AR&P sciendo SocioEconomic Challenges, Volume 7, Issue 4, 2023
ISSN (print) – 2520-6621, ISSN (online) – 2520-6214 Sumy State University

SUSTAINABLE AND ENTREPRENEURIAL: A PATH TO PERFORMANCE IMPROVEMENTS FOR FAMILY FIRMS?

Drake Mullens, **ORCID:** https://orcid.org/0000-0002-5050-216X

PhD, Tarleton State University, USA

Stella Shen, **ORCID:** https://orcid.org/0009-0001-3332-6782

MBA, Doctoral Student, University of Texas-Tyler, USA

Corresponding author: Drake Mullens, E-mail: mullens@tarleton.edu

Type of manuscript: research paper

Abstract: *This study endeavors to reconcile the limited, mixed findings related to entrepreneurship and corporate social responsibility in the family firm context. Specifically, the relationships between entrepreneurial orientation (EO), sustainable investments in environmental and societal initiatives, and the interaction of EO and sustainable investments with family firm performance are evaluated. Data were collected through in-person interviews of 151 top managers of automobile and motorcycle dealerships. Secondary data were collected from ReferenceUSA to confirm the veracity of the primary performance data. Multiple linear regression models were used to evaluate the hypothesized relationships. The results indicate family firms realize higher performance with an EO by being proactive, innovative, and risk-taking. Moreover, sustainable investments are associated with higher family firm performance by either increasing revenues or decreasing costs. EO does not significantly accentuate the positive relationship between sustainable investments and performance. The observed interaction was contrary to expectations with EO acting as a substitute for sustainable investments; firms with an EO use a variety of initiatives, including but not limited to society and the environment, to improve performance. These findings advance the family business literature on entrepreneurship and corporate social responsibility theory by establishing EO and socially responsible, sustainable investments as antecedents of family firm performance while also analyzing the EO-sustainable investment interaction.*

Keywords: entrepreneurial orientation, family firms, CSR, responsible production, innovation.

JEL Classification: M10.

Received: 05.09.2023 **Accepted:** 15.10.2023 **Published:** 31.12.2023

Funding: There is no funding for this research.

Publisher: Academic Research and Publishing UG, Germany.

Founder: Academic Research and Publishing UG, Germany; Sumy State University, Ukraine.

Cite as: Mullens, D. & Shen, S. (2023). Sustainable and Entrepreneurial: A Path to Performance Improvements for Family Firms? *SocioEconomic Challenges*, *7*(4), 58-69. https://doi.org/10.61093/sec.7(4).58-69.2023.

Copyright: © 2023 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

Introduction

Family businesses remain the predominant organizational form in the US. According to Van Der Vliet (2021), family firms are the foundation of the U.S. economy, employing 62 percent of workers and representing 64 percent of the national GDP with 24.2 million registered firms. Though family firms are drivers of growth, innovation, and GDP, important topics like ethics and corporate social responsibility (Vazquez, 2018) and entrepreneurial orientation (Chua et al., 2012) remain understudied and poorly understood in this context. Contemporary literature contends environmental and social performance generate improved stakeholder relations and long-term market performance (Du et al., 2010). Nonetheless, consensus on how environmental performance and social performance relate to organizational performance remains elusive (Arevalo & Aravind, 2017; Pedersen & Neergaard, 2016), and within the family business context, limited work has considered the role of sustainability.

Furthermore, the entrepreneurial orientation (EO) and family firm performance relationship frequently yield empirically inconclusive results. On one hand, a stream of work contends the family business environment fosters entrepreneurship (Zellweger & Sieger, 2012; Tien, 2021) while, on the other hand, a stream of work argues that familiness reduces entrepreneurship (Naldi et al., 2007). Importantly, the literature remains devoid of research evaluating an EO-sustainability interaction on family firm performance. This work aims to address that gap by assaying and synthesizing the extant literature and empirically analyzing sustainability, EO, and the EO-sustainability interaction as antecedents of family firm performance with data collected from executives operating new automobile and motorcycle dealerships. The survey data were complemented and verified by secondary sources. The hypothesized relationships were analyzed with multiple linear regression, and the findings contribute to the ongoing debate regarding the directionality and significance of the sustainability, EO, and performance relationships.

Entrepreneurial Orientation

Despite increasing societal and economic importance and the resultant research attention devoted to family businesses, the discipline is riddled with unresolved questions. These contested questions range from the essence and outcomes of family firm EO to the conceptual definition of a family business (Mullens, 2018; Hernández-Linares et al., 2018). Baron and Lachenauer (2021) reported that 90 percent of all US businesses could be considered family businesses. Moreover, these family businesses contribute to the general welfare of society by creating jobs, innovating, and being good stewards (Astrachan, 2003).

The questions raised by Hernández-Linares et al. (2018) on the antecedents, essence, and outcomes of EO in the family firms serve, in part, as the impetus of this research. The EO construct emerged from the seminal works of Miller (1983) and Covin and Slevin (1989) to explain how firms advance in changing environments. An entrepreneurial firm is "one that engages in product-market innovation, undertakes somewhat risky ventures and is first to come up with 'proactive' innovations, beating competitors to the punch" (Miller, 1983 p. 771). From that definition, innovativeness, proactiveness, and risk-taking emerged as the core dimensions of EO and remain the prevailing approach to examination in the field (Lumpkin & Dess, 2015).

