-term survival, the choice of a compatible BM design aligned with ambidexterity becomes crucial for entrepreneurial firms, *i.e.*, young firms with high potential. Contrary to conventional notions of an efficiency-driven economy, our study suggests that managers of Albanian firms, particularly those operating in moderate to high knowledge-intensity sectors, should consider adopting an NBMD to pursue innovation ambidexterity. Furthermore, established firms that have fallen behind and are struggling with an imbalance between exploration and exploitation should engage in BMI and move towards NBMD. Furthermore, managers should prioritise developing OD and SV as mechanisms to build INNAD capabilities, as establishing cultural norms while ensuring organisational diversity requires time, continuous effort, and a bottom-up approach. Such efforts are more challenging in the context of a culture that cherishes power structures that can stifle creativity and innovation.

Moreover, our study has implications for policymaking, particularly in transition economies. Since NBMD plays a mediating role in transforming ambidexterity capabilities and culture into performance

gains, and given that our findings are not affected by industry type, policies that incentivise the adoption of novel BMs, models that demonstrate a high level of versatility in harvesting both exploitation and exploration, can be widely applicable across industries. From a policy action perspective, the various programs proliferating recently should consider providing grants for entrepreneurial firms and start-ups experimenting with business model innovation, as well as supporting hubs and accelerators that promote and validate new value propositions and revenue models. Such policy implications are particularly relevant in today's business environment, which is similar to, or even more challenging than, the one during the period when the data were collected, as technological disruptions and market realignments following the COVID pandemic are affecting the ways firms conduct business. As this article demonstrates, such an environment requires the development of innovation ambidexterity capabilities and the adoption of novel BMs.

Limitations and Future Research

This study has several limitations that offer opportunities for future research. Firstly, from a methodological perspective, our analysis relied on cross-sectional, self-reported data, which may raise concerns about potential common method bias (CMB). Although we took the necessary steps to ensure construct validity and test the CMB, the risk of potential CMB remains (see Kline, 2011). Secondly, from a generalisability perspective, while the heterogeneity of our sample provides an opportunity to test the ambidexterity hypotheses using a heterogeneous sample, it was biased toward knowledge-intensive firms. Moreover, although testing the ambidexterity hypotheses in the context of a transition economy adds new insights to the existing literature, it also limits the study's generalisability. Future research should test whether it is possible to extend these findings to less knowledge-intensive sectors and firms, as well as to various cultural and economic contexts. Thirdly, with respect to research design, our cross-sectional approach did not allow us to fully assess temporal ambidexterity, that is, the notion that firms may alternate between exploration and exploitation phases rather than pursuing them concurrently (Ossenbrink *et al*., 2019). More importantly, while there is sufficient theoretical rationale and empirical evidence to justify our conceptual model and sufficient validation of the model through comparisons of model fit indices with alternative models, the cross-sectional nature of the study design does not provide sufficient confidence in determining the chain of causal links between variables. We could not measure reverse causality and the interplay of the variables in time. Longitudinal studies may allow researchers to understand such dynamics better and expand on how sequential and simultaneous ambidexterity work in practice.

By introducing the concept of BM design and the activities beyond the organisation's boundaries, our research stresses the importance of inter-organisational learning for innovation ambidexterity. Future research might look more in-depth at the role of alliances (see Wilden *et al*., 2018), different forms of inter-organisational ambidexterity (Brix, 2019) and their interplay with BMs in an open innovation context.

Our study has limited its focus to internal firm dynamics, neglecting important external factors (Wiratmadja *et al*., 2020). Moreover, external environmental factors, such as levels of munificence and dynamism, can affect the performance of various BMs, including the NBMD (Zott & Amit, 2007; 2008). Therefore, future studies should investigate the interplay among BM, ambidexterity, and performance by introducing external environmental factors as moderators. Another promising avenue for research concerns the role of strategic leadership in managing the trade-offs and contradictions inherent in ambidexterity, as highlighted by O'Reilly and Tushman (2008). Leadership and management are vital for successfully implementing a BM design. As noted by Zott and Amit (2007, p. 195), 'bad management corrupts inherently good designs.'

