

Unpacking Saudi Family Firm Performance Benefits of Entrepreneurial Orientation, Digitalization, Ambidexterity, and Involvements

Wassim Aloulou

Imam Mohammad Ibn Saud Islamic University, Saudi Arabia

wjaloulou@imamu.edu.sa

Abstract: This study aims to enhance family firm research by introducing contemporary concepts such as entrepreneurial orientation, digitalization, and ambidexterity. It develops hypotheses to examine their impacts on family firm performance, while also exploring the influence of family and generational involvements on the relationship between entrepreneurial orientation and family firm performance. Furthermore, the study investigates the mediating role of innovation ambidexterity in the relationship between entrepreneurial orientation and performance. Using a quantitative approach, this study analyzed data from 256 Saudi family firms through structural equation modeling (SEM). The findings indicate that both firm digitalization and entrepreneurial orientation significantly affect innovation ambidexterity. Additionally, entrepreneurial orientation and innovation ambidexterity have significant impacts on family firm performance. However, firm digitalization does not demonstrate a significant effect on family firm performance. Moreover, innovation ambidexterity mediates the relationship between digitalization (fully) and entrepreneurial orientation (partially) with family firm performance. This research highlights the importance for family firms seeking to combine entrepreneurial orientation with a high degree of digitalization to explore and leverage innovative practices, especially when family involvement holds greater significance than generational involvement. These findings reinforce the notion of revitalizing entrepreneurial orientations by involving new, well-educated generations. The study also calls for further empirical research on the potential of Saudi family firms and their generations to engage in entrepreneurial behaviors, ensuring their sustainability and modernization in the digital era.

Keywords: Entrepreneurial orientation, Innovation ambidexterity, Firm digitalization, Family involvement, Generational involvement, Family firm performance

1. Introduction

Saudi family firms are considered as the backbone of the Middle East's and GCC's economies accounting for an estimated 63% of all businesses in the Kingdom (Adileh, 2022; Ramadani et al., 2023). They are growing during the last decades and the dynamics of their business model are changing (Aloulou, 2018; Aloulou & Alshaeel, 2023; Aloulou, 2023b). They contributed of \$216 billion to the GDP of the country, and had employed about 7.2 million people, representing a 52 percent of the total workforce (Alsharif, 2019). These statistics prove how important are family businesses in the Saudi economy. In GEM report of 2018, Saiz-Alvarez et al. (2022) highlighted the prevalence of family businesses in Saudi Arabia over the entire population of the study. There are significant percentages of individuals involved in the ownership and management of family businesses.

92 percent of the family businesses are in major areas of the country with 45% in Riyadh, 28% in Makkah and 18% in the Eastern Province. The largest percentage of Saudi family companies fall under the legal form of limited liability company, as they are more in line with the reality and composition of Saudi families (according to a study by the Business Sector Observatory (Marsad) of the Riyadh Chamber) (Asharq Al Awsat, 2021).

Family businesses contribute more than 800 billion riyals (\$213.3 billion) or 32 percent annually to the Kingdom's domestic income and provide many job opportunities for citizens. For instance, the family business sector is vital and plays a prominent role in the development of the national economy in addition to its distinction in the process of localizing national talents of both genders (Saudi Gazette, 2018). More than 80% of the total workers in the private sector work in family businesses, which stresses the need to strengthen and build the capabilities of family businesses, increase their adaptation to the new economic environment imposed by "Vision 2030", and benefit from the promising investment opportunities generated by it.

The mechanisms through which entrepreneurial orientation impacts firm performance remain incompletely understood (Rauch et al., 2009; Kollmann & Stöckmann, 2014; Wales et al., 2021). Potential mechanisms may influence this relationship in a family firm context. To address the potential gap in a such relationship, numerous scholars have investigated the link using several intermediary variables (mostly mediators), such as exploratory and exploitative innovations (Kollmann & Stöckmann, 2014; Wales et al., 2013); innovation and resilience capabilities (Freixanet et al., 2021; Mendoza-Silva, 2021; Aloulou, 2023a); and using several moderators such as family involvement (Aloulou, 2018) or generational involvement (Cherchem, 2017).

This study aims to enhance family firm research by introducing contemporary concepts such as entrepreneurial orientation (EO), firm digitalization (FD), and innovation ambidexterity (INNOVAMBI). It develops hypotheses to examine their impacts on family firm performance (FFP), while also exploring the influence of family (FI) and generational (GI) involvements on the relationship between EO and FFP. Furthermore, the study investigates the mediating role of INNOVAMBI in the EO-FFP relationship.

This study draws on the resource-based view (RBV) and the strategy-conduct-performance framework to examine the mechanisms through which EO influences FFP. It develops a model of EO-capabilities-performance linkages based on a quantitative study design and data from 256 Saudi family firms to simultaneously test the different hypotheses.

The study also calls for further empirical research on the potential of Saudi family firms and their generations to engage in entrepreneurial behaviors, ensuring their sustainability and modernization in the digital era.