Robust meta-analyses provide evidence to support a positive EO and firm performance association which is the most common hypothesis on the relationship (Soares & Perin, 2020; Rosenbusch et al., 2013). Similarly, reviews by Al-Mamary et al. (2020) and Wales (2016) provide evidence for a positive EO and performance relationship. Separately, family business scholars argued family firms could be characterized by risk aversion (Ward, 1997; Hiebl, 2013; Kempers et al., 2019). Since the work of Ward (1997), the literature is replete with articles and reviews that attempt to further understand family firm risk-taking, proactiveness, and innovativeness (Moreno-Menéndez et al., 2022). The field has advanced, but further work is warranted to unlock the potential understanding of family firm EO (Hernández-Linares et al., 2018). This research strives to move the research towards its potential. Limited evidence exists to support the EO-family firm relationship, and given the unique characteristics, risk orientations, structures, and objectives, empirical work is necessary to examine the relationship in family firms (Lumpkin et al., 2010).

Central objectives in family firms are to preserve wealth and transfer wealth across generations which reduces the appetite for risk-taking (Schulze et al., 2002; Zahra, 2018). Furthermore, wealth destruction as the result of risk-taking could compromise the welfare of not only the current generation but generations to come and sully the reputation of the family (Bartholomeusz and Tanewski, 2006). To the contrary, Zahra (2018) contends that family business owners are risk-takers by nature. They manage variable earnings as is the case with all businesses. In addition, they manage the idiosyncrasies of familiness--the entanglement of family, culture, assets, and managerial processes. The debate on entrepreneurship in family firms remains unresolved, and this work seeks to clarify to what extent family firms pursue EO and the implications for performance.

Sustainability

Sustainability has become a management priority in the 21st century as stakeholders espouse new expectations for social and environmental issues (Gatto, 2020; Liakh & Spigarelli, 2020). Furthermore, global competition has increased, and sustainability can serve as a point of differentiation (Ikram et al., 2021). For the purpose of this research, "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987, p. 8) was adopted as the definition of sustainability. Overwhelmingly, sustainability is predicted to be positively associated with firm performance though the results are less convincing with heterogenous findings.

The sustainability-performance relationship is complex and questions remain (Hermundsdottir and Aspelund, 2021). Despite an ever-growing body of research, definitive conclusions are elusive as empirical analyses yield fragmented and inconclusive results (Rezende et al., 2019; Saha, 2020; Alsayegh et al., 2020). Social and environmental initiatives have been historically viewed as requiring a large upfront investment with a long payback period (Cai et al., 2018; Hojnik and Ruzzier, 2016). Sustainability initiatives can be impactful drivers of organizational performance as green and social investments through cost savings or revenue enhancements, but the benefits of those investments frequently do not materialize as evidenced by insignificant and even negative findings related to performance (Peng et al., 2019; Bacinello et al., 2020). Moreover, the directionality of the relationship has been questioned (Pätäri et al., 2012) Importantly, most sustainability research considers environmental performance with little or no consideration of social performance. As noted by Hermundsdottir and Aspelund (2021), previous reviews focus on the environment while excluding social issues under the purview of sustainability.

Four primary arguments advance performance enhancements emanating from sustainability initiatives: 1) Cost savings in raw materials, energy, water, and waste (Whelan and Fink, 2016; Gürlek and Tuna, 2018), 2) Leveraging sustainability to capitalize on consumer preferences towards responsible products, thereby bolstering brand equity and reaching new customers (García-Sánchez et al., 2019; Whelan and Fink, 2016), 3) Favorable access to new markets, governmental contracting (Whelan and Fink, 2016), 4) Social justice allows firms to reach a diverse talent pool, harness the collective genius of those diverse individuals, and reach new demographics (Jan et al., 2022). The arguments to support a positive sustainability-performance relationship often do not materialize empirically.

Hermundsdottir and Aspelund's (2021) review of 100 published, peer-reviewed articles observed 29 found mixed results, 5 found inconclusive results, and 2 found negative results. Padgett and Moura-Leite (2012) observed a negative relationship between an innovation's social benefit and firm financial performance. Hoang et al. (2020) found green innovation harms current performance when the green innovation does not occur in conjunction with other innovations, and moreover, the greenest innovators lagged gains in stock market valuations.

Given the paucity of extant research, understanding of outcomes emanating from sustainability is more limited in family firms which are distinct from other types of firms in ownership, time orientation, goals, governance, management, and transfer of power which are determinants of how the firm formulates goals, strategies, and (Chua et al., 1999; Neubauer & Lank, 1998).

Theoretical Framework and Hypotheses

EO and organizational performance

Global competition has increased volatility and the rate of innovation (El Chaarani et al., 2022). As such, there is an increased risk that complacency will yield business decline or failure. Profits derived from existing products, services, and processes are at risk of obsolescence in future periods (Mullens, 2018). Firms must seek and exploit entrepreneurial opportunities in hostile and turbulent environments to remain ahead of advancing competition and exacting consumer preferences (D'Aveni, 1994; De Clercq et al., 2010). To that end, market competitiveness is dependent on opportunity recognition, obsolescence avoidance, and performance improvements that are achieved through an EO (Paulus and Hermanto, 2022).

