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Diversity of second generation to innovation; Reflection from family business in Indonesia

Diversidad de segunda generación a la innovación; reflexión desde la empresa familiar en Indonesia

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Abstract

Purpose: this research aims to empirically prove the influence of the second generation on innovation in family companies in Indonesia. This research used 50 family companies listed on the Indonesia Stock Exchange from 2016 to 2022

Theoretical framework: Referring to the RBV theory, we tried to design a conceptual framework that shows the role of the second generation to increase innovation in family companies in Indonesia. Apart from that, the conceptual framework also explains the relationship between secondary generation gender diversity, education and management experience in a TMT organization as a trigger for increased innovation in family companies. In the conceptual framework designed in this research, we also want to prove again the influence of family ownership and institutional ownership in encouraging innovation in family companies in Indonesia

Method: We used 50 family companies listed on the Indonesia Stock Exchange from 2016 to 2022. Sample selection was carried out using a purposive sampling technique. In our research, innovation in family companies is used as the dependent variable, as well as second generation, gender diversity, education, experience in organization/management (TMT), family ownership and institutional ownership. To control bias in the data, we also use control variables consisting of current ratio, fixed assets to total assets and leverage. The data analysis stages were carried out using binary logistic regression and Wald tests

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Results and Conclusions: We succeeded in proving that the second generation has a positive and significant influence on innovation in family companies in Indonesia. We also found that the diversity of types of education chosen by domestic CEOs encourages them to innovate in family companies. Furthermore, we also found that organizational/management experience has a positive and significant effect on innovation in family companies, while family ownership and institutional ownership do not have a significant effect on innovation in family companies. Thus we conclude that the second generation can encourage increased innovation in family companies in Indonesia. The previous CEO's awareness of preparing for regeneration without looking at gender preferences was the key to increasing innovation in family companies in Indonesia

JEL Code: G3, G32, O3
Keywords: second generation; gender; education; top management team experience; family ownership & institutional ownership

Resumen

Objetivo: esta investigación tiene como objetivo demostrar empíricamente la influencia de la segunda generación en la innovación en las empresas familiares de Indonesia. Esta investigación utilizó 50 empresas familiares que cotizaron en la Bolsa de Valores de Indonesia de 2016 a 2022
Marco teórico: Refiriéndonos a la teoría RBV, intentamos diseñar un marco conceptual que muestre el papel de la segunda generación para aumentar la innovación en las empresas familiares de Indonesia. Aparte de eso, el marco conceptual también explica la relación entre la diversidad de género de la segunda generación, la educación y la experiencia en gestión en una organización TMT como detonante para una mayor innovación en las empresas familiares. En el marco conceptual diseñado en esta investigación, también queremos demostrar nuevamente la influencia de la propiedad familiar y la propiedad institucional en el fomento de la innovación en las empresas familiares de Indonesia
Método: Utilizamos 50 empresas familiares que cotizaron en la Bolsa de Valores de Indonesia de 2016 a 2022. La selección de la muestra se llevó a cabo utilizando una técnica de muestreo intencional. En nuestra investigación, la innovación en las empresas familiares se utiliza como variable dependiente, así como la segunda generación, la diversidad de género, la educación, la experiencia en organización/gestión (TMT), la propiedad familiar y la propiedad institucional. Para controlar el sesgo en los datos, también utilizamos variables de control que consisten en el índice corriente y los activos fijos en relación con el total Activos y apalancamiento. Las etapas de análisis de datos se llevaron a cabo utilizando regresión logística binaria y pruebas de Wald
Resultados y conclusiones: Logramos demostrar que la segunda generación tiene una influencia positiva y significativa en la innovación en las empresas familiares en Indonesia. También descubrimos que la diversidad de tipos de educación elegidos por los directores ejecutivos nacionales los alienta a innovar en las empresas familiares. Además, también descubrimos que la experiencia organizacional/de gestión tiene un efecto positivo y significativo en la innovación en las empresas familiares, mientras que la propiedad familiar y la propiedad institucional no tienen un efecto significativo en la innovación en las empresas familiares. Por lo tanto, concluimos que la segunda generación puede alentar una mayor innovación en las empresas familiares en Indonesia. La conciencia del director ejecutivo anterior de prepararse para la regeneración sin tener en cuenta las preferencias de género fue la clave para aumentar la innovación en las empresas familiares en Indonesia

Código JEL: G3, G32, O3
Palabras clave: segunda generación; género; educación; experiencia en equipos de alta dirección; propiedad familiar y propiedad institucional

Introduction

Family businesses are an important access to wealth creation and have an important role in the world economy. In Indonesia, 95% of businesses are owned by family companies. In general, family companies in Indonesia are able to make a significant contribution to the country's economic growth. It is estimated that family companies contribute 82% to GDP and 40% to market capitalization in the capital market in Indonesia (Daya Qarsa 2022). A family company is defined as a business that is passed down from generation to generation to individuals who are related by blood, or family relationships that are formed based on certain ties such as marriage (H. Huang, Lyu, and Zhu 2019). Family companies have long-term business goals. Generally, family companies have a high desire to develop the business because of family ownership of the company. However, the reality is that family companies have very difficult succession challenges. It has been proven that only 30% of family companies in Indonesia are able to survive until the second generation and even only 13% can survive until the third generation (Daya Qarsa 2022). However, this needs to be appreciated because Indonesia is the country with the largest number of family companies in ASEAN, namely around 130,000 companies with total assets reaching USD 1,800 billion (Darmono 2019)

According Jaidi et al. (2022); Rahim et al.(2024) the progress and development of family companies is very dependent on the ability to exploit and explore ideas possessed by business managers. Exploitation and exploration will be the reference for realizing innovation. For family companies, innovation is very important to maintain or increase their competitiveness. According to the Resources Base View Theory (RBV), maintaining the sustainability of a business in the long term will be driven by the competitive advantages developed by business actors, namely by encouraging the implementation of innovation in business activities (Y. C. Huang, Yang, and Wong 2016)