The paper is organized into four primary parts. The first part, Section 2, offers an extensive examination of the existing literature on EO, FD, INNOVAMBI, FFP and FI, and GI. This section focuses on the theoretical framework and the development of hypotheses. Moving on to Section 3, the study's methodology is outlined, covering the sampling approach, data collection procedures, measurement instruments for the key variables, and the analysis strategy. In Section 4, the paper presents a comprehensive overview of the study's findings. Finally, the last section delves into a discussion of these findings, emphasizing their implications for theory and practice, addressing research limitations, suggesting potential directions for future studies and concluding with key remarks.

2. Theoretical Background and Hypotheses Development

2.1 Resource-Based View, Information Processing Theory and Organizational Capability Perspective

From the Resource-Based View (RBV) perspective, firms seek unique resources and capabilities to achieve higher performance (Barney, 2001). To foster innovation, firms must continuously develop and integrate their skills and abilities (Teece et al., 2016). Firm resources and capabilities are critical for sustaining competitive advantage. EO is recognized as a strategic resource for family firms to enhance performance (Zhou et al., 2005). From a perspective of organizational capability, innovation ambidexterity enables firms to translate EO into performance outcomes (Kollmann & Stöckmann, 2014; Aloulou, 2023a). Adopting the strategy-conduct-performance paradigm (Aloulou, 2023a; 2024), we investigate the role of innovation ambidexterity as organizational capability in converting strategic orientations into higher performance.

Drawing from the information processing theory, this study explores the influence mechanisms between firm digitalization and performance, building on prior research (Ribeiro-Navarrete et al., 2021; Issah & Calabro, 2024). Firm digitalization involves using digital technology to organize, process, and store data. To achieve long-term success, firms must integrate digital technologies into innovation activities, fostering stronger capabilities and creating growth opportunities (Aloulou, 2029b; Felipe et al., 2020; Cai et al., 2019). Developing higher-order capabilities, such as innovation ambidexterity, is crucial for leveraging strategic resources like EO and lower-order capabilities (technological resources) like firm digitalization (Aloulou, 2023a; 2024; Enrique et al., 2022; Felipe et al., 2020; Zhang et al., 2016; Zhou & Wang, 2021).

2.2 Key Concepts Defined and Linked

2.2.1 Entrepreneurial orientation

EO is a vital concept in entrepreneurship, supported by scholars (Rauch et al., 2009; Runyan et al., 2012). It comprises three dimensions: Innovativeness, Proactiveness, and Risk-taking. Innovativeness involves embracing novelty and creativity to develop new products or processes. Proactiveness enables firms to anticipate and respond to changes, staying competitive. Risk-taking reflects a firm's willingness to pursue activities with potential outcomes, even if failure is possible (Covin and Slevin, 1989; Lumpkin and Dess, 1996).

2.2.2 Firm digitalization

Firm digitalization refers to the integration and utilization of digital technologies and processes within an organization's operations, strategies, and business models. It involves leveraging digital tools such as cloud computing, data analytics, artificial intelligence, and automation to enhance efficiency, productivity, and customer experiences (Hao & Song, 2016; Yu et al., 2017).

2.2.3 Innovation ambidexterity

Innovation ambidexterity is the ability of an organization to balance and integrate both exploratory and exploitative innovation, combining the pursuit of new possibilities with optimizing existing capabilities for long-term growth and adaptation (Raisch et al., 2009; O'Reilly & Tushman, 2013).

2.2.4 Family and generational involvements

Active participation of family members in a family business, known as family involvement, impacts operations and outcomes (Sciascia & Mazzola, 2008). The level of family involvement shapes the direction and success of family enterprises. Generational involvement refers to the number of family generations simultaneously involved as the primary steward in the management of the firm (Cherchem, 2017; Zahra et al., 2007; Alrubaishi et al., 2021).

2.2.5 Family firm performance

Within the field of family business studies, family firm performance refers to the overall effectiveness and achievement of a business that is owned and operated by a family, encompassing financial success, sustainability, and the ability to pass the business to future generations (Williams Jr, 2018). When objective data is scarce, subjective measurements of family firm performance (FFP) have been deemed suitable (Singh et al., 2016). This study emphasizes FFP, which is assessed based on Top Management's satisfaction with firm results and influenced by strategic and technological resources (e.g., EO and FD) as well as firm capabilities (INNOVAMBI).

2.3 Hypotheses Developed

2.3.1 EO and family firm performance

Entrepreneurial orientation (EO) is positively linked to family firm performance, as it enables firms to innovate, take risks, and proactively respond to market changes for an enhanced competitiveness, growth, and sustainability. EO fosters a culture of entrepreneurship in terms of innovativeness, proactiveness and risk-taking, driving family firms towards superior performance outcomes (e.g., Wales et al., 2013; Aloulou, 2018; Kallmuenzer et al., 2018). We can state the following:

H1: There is a positive relationship between EO and FFP.