Performance deterioration due to complacency may be exacerbated in family firms which are oft-criticized for risk intolerance and loss avoidance (Meroño-Cerdán et al., 2018), Thus, an EO may yield more positive, significant performance improvements for family firms with differences related to time orientation, goals, governance, management, and desire to transfer wealth/ownership across generations. To mitigate the risk of loss, family leaders who inculcate a culture of EO preserve wealth with assiduous strategic planning, capital allocation, and implementation (Eddleston et al., 2008). Those family firms that tolerate risks, innovate, and secure first-mover advantages are expected to enjoy market advantages and remain competitive as business paradigms shift. Therefore:

Hypothesis 1: Entrepreneurial orientation is positively associated with family firm performance.

Sustainability and organizational performance

Social and environmental performance is argued to increase organizational performance. In short, environmental performance can reduce costs and increase the differentiation of a firm. Environmental performance bolsters a firm's reputation and product positioning, both of which enhance differentiation and marketplace advantages (Chen, 2008; Chen & Sheu, 2017). Firms leading in environmental performance are differentiated, and that differentiation supports price premiums and margins (Ling, 2019). Moreover, increasingly consumers are environmentally conscious and seek out firms who are aligned with their values related to the environment. Consequently, environmental performance can drive consumer demand and increase differentiation which results in market advantages (González-Benito and González-Benito, 2005; Lin et al., 2013; Ling, 2019).

Environmental performance is further associated with cost reductions in compliance with current and forthcoming environmental regulations (Berman et al., 1999), in accessing financial capital (Feng & Guo 2015), in energy costs, and in material costs (Roscoe et al., 2019). On the revenue side, environmental performance has the potential to increase demand, and on the cost side, environmental performance has the potential to reduce internal and external expenses. Therefore:

Hypothesis 2: Sustainable investments are positively associated with family firm performance.

EO accentuates the sustainable investment and organizational performance relationship

Sustainable investments do not occur by chance. Firms must actively seek out prudent environmental and social opportunities to identify profitable investments (Mullens, 2018). A proactive orientation positions the firm to seek and identify suitable investments associated with sustainability initiatives. These novel investment opportunities for the firm have outcomes that are unknown, uncertain, or ambiguous. Consequently, a risk orientation is necessary for the firm to tolerate the inherent risks associated with sustainable investments. Finally, innovativeness is the cornerstone of finding new ways to solve old problems through the recognition of product, service, and organizational improvements that increase sustainability and market performance. Therefore:

Hypothesis 3: Entrepreneurial orientation accentuates the positive sustainability and family firm performance relationship.

The extant research reviewed, the developed hypotheses, and the logic herein culminate in Figure 1 which depicts the following relationships: EO and family firm performance (H1), sustainable investments and family firm performance (H2), and EO moderating the sustainable investments and family firm performance relationship (H3).

SocioEconomic Challenges, Volume 7, Issue 4, 2023
ISSN (print) – 2520-6621, ISSN (online) – 2520-6214

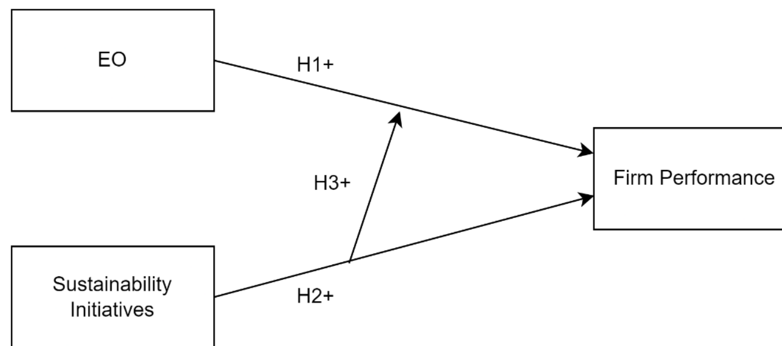

Figure 1. Model of Hypothesized Relationships

Source: developed by authors.

Methodology

In this section, the sample frame, survey instrument, and analysis techniques are developed and explained. This research utilizes primary data collected from new motorcycle and automobile dealerships. These two related industries were selected to reduce the impact of exogenous factors (Brewer and Crano, 2000) in addition to the high concentration of family firms. A list of motorcycle and automobile dealers with operations in Texas was generated from ReferenceUSA. At the time data were collected, 3,157 new car dealers and 1,150 motorcycle dealers operated in Texas. The locations of these 4,307 firms were evaluated, and 497 firms operated in the sample vicinity of 100 miles of Arlington, TX. The included 497 firms were identified as family businesses through telephone screening. The 205 dealerships that were not family firms were excluded from further consideration. An attempt was made to schedule in-person interviews with the 212 family firms within 100 miles of Arlington, TX that self-identified as family businesses. In-person meetings were completed with 151 managers that produced usable surveys (71% response rate).

The sample includes small to medium-sized family firms with the number of employees ranging from 4 to 800 employees, and the average firm employed 77.96 persons. These are typically older, established firms with an average founding year of 1975 with the founding year ranging from 1922 to 2009. The generation of the family in control of the business ranged from the first to third with an average of 1.55. The largest range was observed in the number of locations, ranging from 1 location to 120 locations, and the average firm operated 3.18 locations. The mean, standard deviation, and range for the founding year, number of employees, generation in control, and number of locations are presented in Table 1.