In many cases in the business world, family companies have a conservative concept in carrying out innovation. Because innovation is a decision that is considered risky and can change the history and reputation of the company as well as market trust in the products and services offered by the company (Cioca et al. 2020). Family companies are seen as traditional or even conservative organizations that do not want to break away from new, proven ways of doing business. They are only stuck with the old ways, and tend to be afraid of innovation because it involves high risks (Rondi, De Massis, and Kotlar 2019). The heterogeneity in the ability of family firms to transform a limited innovation process into an advantage that drives business development is still difficult to understand (De Massis et al. 2014)

Innovation in family companies has certainly become one of the most popular topics to research at the moment, considering the many pros and cons of the innovation process in family companies. According to Chirico and Kellermanns (2022) family companies create innovation in a unique way

because of the governance structure and culture that family companies have. This means that the generation that holds dominant control will shape the family organization and influence the way of interaction between the family system and the business system. Previous studies specifically recognize the existence of strong heterogeneity, this is due to the regeneration stage of a family firm (Salvato and Moores 2010)

In fact, only a few family companies survive the transition from one generation to another (Hillebrand 2019). The research results of Chirico and Kellermanns (2022) state that the regeneration process from the first generation to the second and third generations is expected to have an impact on decreasing company performance. Even in the third generation the family company will reach its lowest point. However, in the fourth, fifth and sixth generations, the company's performance will increase, because the further the distance between family members and the founding generation, the more their thinking will shift to business logic and provide positive potential for the company. This is because companies have difficulty transferring key managers and resources to the next generation, conflicts among successors and lack of managerial experience (H. Huang, Lyu, and Zhu 2019). However, previous studies also stated that the second generation taking control of the family company will be able to improve the operational performance and accounting system of the family company for the better, if the chosen succession is equipped with the necessary knowledge and experience (Xu et al. 2015).

The regeneration process in family companies will certainly influence the structure of the Top Management Team (TMT) in family companies (Kellermanns et al. 2008). In a study by (Terjesen, et al., 2009)), gender diversity in the management structure of family companies is stated as a key factor that might increase the innovation of public companies in mature market economies. Gender is still a central issue in selecting CEO succession in family companies. A survey conducted on family businesses in America in 2010 highlighted that female leadership is still at a low level, but is increasingly making sense in family companies. A number of studies report that 24% of family businesses surveyed reported that the CEO or company president was led by a woman (MassaMutual, 2010). Although 31.10% of family businesses in the US say they may have a female successor in the future, it is still unlikely. Dahl & Moretti (2008) refer to a number of family literature. Boys still have opportunities and tend to be preferred to become leaders in family companies compared to girls (Villalonga & Amit 2020)

The integration of external knowledge also allows companies to develop more successful innovations, with a greater degree of novelty, and a better return on R&D investments. Combining internal and external knowledge in this way provides the opportunity to share resources, ideas, and improve technology and product development). In a study Hirofumi et al., (2023) stated that the past work experience of the successor CEO can increase the possibility of introducing management innovations from the family successor CEO.

Previous studies also argue that TMT members' past career experiences can influence firm outcomes and that job mobility experiences may be an important part of firm innovation (Schoar and Zuo 2017). Experience also influences managerial decision making which is supported by previous research (Putra and Nasir 2015). Previous literature suggests that TMTs are receptive to new ideas, open to new experiences and prefer change; tend to be innovative and have intrinsic motivation to pursue innovation (George & Zhou (2001), López-Bonilla and López-Bonilla (2012)). Therefore, TMT members who experience more job mobility tend to favor innovation more, indicating a positive relationship between TMT job mobility experiences and firm innovation (Jia et al. 2022).

Institutional, agency, and socioemotional wealth theories have attempted to explain the dynamics of governance and innovation structures in family firms and the potential for agency conflicts. Additionally, institutional investors can influence a firm's sources of innovation (Harasheh, Capocchi, and Amaduzzi 2022). Thus, external shareholders, especially institutional investors also play a very important monitoring role when ownership is highly concentrated due to the benefits of high personal control. The presence of institutional investors in the ownership structure of a company can increase the desire to invest in R&D activities. These R&D activities are a source of company innovation for the future (Cirillo et al., 2019).

Firms with greater gender diversity in ownership structures in family firms are more likely to invest in R&D and rely on external capital and gender diversity in ownership allows firms from less developed developing countries to catch up on innovation across the board with firms from more advanced developing countries (Tonoyan & Boudreaux 2023). Gender diversity in top management is a useful non-financial signal to potential investors regarding the effectiveness of the top management team and the viability of the company (Quintana-García, et al., 2022).

In a study by Jangwook (2022) greater gender diversity in TMT can increase the number of innovations. Additionally, greater TMT gender diversity will narrow the multifaceted innovation of gender-diverse TMTs and highlight the risk-reducing effects of female TMT members in the context of innovation. Meanwhile, several studies show that innovation and corporate productivity are driven by male entrepreneurs ((I. H. Lee & Marvel (2014), Strohmeyer et al., 2017)). Other research also finds mixed results on the relationship between gender and corporate innovation. However, it is known that the number of women starting or running new businesses is higher than men in developing countries (Hoang, et al., 2021).

As mentioned previously, with the development of family companies and the aging of first generation entrepreneurs, there are more and more challenges to succession issues. Hou et al. (2021) found that a CEO's first market experience will influence the company's innovation. In research, He et al., (2021) found that senior management's academic experience positively influences corporate green innovation.

