



RESEARCH ARTICLE

The Impact of ESG Factors on Stock Prices in Family-Owned Businesses: Evidence from the Stock Exchange of Thailand

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ARTICLE INFO	ABSTRACT
Received: Jul 13, 2024 Accepted: Sep 26, 2024	This study investigates how Environmental, Social, and Governance (ESG) factors influence stock prices in family-owned businesses listed on the Stock Exchange of Thailand (SET), specifically those included in the 2022 Thailand Sustainability Investment (THSI) list. Using quarterly panel data from Q1 2020 to Q4 2022, the study applies panel data analysis to examine the relationship between stock prices and ESG scores. Cash flow from investment activities, SET index, and RoA are used to control for other factors that can impact stock price. The results reveal that environmental and governance scores contribute to stock price increases, reflecting investor preference for sustainable business practices. However, social score was found to have no significant effect on stock prices in this context. These findings underscore the growing importance of robust environmental policies and governance structures in family businesses in emerging markets. The study provides valuable insights for policymakers and family business owners, advocating for enhanced ESG integration to promote market value and sustainability.
Keywords ESG Family Business SET Stock Price Sustainability	
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INTRODUCTION

Family-owned businesses have long been a linchpin of Thailand's economy, comprising approximately 80% of all enterprises (Changkwian & Wangthanomsak, 2022). These businesses contribute significantly to national employment and GDP, with some of the country's largest corporations rooted in family ownership. However, as global economic trends evolve and investor priorities shift toward sustainability, family-owned businesses face new challenges in maintaining competitiveness and growth. In this shifting landscape, integrating Environmental, Social, and Governance (ESG) factors into their strategies is becoming increasingly essential for long-term success.

ESG factors have been studied in developed economies, where they are shown to influence stock market performance and investor behavior (Schmidt, 2019; Ambrosini, 2021). However, the impact of ESG on stock prices in emerging markets—particularly within the context of family-owned businesses—remains underexplored. Given the unique ownership structures and long-term outlook typical of family-owned firms, understanding how ESG factors affect their stock price performance is essential for both investors and policymakers in emerging markets like Thailand.

Thailand's government agencies, particularly the Stock Exchange of Thailand (SET), actively promote sustainable development by integrating sustainability into the country's financial and economic sectors. SET's goal is to build a sustainable capital market (Stock Exchange of Thailand, n.d.). Since 2015, SET has compiled the Thailand Sustainability Investment (THSI) list, now rebranded as the SET ESG Ratings, which highlights companies excelling in Environmental, Social, and Governance (ESG) criteria. According to the Stock Exchange of Thailand (2023), this initiative supports businesses that demonstrate growth while considering shareholder interests. SET places emphasis on risk

assessment and strategies to reduce greenhouse gas emissions, key elements of climate management. Investors can access the performance data of sustainable enterprises via SET ESG Ratings index. On October 10, 2022, SET published its annual list of sustainable stocks, featuring 170 companies, both family-owned and others (Changkwian & Wangthanomsak, 2022).

While there is growing recognition of ESG's importance in global markets, the specific impact of these factors on family-owned businesses in emerging markets has not been comprehensively addressed. This study aims to fill that gap by examining the influence of ESG factors—specifically environmental, social, and governance scores—on the stock prices of family-owned businesses listed on the SET. In doing so, the research contributes to the broader conversation on sustainable business practices and their financial implications to family-owned businesses in Thailand.

LITERATURE REVIEW

Environmental (ENV)

Research increasingly links Environmental, Social, and Governance (ESG) factors, particularly the environmental component, to stock market performance and corporate valuations. Schmidt (2019) demonstrated how environmental news sentiment affects financial outcomes for companies on major indices like the Dow Jones. Volodchenkov (2022) emphasized the need for detailed analysis of environmental scores in specific sectors, revealing a gap in understanding their response to environmental narratives. Ambrosini (2021) used network theory to study ESG in Italy. Jang (2019) evaluated the impact of environmental considerations on European companies. Demeroukis (2019) discovered an investor preference for companies with poorer environmental performance, inviting further investigation into how environmental efforts are valued. Collectively, these studies highlight the need for focused research on the environmental aspects of ESG.