Table 1. Sample Firm Characteristics

	Year Founded	Number of Employees	Generation in Control	Number of Locations
Mean	1975	77.96	1.55	3.18
Std. Deviation	20.29	129.35	0.655	10.9
Minimum	1922	4	1	1
Maximum	2009	800	3	120

Source: developed based on primary data collected by authors and analyzed with SPSS.

Independent Variables

The three dimensions of EO operationalized by Covin and Slevin (1989) were used in this research. Pursuant to extant research, all items were evaluated on a seven-point semantic differential scale. The scale had a Cronbach's alpha of 0.86. The mean of the three EO dimensions was 4.98.

Sustainability considers the environmental investment dimension and the social investment dimension (Bilan et al., 2020). This research includes eight indicators of sustainable investment, four of which are related to environmental responsibility and four of which are related to social responsibility. The scale was adapted from

the work of Turker (2009) wherein 269 stakeholders were surveyed in Turkey. The scale has been widely adopted and accepted in organizational sustainability research (De Roeck and Delobbe, 2012). Removal of one item from the scale was necessary as it addressed paying taxes which is a legal imperative and sustainable investment entails discretionary spending beyond those required by law. The scale had a Cronbach's alpha of 0.87. The two dimensions of sustainability had a mean of 5.25.

Control Variables

We controlled for firm age and size in our analysis as extant research supports a relationship with firm performance (Majumdar, 1997; Anderson and Reeb, 2003).

Dependent Variable

Performance is multidimensional in small businesses and particularly family businesses (Astrachan, 2003; Mazzi, 2011). An objective measure of financial performance reduces the risk of common method bias. However, objective data may not always be available, and interpretations may be incomplete for small family firms. Subjective evaluation of performance captures meaningful, valid, and reliable non-financial performance. Subjective measures are not without limitations which include common method and social desirability biases. This research blends both objective and subjective performance measures. After-tax net income, the ability to reach financial objectives, and performance compared to rivals were self-reported via survey. Annual revenue was collected from ReferenceUSA as the objective measure of performance. We observed a correlation of .67 between the objective and subjective measures of performance. A Cronbach's alpha of 0.93 was observed for the subjective performance measures (mean 4.80). The operationalization of the study variables and Cronbach's alpha for multi-item variables is presented in Table 2.

Table 2. Variable Operationalization and Cronbach's Alpha

Variable	Measure	Cronbach's Alpha
Entrepreneurial Orientation	3 dimensions, 3 items per dimension, evaluated on a 7-point semantic differential (Covin and Slevin, 1989)	.86
Sustainability	2 dimensions, 4 items per dimension, evaluated on a 7-point semantic differential (Turker, 2009)	.87
Year Founded	Respondents reported the year the business was established	NA
Number of Employees	Respondents reported the number of employees	NA
Performance	3 items were evaluated on a 7-point semantic differential	.93

Source: developed based on primary data collected by authors and analyzed with SPSS.

Analysis

This research employed established scales with demonstrated reliability. Nonetheless, Cronbach's alpha was evaluated, and the scales ranged from 0.86 to 0.93 which indicated sufficiently high reliability. The hypothesized relationships were analyzed with multiple linear regression.

Results

The mean, standard deviation, and correlations for the study variables are included in Table 3.

Table 3. Means, Standard Deviations, and Correlations

Variables	Mean	SD	1	2	3	4	5
1. #Employees	77.96	129.35	-				
2. Founded	1975	20.29	-.292***	-			
3. Sustainability	5.25	1.24	.173**	-.061	-		
4. EO	4.98	.94	.311***	-.027	.493***	-	
5. Performance	4.80	1.56	284***	.025	.371***	.385***	-
Notes: *p < 0.05; **p < 0. 01; ***p < 0.001							

Source: developed based on primary data collected by authors and analyzed with SPSS.

Three multiple linear regression analyses were completed, and the results are included in Tables 4 and 5. The first analysis regressed performance on the study control variables. The second analysis regressed performance on the control variables and independent variables. The third analysis regresses performance on the control variables, independent variables, and EO-sustainability interaction. Table 4 provides the unstandardized coefficients for the modeled variables, the standard errors of those variables in parentheses, and the significance level is denoted by asterisks. With respect to controls, firm size was positively related to performance while year founded was not associated with performance as indicated by Model 1. EO and sustainability significantly and positively predicted firm performance after controlling for firm age and size as indicated in Model 2. Investment in sustainability initiatives is associated with enhanced organizational performance ($p < 0.05$) thereby confirming Hypothesis 1. Firms that were innovative, proactive, and took risks (i.e., EO) were associated with higher performance. Therefore, Hypothesis 2 is confirmed ($p < 0.05$). The EO-sustainability interaction was not significantly associated with firm performance at any reasonable level of alpha as indicated in Model 3. Nonetheless, the EO-sustainability interaction on performance is graphically presented in Figure 2. Interestingly, at low levels of EO, investment in sustainable initiatives provides a greater return than when the firm has a high level of EO which was contrary to the hypothesized direction.

Table 4. Regression Models with Organizational Performance as Outcome

Variables	Model 1	Model 2	Model 3
#Employees	.004(.001)***	.003(.001)**	.003(.001)*
Founded	.009(.007)	.008(.006)	.008(.006)
Sustainability		.304(.111)**	.328(.157)*
EO		.338(.152)*	.304(.159)*
Sustainability*EO			-.022(.087)
Notes: *p < 0.05; **p < 0. 01; ***p < 0.001			

Source: developed based on primary data collected by authors and analyzed with SPSS.