2.3.2 FD and family firm performance

Firm digitalization positively impacts family firm performance by enhancing operational efficiency, improving decision-making, and increasing innovation capabilities and leading to improved financial performance, competitiveness, and sustainability. Digitalization enables family firms to respond effectively to market changes, driving superior performance outcomes (Suder et al., 2022; Ribeiro-Navarrete et al., 2021; Issah & Calabro, 2024). The following hypothesis can be stated:

H2: There is a positive relationship between FD and FFP.

2.3.3 INNOVAMBI- family firm performance

The role of innovation ambidexterity in enhancing firm performance is significant as it allows firms to simultaneously pursue exploratory and exploitative activities. These activities can lead to enhanced competitive advantage, adaptability, and long-term success.

Innovation ambidexterity also positively influences family firm performance and enables them to simultaneously innovate and optimize existing capabilities, leading to improved financial performance, growth, and survival (Van Doorn et al., 2020; Stubner et al., 2012). The following hypothesis can be stated:

H3: There is a positive relationship between INNOVAMBI and FFP.

2.3.4 EO, innovation ambidexterity and family firm performance

EO is positively linked to family firm performance, as it fosters a culture of entrepreneurship, driving family firms towards superior performance outcomes. However, the relationship between EO and performance is not direct; rather, it is mediated by innovation ambidexterity.

The importance of innovation ambidexterity in driving family firm performance is also supported by theoretical perspectives on organizational ambidexterity (O'Reilly & Tushman, 2013).

Innovation ambidexterity plays a crucial mediating role in the EO-performance relationship (Raisch et al., 2009). Innovation ambidexterity allows firms to simultaneously pursue new opportunities and optimize existing capabilities, leading to enhanced performance outcomes.

EO enables family firms to develop innovation ambidexterity by encouraging experimentation, risk-taking, and learning from failures. In turn, innovation ambidexterity enables family firms to translate EO into tangible performance outcomes.

The mediating role of innovation ambidexterity suggests that family firms with high EO are more likely to develop innovation ambidexterity, which ultimately leads to superior performance outcomes. Several studies have emphasized the mediating role of innovation ambidexterity in the EO – (firm, new product...) performance relationship (Kollmann and Stöckmann, 2014; Mirbaha et al., 2019; Huang et al., 2020; Lisboa et al., 2011). We can advance the following hypotheses:

H4: There is a positive relationship between EO and INNOVAMBI.

H5: INNOVAMBI mediates the relationship between EO and FFP.

2.3.5 Firm digitalization, innovation ambidexterity and family firm performance

Firm digitalization refers to the adoption and integration of digital technologies and capabilities (digital platforms, data analytics...) into the operations and processes of a firm (Gupta et al., 2020). It involves leveraging digital tools, platforms, and data to enhance efficiency, innovation, customer experience, and overall firm performance.

Innovation ambidexterity is critical in the context of firm digitalization because it enables firms to simultaneously explore and exploit digital technologies and opportunities. It also plays a mediating role between firm digitalization and firm performance. In fact, firms that can develop and maintain innovation ambidexterity are more likely to translate the benefits of digitalization into improved financial and non-financial performance outcomes. Innovation ambidexterity allows firms to fully realize the performance benefits of their digitalization efforts (Oduro & De Nisco, 2023; Fengel et al., 2022). From above, we can advance the following hypotheses:

H6: There is a positive relationship between FD and INNOVAMBI.

H7: INNOVAMBI mediates the relationship between FD and FFP.

2.3.6 Moderating roles of FI and GI in the EO-FFP relationship

Several studies suggested that high levels of family involvement strengthened the positive relationship between EO and firm performance in family firms. This may be due to the alignment of family values, long-term orientation, and commitment to the firm's success, which amplifies the impact of EO on performance outcomes (Kammerlander et al., 2020; Arzubaiaga et al., 2018). In addition, family involvement can influence the implementation and effectiveness of EO in family firms. Family members' involvement in decision-making processes and in implementing entrepreneurial strategies can shape the extent to which EO is embraced and translated into action. We can state the following hypothesis:

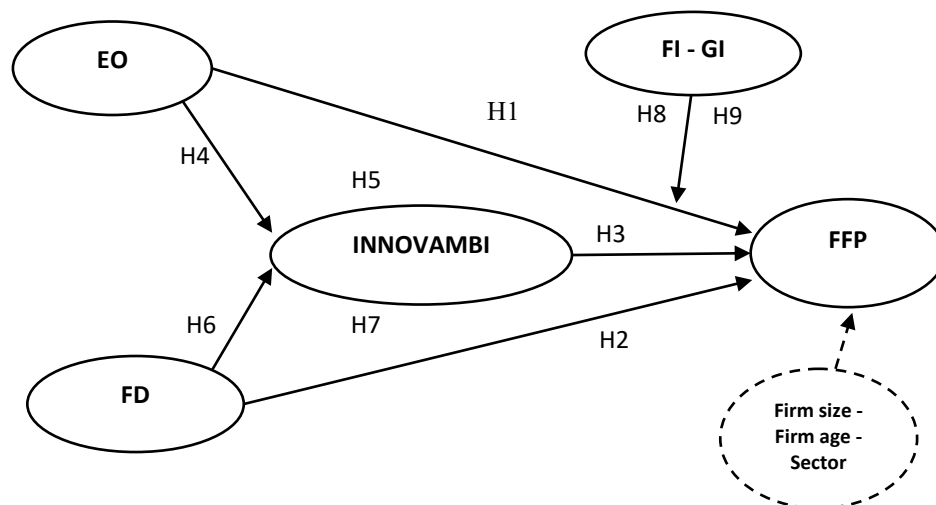
H8: FI moderates the relationship between EO and FFP.