This influence is more visible when senior management occupies important positions or has a higher level of education. A higher level of education supports the accumulation of knowledge and learning skills that make a person more cognitively capable. This shows acceptance of new ideas and changes which can be a source of innovation (Njinyah et al. 2022). Recent studies show that directors with foreign experience increase a firm's long-term value, firm innovation (Yuan and Wen 2018) and information transparency (Wen, Cui, & Ke 2020)

As more and more institutional investors undertake sustainable development, monitoring can influence environmental performance and innovation behavior (Jiang & Bai (2022), Miller et al. (2022), Chemmanur & Tian (2018) found that total institutional ownership has a positive impact on innovation. In particular, institutional voids can hinder entrepreneurial activity (Webb et al., (2020), Kim et al., (2022)). In addition, the influence of institutional investors' share ownership on corporate innovation has been widely studied in developed countries (Chi, Liao, and Yang 2019). However, compared to developing countries, there is still little literature discussing this study.

This study uses several control variables, this is intended to encourage better modeling and less bias in the results. The control variable used is the measurement of the company's financial performance which consists of liquidity, fixed asset ratio and leverage. Dang & Harima (2020) revealed that the second generation has better abilities to encourage increased business performance, so that this success is one of the triggers for increasing the ability of family companies in Vietnam to innovate. Furthermore, Martínez-Alonso et al., (2022) stated that improving company performance is an important element in family companies to carry out innovation. Furthermore, Korede et al. (2023) stated that managing liquidity positions and optimal leverage because they are adjusted to the company's needs will encourage increased innovation in family firms.

Based on the description above, we assess that research discussing innovation in family companies has been very popular in recent years, but there is not much research discussing the role of the second generation in encouraging innovation in family companies in Indonesia. Apart from that, there are still conflicting gender preferences of prospective CEOs to replace previous generation CEOs, which is something we are interested in offering. Considering that family companies in Indonesia have different characteristics from family companies in other countries in the world.

Literature review

Resourse Base View Theory (RBV)

Resource characteristics and the ongoing search for competitive advantage have received considerable attention in the strategic management literature. Resource Based View (RBV) explains the internal sources of a company's competitive advantage. Recently, the RBV has emphasized Knowledge Based View (KBV) as important in ensuring sustainable competitive advantage (Arend & Lévesque, 2010). The study (Pereira and Bamel 2021) notes that the transition of a product-based economy to a knowledge-based economy and industry 4.0 offers impetus for the popularization of the knowledge resource-based view as a framework, for gaining performance and competitive advantage (Cuthbertson and Furseth 2022)

The Resource Based View (RBV) also assumes that differences in performance and the creation of competitive advantages as well as entrepreneurial outcomes, such as innovation are largely caused by resources and capabilities (J. Barney 1991). Based on continuous family involvement in business, family firms develop a unique set of resources (Zahra 2003), which can be a source of competitive advantage (J. B. Barney 2012). In more detail, family firms are associated with unique human resources, namely knowledge, skills and abilities which are generally considered to be the most important resources. The main characteristic of human capital is the long-term orientation typical of family firms. This is due to the long-term orientation of family companies and the long tenure of employees, management and leadership. Family firms are further associated with unique intellectual human capital, which refers to deep specific knowledge (J. B. Barney and Hesterly 2015).

In addition, as argued from the perspective of the resource-based view (RBV), the internal characteristics of a firm, such as strategy, structure, and core capabilities, are key factors influencing a firm's innovation activities. RBV argues that a firm's resources (e.g. R&D intensity and firm size) and capabilities (e.g. green capabilities), with characteristics such as rarity, uniqueness, non-imitability, and non-substitutability, can enhance green innovation and help it to gain advantage (H. Huang, Lyu, and Zhu 2019).

Hypothesis development

The influence of the second generation on innovation in family companies

In the RBV concept, it is stated that a business must regenerate to be able to maintain business continuity, but the successor appointed as CEO must have high competence so as to be able to encourage innovation and competitive advantage in a business (J. Barney 1991). Family companies basically have a high desire to develop the business in the long term and develop each generation. However, family companies often experience difficulties during the succession process. The successful transfer of the family business to the next generation, especially the transition from the first generation to the second generation, is very important for business continuity. The involvement of next generations can be beneficial for innovation strategies and the effect is likely to be stronger for exploration (Scholes et al. 2021). Members of the next generation usually have new interests, new ideas, and new goals compared to other members (Young et al. 2008). In addition, adding members of the next generation can influence the exploration mode of innovation strategies. Thus, the company's ability to improve performance through innovation can be ensured by gradual business development. In research Hermundsdottir & Aspelund (2022) contributing to sustainability strategies, the implementation of social and environmental innovation influences perceived company performance from value creation and reduction of costs and risks. Thus, the appointment of the second generation on the corporate board influences the innovation of family firms.

H_1: The second generation has a positive and significant influence on family company innovation

The influence of gender on innovation in family companies

Gender preferences remain a consideration for CEOs of companies in developing countries in determining succession in family companies. CEOs today tend to choose their biological children as boys compared to their biological children as girls (Belen Villalonga and Amit 2006). The board of directors is seen as a forum that connects the organization with the vital resources and opportunities necessary to achieve the company's goals. Meanwhile, family firms are faced with uncertainty or scarcity of generational resources. In a related study Dai, Byun, & Ding (2019) confirmed that a greater presence of women on corporate boards improves knowledge integration and corporate innovation performance in new venture teams. Innovation influences productivity and competitive advantage and helps innovation-oriented policies at both national and corporate levels.

Previous studies confirm that innovation and R&D lead to increased productivity and this impact is found in many countries at both corporate and national levels. Meanwhile, several studies show that innovation and company productivity are driven by male entrepreneurs (Tonoyan & Boudreaux (2023), Marvel et al., (2015)). Other research finds mixed results on the relationship between gender and firm performance/innovation (Rosa et al., 1996). Additionally, the number of women starting or running new businesses is higher than men in developing countries, with the largest difference seen in Vietnam (Hoang, et al., 2021). Additionally, emerging evidence suggests that gender diversity in companies can have a significant impact on a company's innovation capabilities (Na and Shin (2019), Attah-Boakye et al. (2020)). Thus, gender diversity on corporate boards influences family firm innovation.