REFERENCES

Akbari, M., Baghersad, V., Harandizadeh, M., Giglio, C., & Padash, H. (2025). Absorptive capacity and technological innovation: Ambidexterity and research and development. *Management Decision*. https://doi.org/10.1108/MD-07-2024-1708

Alkaabi, S., Hazzam, J., Wilkins, S., & Dan, S. (2024). The influences of ambidexterity, new public management and innovation on the public service quality of government organizations. *Public Performance & Management Review, 47*(5), 1110-1137. https://doi.org/10.1080/15309576.2024.2367130

Almeida Costa, A., & Zemsky, P. (2021). The choice of value-based strategies under rivalry: Whether to enhance value creation or bargaining capabilities*. Strategic Management Journal*. https://doi.org/10.1002/smj.3282

Amit, R., & Zott, C. (2016). Business model design: *A* dynamic capability *perspective*. *The Oxford Handbook of Dynamic Capabilities*, *52*, 1-5. https://doi.org/10.1093/oxfordhb/9780199678914.013.29

Asiaei, K., Bontis, N., Askari, M.R., Yaghoubi, M., & Barani, O. (2023). Knowledge assets, innovation ambidexterity and firm performance in knowledge-intensive companies. *Journal of Knowledge Management*, *27*(8), 2136-2161. https://doi.org/10.1108/JKM-04-2022-0277

Bell, L., & Hofmeyr, K. (2021). Enabling organisational ambidexterity: A leadership perspective. *South African Journal of Business Management*, *52*(1), 15. https://doi.org/10.4102/sajbm.v52i1.2268

Berraies, S., & Ben Rejeb, W. (2021). Do board of directors' roles and composition promote exploitative and exploratory innovations? Evidence from Tunisian listed firms. *European Journal of International Management, 15*(4), 628-656. https://doi.org/10.1504/EJIM.2021.114624

Birkinshaw, J., Zimmermann, A., & Raisch, S. (2016). How do firms adapt to discontinuous change? Bridging the dynamic capabilities and ambidexterity perspectives. *California Management Review, 58*(4), 36-58. https://doi.org/10.1525/cmr.2016.58.4.36

Bock, A.J., Opsahl, T., George, G., & Gann, D.M. (2012). The effects of culture and structure on strategic flexibility during business model innovation. *Journal of Management Studies, 49*, 279-305. https://doi.org/10.1111/j.1467-6486.2011.01030.x

Božič, K., & Dimovski, V. (2019). Business intelligence and analytics use, innovation ambidexterity, and firm performance: A dynamic capabilities perspective. *The Journal of Strategic Information Systems, 28*(4), 101578. https://doi.org/10.1016/j.jsis.2019.101578

Brettel, M., Strese, S., & Flatten, T.C. (2012). Improving the performance of business models with relationship marketing efforts—An entrepreneurial perspective. *European Management Journal, 30*(2), 85-98. https://doi.org/10.1016/j.emj.2011.11.003

Brix, J. (2019). Innovation capacity building: An approach to maintaining balance between exploration and exploitation in organizational learning. *The Learning Organization: An International Journal, 26*(1), 12-26. https://doi.org/10.1108/TLO-08-2018-0143

Buccieri, D., Javalgi, R.G., & Cavusgil, E. (2020). International new venture performance: Role of international entrepreneurial culture, ambidextrous innovation, and dynamic marketing capabilities. *International Business Review, 29*, 101-639. https://doi.org/10.1016/j.ibusrev.2019.101639

Carter, W.R. (2015). Ambidexterity deconstructed: A hierarchy of capabilities perspective. *Management Research Review, 38*(8), 794-812. https://doi.org/10.1108/MRR-05-2014-0116

Cheng, S., Fan, Q., & Song, Y. (2023). Performance gap and innovation ambidexterity: A moderated mediation model. *Sustainability, 15*, 3994. https://doi.org/10.3390/su15053994

Chesbrough, H., & Rosenbloom, R.S. (2002). The role of the business model in capturing value from innovation: Evidence from Xerox Corporation's technology spin-off firms. *Industrial and Corporate Change, 11*(3), 529-555. https://doi.org/10.1093/icc/11.3.529

Cochran, W.G. (1977). *Sampling techniques* (3rd ed.). John Wiley & Sons.