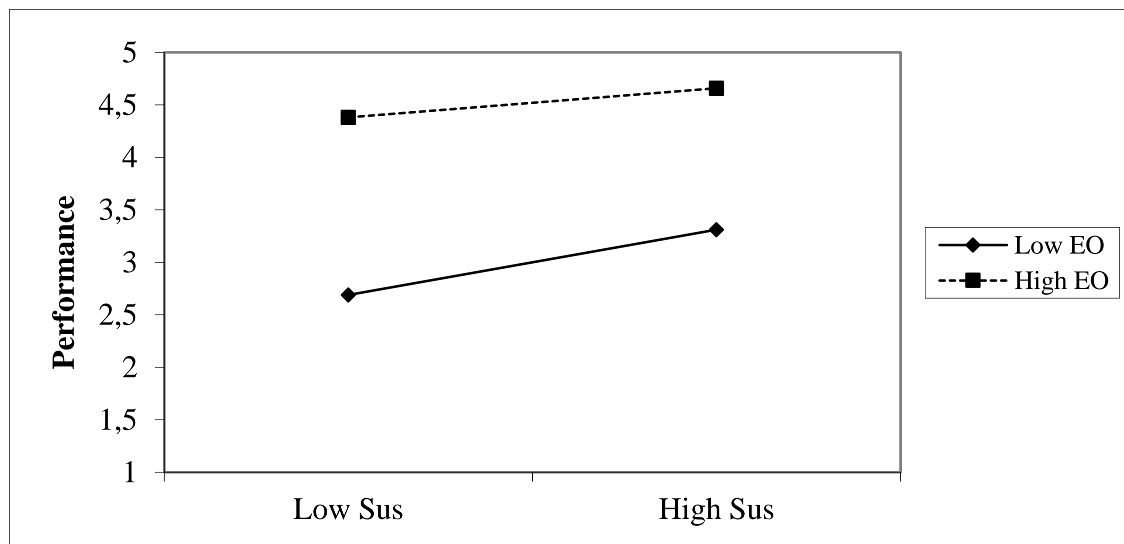

Figure 2. Interaction

Source: developed based on primary data collected by authors and analyzed with SPSS.

The coefficient of determination (R^2) was evaluated to determine the practical significance of the control variables (Model 1), hypothesized variables after controls (Model 2), and the hypothesized variables plus the interaction thereof after controls (Model 3) on family firm performance. The R^2 and adjusted R^2 for the three analyzed models are presented in Table 3. The control variables explain 9.4 (.08 adjusted) percent of the variables in performance. EO and investments in sustainability initiatives explain an additional 13.6 percent (12.7 adjusted) of the variance in performance. The inclusion of the EO-sustainability interaction negligibly increased the variance explained

while a decrease in the adjusted R^2 was observed. The adjusted R^2 balances the explanatory power against the parsimony of models. The control variables, EO, and sustainability (Model 2) are practically significant with 23 percent (.207 adjusted) of the variability in family firm performance explained.

Table 5. Variance in Performance Explained

	R-squared	R-squared Adjusted
Model 1	.094	.08
Model 2	.23	.207
Model 3	.234	.202

Source: developed based on primary data collected by authors and analyzed with SPSS.

Conclusion

Family businesses are argued to be the foundation of the US economy, accounting for the majority of the GDP and employment opportunities. Despite the importance of family firms, foremost management issues, namely environmental responsibility, social responsibility, and entrepreneurship, remain understudied. These management issues are increasingly important to organizations with increased global competition, increased environmental turbulence, and shifting buyer expectations. Nevertheless, the impact of EO and investments in environmental and social initiatives on financial outcomes is inconclusive or poorly understood, and the literature lacks consideration of the EO-sustainability interaction on performance. The goal of this research was to ameliorate those deficits in the literature with a sample of 151 family firms operating in the retail motorcycle and automobile industries.

This work answers calls for the empirical analysis and theoretical application of sustainability (Vazquez, 2018) and entrepreneurship theory (Hernández-Linares et al., 2020) in family business research. Limited published research examined EO and sustainability in the family business environment. Our findings indicate that EO and investments in sustainability initiatives are positively and significantly associated with family firm performance. Despite the idiosyncrasies of family firms, EO is one avenue by which family firms can improve financial outcomes. Inconclusive findings relating to the significance and direction of sustainability initiatives impeded progress in the discipline and subsequent adoption in practice. Our findings provide additional empirical evidence that sustainable investment is significant and positive for performance which not only advances academic literature but also organizational practices. The interaction of EO and investment in sustainable investments yielded an outcome that was unexpected and contrary to the hypothesized relationship. Family firms benefit most from investments in sustainability initiatives when the firm does not have a high EO. However, firms with high EO outperform firms with low EO irrespective of the investments in sustainability initiatives. Entrepreneurial firms secure opportunities to improve performance that include but go beyond social and environmental initiatives. Firms low on EO bolster performance with social and environmental initiatives but lack the requisite capabilities to identify and exploit other opportunities.