Social (SOC)

The connection between ESG scores and stock performance, with a focus on the social component, reveals significant insights into the influence of corporate social responsibility (CSR) on market valuation. Fatmy (2016) on the FTSE-100 and HDAX indexes, and Santos (2021) on the STOXX Europe 600 Index, both highlight the importance of social factors in operational performance and investor valuation. Wang and Wu (2021) cautioned that social engagement might increase stock price crash risk under certain conditions, underlining the need for balanced governance. Xu et al. (2023) showed that ESG, particularly social initiatives, acted as protection during the COVID-19 pandemic, enhancing stock resilience. Kolaric (2023) examined the energy sector, indicating that while climate actions impact stock prices, positive social governance can mitigate negative effects and improve investor perceptions. This review suggests a generally positive relationship between social aspects of ESG and stock prices, influenced by sector, location, and CSR dynamics.

Governance (GOV)

The impact of corporate governance on stock prices is a critical area of interest. The literature consistently indicates a positive relationship between governance practices and stock valuations across various markets. Studies by Ullah (2012) on the KSE-30 index, Teker and Yüksel (2014) in Borsa İstanbul, Samontaray (2010) with NIFTY index-listed companies in India, Drobetz et al. (2004) in Germany, and Ergin (2012) in Turkey, all underscore the importance of corporate governance. Padungsaksawasdi and Treepongkaruna (2023) delved into governance, showing that while family-owned businesses may have lower CSR engagement, negatively impacting ESG scores and stock valuations, governance reforms like board diversity can boost CSR efforts and enhance stock prices. These studies suggest that strong governance practices—characterized by transparency, strategic, financial, and ethical management—correlate with higher stock valuations and improved financial performance.

Specifically, the findings indicate that Thai family-owned businesses could enhance their market valuation and gain a competitive edge by adopting high governance standards, focusing on transparency, stakeholder engagement, and ethical practices. This synthesis underscores the crucial role of governance in boosting stock prices and suggests a pathway for Thai family businesses to secure sustainable competitive advantages in an increasingly governance-focused global market.

Cash flow investments (CFI)

Nikbakht (2024) shows that efficient operating and financing cash flows significantly impact firm value. Jones (2001) suggests targeting sustainable projects with positive NPV to meet market growth expectations. Spineanu et al. (2014) highlight the importance of financing strategies for liquidity investments, while Ni et al. (2019) caution about the perception of operating cash inflows. Shubita (2021) notes that firm size and operating cycle influence the effectiveness of CFI in enhancing market valuation. Collectively, these studies suggest that strategic investment decisions, mindful of market dynamics and internal operational factors, are vital for Thai family business groups to leverage CFIs and improve firm valuation. This comprehensive approach ensures that investments are aligned with both internal capabilities and external market conditions.

Return on assets (ROA)

The connection between Return on Assets (RoA) and securities prices underscores RoA's importance as an indicator of operational efficiency and investor appeal. RoA measures how well a company utilizes its assets to generate profit, reflecting financial health and profitability. Studies by Heikal et al. (2014) in Indonesia's automotive sector, Saputra (2022), and Hadi (2018) corroborate RoA's impact on stock prices, emphasizing that higher RoA signals strong financial performance to investors. Overall, the literature suggests a positive relationship between RoA and securities prices, highlighting operational efficiency and sustainable growth as key to enhancing market attractiveness to sustainability-oriented investors.

The stock exchange of thailand index (SET)

The SET Index functions as a comprehensive gauge of overall stock market performance in Thailand, capturing the collective price movements of all stocks listed on the Stock Exchange of Thailand (SET). This index offers valuable insights into the broader economic environment and investor confidence, with its fluctuations often indicating potential shifts in individual stock prices. By monitoring the performance of listed securities, the SET Index allows market participants to predict future price directions and adjust their investment strategies accordingly. It is particularly useful for forecasting market-wide movements, as it reflects the performance of various sectors within the Thai economy, making it an essential tool for decision-making in the Thai financial markets (Stock Exchange of Thailand, n.d.).

Research Hypothesis

This research's focus is to study the impact of ESG score on stock prices of family businesses listed on SET. Therefore, the main hypotheses are as followings;

Hypothesis 1: Environmental Scores (ENV) positively impacts stock prices (STOCKPRICE) of family businesses listed on SET.

Hypothesis 2: Social Scores (SOC) positively impacts stock prices (STOCKPRICE) of family businesses listed on SET.

Hypothesis 3: Governance Scores (GOV) positively impacts stock prices (STOCKPRICE) of family businesses listed on SET.