Delaney, J.T., & Huselid, M.A. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal*, *39*, 949-969. https://doi.org/10.2307/256718

De Silva, M., Howells, J., Khan, Z., & Meyer, M. (2022). Innovation ambidexterity and public innovation Intermediaries: The mediating role of capabilities. *Journal of Business Research*, *149*, 14-29. https://doi.org/10.1016/j.jbusres.2022.05.013

Duan, Y., Liu, W., Wang, S., Yang, M., & Mu, C. (2022). Innovation ambidexterity and knowledge redundancy: The moderating effects of transactional leadership. *Frontiers in Psychology, 13*, 1003601. https://doi.org/10.3389/fpsyg.2022.1003601

European Commission. (2008). *Statistical classification of economic activities in the European Community, Rev. 2 (NACE Rev. 2)*. European Communities. Retrieved from https://books.google.it/books/about/NACE_Rev_2.html?id=QzlAzwEACAAJ&redir_esc=y on January 21, 2022.

Farzaneh, M., Wilden, R., Afshari, L., & Mehralian, G. (2022). Dynamic capabilities and innovation ambidexterity: The roles of intellectual capital and innovation orientation. *Journal of Business Research, 148*, 47-59. https://doi.org/10.1016/j.jbusres.2022.04.030

Ferner, A., Almond, P., & Colling, T. (2005). Institutional theory and the cross-national transfer of employment policy: The case of 'workforce diversity' in US multinationals. *Journal of International Business Studies, 36*(3), 304-321. https://doi.org/10.1057/palgrave.jibs.8400134

Gerdoçi, B., Bortoluzzi, G., & Dibra, S. (2018). Business model design and firm performance: Evidence of interactive effects from a developing economy. *European Journal of Innovation Management, 21*(2), 315-333. https://doi.org/10.1108/EJIM-02-2017-0012

Gronum, S., Steen, J., & Verreynne, M.-L. (2016). Business model design and innovation: Unlocking the performance benefits of innovation. *Australian Journal of Management, 41*(3), 585-605. https://doi.org/10.1177/0312896215587315

Galindo-Rueda, F., & Verger, F. (2016). OECD taxonomy of economic activities based on R&D intensity (OECD Science, Technology and Industry Working Papers, No. 2016/04). OECD Publishing. https://doi.org/10.1787/5jlv73sqqp8r-en

Hair, J.F. (2010). *Multivariate data analysis: A global perspective*. Pearson.

Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

Iglewicz, B., & Hoaglin, D.C. (1993). *How to detect and handle outliers*. ASQ Quality Press.

Jansen, J.J., Van Den Bosch, F.A., & Volberda, H.W. (2006). Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management Science*, *52*(11), 1661-1674. https://doi.org/10.1287/mnsc.1060.0576

Jansen, J.J.P., George, G., Van Den Bosch, F.A.J., & Volberda, H.W. (2008). Senior team attributes and organizational ambidexterity: The moderating role of transformational leadership. *Journal of Management Studies, 45*(5), 982-1007. https://doi.org/10.1111/j.1467-6486.2008.00775.x

Jin, C., Liu, A., Liu, H., Gu, J., & Shao, M. (2022). How business model design drives innovation performance: The roles of product innovation capabilities and technological turbulence. *Technological Forecasting and Social Change, 178*, 121591. https://doi.org/10.1016/j.techfore.2022.121591

Karmeni, K., Uhlaner, L., & Lucianetti, L. (2021). The novelty-centered business model: A transition mechanism between exploration and exploitation in SMEs. *Journal of Small Business and Enterprise Development, 29*(4), 574-601. https://doi.org/10.1108/JSBED-06-2021-0221

Khanagha, S., Volberda, H., & Oshri, I. (2014). Business model renewal and ambidexterity: Structural alteration and strategy formation process during transition to a cloud business model. *R&D Management, 44*(3), 322-340. https://doi.org/10.1111/radm.12070

Kline, R.B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). Guilford Press.