H_2: Gender diversity has a positive and significant effect on the performance of family companies

The influence of education on innovation in family companies

RBV theory states that a company's tendency to survive can be achieved by innovating. To carry out innovation, a CEO must have knowledge and experience, one way to gain knowledge is obtained from formal education, or obtained through training or business internships (J. B. Barney and Hesterly 2015). When the second generation has high knowledge, their ability to innovate will also be higher (Baltazar et al. 2023). In research Holmstrom (1989) states that innovation is strategic and directed investment behaviour of companies which is accompanied by risk and uncertainty. Executives who have rich work experience abroad, by learning to understand production procedures, techniques, marketing strategies, and internal administration systems, can properly manage all problems within the company. Thus, if a company is in the process of globalization, executives who have experience abroad can help solve the problems faced by the company, because they enter the global market and contribute to the progress of the organization.

Apart from that, the CEO's educational background also plays an important role (Hua et al. 2023) found that the higher the proportion of senior executives with an academic background, the more significant the investment in corporate innovation. This influence is more obvious when senior managers hold important positions or have a higher level of education (Cao et al. 2022). Academic experience will influence the formation of management's cognitive foundations and values with an imprinting effect. In addition, senior management with academic experience is more ethical and disciplined, improving the quality of financial reports (Ma et al. 2019), and corporate social responsibility performance (He, Chen, and Zhang 2021)

H_3: CEO education has a positive and significant effect on family company performance

The influence of position experience in TMT on innovation in family companies

Most CEOs of family companies in a number of European and Asian countries are starting to realize that they must prepare their succession with superior quality human resources to encourage innovation in family companies (Liaqat, Haron, and Bhatti 2021). Besides that J. Barney (1991); J. B. Barney (2012); J. B. Barney and Hesterly (2015) stated that innovation can be obtained from the experience gained by the CEO through the process of internship, training or self-taught learning, experience will make the CEO have high innovation abilities so that he is able to create competitive advantages that make the sustainability of business performance more stable.

A family-based CEO will most likely transfer the essence of what is championed in the company to the Top Management Team (TMT). (Jim Lee 2006) states that if family business owners also participate in management (via a family-based CEO) they may have greater loyalty within the company, thereby increasing employee productivity or the company's overall innovation performance. Cao et al. (2022) found that experience in a company provides experience in managing an organization, including leadership. Therefore, when they are actually appointed as CEO, they replace their parents. Management experience further encourages the desire to innovate. According to Y. Yuan, Hu, and Cheng (2023), the higher the TMT experience, the more it will encourage innovation in family companies. Experience managing organizations provides more advanced thinking and increases management awareness for innovation.

H_4: Work experience in TMT has a positive and significant effect on family company innovation

The influence of family ownership on innovation in family companies

In family companies, it is certain that the highest ownership structure is determined to come from blood ties or marriage ties or bonds formed due to legal legality. Portion of family ownership in a family company > 0.80% (Baltazar et al. 2023). The leadership of a family company will certainly continue to expand family ownership by placing children, relatives or other individuals who are related by blood, marriage or ties formed due to legal legality. When the CEO of a family company realizes that business continuity is important, it can be ensured that the family members who will be part of the company will be individuals who have high quality human resources (Ballal, Bapat, and Milind Ballal 2019).

According to Y. L. Chi (2023), family ownership has a positive and significant effect on innovation in family companies. The greater the percentage of family ownership in family companies will encourage increased innovation in the company. Family members involved in managerial activities

become aware of the importance of innovation to maintain the company's survival. The research results of Kotlar and De Massis (2013) state that the family will continue to try to strengthen their role in the family company. When family ownership is large, it tends to increase the possibility of innovation in family companies. However, research results from Cirillo et al., (2019) found that higher family ownership tends not to encourage innovation. The dominance of the family is accustomed to classical governance patterns which tend to maintain family hegemony. This situation encourages them to inhibit innovation. The same results were also obtained by Y. C. Huang, Yang, & Wong (2016) who found that family ownership tends to inhibit innovation. The assumption is that when the family innovates, outsiders will join the company's board of directors.

H_5: Family ownership has a positive and significant effect on family company innovation

The influence of institutional ownership on innovation in family companies

According to Scafarto and Dimitropoulos (2018), the existence of other companies within the family company is a monitoring institution for the policies taken by the CEO of the family company. The existence of other companies will encourage the emergence of positive policies that can advance family companies, one of which is through innovation. Kotlar and De Massis (2013) stated that the presence of other companies in the family company tends to increase innovation. However, ownership of other companies within a family company is generally still owned by family members or relatives of the family company, so that the synergy that arises as a result of ownership encourages innovation. Different things were obtained in research by J. Chi, Liao, and Yang (2019) who found that institutional ownership had no effect on innovation in family companies. Furthermore, research results obtained by Y. Yuan, Hu, and Cheng (2023), found that the existence of other companies in the family company's management functioned as an instrument for monitoring the activities of the CEO of the family company, but they could not influence the CEO of the family company to innovate. Fear of failure and the increasing number of external parties entering the company and disrupting family hegemony in the company environment tends to inhibit innovation in family companies.

H_6: Institutional ownership has a positive and significant effect on family company innovation.

Method

The type of research currently being carried out is quantitative research, where the aim of this research is to prove the influence between the second generation managing a family company and innovation in the

family company. In this research, the objects are all family companies that have conducted an IPO on the Indonesian Stock Exchange. This research was conducted from 2017 to 2022. The data used in this research was obtained through family company annual reports which can be accessed via the website www.idx.go.id and the websites of each company.

In this study, several main variables were used, namely innovation in family companies (dependent variable), second generation, gender, education, experience as a Top Management Team (TMT), family ownership and institutional ownership (independent variables). In this research, control variables are also used which include liquidity, the ratio of fixed assets to total assets and leverage.