METHODOLOGY

The study employed a mixed-method approach, utilizing secondary panel data collected quarterly from Q1 2020 to Q4 2022. The sample comprises of 29 family-owned businesses listed on the Thailand Sustainability Investment (THSI) index, following Apisakkul's (2016) criteria. Panel data analysis is used to explore the relationship between ESG factors and stock prices of sustainable companies on the Stock Exchange of Thailand (SET). Cash flow from investment activities (CFI), company's return on assets (ROA), and the SET market index (SET) are used as control variables to control for other factors that may affect stock price. Linear and quadratic trend terms are also added. The estimated model is;

$$STOCKPRICE_{it} = \beta_0 + \beta_1 ENV_{it} + \beta_2 SOC_{it} + \beta_3 GOV_{it} + \beta_4 CFI_{it} + \beta_5 ROA_{it} + \beta_6 SET_t + \beta_7 Time + \beta_8 TimeSq + u_{it}$$

RESULTS

The study analyzed 348 data points from 29 companies. The descriptive statistics are summarized in Table 1.

Table 1: Descriptive Statistics of Sample Companies (1st Quarter 2020 – 4th Quarter 2022)

Variables (N=348)	Minimum	Maximum	Mean	Std.
STOCKPRICE (Baht)	1.00	150.00	26.75	20.83
ENV (Score)	43.88	77.74	61.20	8.30
SOC (Score)	51.44	73.05	61.00	5.44
GOV (Score)	25.16	79.33	51.42	13.62
SET (Point)	1126	1695	1509	175.2
CFI (Baht)	-97404501.81	12385351.43	-6286524.00	14597212.88
ROA (%)	-8.62	26.04	7.08	5.31

The descriptive statistics of 348 observations from the sample companies, covering the 1st quarter of 2020 to the 4th quarter of 2022, revealed several key insights. Stock prices (in Baht) ranged from a low of 1.00 to a high of 150.00, with a mean of 26.75 and a standard deviation of 20.83. Environmental (ENV) scores varied between 43.88 and 77.74, averaging 61.20 with a standard deviation of 8.30. Social (SOC) scores ranged from 51.44 to 73.05, with a mean of 61.00 and a standard deviation of 5.44. Governance (GOV) scores spanned from 25.16 to 79.33, with a mean of 51.42 and a standard deviation of 13.62. The SET index, measured in points, ranged from 1,126 to 1,695, with a mean of 1,509 and a standard deviation of 175.2. Cash Flow from Investments (CFI), measured in Baht, ranged from -97,404,501.81 to 12,385,351.43, with a mean of -6,286,524.00 and a standard deviation of 14,597,212.88. Lastly, the Return on Assets (ROA) ranged from -8.62% to 26.04%, with an average of 7.08% and a standard deviation of 5.31%.

Table 2 presents the estimated coefficients, Driscoll-Kraay standard errors, log likelihood, and Akaike Information Criteria (AIC) for each model. The numbers in parentheses indicate standard errors for each coefficient.

The pooled OLS model achieved an R-squared of 0.0608 with an F-statistic of 191.3996 (p-value = 0.0000). The Variance Inflation Factor (VIF) for the independent variables (excluding time trend and squared time trend) did not exceed 2.0, suggesting no significant multicollinearity. Both White's test for heteroskedasticity and Wald's test for groupwise heteroskedasticity rejected the null hypothesis of homoskedasticity.

For the fixed-effect model, the LSDV R-squared was 0.8529, and the within R-squared was 0.1499. The Pesaran CD test for cross-sectional dependence indicated strong cross-sectional dependence in both the fixed-effect (p-value = 0.0078) and random-effect (p-value = 0.0015) models. The estimated θ used for quasi-demeaning in the random-effect model was 0.8752.

Table 2: Summary of estimation results

Dependent Variable: STOCKPRICE			
Independent Variables	Pooled OLS	Fixed Effects	Random Effects
constant	4.5735 (4.8634)	-47.6290 (34.7322)	-39.6035 (24.3769)
ENV	0.0998 (0.1221)	0.4584 *** (0.1024)	0.4224 *** (0.1340)
SOC	-0.0824	0.1859	0.1166

Dependent Variable: STOCKPRICE			
Independent Variables	Pooled OLS	Fixed Effects	Random Effects
	(0.1905)	(0.4972)	(0.3846)
GOV	-0.1059 (0.0672)	0.2506 ** (0.0847)	0.2217 ** (0.1030)
CFI	-2.6317e-07 *** (4.0388e-08)	1.4966e-07 (8.8143e-08)	1.3638e-07 (8.8710e-08)
ROA	0.0389 (0.2565)	0.1211 (0.1295)	0.1046 (0.1012)
SET	0.0199 *** (0.0038)	0.0158 *** (0.0037)	0.0158 *** (0.0036)
Time	-1.7360 *** (0.5672)	-0.9347 * (0.4613)	-0.9698 ** (0.4795)
TimeSq	0.1061 *** (0.0331)	0.0806 *** (0.0212)	0.0818 *** (0.0214)
Log-Likelihood	-1538.99	-1216.42	-1565.70
Akaike Criterion	3095.99	2506.84	3149.41