Koufteros, X., Babbar, S., & Kaighobadi, M. (2009). A paradigm for examining second-order factor models employing structural equation modeling. *International Journal of Production Economics, 120*, 633-652. https://doi.org/10.1016/j.ijpe.2009.04.010

Kousina, E., & Voudouris, I. (2023). The ambidextrous leadership-innovative work behavior relationship in the public sector: The mediating role of psychological ownership. *Public Administration Review*, *83*(6), 1478-1495. https://doi.org/10.1111/puar.13650

Kringelum, L.T.B., & Gjerding, A.N. (2018). Identifying contexts of business model innovation for exploration and exploitation across value networks. *Journal of Business Models, 6*(3), 45-62. https://doi.org/10.5278/ojs.jbm.v6i3.1835

Liao, S., Liu, Z., & Zhang, S. (2018). Technology innovation ambidexterity, business model ambidexterity, and firm performance in Chinese high-tech firms. *Asian Journal of Technology Innovation, 26*(3), 325-345. https://doi.org/10.1080/19761597.2018.1549954

Liu, Y., Wang, W., & Chen, D. (2019). Linking ambidextrous organisational culture to innovative behavior: A moderated mediation model of psychological empowerment and transformational leadership. *Frontiers in Psychology, 10*. https://doi.org/10.3389/fpsyg.2019.02192

Lucena, A., & Roper, S. (2016). Absorptive capacity and ambidexterity in R&D: Linking technology alliance diversity and firm innovation. *European Management Review, 13*(3), 159-178. https://doi.org/10.1111/emre.12074

March, J.G. (1991). Exploration and exploitation in organisational learning. *Organization Science, 2*(1), 71-87. Retrieved from https://www.jstor.org/stable/2634940 on May 2, 2025.

Markides, C.C. (2013). Business model innovation: What can the ambidexterity literature teach us?. *Academy of Management Perspectives, 27*, 313-323. https://doi.org/10.5465/amp.2012.0172

Mura, M., Micheli, P., & Longo, M. (2021), The effects of performance measurement system uses on organizational ambidexterity and firm performance, *International Journal of Operations & Production Management*, *41*(13), 127-151. https://doi.org/10.1108/IJOPM-02-2021-0101

Nakandala, D., Tho, N.D., & Lau, H. (2024). Differential effects of external networks and integrative effects of employee integration on innovation ambidexterity. *Creativity and Innovation Management, 33*(1), 93-106. https://doi.org/10.1111/caim.12584

Ochie, C., Nyuur, R.B., Ludwi, G., & Cunningham, J.A. (2022). Dynamic capabilities and organisational ambidexterity: New strategies from emerging market multinational enterprises in Nigeria. *Thunderbird International Business Review, 64*(5), 493-509. https://doi.org/10.1002/tie.22266

OECD. (2005). *Oslo manual: Guidelines for collecting and interpreting innovation data, 4*. Organization for Economic Cooperation and Development.

O'Reilly III, C.A., & Tushman, M.L. (2013). Organisational ambidexterity: Past, present, and future. *Academy of Management Perspectives, 27*(4), 324-338. https://doi.org/10.5465/amp.2013.0025

O'Reilly III, C.A., & Tushman, M.L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organisational Behavior, 28*, 185-206. https://doi.org/10.1016/j.riob.2008.01.002

Ossenbrink, J., Hoppmann, J., & Hoffmann, V.H. (2019). Hybrid ambidexterity: How the environment shapes incumbents' use of structural and contextual approaches. *Organization Science, 30*(6), 1319-1348. https://doi.org/10.1287/orsc.2019.1309

Patterson, M.G., West, M.A., Shackleton, V.J., Dawson, J.F., Lawthom, R., Maitlis, S., Robinson, D.L., & Wallace, A.M. (2005). Validating the organisational climate measure: Links to managerial practices, productivity, and innovation. *Journal of Organizational Behavior, 26*(4), 379-408. https://doi.org/10.1002/job.312

Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903. https://doi.org/10.1037/0021-9010.88.5.879

Pucci, T., Nosi, C., & Zanni, L. (2017). Firm capabilities, business model design, and performance of SMEs. Journal of Small Business and Enterprise Development, *24*, 222-241. https://doi.org/10.1108/JSBED-10-2016-0164

Sinkula, J.M., Baker, W.E., & Noordewier, T. (1997). A framework for market-based organisational learning: Linking values, knowledge, and behavior. *Journal of the Academy of Marketing Science, 25*(4), 305-318. https://doi.org/10.1007/BF02894327