The empirical results inform practical considerations for family business managers, As the business environment is increasingly characterized by environmental dynamism, managers who inculcate a proactive orientation are better positioned to recognize emergent changes and opportunities while also being oriented to take bold action. Similarly, family managers position the firm to exploit those opportunities with novel processes, products, and structures through an orientation of innovativeness. Risk tolerance underpins firm innovation and proactiveness necessary to secure profits as outcomes are uncertain or unknown for new business initiatives. Thus, family managers must be willing to take risks to seize opportunities that improve the firm's market performance. In aggregate, innovation, proactiveness, and risk-taking comprise a family firm's EO which results in improved market performance. As stakeholders are more concerned with and aware of social and environmental issues, family managers who align the firm with buyers' environmental and social interests can increase performance with higher revenue due to reputational and differentiation advantages and lower costs associated with regulatory compliance, capital, materials, energy, and other inputs. In addition, social and environmental initiatives are expected to be further amplified as important determinants of firm performance as consumers gain more access to information due to advances in internet technologies and AI. Family firm managers can improve their firms'

performance today while also getting ahead of the curve by recognizing stakeholders' environmental and social concerns and seizing opportunities to allay those concerns that reduce costs or create reputational benefits.

This research highlights the practical and theoretical importance of EO and sustainability initiatives in evaluating family firm performance. To further understand these concepts and their relationship with performance, future research should consider additional industries and geographic locations to increase extensibility. Furthermore, the consideration of financial slack, human capital, and diversity as moderators could illuminate the contingent aspects of EO and sustainability initiatives on financial outcomes. Next, longitudinal analysis is recommended to ascertain the lag between the pursuit of EO and sustainability initiatives and manifestations in performance. Finally, the factors, mechanisms, culture, and attributes that precede an EO warrant future investigation to understand how, when, and why a firm develops an innovative, proactive, and risk-taking orientation.

Author Contributions: Conceptualization: D.M. and S.S.; methodology: D.M. and S.S.; project administration: D.M.; software: D.M. and S.S.; investigation: D.M. and S.S.; data curation: D.M.; formal analysis: D.M. and S.S.; validation: D.M. and S.S.; visualization: D.M. and S.S.; writing-original draft preparation: D.M.; writing - review & editing: D.M. and S.S.

Conflicts of Interest: Authors declare no conflict of interest.

Data Availability Statement: Not applicable.

Informed Consent Statement: Not applicable.

References

1. Al-Mamary, Y. H., Alwaheeb, M. A., Alshammari, N. G. M., Abdulrab, M., Balhareth, H., & Soltane, H. B. (2020). The effect of entrepreneurial orientation on financial and non-financial performance in Saudi SMEs: a review. *Journal of Critical Reviews*, 7(14), 270-278. [CrossRef]
2. Alsayegh, M. F., Abdul Rahman, R., & Homayoun, S. (2020). Corporate economic, environmental, and social sustainability performance transformation through ESG disclosure. *Sustainability*, 12(9), 3910. [CrossRef]
3. Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: evidence from the S&P 500. *The journal of finance*, 58(3), 1301-1328. [CrossRef]
4. Arevalo, J. A., & Aravind, D. (2017). Strategic outcomes in voluntary CSR: Reporting economic and reputational benefits in principles-based initiatives. *Journal of Business Ethics*, 144, 201-217. [CrossRef]
5. Astrachan, J. H. (2003). Commentary on the special issue: The emergence of a field. *Journal of Business Venturing*, 18(5), 567-572. [CrossRef]
6. Bacinello, E., Tontini, G., & Alberton, A. (2020). Maturity in sustainable innovation and corporate social responsibility: Implications in business performance. *Brazilian Journal of Management*, *12*(6), 1293–1308. [CrossRef]
7. Baron, J., & Lachenauer, R. (2021). Do most family businesses really fail by the third generation? *Harvard Business Review*. Retrieved April 21, 2023, from [Link]
8. Bartholomeusz, S., & Tanewski, G. A. (2006). The relationship between family firms and corporate governance. *Journal of Small Business Management*, 44(2), 245-267. [CrossRef]
9. Berman, S. L., Wicks, A. C., Kotha, S., & Jones, T. M. (1999). Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance. *Academy of Management Journal*, 42(5), 488-506. [CrossRef]
10. Bilan, Y., Hussain, H. I., Haseeb, M., & Kot, S. (2020). Sustainability and economic performance: Role of organizational learning and innovation. *Inzinerine Ekonomika-Engineering Economics*. [CrossRef]
11. Brewer, M. B., & Crano, W. D. (2014). Chapter Title. In *Research Design and Issues of Validity* (2nd ed., pp. 11–26). Cambridge University Press. [CrossRef]
12. Cai, H., Yang, J., Zhang, W., Han, S., & Yu, Y. (2018). Path-level network transformation for efficient architecture search. *International Conference on Machine Learning*, 678-687. Retrieved April 21, 2023, from [Link]