Generational involvement refers to the active participation and influence of different generations within the family firm, including both senior and next-generation family members. The interplay between different generations can have a moderating effect on the EO-performance relationship in family firms. generational involvement can influence the adoption and adaptation of EO strategies. Different generations may have varying perspectives, values, and preferences regarding entrepreneurial activities. Research suggests that next-generation involvement can bring fresh ideas, innovation, and a greater willingness to take risks, which can contribute to the effectiveness of EO in family firms. However, senior generation involvement can provide stability, experience, and resources to support the implementation of EO strategies (Cherchem 2017; Sciascia & Mazzola, 2008). Therefore, other studies stated that family firms with a high degree of generational involvement had a stronger alignment between EO and family goals, leading to improved firm performance (Alrubaishi et al., 2021; Liew & Loo, 2023). From above, we can hypothesize the following:

H9: GI moderates the relationship between EO and FFP.

2.4 Research Model

Figure 1 showed the research model and hypotheses suggesting the influence of EO and FD on FFP through INNOVAMBI.



H1-H4, H6: Direct relationships

H5; H7: Indirect effects (mediation)

H8-H9: Indirect effects (moderation)

Figure 1: Research Model

3. Methodology

3.1 Sampling and Data Collection

This empirical study was conducted among Saudi family firms. To identify them, we selected them from different sources: official sources (national chambers of commerce, and National Center of Family Businesses) and personal sources (social network and personal contacts). Five regions are taken into consideration and main industries: manufacturing, trading and service are covered by this study. Senior and middle managers were selected to be respondents because of their knowledge about the context and topics of the study.

After ensuring the accuracy and appropriateness of the language in the questionnaire, an online version of the questionnaire was set up and a link was generated. Data were gathered during the period from October 2022 to June 2023 with the help of three paid assistant researchers. They helped the researcher disseminate the questionnaire link through emails and social media platforms (e.g., WhatsApp contacts and groups).

Data were collected from 256 family firms. 63% of these firms are from Riyadh and 37% from the other Saudi regions. 42.6% of these firms have one generation, the rest have two or more generations. 40.6% of firms have a percentage of family involvement 5% and high. Most of the respondents are male (87.9%). 36.3% are owner/CEO, 31.6% are departmental executive officers or middle-level managers. 32.4% are members of the board of directors or senior consultant of the firms.

3.2 Measures

We collected the measures of the following constructs using a multi-item five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree):

Entrepreneurial orientation (EO): it is measured with 9 items from Covin & Slevin (1989). EO is conceptualized as a strategic posture that reflects a firm's propensity of innovativeness, proactiveness and risk-taking. The construct was validated in different contexts (Kreiser et al., 2002; Runyan et al., 2012; Dess et al., 2011).

Firm IT/Digital capability (F-IT/DT): it is measured with 6 items adapted from Hao & Song (2016) and Yu et al. (2017). It is referred to as the use of IT/digital technology for facilitating technical and market knowledge creation, for internal and external communication, for marketing and promotion purposes, for moving toward automation or digitalization of processes and for developing new products and/or services.

Innovation ambidexterity (IA): it is measured using 11 items from Zhang et al., (2016). It denotes the capacity of a company to effectively engage in both exploration (learning and acquiring knowledge, technology and skills, product development, management, and markets entirely new to the firm) and exploitation (enhancing product quality, processes, and knowledge; upgrade competences; and expedite product and process advancements to improve overall attributes) activities, maintaining a delicate balance while acknowledging the trade-offs involved. The two dimensions (exploration and exploitation) were measured independently, then added to form a single index for innovation ambidexterity.

Family Firm Performance (FFP): it is measured using 7 items from scales developed and adapted from previous studies (Aloulou, 2019a; 2023a). This measure exhibits subjective attributes to assess performance, incorporates a competitive assessment and addresses the notion of performance over time (Chen et al., 2014; Singh et al., 2016). A sample item is: "The extent to which your firm's performance during the last 2 or 3 years, relative to all other competitors, our profitability has been substantially better" from "Much below the average" to "Much above the average".

Family Involvement (FI): is measured as the share of family executives in top management (i.e., dividing the number of family top managers by the total number of top managers), aligning with prior research approaches (e.g., Minichilli et al., 2010; Sciascia et al., 2013; Sciascia & Mazzola, 2008; Zahra et al., 2007; Kammerlander et al., 2020)

Generational Involvement (GI): it is measured by involving a clear and straightforward question to respondents: "How many generations are presently involved in business management and strategic decision-making?" Respondents can indicate a single generation, two generations, or multiple generations (three or more) in consistency with previous studies (e.g., Cherchem, 2017).