Slater, S.F., & Olson, E.M. (2000). Strategy type and performance: The influence of sales force management. *Strategic Management Journal, 21*(8), 813-829. https://doi.org/10.1002/1097-0266(200008)21:8<813::AID-SMJ117>3.0.CO;2-0

Smith, W.K., Binns, A., & Tushman, M.L. (2010). Complex business models: Managing strategic paradoxes simultaneously. *Long Range Planning, 43*(2), 448-461. https://doi.org/10.1016/j.lrp.2009.12.002

Spraggon, M., & Bodolica, V. (2017). Collective tacit knowledge generation through play: Integrating socially distributed cognition and transactive memory systems. *Management Decision, 55*(1), 119-135. https://doi.org/10.1108/MD-10-2015-0367

Stoiber, K., Matzler, K., & Hautz, J. (2022). Ambidextrous structures paving the way for disruptive business models: A conceptual framework. *Review of Managerial Science*. https://doi.org/10.1007/s11846-022-00589-7

Teece, D.J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal, 28*(13), 1319-1350. https://doi.org/10.1002/smj.640

Teece, D.J. (2010). Business models, business strategy and innovation. *Long Range Planning, 43*(2-3), 172-194. https://doi.org/10.1016/j.lrp.2009.07.003

Teece, D.J., Raspin, P.G., & Cox, D.R. (2020). Plotting strategy in a dynamic world. *MIT Sloan Management Review, 62*(1), 28-33. Retrieved from https://sloanreview.mit.edu/article/plotting-strategy-in-a-dynamic-world/ on March 10, 2022.

Tushman, M.L., & O'Reilly III, C.A. (1996). Ambidextrous organisations: Managing evolutionary and revolutionary change. *California Management Review, 38*(4), 8-39. https://doi.org/10.2307/41165852

Vajjhala, R., Narasimha, & Strang, K.D. (2014). Collaboration strategies for a transition economy: Measuring culture in Albania. *Cross Cultural Management, 21*(1), 78-103. https://doi.org/10.1108/CCM-07-2013-0162

van Lieshout, J.W., Van Der Velden, J.M., Blomme, R.J., & Peters, P. (2021). The interrelatedness of organizational ambidexterity, dynamic capabilities and open innovation: a conceptual model towards a competitive advantage. *European Journal of Management Studies*, *26*(2/3), 39-62. https://doi.org/10.1108/EJMS-01-2021-0007

Wang, C.L., & Rafiq, M. (2014). Ambidextrous organisational culture, contextual ambidexterity, and new product innovation: A comparative study of UK and Chinese high-tech firms. *British Journal of Management, 25*(1), 58-76. https://doi.org/10.1111/1467-8551.12010

Wang, H., & Fang, C.-C. (2021). The influence of corporate networks on competitive advantage: The mediating effect of ambidextrous innovation. *Technological Analysis and Strategic Management*. https://doi.org/10.1080/09537325.2021.1934436

Wei, Z., Song, X., & Wang, D. (2017). Manufacturing flexibility, business model design, and firm performance. *International Journal of Production Economics, 193*, 87-97. https://doi.org/10.1016/j.ijpe.2017.06.019

Wilden, R., Hohberger, J., Devinney, T.M., & Lavie, D. (2018). Revisiting James March (1991): Whither exploration and exploitation?. *Strategic Organization, 16*(3), 352-369. https://doi.org/10.1177/1476127018765031

Wiratmadja, I.I., Bagus Profityo, W., & Rumanti, A.A. (2020). Drivers of innovation ambidexterity on small-medium enterprises (SMEs) performance. *IEEE Access*. https://doi.org/10.1109/ACCESS.2020.3048139

World Economic Forum. (2019). *Global Competitiveness Report*. World Economic Forum.