In this research, innovation in family companies is limited by looking at whether they have R&D costs or have patents originating from product development they have carried out. Therefore, to measure innovation in family companies, a binary number is used, namely 1 is given to family companies that publish R&D costs or have product development patents, while 0 is given to family companies that do not publish R&D costs or patents in their annual reports (H. Huang, Lyu, and Zhu 2019). Second generation. In measuring this variable, a dummy is used, namely 1 for family companies managed by the second generation, while 0 is given to family companies managed by other than the second generation (Sunon, Islam, and Kabir 2022). Furthermore, the gender variable is also measured using a dummy, namely 1, namely the second generation male and 0 for the second generation or any other gender other than male (Sunon, Islam, and Kabir 2022).

The educational variable is measured by the level of education equivalent to a bachelor's degree, master's degree or doctoral education in various fields taken at a number of leading universities in the country or abroad. When a family company has the next generation who completed their higher education studies abroad, they get a score of 1, while the next generation who took their higher education at home get a score of 0 (H. Huang, Lyu, and Zhu 2019).

The TMT experience variable is also measured using binary numbers, namely 1 for the second generation who have TMT experience, while 0 is given to the second generation or others who do not have TMT experience (Quintana-García and Benavides-Velasco 2016).

Family ownership is one of the independent variables used where this variable is measured by dividing the amount of family ownership by the total ownership as a percentage, while institutional ownership is sought by dividing the total ownership of other companies by the total ownership as a percentage. The next variable is the control variable, namely liquidity as measured by the current ratio, fixed assets and leverage ratio as measured by the debt to equity ratio.

The data analysis method used is binary logistic regression with the Logit approach. The testing procedure carried out starts from the analysis requirements test, namely -2 log likelihood, carrying out goodness of fit analysis using Hosmer and Lemeshow analysis. After these procedures have been fulfilled,

the analysis stage continues by observing the value of Procedure R^2, and continuing to analyze the binary logistic regression equation model. The equation used in this research is:

$$\frac{Inovasi}{1-Inovasi} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta X_4 + \beta_5 X_5 + \beta_6 X_6 + \text{Control} + e$$

Information:

1- Inovasi	= Innovation in Family Company
α	= Constanta
β_1-β_6	= Regression Coeficient
Control	= Control Variable Coeficient
X_1	= Second Generation
X_2	= Gender
X_3	= Education Domestic/Foreigh
X_4	= Experience Top Management Team (TMT)
X_5	= Family Ownership
X_6	= Institutional Ownership
e	= Error Term

Analysis of the logistic regression equation model above was also carried out using the odds ratio. This is certainly important to know how likely it is to be accurate in the level of predictions that will be analyzed in this research. The next stage is to test the hypothesis using the Wald test.

Result and discussion

In accordance with the results of the data processing carried out, descriptive statistics can be narrated as shown in table 1 below:

Table 1
Statistic descriptive

Variable	Obs	Mean	Std Dev	Min	Max
Innovation	350	0.957	0.202	0	1
Second Generation	350	0.320	0.467	0	1
Gender	350	0.789	0.409	0	1
Education	350	0.731	0.443	0	1
TMT	350	0.392	0.392	0	1
Family Ownership	350	0.286	0.286	0	0.95
Institutional Ownership	350	0.075	0.075	-0.13	0.64
Current Ration	350	10.47	10.469	0.03	75.82
Fixed Asses / Total Assets	350	0.28	0.282	-0.01	2.53
Debt to Equity Ratio	350	42.36	42.356	-3.74	786.90

In the table above, it is identified that the number of observations processed is 350 (50 x 7) where the average innovation value in family companies in Indonesia is 0.96. Innovation in family companies is measured with a dummy, namely 1 for family companies that innovate, while 0 is the score for family companies that do not innovate. Thus, it can be concluded that the tendency of family companies in Indonesia to innovate is relatively high from 2016 to 2022. In descriptive statistics, it can be seen that the average value for the second generation assessment score is 0.32. The second generation in this research is also measured using categories, a score of 1 is given to family companies that have regenerated to the second generation, while a score of 0 is given to family companies that have not regenerated to the second generation. The average value obtained shows that not many family companies in Indonesia have regenerated management to the second generation from 2016 to 2022.

Gender is the third main variable in this research. To measure gender, a dummy is also used, namely a score of 1 for a company CEO who is male, while 0 is given to companies with a female CEO. The average statistical value obtained from the data processing stage is 0.79. Thus, the tendency for family companies to encourage men as leaders/managers is still very high compared to CEOs held by women.

Referring to the information above, it is known that the statistical average obtained is 0.73, so it can be concluded that family companies in Indonesia tend to be more confident in sending their future leaders to get higher education abroad compared to education at the same level at home. From the same data, it is known that the average value of TMT experience for the second generation is 0.81. This shows the tendency of family companies to appoint members of the family who will become directors in the family company who have had experience of being part of the board of directors in other companies in the past.

Based on descriptive statistics, it can be seen that the highest family ownership in family companies in Indonesia is 0.97, while the lowest family ownership value is 0.03. The average family ownership owned by family companies in Indonesia from 2016 to 2022 is 0.61 with a standard deviation of 0.28. Thus, the portion of family ownership in a number of public companies in Indonesia is relatively high. Apart from that, it can be seen that the lowest institutional ownership value in one of the family companies in Indonesia is 0.03, while the highest institutional ownership value in one of the family companies is 0.64. If observed overall, the average institutional ownership in family companies in Indonesia is 0.079. Thus, it can be concluded that the share of institutional ownership in family companies in Indonesia from 2016 to 2022 is relatively low.