Control variables: firm size, firm age and sector of activity are the control variables used in this study. (Aloulou, 2018).

3.3 Analysis Strategy

In our study, we employed SPSS software for an exploratory factor analysis (EFA) to uncover underlying latent factors. Subsequently, with AMOS software (version 21.0) a confirmatory factor analysis (CFA) was conducted to refine and empirically validate the measures and a structural equation modeling (SEM) analysis with maximum likelihood estimation (MLE) was used to test simultaneously the hypothesized relationships in the conceptual model.

3.4 Common Method Bias

Given that this study relied on self-reporting for all variables, the potential issue of common method bias was considered. Following MacKenzie and Podsakoff's (2012) approach, Harman's one-factor test was performed to assess common method bias. The results revealed that 5 factors were drawn out and the largest factor explained 26.716% (<50%) of the total variance. No single factor accounted for a majority of the total variance, indicating the absence of common method bias. To further examine the measurement model, a confirmatory factor analysis (CFA) was conducted, comparing a multifactor model to a single overall latent factor model. The fit indices for the multifactor model [$\chi^2/DF = 1.318$; RMR = 0.047; CFI = 0.965; TLI = 0.961; GFI = 0.877; RMSEA = 0.035; NNFI = 0.870] demonstrated significantly better fit compared to the one-factor model [$\chi^2/DF = 6.216$; CFI = 0.400; TLI = 0.360; GFI = 0.407; RMSEA = 0.143; NNFI = 0.363]. These results indicate that common method bias is not a significant concern in this study.

3.5 Reliability and Validity of the Measurement Model

The reliability and validity of the constructs are examined. The findings of the exploratory factor analysis reveal that the factor loadings are significant and higher than 0.5, the KMO index is higher than 0.6 and the constructs are reliable with Cronbach's Alphas exceeding 0.7 and composite reliability indexes exceeding 0.84. Convergent validity is also demonstrated with an average variance extracted (AVE) higher than 0.5 for each construct. The discriminant validity also was demonstrated. The square root of the AVE estimated for each construct is verified to be greater than the correlation between that construct and all other constructs in the model (Hair et al., 2019).

The descriptive statistics show significant and positive correlations among main variables (independent, mediator and dependent). Significant and positive correlations were found between control variables (Firm size and firm age) and EO, FFP and generational involvement. Discriminant validity was demonstrated and

showed that the values of square root of the AVE are superior to values of correlations between constructs (Fornell & Larcker, 1981).

4. Results

After checking for the model fit [$\chi^2/DF = 1.245$; RMR = 0.065; CFI = 0.963; TLI = 0.959; GFI = 0.864; RMSEA = 0.031; NNFI = 0.841], the findings indicate that both FD (estimate = 0.250***, $p < 0.001$) and EO (estimate = 0.123**, $p < 0.01$) significantly affect INNOVAMBI. Thus, hypotheses H4 and H6 were supported. Additionally, EO (estimate = 0.337***, $p < 0.001$) and INNOVAMBI (estimate=0.211**, $p < 0.01$) have significant impacts on FFP. Hence, hypotheses H1 and H3 were supported. However, FD does not demonstrate a significant effect on FFP (estimate= 0.055, $p=.290$) and hypothesis H2 was not supported. Moreover, we followed the recommendations of Zhao et al., (2010) to test the mediation hypotheses and used the bootstrapping technique to observe the indirect effects of EO of FD on FFP. The results showed that INNOVAMBI mediates the relationship between FD (fully) and EO (partially) with FFP. Consequently, hypothesis H5 was partially supported and H7 was fully supported.

Therefore, FI moderates the relationship between EO and FFP (estimate of the interaction = 0.108*, $p < 0.01$) while GI did not moderate this relationship (estimate of the interaction = 0.116, $p = 0.079$). Hypothesis H8 was supported and hypothesis H9 rejected. Merely, GI can moderate this relationship for $p < 0.1$. This result may be considered with precaution. The significant interactions should be probed to explore how the relationships change at different levels of the moderators.

5. Discussion, Implications, Limitations, and Future Perspectives

This paper examines the relationship between EO and FFP, as well as the relationship between FD and FFP, with a focus on the mediating role of INNOVAMBI. The study highlights the complementary roles of EO and FD in enhancing the ability of family firms to balance exploration and exploitation activities, leading to improved performance. The strategic orientation associated with EO and the technological resources associated with FD enable Saudi family firms to explore and experiment with new digital technologies and business models, while also exploiting digital capabilities to drive innovation and performance. The findings indicate that Saudi family firms consider the unique characteristics of the family (family members, relying on new well-educated generations) in guiding their strategic choices, utilizing digital technologies, and pursuing simultaneous exploration and exploitation to achieve superior performance.