Zang, J., & Li, Y. (2017). Technology capabilities, marketing capabilities, and innovation ambidexterity. *Technological Analysis and Strategic Management, 29*, 23-37. https://doi.org/10.1080/09537325.2016.1194972

Zhang, X., Le, Y., Liu, Y., & Chen, X. (2021). Fostering ambidextrous innovation strategies in large infrastructure projects: A team heterogeneity perspective. *IEEE Transactions on Engineering Management*. https://doi.org/10.1109/TEM.2021.3074431

Zhao, X., Lynch, J.G. Jr., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research, 37*(2), 197-206. https://doi.org/10.1086/651257

Zott, C. (2003). Dynamic capabilities and the emergence of intra-industry differential firm performance: Insights from a simulation study. *Strategic Management Journal, 24*(2), 97-125. https://doi.org/10.1002/smj.302

Zott, C., & Raphael, A. (2007). Business model design and the performance of entrepreneurial firms. *Organization Science, 18*(2), 181-199. https://doi.org/10.1287/orsc.1060.0229

Zott, C., & Raphael, A. (2008). The fit between product market strategy and business model: Implications for firm performance. *Strategic Management Journal, 9*(1), 1-26. https://doi.org/10.1002/smj.630

Zott, C., & Raphael, A. (2010). Business model design: An activity system perspective. *Long Range Planning, 43*, 216-226. https://doi.org/10.1016/j.lrp.2009.07.004

Appendix A:

Table A.1. Measurement items

Novel Business model design theme (NBMD)	Zott and Amit (2007; 2008)
Our business model offers new combinations of products, services, and information (NBMD1).	
The business model brings together new participants (NBMD2).	
Incentives offered to participants in transactions are novel (NBMD3).	
Our business model gives access to a wide variety and number of participants and/or goods/services (NBMD4).	
The richness (*i.e.*, quality and depth) of some of the enabled links between participants is novel (NBMD5).	
In our industry, we are a pioneer in exploiting our business (NBMD6).	
We have continuously introduced innovations to make our business more effective (NBMD7).	
There are no competing businesses in our industry that are threatening ours (NBMD8).	
There are other important aspects of the business model that make it novel (NBMD9).	
Our business model, overall, is novel (NBMD10).	
Organisational diversity (OD)	Ferner *et al*. (2005)
In this business unit ...	
we respect everyone's different viewpoints (OD1).	
we value people from diverse backgrounds with diverse experiences and skills (OD2).	
we encourage all employees to generate as many alternative solutions to problems as possible (OD3).	
Shared vision (SV)	Sinkula *et al. (*1997) and Patterson *et al*. (2005)
All employees view themselves as partners in charting the direction of this business unit (SV1).	
The future direction of this business unit is clearly communicated to everyone (SV2).	
Everyone who works here is well aware of the long-term plans and direction of this business unit (SV3).	
There is a strong sense of where this business unit is going (SV4).	
Explorative innovation (ERI)	Jansen *et al.* (2006)
Our organisation accepts demands that go beyond existing products and services (ERI1).	
We invent new products and services (ERI2)	
We experiment with new products and services in our local market (ERI3).	
We commercialise products and services that are completely new to our organisation (ERI 4).	
We frequently utilise new opportunities in new markets (ERI 5).	
Our organisation uses new distribution channels (ERI 6).	
Our firm has developed new marketing techniques (ERI 7).	
Exploitative innovation (ERI)	Jansen *et al.* (2006)
We frequently refine the provision of existing products and services (EII1).	
We regularly implement small adoptions to existing products and services (EII2).	
We introduce improved, but existing, products and services for our local market (EII3).	
We improve our provision's efficiency of products and services (EII4).	
We increase economies of scale in existing markets (EII5).	
Our organisation expands services for existing clients (EII6).	
Performance (PERF)	Adapted from Auh and Merlo (2012); Delaney and Huselid (1996)
Performance compared to the direct competitor concerning market share (PERF1).	
Performance compared to the direct competitor concerning revenues (PERF2).	
Performance compared to the direct competitor concerning profit (PERF3).	
Performance compared to the direct competitor concerning cash flow (PERF4).	
Performance compared the direct competitor concerning return on investment (PERF5).	

Source: own elaboration.

Appendix B:

Table B.1. Model fit statistics

	First-order model estimates	Second-order model estimates
CMIN/DF	1.471	1.466
CFI	0.96	0.96
SRMR	0.059	0.065
RMSEA	0.052	0.052
PClose	0.393	0.403

Note: chi-square divided by the degrees of freedom (χ2/df); comparative fit index (CFI); root mean squared error of approximation (RMSEA); p of close fit (PClose); root mean square residual index (SRMR).
Source: own elaboration.