13. Chen, Y. J., & Sheu, J. B. (2017). Non-differentiated green product positioning: Roles of uncertainty and rationality. *Transportation Research Part E: Logistics and Transportation Review*, 103, 248-260. [CrossRef]
14. Chen, Y. S. (2008). The driver of green innovation and green image–green core competence. *Journal of Business Ethics*, 81, 531-543. [CrossRef]
15. Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19-39. [CrossRef]
16. Chua, J. H., Chrisman, J. J., Steier, L. P., & Rau, S. B. (2012). Sources of heterogeneity in family firms: An introduction. *Entrepreneurship Theory and Practice*, 36(6), 1103-1113. [CrossRef]
17. Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87. [CrossRef]
18. De Clercq, D., Dimov, D., & Thongpapanl, N. T. (2010). The moderating impact of internal social exchange processes on the entrepreneurial orientation–performance relationship. *Journal of Business Venturing*, 25(1), 87-103. [CrossRef]
19. De Roeck, K., & Delobbe, N. (2012). Do environmental CSR initiatives serve organizations' legitimacy in the oil industry? Exploring employees' reactions through organizational identification theory. *Journal of Business Ethics*, 110, 397-412. [CrossRef]
20. Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review*, 86(1), 59-100. [CrossRef]
21. Du, S., Bhattacharya, C. B., & Sen, S. (2010). Maximizing business returns to corporate social responsibility (CSR): The role of CSR communication. *International Journal of Management Reviews*, 12(1), 8-19. [CrossRef]
22. Eddleston, K. A., Kellermanns, F. W., & Sarathy, R. (2008). Resource configuration in family firms: Linking resources, strategic planning and technological opportunities to performance. *Journal of Management Studies*, 45(1), 26-50. [CrossRef]
23. El Chaarani, H., Vrontis, P. D., El Nemar, S., & El Abiad, Z. (2022). The impact of strategic competitive innovation on the financial performance of SMEs during COVID-19 pandemic period. *Competitiveness Review: An International Business Journal*, 32(3), 282-301. [CrossRef]
24. Feng, Y., & Guo, Y. (2015). The relationship between capital structure and financial performance of China's real estate listed companies. *Journal of Finance and Economics*, 3(4), 72-76. [CrossRef]
25. García-Sánchez, I. M., Suárez-Fernández, O., & Martínez-Ferrero, J. (2019). Female directors and impression management in sustainability reporting. *International Business Review*, 28(2), 359-374. [CrossRef]
26. Gatto, A. (2020). A pluralistic approach to economic and business sustainability: A critical meta-synthesis of foundations, metrics, and evidence of human and local development. *Corporate Social Responsibility and Environmental Management*, 27(4), 1525-1539. [CrossRef]
27. González-Benito, J., & González-Benito, Ó. (2005). Environmental proactivity and business performance: an empirical analysis. *Omega*, 33(1), 1-15. [CrossRef]
28. Gürlek, M., & Tuna, M. (2018). Reinforcing competitive advantage through green organizational culture and green innovation. *The Service Industries Journal*, 38(7-8), 467-491. [CrossRef]
29. Hiebl, M. R. (2013). Risk aversion in family firms: what do we really know? *The Journal of Risk Finance*, 14(1), 49-70. [CrossRef]
30. Hermundsdottir, F., & Aspelund, A. (2021). Sustainability innovations and firm competitiveness: A review. *Journal of Cleaner Production*, *280*. [CrossRef]
31. Hernández-Linares, R., & López-Fernández, M. C. (2018). Entrepreneurial orientation and the family firm: Mapping the field and tracing a path for future research. *Family Business Review*, 31(3), 318-351. [CrossRef]
32. Hernández-Linares, R., Kellermanns, F. W., López-Fernández, M. C., & Sarkar, S. (2020). The effect of socioemotional wealth on the relationship between entrepreneurial orientation and family business performance. *BRQ Business Research Quarterly*, 23(3), 174-192. [CrossRef]