The theoretical implications of the study are twofold. Firstly, the research goes beyond previous studies that focused on individual antecedents to ambidexterity by considering EO and FD in the research model. Secondly, the study contributes to the literature on EO, FD, and INNOVAMBI by providing insights into the mediating role of INNOVAMBI in the relationships between EO and performance, as well as FD and performance. The study demonstrates that INNOVAMBI serves not only as a balance between exploration and exploitation but also as a mechanism through which strategic and technological resources can translate into enhanced performance.

From a practical standpoint, the findings have important implications for family firm managers. Family firms pursuing exploration and exploitation activities from an INNOVAMBI perspective should be mindful of their strategic (EO) and technological (FD) resources. The study suggests that INNOVAMBI serves as a suitable mechanism for family firms to simultaneously leverage the benefits of EO and FD to enhance firm performance.

However, the study has several limitations that suggest potential avenues for future research. Firstly, it highlights the importance of investigating the interaction between EO and FD and their impact on INNOVAMBI as an organizational capability. Future research could delve deeper into this interaction. Secondly, the use of cross-sectional data limits the ability to establish causal relationships between EO, FD, INNOVAMBI, and performance. Future research could adopt longitudinal designs to examine the effects of EO and FD on INNOVAMBI and performance over time.

6. Concluding Remarks

In summary, this study examines the factors influencing innovation ambidexterity (INNOVAMBI) and its impact on firm performance. It emphasizes the simultaneous effects of entrepreneurial orientation (EO) and firm digitalization (FD) in developing INNOVAMBI. Additionally, it demonstrates how innovation ambidexterity serves as a valuable mechanism for firms to leverage their unique resources and achieve superior performance. By shedding light on the intricacies of innovation ambidexterity and its performance outcomes,

this research contributes new insights to the field. It also advances our understanding of the mechanisms underlying the relationships between EO-performance and FD-performance. It also builds the basis for undertaking further research comparisons between Saudi family and non-family firms to test these two key relationships.

References

- Aloulou, W.J., (2018), "Examining Entrepreneurial orientation' dimensions–performance relationship in Saudi family businesses: Contingency role of family involvement in management", in the *Journal of Business Family Management*, 8(2), 126 – 145, <https://doi.org/10.1108/JFBM-02-2018-0007>
- Aloulou, W.J., (2019a), Impacts of Strategic Orientations on New Product Development and Firm Performances: Insights from Saudi Industrial Firms, *European Journal of Innovation Management*, 22(2), <https://doi.org/10.1108/EJIM-05-2018-0092>.
- Aloulou, W.J., (2019b), Entrepreneurship and Innovation in the Digitalization Era: Exploring Uncharted Territories, in Mezghani, K., Aloulou, W.J., Business Transformations in the Era of Digitalization, Edition: Premier Reference Source, Chapter 11 (p. 179-203), IGI Global Publisher.
- Aloulou, W.J., (2023a), Be innovative and resilient: Empirical evidence from Saudi firms on how to translate entrepreneurial orientation into firm performance, *Administrative Sciences*, 13(7), 168; <https://doi.org/10.3390/admsci13070168>.
- Aloulou, W.J., (2023b). Family Business in GCC: Towards the future. In Ramadani, V., Aloulou, W.J., Zainol, M. (2023). *Family Business in GCC countries*, Springer, Cham, chapter 8, pp. 143-156. https://doi.org/10.1007/978-3-031-17262-5_8
- Aloulou, W. J. (2024). Entrepreneurial Orientation and Innovation Performance of Saudi Firms: A Sequential Mediation Model of Absorptive Capacity and Innovation Capability. *FIB Business Review*, 23197145231220426.
- Aloulou, W.J., Alshaeel, R., (2023). Family Business in Saudi Arabia. In Ramadani, V., Aloulou, W.J., Zainal, M. (2023). *Family Business in GCC countries*, Springer Cham, chapter 6, pp. 91-119. https://doi.org/10.1007/978-3-031-17262-5_6
- Alrubaishi, D., Haugh, H., Robson, P., Doern, R., & Wales, W. J. (2021). Socioemotional wealth, generational involvement, and the manifestation of entrepreneurial orientation within Saudi family firms. In Corbett, A.C., Kreiser, P.M., Marino, L.D., & Wales, W.J., *Entrepreneurial Orientation: Epistemological, Theoretical, and Empirical Perspectives* (Vol. 22, 175-199). Emerald Publishing Limited. <https://doi.org/10.1108/S1074-754020210000022007>
- Alsharif, D.T. (2019). In Saudi Arabia, business runs in the family. Available online at: <https://www.arabnews.com/node/1579676>.
- Arzubiaga, U., Iturralde, T., Maseda, A., & Kotlar, J. (2018). Entrepreneurial orientation and firm performance in family SMEs: the moderating effects of family, women, and strategic involvement in the board of directors. *International Entrepreneurship and Management Journal*, 14, 217-244.
- Asharq Al Awsat, (2021). Family Businesses Contribute \$216 Bn to Saudi GDP, Available from: <https://english.aawsat.com/home/article/2715376/family-businesses-contribute-216-bn-saudi-gdp>
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643-650.
- Cai Z, Liu H, Huang Q, Liang L (2019) Developing organizational agility in product innovation: the roles of IT capability, KM capability, and innovative climate. *R D Manage* 49:421–438.
- Cherchem, N. (2017). The relationship between organizational culture and entrepreneurial orientation in family firms: Does generational involvement matter?. *Journal of Family Business Strategy*, 8(2), 87-98.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87. <https://doi.org/10.1002/smj.4250100107>
- Dess, G. G., Pinkham, B. C., & Yang, H. (2011). Entrepreneurial orientation: Assessing the construct's validity and addressing some of its implications for research in the areas of family business and organizational learning. *Entrepreneurship Theory and Practice*, Vol. 35 No. 5, pp. 1077-1090.
- Felipe CM, Leidner DE, Roldan JL, Leal-Rodriguez AL (2020) Impact of IS capabilities on firm performance: the roles of organizational agility and industry technology intensity. *Decis Sci* 51:575–619.
- Fengel F-M, Kindermann B, Strese S (2022) The Dual Imperative of Digital Transformers – The Relationship between a Firm's Digital Orientation and Innovation Ambidexterity, ECIS 2022 Research Papers. 95. https://aisel.aisnet.org/ecis2022_rp/95
- Fornell, C. & Larcker, D.F. (1981), Evaluating structural equation models with unobservable variables and measurement error, *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis*. 8th edition, Hampshire, UK Cengage Learning, EMEA.
- Hao, S., & Song, M. (2016). Technology-driven strategy and firm performance: are strategic capabilities missing links? *Journal of Business Research*, 69(2), 751–759.
- Huang, S., Pickernell, D., Battisti, M., Soetanto, D., & Huang, Q. (2020). When is entrepreneurial orientation beneficial for new product performance? The roles of ambidexterity and market turbulence. *International Journal of Entrepreneurial Behavior & Research*.
- Issah, W. B., & Calabro, A. (2024). The impact of digitalization on family firms' performance: The moderating role of family goals. *IEEE Transactions on Engineering Management*.