*** p-value < 0.01,

** p-value < 0.05,

* p-value < 0.1

The estimated coefficients of the pooled OLS model differed significantly from those of the fixed-effect and random-effect models. Statistical tests for the adequacy of the pooled OLS model indicated its inadequacy. The Hausman test, with a p-value of 0.1130, suggested that the random-effect model was the appropriate choice. However, the log-likelihood and Akaike Information Criteria (AIC) favored the fixed-effect model in terms of relative goodness of fit. Both the fixed-effect and random-effect models demonstrated that the coefficients for ENV, GOV, and SET were statistically significant at the 95% confidence level.

DISCUSSION

The study provides insights into factors impacting stock prices of family businesses listed on the Stock Exchange of Thailand (SET) after controlling for more traditional factors, such as, cash flow from investing activities and the state of the stock market. The result of the study shows that Environmental score (ENV) positively impacts stock prices, emphasizing the importance of environmental sustainability. This aligns with literature from Schmidt (2019) and Volodchenkov (2022), indicating that investors value companies managing their environmental impact. For Thai family-owned businesses, this underscores the need to improve their environmental scores to increase owner's value.

The Governance score (GOV) was positively significant at the 5% level, highlighting the critical role of corporate governance in stock prices, consistent with studies by Ullah (2012) and Teker and Yüksel (2014). Additionally, Asvathitanont and Tangjitprom (2020) emphasized the positive influence of strong ESG practices on stock prices, with governance improvements leading to better earning quality and ESG-centric investments yielding lower risk and potential for abnormal returns. Adopting high governance standards, including transparency and ethical management, enhances market valuation for family-owned businesses listed on SET.

The Social score (SOC) was not statistically significant, suggesting it does not explain stock prices within this context. While CSR initiatives are important for overall corporate health, they are not primary drivers of stock performance for family businesses listed on SET. This indicates that social initiatives might not directly translate into immediate financial gains in stock prices.

RECOMMENDATIONS

A global trend towards sustainable investment is reflected in the significant positive impact that Environmental (ENV) and Governance (GOV) scores have on stock prices. This suggests that family-

owned companies listed on the Stock Exchange of Thailand (SET) can increase their market value by focusing on improving their environmental and governance practices. However, there is no evidence that social practice impacts stock price. The fixed effect model's low within-R2 value indicates that not all variables influencing stock prices may be captured by the model, necessitating more research into other controlling factors.

Family businesses should adopt sustainable business operations, increase transparency, and ensure robust governance frameworks to attract investors and boost stock prices, focusing on improving environmental practices and corporate governance. Regular, transparent ESG reporting is crucial to demonstrate commitment to sustainability and provide necessary investor information. Additionally, incorporating variables such as market sentiment indicators, macroeconomic factors, or industry-specific influences could improve the model's explanatory power and offer a more comprehensive understanding of stock price determinants.

CONTRIBUTION TO KNOWLEDGE

This study makes several notable contributions to understanding ESG factors in emerging markets, particularly within family-owned businesses. The key contributions are:

1. **Focus on Family-Owned Businesses:** It uniquely examines ESG's role in family-owned businesses, which dominate the Thai economy, highlighting how concentrated ownership and long-term management philosophies shape their approach to sustainability and governance.
2. **Non-Significance of Social Scores and Cash Flow Investments:** The study finds that social scores (SOC) and cash flow investments (CFI) are not significant drivers of stock prices for family businesses listed on SET, suggesting investors prioritize environmental and governance factors.
3. **Practical Implications for Policymakers and Investors:** It offers actionable insights for policymakers and investors, emphasizing the importance of robust environmental and governance practices to enhance stock market performance.
4. **Contribution to Sustainable Business Practices:** The research shows that businesses managing their environmental impact and maintaining strong governance structures are financially rewarded, reinforcing the financial importance of sustainability.

Authors' contributions

RW originated the concept, planned the research project, gathered most of the data, authored the manuscript, conducted the literature review, and helped interpret the results. TO handled data analysis and statistical evaluation. CL assisted by collecting and organizing some of the data. AB was responsible for data cleaning. All authors reviewed and agreed to the final version of the paper.

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