Table B.2. Factor loading

Items	Item loading	Sub-factor loading	Sub´-factor
ERI2	0.86	0.83	ERI
ERI3	0.84		
ERI4	0.71		
EII1	0.87	0.79	EII
EII2	0.75		
EII3	0.62		
OD1	0.82	0.55	OD
OD2	0.94		
OD3	0.69		
SV1	0.92	0.91	SV
SV2	0.77		
SV3	0.69		
SV4	0.68		
NBMD 2	0.76	N/A	NBMD
NBMD 3	0.87		
NBMD 4	0.60		
NBMD 5	0.62		
PERF1	0.81	N/A	PERF
PERF3	0.92		
PERF4	0.89		
PERF5	0.89		

Note: PERF = business performance, SV = shared vision, NBMD = novelty-centred business model design, ERI = explorative innovation, OD = organisational diversity, EII = exploitative innovation; not applicable (N/A).
Source: own elaboration.

Table B.3. Internal consistency, convergent validity, and discriminant validity for the model comprising first-order constructs

	CA	CR	AVE	MSV	MaxR(H)	PERF	SV	ERI	NBMD	OD	EII
PERF	0.923	0.930	0.768	0.149	0.936	**0.876**					
SV	0.851	0.853	0.595	0.247	0.901	0.087	**0.772**				
ERI	0.842	0.847	0.650	0.422	0.863	0.285**	0.189*	**0.806**			
NBMD	0.821	0.809	0.520	0.202	0.848	0.386***	0.319***	0.449***	**0.721**		
OD	0.834	0.861	0.677	0.247	0.910	-0.047	0.497***	0.141	0.146†	**0.823**	
EII	7.888	0.796	0.570	0.422	0.834	0.151†	0.229*	0.649***	0.447***	0.205*	**0.755**

Note: cronbach's alfa (CA), composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), maximum reliability (MaxR (H)); on the diagonal are the square roots of AVE in bold font; Significance codes: '†' p < 0.100, '*' p < 0.050, '**' p < 0.010, '***' p < 0.001.
Source: own elaboration.

Table B.4. Internal consistency, convergent validity, and discriminant validity for the model comprising second-order constructs

	CR	AVE	MSV	MaxR(H)	PERF	NBMD	INNAD	CULAD
PERF	0.930	0.768	0.150	0.936	**0.876**			
NBMD	0.809	0.520	0.307	0.849	0.388***	**0.721**		
INNAD	0.787	0.649	0.307	0.789	0.281**	0.554***	**0.806**	
CULAD	0.706	0.560	0.117	0.835	0.075	0.342***	0.295**	**0.748**

Note: composite reliability (CR); average variance extracted (AVE); maximum shared variance (MSV); maximum reliability (MaxR (H)); on the diagonal are the square roots of AVE in bold font; Significance codes: '†' p < 0.100, '*' p < 0.050, '**' p < 0.010, '***' p < 0.001.
Source: own elaboration.

Table B.5. Common latent factor: The difference between the standardised regression weights of the unconstrained and constrained models

Path	Standardised regression weights		
	Constrained model (with CLF)	Unconstrained models (without CLF)	Difference
PERF → PERF1	0.763	0.777	0.014
PERF → PERF3	0.922	0.932	0.010
PERF → PERF4	0.876	0.887	0.011
PERF → PERF5	0.862	0.873	0.011
SV → SV1	0.627	0.649	0.022
SV → SV2	0.861	0.882	0.021
SV → SV3	0.822	0.829	0.007
SV → SV4	0.726	0.740	0.014
ERI → ERI2	0.853	0.863	0.010
ERI → ERI3	0.830	0.839	0.009
ERI → ERI4	0.702	0.709	0.007
NBMD → NBMD2	0.746	0.762	0.016
NBMD → NBMD3	0.815	0.833	0.018
NBMD → NBMD4	0.625	0.650	0.025
NBMD → NBMD5	0.653	0.672	0.019
OD → OD1	0.790	0.823	0.033
OD → OD2	0.888	0.940	0.052
OD → OD3	0.629	0.686	0.057

Path	Standardised regression weights		
	Constrained model (with CLF)	Unconstrained models (without CLF)	Difference
EII → EII1	0.849	0.868	0.019
EII → EII2	0.734	0.755	0.021
EII → EII3	0.588	0.621	0.033

Note: common latent factor (CLF).
Source: own elaboration.