- Kallmuenzer, A., Strobl, A., & Peters, M. (2018). Tweaking the entrepreneurial orientation–performance relationship in family firms: the effect of control mechanisms and family-related goals. *Review of Managerial Science*, 12, 855-883.
- Kammerlander, N., Patzelt, H., Behrens, J., & Röhm, C. (2020). Organizational ambidexterity in family-managed firms: The role of family involvement in top management. *Family Business Review*, 33(4), 393-423.
- Kollmann, T., & Stöckmann, C. (2014). Filling the Entrepreneurial Orientation–Performance Gap: The Mediating Effects of Exploratory and Exploitative Innovations. *Entrepreneurship Theory and Practice*, 38(5), 1001–1026. <https://doi.org/10.1111/j.1540-6520.2012.00530.x>
- Kreiser, P. M., Marino, L. D., & Weaver, K. M. (2002). Assessing the psychometric properties of the entrepreneurial orientation scale: A multi-country analysis. *Entrepreneurship Theory and Practice*, 26(4), 71-93.
- Liew, M. X., & Loo, Y. M. (2023). The family-level of generational involvement: impact on the nexus between entrepreneurial orientation and business performance among small family businesses. *Journal of Family Business Management*, <https://doi.org/10.1108/JFBM-01-2023-0013>
- Lisboa, Ana; Skarmeas, Dionysis & Lages, Carmen., (2011). Entrepreneurial orientation, exploitative and explorative capabilities, and performance outcomes in export markets: A resource-based approach. *Industrial Marketing Management*, 40, 1274-1284.
- Lumpkin, G.T. & Dess, G.G. (1996), Clarifying the entrepreneurial orientation construct and linking it to performance, *Academy of Management Review*, 21(1), 135-172. <https://doi.org/10.5465/amr.1996.9602161568>
- MacKenzie, S.B., & Podsakoff, P.M. (2012). Common Method Bias in Marketing: Causes, Mechanisms, and Procedural Remedies. *Journal of Retailing*, 88, 542–555. <https://doi.org/10.1016/j.jretai.2012.08.001>
- Minichilli, A., Corbetta, G., & MacMillan, I. C. (2010). Top management teams in family-controlled companies: “Familiness,” “faultlines,” and their impact on financial performance. *Journal of Management Studies*, 47(2), 205-222. <https://doi.org/10.1111/j.1467-6486.2009.00888.x>
- Mirbaha, M., Kooshki Jahromi, A., & Asghari, H. (2019). Investigating on the Effect of Entrepreneurial Orientation and Capability Based Human Resource Management on Firm Performance with The Mediating Role of Innovation Ambidexterity.
- Oduro, S., & De Nisco, A. (2023). From Industry 4.0 adoption to innovation ambidexterity to firm performance: a MASEM analysis. *European Journal of Innovation Management*, <https://doi.org/10.1108/EJIM-02-2023-0106>
- O'Reilly III, C. A., & Tushman, M. L. (2013). Organizational ambidexterity: Past, present, and future. *Academy of Management Perspectives*, 27(4), 324-338.
- Raisch, S., Birkinshaw, J., Probst, G., & Tushman, M. L. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organization science*, 20(4), 685-695.
- Ramadani, V., Aloulou, W.J., Zainal, M. (2023). *Family Business in GCC countries*, Contributions to management science, Springer Cham. <https://doi.org/10.1007/978-3-031-17262-5>
- Rauch, A., Wiklund, J.W., Lumpkin, G.T., & Frese, M., (2009). Entrepreneurial orientation and business performance: an assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33, 761–781. <https://doi.org/10.1111/j.1540-6520.2009.00308.x>
- Ribeiro-Navarrete, S., Botella-Carrubi, D., Palacios-Marques, D., & Orero-Blat, M. (2021). The effect of digitalization on business performance: An applied study of KIBS. *Journal of Business Research*, 126, 319-326.
- Runyan, R.C., Ge, B., Dong, B. & Swinney, J.L. (2012), Entrepreneurial orientation in cross-cultural research: assessing measurement invariance in the construct. *Entrepreneurship Theory and Practice*, 36(4), 819-836. <https://doi.org/10.1111/j.1540-6520.2010.00436.x>
- Saiz-Alvarez, J. M., Coduras, A., & Roomi, M. A. (2022). Senior Entrepreneurship and Family Business Vitality in Saudi Arabia. In *Research Anthology on Strategies for Maintaining Successful Family Firms* (pp. 917-936). IGI Global.
- Sciascia, S., & Mazzola, P. (2008). Family involvement in ownership and management: Exploring nonlinear effects on performance. *Family Business Review*, 21(4), 331-345. <https://doi.org/10.1177/08944865080210040105>
- Sciascia, S., Mazzola, P., & Chirico, F. (2013). Generational involvement in the top management team of family firms: Exploring nonlinear effects on entrepreneurial orientation. *Entrepreneurship Theory and Practice*, 37(1), 69-85. <https://doi.org/10.1111/j.1540-6520.2012.00528.x>
- Singh, S., Darwish, T. K., & Potočník, K. (2016). Measuring organizational performance: A case for subjective measures. *British Journal of Management*, 27(1), 214-224. <https://doi.org/10.1111/1467-8551.12126>
- Stubner, S., Blarr, W. H., Brands, C., & Wulf, T. (2012). Organizational ambidexterity and family firm performance. *Journal of Small Business & Entrepreneurship*, 25(2), 217-229.
- Suder, M., Duda, J., Kusa, R. and Mora-Cruz, A. (2022), "At the crossroad of digital and tourism entrepreneurship: mediating effect of digitalization in hospitality industry", *European Journal of Innovation Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/EJIM-08-2022-0422>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Van Doorn, S., Tretbar, T., Reimer, M., & Heyden, M. (2020). Ambidexterity in family firms: The interplay between family influences within and beyond the executive suite. *Long Range Planning*, 101998.
- Wales, W. J., Gupta, V. K., & Mousa, F.-T. (2013). Empirical research on entrepreneurial orientation: An assessment and suggestions for future research. *International Small Business Journal*, 31(4), 357–383. <https://doi.org/10.1177/0266242611418261>