33.Hoang, T. H. V., Przychodzen, W., Przychodzen, J., & Segbotangni, E. A. (2020). Does it pay to be green? A disaggregated analysis of US firms with green patents. *Business Strategy and the Environment*, 29(3), 1331-1361. [CrossRef]
34.Hojnik, J., & Ruzzier, M. (2016). What drives eco-innovation? A review of an emerging literature. *Environmental Innovation and Societal Transitions*, 19, 31-41. [CrossRef]
35.Ikram, M., Ferasso, M., Sroufe, R., & Zhang, Q. (2021). Assessing green technology indicators for cleaner production and sustainable investments in a developing country context. *Journal of Cleaner Production*, 322. [CrossRef]
36.Jan, A. A., Lai, F. W., Siddique, J., Zahid, M., & Ali, S. E. A. (2022). A walk of corporate sustainability towards sustainable development: a bibliometric analysis of literature from 2005 to 2021. *Environmental Science and Pollution Research*, *30*, 36521–36532. [CrossRef]
37.Kempers, M., Leitterstorf, M. P., & Kammerlander, N. (2019). Risk behavior of family firms: A literature review, framework, and research agenda. In E. Memili & C. Dibrell (Eds.), The Palgrave Handbook of Heterogeneity among Family Firms (pp. 431–460). Palgrave Macmillan.
38.Liakh, O., & Spigarelli, F. (2020). Managing corporate sustainability and responsibility efficiently: A review of existing literature on business groups and networks. *Sustainability*, 12(18), 7722. [CrossRef]
39.Lin, R. J., Tan, K. H., & Geng, Y. (2013). Market demand, green product innovation, and firm performance: evidence from Vietnam motorcycle industry. *Journal of Cleaner Production*, 40, 101-107. [CrossRef]
40.Ling, Y. H. (2019). Examining green policy and sustainable development from the perspective of differentiation and strategic alignment. *Business Strategy and the Environment*, 28(6), 1096-1106. [CrossRef]
41.Lumpkin, G. T., Brigham, K. H., & Moss, T. W. (2010). Long-term orientation: Implications for the entrepreneurial orientation and performance of family businesses. *Entrepreneurship & Regional Development*, 22(3-4), 241-264. [CrossRef]
42.Mazzi, C. (2011). Family business and financial performance: Current state of knowledge and future research challenges. *Journal of Family Business Strategy*, 2(3), 166-181. [CrossRef]
43.Majumdar, S. K. (1997). The impact of size and age on firm-level performance: some evidence from India. *Review of industrial organization*, 12, 231-241. [CrossRef]
44.Meroño-Cerdán, A. L., López-Nicolás, C., & Molina-Castillo, F. J. (2018). Risk aversion, innovation and performance in family firms. *Economics of Innovation and New Technology*, 27(2), 189-203. [CrossRef]
45.Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791. [CrossRef]
46.Moreno-Menéndez, A. M., Arzubiaga, U., Díaz-Moriana, V., & Casillas, J. C. (2022). The impact of a crisis on entrepreneurial orientation of family firms: The role of organisational decline and generational change. *International Small Business Journal*, 40(4), 425-452. [CrossRef]
47.Mullens, D. (2018). Entrepreneurial orientation and sustainability initiatives in family firms. *Journal of Global Responsibility*, 9(2), 160-178. [CrossRef]
48.Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33-47. [CrossRef]
49.Neubauer, F., & Lank, A. (1998). The family business: It‘s governance for sustainability (pp. 34-52). New York: Macmillan Press.
50.Padgett, R. C., & Moura-Leite, R. C. (2012). Innovation with high social benefits and corporate financial performance. *Journal of Technology Management & Innovation*, 7(4), 59-69. [CrossRef]
51.Pätäri, S., Jantunen, A., Kyläheiko, K., & Sandström, J. (2012). Does sustainable development foster value creation? Empirical evidence from the global energy industry. *Corporate Social Responsibility and Environmental Management*, 19(6), 317-326. [CrossRef]
52.Paulus, A. L., & Hermanto, Y. B. (2022). The competitive advantage of furniture SMEs in East Java: The role of aggressiveness in entrepreneurship orientation. *Economies*, 10(6), 139. [CrossRef]
53.Pedersen, E. R., & Neergaard, P. (2016). The bottom line of CSR: A different view. In *Managing Corporate Social Responsibility in Action* (pp. 91-106). Routledge.

54. Peng, J., Hu, X., Wang, X., Meersmans, J., Liu, Y., & Qiu, S. (2019). Simulating the impact of Grain-for-Green Programme on ecosystem services trade-offs in Northwestern Yunnan, China. *Ecosystem Services*, 39. [CrossRef]
55. Roscoe, S., Subramanian, N., Jabbour, C. J., & Chong, T. (2019). Green human resource management and the enablers of green organizational culture: Enhancing a firm's environmental performance for sustainable development. *Business Strategy and the Environment*, 28(5), 737-749. [CrossRef]
56. Rosenbusch, N., Rauch, A., & Bausch, A. (2013). The mediating role of entrepreneurial orientation in the task environment–performance relationship: A meta-analysis. *Journal of Management*, 39(3), 633-659. [CrossRef]
57. Saha, R., Shashi, Cerchione, R., Singh, R., & Dahiya, R. (2020). Effect of ethical leadership and corporate social responsibility on firm performance: A systematic review. *Corporate Social Responsibility and Environmental Management*, 27(2), 409-429. [CrossRef]
58. Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2002). Altruism, agency, and the competitiveness of family firms. *Managerial and Decision Economics*, 23(4-5), 247-259. [CrossRef]
59. Soares, M. D. C., & Perin, M. G. (2020). Entrepreneurial orientation and firm performance: an updated meta-analysis. *RAUSP Management Journal*, 55 (2), 143-159. [CrossRef]
60. Tien, N. H. (2021). Vietnamese family business in Vietnam and in Poland: Comparative analysis of trends and characteristics. *International journal of entrepreneurship and small business*, 42(3), 282-299. [CrossRef]
61. Turker, D. (2009). Measuring corporate social responsibility: A scale development study. *Journal of Business Ethics*, 85, 411-427. [CrossRef]
62. Van Der Vliet, D. (2021). Measuring the financial impact of family businesses on the US economy. *FamilyBusiness.org*. Retrieved April 22, 2023, from [Link]
63. Vazquez, P. (2018). Family business ethics: At the crossroads of business ethics and family business. *Journal of Business Ethics*, 150, 691-709. [CrossRef]
64. Wales, W. J. (2016). Entrepreneurial orientation: A review and synthesis of promising research directions. *International Small Business Journal*, 34(1), 3-15. [CrossRef]
65. Ward, J. L. (1997). Growing the family business: Special challenges and best practices. *Family Business Review*, 10(4), 323-337. [CrossRef]
66. WCED, (1987). World commission on environment and development. *Our Common Future*, 17(1), 1-91. Retrieved April 7, 2023 from [Link]
67. Whelan, T., & Fink, C. (2016). The comprehensive business case for sustainability. *Harvard Business Review*, 21. Retrieved April 7, 2023 from [Link]
68. Zahra, S. A. (2018). Entrepreneurial risk taking in family firms: The wellspring of the regenerative capability. *Family Business Review*, 31(2), 216-226. [CrossRef]
69. Zellweger, T., & Sieger, P. (2012). Entrepreneurial orientation in long-lived family firms. *Small Business Economics*, 38, 67-84. [CrossRef]