After being presented with a statistical description of the research variables used, logistic regression analysis can of course be carried out. The initial testing stages carried out tested the accuracy of the analysis model used in this research. The first analysis stage used is -2 likelihood. According to Hair et al., (2019) Log Likelihood is a test that aims to ensure that the independent variable used to predict

the possibility of innovation occurring in a family company is the right variable or vice versa. This requirement will be fulfilled when the Log Likehood value becomes greater if the coefficient produced in the model has a negative sign. Based on the results of the data processing that has been carried out, detailed results can be seen in Table 2 below:

Table 2
Log Likelihood Test

Iteration	Coefficients
Iteration 0	-61.922123
Iteration 1	-55.879239
Iteration 2	-51.687855
Iteration 3	-51.570875
Iteration 4	-51.570793
Iteration 5	-51.570793

Based on the table above, it can be seen that in iteration 0 the Log Likelihood value obtained was -61.922123, the coefficient value got stronger until iteration 5, namely -51.570793. In this way, the independent variables used in the analysis model are the right variables, so that further data processing can be carried out immediately.

The Hosmer and Lemshows test is intended to test the goodness of fit of the regression model that will be formed. Based on the results of the tests that have been carried out, a description of the results can be seen in Table 3 below:

Table 3
Hosmer and Lemeshows Result

Model	Result
Number of Observation	350
Number of Group	8
Hosmer-Lemeshow Chi^2	2.63
Prob > Chi^2	0.853

In accordance with the results of the Hosmer-Lemeshow test, a Chi2 value of 2.63 was obtained and a probability value of 0.853. The testing procedure was carried out using an error rate of 0.05. Thus $P < 0.05$. In this way, the resulting goodness of fit meets the testing procedures so that further data processing stages can be carried out immediately.

Classification is an analysis that aims to determine the level of accuracy of predictions formed from the results of binary logistic regression analysis. Based on the results of the data processing that has been carried out, a description of the results can be seen in Table 4 below:

Table 4
Classification

Classified	True		Total
	D	-D	
+	335	15	350
-	0	0	0
Total	335	15	350
Classifified + if Predicted Pr (D) > = 0,5			
True D defined as inovasi i = 0			
Sensitivity	Pr (+| D)		100,00 %
Specificity	Pr (-| ~ D)		0,00 %
Positive Predictive Value	Pr (– D| +)		95,71 %
Negative Predictive Value	Pr (~ D| –)		. %
False + rate for true ~ D	Pr (+| D)		100,00 %
False – rate for true D	Pr (-| ~ D)		0,00 %
False + rate for classified +	Pr (– D| +)		4,29 %
False + rate for classified –	Pr (~ D| –)		. %
correctly classified			95,71 %

In the table above, 335 observations have a positive sign, while 15 other observations have a negative sign. A positive sign indicates a tendency for family companies to innovate, while a negative sign indicates a tendency for family companies not to innovate. The classification results show that the tendency for family companies managed by the second generation is very high, reaching 95.71%. The results obtained show that family company managers have an awareness that to create business ambidexterity it is very important for them to innovate. Where the tendency is that the second generation has better innovation capabilities than the first generation.

After all procedures for carrying out binary logistic regression analysis have been fulfilled, hypothesis testing can be carried out. Based on the results of the data processing that has been carried out, a description of the results can be seen in Table 5 below

Table 5
Hypothesis testing results

Dependent Innovation	Coef	Odds Ratio	Z	P > (z)	Result
Constanta	5.436		1.75	0.080	
Secgen	1.286	3.120	2.67	0.015	Accepted
Gen	-0.393	0.563	-0.47	0.639	Reject
Edu	-2.493	0.074	-2.76	0.006	Accepted
TMT	2.368	10.682	3.55	0.000	Accepted
Famow	0.332	1.393	0.44	0.663	Reject
Inown	-1.836	0.159	-0.51	0.612	Reject
CR	-0.035	0.965	-1.31	0.190	Reject
FTA	-1.211	0.297	-1.48	0,138	Reject
DER	-0.001	0.999	-0.17	0.865	Reject

Proseudo R	0.167
LR-Chi^2	20.70
Prob > Chi^2	0.014

In the table above, it can be seen that the resulting Proseudo R^2 value is 0.1672. The coefficient value shows that second generation, gender, education, organizational experience (TMT), family ownership, institutional ownership, current ratio, fixed assets per total assets and debt to equity ratio are only able to contribute to influencing changes in the tendency of family companies in Indonesia to undertake innovation.

At the first hypothesis testing stage, it can be seen that the second generation variable has a regression coefficient of 1.286, and a Wald test probability value of 0.015. Statistical data processing procedures were carried out using an error rate of 0.05. Thus, $P < 0.05$, so it can be concluded that the second generation has better innovation abilities than the first generation in family companies in Indonesia.

At the second hypothesis testing stage, it can be seen that the gender variable has a negative slope regression coefficient of -0.393. and the prob value is 0.639. Thus, it can be concluded that gender has no effect on innovation in family companies listed on the Indonesian Stock Exchange.

At the third hypothesis testing stage, it can be seen that education has a negative regression coefficient of -2.493. Statistically, a probability value of 0.006 was also obtained. These results show that the second generation who received leadership education or domestic organizations encouraged innovation in the family companies they managed compared to the first generation. Next, at the fourth hypothesis testing stage, it can be seen that experience in the organization (TMT) has a positive slope regression coefficient of 2,386, and a Prob value of 0.000. These results prove that organizational and leadership experience encourages the second generation to be more innovative than the first generation in family companies in Indonesia.

At the fifth hypothesis testing stage, it was found that family ownership had a positive regression coefficient of 0.332, statistically this finding was proven by a probability value of 0.44. The results obtained show $P > 0.05$, so it can be concluded that family ownership does not have a significant effect on innovation in family companies in Indonesia. Relatively not much different results were obtained for the institutional ownership variable which had a negative regression coefficient but did not have a significant effect on innovation in family companies in Indonesia.