- Wales, W. J., Kraus, S., Filser, M., Stöckmann, C., & Covin, J. G. (2021). The status quo of research on entrepreneurial orientation: Conversational landmarks and theoretical scaffolding. *Journal of Business Research*, *128*, 564-577. <https://doi.org/10.1016/j.jbusres.2020.10.046>
- Williams Jr, R. I. (2018). Measuring family business performance: research trends and suggestions. *Journal of Family Business Management*, *8*(2), 146-168.
- Yu, W., Jacobs, M. A., Chavez, R., & Feng, M. (2017). The impacts of IT capability and marketing capability on supply chain integration: a resource-based perspective. *International Journal of Production Research*, *55*(14), 4196-4211.
- Zahra, S. A., Neubaum, D. O., & Larrañeta, B. (2007). Knowledge sharing and technological capabilities: The moderating role of family involvement. *Journal of Business Research*, *60*(10), 1070-1079. <https://doi.org/10.1016/j.jbusres.2006.12.014>
- Zhang, J. A., Edgar, F., Geare, A., & O'Kane, C. (2016). The interactive effects of entrepreneurial orientation and capability-based HRM on firm performance: The mediating role of innovation ambidexterity. *Industrial Marketing Management*, *59*, 131-143.
- Zhao, X., Lynch, J. G., & 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>
- Zhou, K.Z., Yim, C.K., & Tse, D.K. (2005). The effects of strategic orientations on technology-and market-based breakthrough innovations. *Journal of Marketing*, *69*(2), 42-60. <https://doi.org/10.1509/jmkg.69.2.42.60756>