Appendix C:

Table C.1. Structural model results for control variables

Path	Est.	SE.	St.Est.	CR.	P
Other BMs → INNAD	-0.831	0.266	-0.279	-3.130	0.002
Sector → INNAD	-0.025	0.257	-0.009	-0.098	0.922
AGE (log) → INNAD	0.366	0.173	0.188	2.111	0.035
SIZE (log) → NBMD	0.065	0.054	0.097	1.192	0.233
Other BMs → NBMD	-0.079	0.18	-0.036	-0.438	0.662
Sector → NBMD	-0.131	0.166	-0.061	-0.793	0.428
AGE (log) → NBMD	-0.150	0.115	-0.105	-1.306	0.192
SIZE (log) → PERF	0.290	0.069	0.325	4.213	***
Other BMs → PERF	-0.354	0.215	-0.121	-1.647	0.1
Sector → PERF	-0.350	0.210	-0.121	-1.671	0.095
AGE (log) → PERF	-0.103	0.139	-0.054	-0.738	0.461

Note: cultural ambidexterity (CULAD), innovation ambidexterity (INNAD), firm's performance (PERF), novel business model design theme (NBMD), logarithm of firm's age (AGE (log)), logarithm of size (SIZE (log), other business models (other BM), Sector (1 = manufacturing firms; 0 = service firms); '***' p<0.001; estimates (Est.); standardised estimates (St.est.); standard errors (SE); critical ratio (CR); p-value (P).
Source: own elaboration.

Authors

The contribution share of authors is equal and amounted to ⅓ for each of them.

Blendi Gerdoçi
Associate Professor at the Department of Management, University of Tirana, Albania. His research interests include transaction cost economics, strategic alliances and networks, contracting, and, more recently, education, business modelling, and innovation. He has published several articles in reputed scientific journals such as the Journal of Computers in Education, European Journal of Innovation Management, and other international journals.
Correspondence to: Prof. Blendi Gerdoçi, Department of Management, University of Tirana, Faculty of Economy, Arben Broci Road, 1000 Tirana, Albania, e-mail: blendigerdoci@feut.edu.al
ORCID https://orcid.org/0009-0006-5313-4688

Marco Cucculelli
Full Professor at the Department of Economics and Social Science, Marche Polytechnic University, Italy, where he coordinates the PhD program in Economics. His research interests are in the fields of innovation, corporate governance and finance, entrepreneurship and firm performance. He has published in several international journals, such as Research Policy, Journal of Corporate Finance, Small Business Economics, Journal of Evolutionary Economics, Cambridge Journal of Economics, Journal of Cleaner Production, Technological Forecasting & Social Change, and others. He is an Associate Editor of JSBM, JSBE and the Italian Economic Journal.
Correspondence to: Prof. Marco Cucculelli, Department of Economics and Social Science, Marche Polytechnic University, Faculty of Economy 'Giorgio Fuà,' Piazzale Martelli 8, 60121 Ancona, Italy, e-mail: m.cucculelli@staff.univpm.it
ORCID https://orcid.org/0000-0003-0035-9454

Daniela Lena (corresponding author)
Post-Doc researcher at the Department of Economics and Social Science, Marche Polytechnic University, Italy. Her research interests include field, business modelling, firm growth and performance, productivity growth, sustainability development, environment regulation, and resilient cities. She has published in the *European Journal of Innovation Management, Economia Marche-Journal of Applied Economics,* and *Technological Forecasting & Social Change.*
Correspondence to: Daniela Lena, PhD, Department of Economics and Social Science, Marche Polytechnic University, Faculty of Economy 'Giorgio Fuà,' Piazzale Martelli 8, 60121 Ancona, Italy, e-mail: d.lena@univpm.it
ORCID https://orcid.org/0000-0003-4839-8794

Acknowledgements and Financial Disclosure

The authors would like to thank the anonymous referees for their comments and advice.

Use of Artificial Intelligence

We used Grammarly for proofreading but edited the final version ourselves.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright and License

Published by Krakow University of Economics – Krakow, Poland