Discussion

The influence of the second generation on innovation in family companies in Indonesia

Based on the results of testing the first hypothesis, it was found that the second generation had a positive influence on innovation in family companies in Indonesia. These findings show that the second generation has better innovation abilities than family company CEOs from the first generation. This is because the first generation has prepared the second generation well, they have equipped business succession candidates with knowledge and experience, so that the second generation's mindset is equipped with high knowledge to innovate even stronger. They realize that innovation is very important to create competitive advantage so that it can encourage increased business performance and long-term business sustainability.

The findings in the first hypothesis are supported by the RBV theory developed by (J. Barney 1991). it is stated that a business must regenerate to be able to maintain business continuity, but the successor appointed as CEO must have high competence so as to be able to encourage innovation and competitive advantage in a business. The results obtained are supported by the results of H. Huang, Lyu, and Zhu (2019); Kellermanns et al. (2008); Belen Villalonga and Amit (2006) research which found that the second generation will innovate at a higher rate than the previous generation. The second generation will try to surpass the achievements of the previous generation by innovating. The mentoring process obtained from the first generation and the better quality of human resources from the second generation encourage them to be more motivated to innovate in order to create competitive advantage. The same results were also obtained by Scholes et al., (2021) who revealed that family companies basically have a high desire to develop the business in the long term and develop each generation. However, family companies often experience difficulties during the succession process. The successful transfer of the family business to the next generation, especially the transition from the first generation to the second generation, is very important for business continuity. The involvement of next generations can be beneficial for innovation strategies and the effect is likely to be stronger for exploration. Members of the next generation usually have new interests, new ideas, and new goals compared to other members (Young et al. 2008).

The influence of gender on innovation in family companies in Indonesia

In the second hypothesis testing stage, it was found that gender had no effect on innovation in family companies listed on the Indonesia Stock Exchange. These findings show that whether men or women

become company CEOs, the innovation process in family companies will still continue to occur. Each gender selected as CEO of a family company currently realizes the importance of innovation, namely to encourage competitive advantage for the sake of increasing business performance and business sustainability in the future. Business actors today are very aware that the business competition they face is very tight, so exploitation and exploration are needed to create innovation in order to create competitive advantage.

The results obtained in the second hypothesis testing stage are supported by research by I. H. Lee & Marvel, (2014), as well as research conducted by Rosa et al., (1996), in several parts of developed countries in Europe the preference for men as business succession is starting to be refuted, because women are starting to be considered worthy of being CEOs of family companies because of their creative thinking. In addition, the number of women starting or running new businesses is higher than men in developing countries, with the largest difference seen in Vietnam (Hoang, Nahm, and Dobbie 2021) . Additionally, emerging evidence suggests that gender diversity in companies can have a significant impact on a company's innovation capabilities (Na and Shin 2019, Attah-Boakye et al. 2020). Something that is not much different was stated by Nguyen et al (2022) who stated that gender references no longer have an influence on innovation in family companies in developing countries such as India, Bangladesh or Vietnam. First generation CEOs are no longer oriented towards choosing sons as successor CEOs, they have also started to take into account their daughters who have been prepared to become CEOs of family companies. Selanjutnya Baltazar et al. (2023); Bannò, Coller, and D'Allura (2021) revealed that intense competition encourages CEOs of family companies to no longer pay attention to the superior gender for succession in family companies. Both girls and boys will be prepared first through education and experience so that they increasingly realize that innovation in family companies is very important.

The influence of education on innovation in family companies in Indonesia

Based on the results of testing the third hypothesis, it was found that second generation CEO education had a negative effect on innovation in family companies in Indonesia. These findings show that the leadership, management and business education obtained by the second generation at home encourages innovation more than the second generation selected as business succession who received education abroad. The results obtained were because the second generation, which was prepared as the successor to the family business, was able to choose the right major, so that it was able to support the development needs of the family business that their parents ran. Apart from that, the leading campus in Indonesia that they choose as a place to receive their education certainly knows the development and business culture in Indonesia compared to those who choose to receive higher education abroad. Therefore, the desire and

accuracy to innovate is better carried out by the second generation who manage family companies who have completed higher education in the fields of organization, management and business domestically, compared to the second generation who choose to continue their higher education abroad.

The results found in hypothesis testing are supported by the concept of RBV theory. In this theory it is stated that a company's tendency to survive can be achieved by innovating. To carry out innovation, a CEO must have knowledge and experience, one way to gain knowledge is obtained from formal education, or obtained through training or business internships (J. B. Barney and Hesterly 2015). When the second generation has high knowledge, their ability to innovate will also be higher (Baltazar et al. 2023). Besides that He et al., (2021a) which found that the higher the proportion of senior executives with an academic background, the more significant the investment in company innovation. This influence is more obvious when senior managers hold important positions or have a higher level of education (Cao et al. 2022). Academic experience will influence the formation of management's cognitive foundations and values with an imprinting effect. In addition, senior management with academic experience is more ethical and disciplined, improving the quality of financial reports (Ma et al. 2019). What also supports the hypothesis was also expressed by Tanan et al. (2023) who stated that higher education taken domestically by prospective CEOs in family companies is more likely to encourage successful innovation, compared to those who choose to take higher education abroad.

The influence of TMT on innovation in family companies in Indonesia

Based on the results of testing the fourth hypothesis, it was found that the experience of being part of the management or directors of a company in the past had a positive effect on innovation in family companies listed on the Indonesia Stock Exchange. The findings obtained show that the higher the experience of being part of the board of directors or management of a company in the past, the greater the increase in innovation in family companies. This is because experience becomes learning which encourages increased awareness in succession candidates to innovate. Experience in other organizations will be valuable learning that will influence the second generation's policies to further develop the family company from the previous generation. Experience in other organizational environments will be the best teacher to encourage the second generation to become more aware of the importance of innovation than the previous generation.

The results of hypothesis testing are supported by research results Liaqat, Haron, and Bhatti (2021), it state most CEOs of family companies in a number of European and Asian countries are starting to realize that they must prepare their succession with superior quality human resources to encourage innovation in family companies. Besides that J. Barney (1991); J. B. Barney (2012); J. B. Barney and

Hesterly (2015) stated that innovation can be obtained from the experience gained by the CEO through the process of internship, training or self-taught learning, experience will make the CEO have high innovation abilities so that he is able to create competitive advantages that make the sustainability of business performance more stable. The results obtained at the fourth hypothesis testing stage are supported by research by Hou et al., (2021) which found that the CEO's first market experience will influence the company's innovation. In research, He et al., (2021) found that senior management's academic experience positively influences corporate green innovation. This influence is more visible when senior management occupies important positions or has a higher level of education. A higher level of education supports the accumulation of knowledge and learning skills that make a person more cognitively capable. This shows acceptance of new ideas and changes which can be a source of innovation (Njinyah et al. 2022). Recent studies show that directors with foreign experience increase a firm's long-term value, firm innovation (Yuan and Wen 2018) and information transparency (Wen, Cui, and Ke 2020).

The influence of family ownership on innovation in family companies in Indonesia

Based on the results of testing the fifth hypothesis, it was found that family ownership does not have a significant effect on innovation in family companies in Indonesia. These findings indicate that whether large or small family ownership in a family company, innovation will still be implemented. The second manager or successor chosen to be CEO will try to continue to innovate because he realizes that the family company he leads must continue to run. To make this happen, innovation is certainly important to create superior products or create high sales. Through innovation, family companies managed by the second generation will be able to create competitive advantages, and this is an important indicator that can encourage increased business performance or business sustainability in the long term.

The results obtained are consistent with Cirillo et al., (2019) who found that higher family ownership tends not to encourage innovation. The dominance of the family is accustomed to classical governance patterns which tend to maintain family hegemony. This situation encourages them to inhibit innovation. The same results were also obtained by Y. C. Huang, Yang, & Wong (2016) who found that family ownership tends to inhibit innovation. The assumption is that when the family innovates, outsiders will join the company's board of directors. Something not much different was expressed by Bannò, Coller, and D'Allura (2021) stated that the large percentage of family ownership is not the reason why innovation must be carried out in family companies, but rather that intense competition will encourage this to happen. Support for this opinion was expressed by Ballal, Bapat, and Milind Ballal (2019); Liaqat, Haron, and Bhatti (2021); Nguyen et al. (2022), they stated that to maintain the hegemony of family ownership, CEOs

must be aware of the need for innovation, intense competition encourages innovation to be intensive and carried out as quickly as possible in family companies.

The influence of institutional ownership on innovation in family companies in Indonesia

Based on the results of testing the sixth hypothesis, it was found that institutional ownership had no significant effect on innovation in family companies listed on the Indonesia Stock Exchange. These findings show that a high or low percentage of institutional ownership in family companies will not affect innovation in family companies. These results show that innovation will still occur in family companies, whether they have institutional ownership or not at all. In general, CEOs of family companies are very aware of the importance of the innovation they carry out to maintain the survival of the family companies they manage. Innovation will bring harmony between the ability to exploit or manage businesses, thereby creating innovative products and innovative strategies to encourage increased business performance.

What was consistently obtained in research by J. Chi, Liao, and Yang (2019) found that institutional ownership had no effect on innovation in family companies. Furthermore, research results obtained by Y. Yuan, Hu, and Cheng (2023), found that the existence of other companies in the family company's management functioned as an instrument for monitoring the activities of the family company's CEO, but they could not influence the family company's CEO to innovate. Fear of failure and the increasing number of external parties entering the company and disrupting family hegemony in the company environment tends to inhibit innovation in family companies. Furthermore, the research results of Ballal, Bapat, and Milind Ballal (2019; Ye et al. (2022) state that the existence of institutional ownership in a family company will not influence the CEO to innovate, considering that the largest ownership in a family company comes from blood ties, or close ties. is formed based on a legal bond such as marriage, until the process of adoption in family business will occur when the majority of family members in company management provide support for this policy.

Conclusion

In accordance with the results of hypothesis testing, it was found that the second generation selected as CEO was able to encourage better innovation than the previous generation in family companies listed on the Indonesia Stock Exchange. Apart from that, in the results of testing the second hypothesis, it was found that the second gender as CEO in a family company did not have a significant effect on innovation

in family companies listed on the Indonesia Stock Exchange. In the third hypothesis testing stage, it was found that the second generation who had received higher education in the country had better innovation abilities in developing businesses.

In the fourth hypothesis testing stage, it was found that organizational and leadership experience or being part of the board of directors of other companies in the past from the second generation had a positive effect on innovation in family companies listed on the Indonesia Stock Exchange. However, in the fifth and sixth stages of hypothesis testing, it was found that family ownership and institutional ownership did not have a significant effect on innovation in family companies listed on the Indonesia Stock Exchange.

Guided by the results of hypothesis testing which found that the second generation had a positive influence on innovation in family companies in Indonesia. These results show the importance of the innovation process in family companies in Indonesia after business succession from the first generation to the second generation. This condition is because the business competition map experienced by the first generation is certainly different from the business competition faced by the second generation. Therefore, the second generation who become business CEOs must be more creative and dare to make breakthroughs in the form of innovation in order to create competitive advantages that can encourage increased business performance and maintain business sustainability in the future.

Apart from that, from the description of the results of hypothesis testing, it can be seen that higher education taken by the second generation in the country is more capable of creating innovation in family companies. This suggests that every candidate for business succession, whether male or female, must equip themselves with education and knowledge of the type of business they are running. Where education does not have to be done abroad, but can also be effectively done at home. Domestic business practitioners certainly know the patterns and structures of business in the country so they can provide references to the second generation who are in the process of carrying out innovations in order to create competitive advantages.

The results obtained in this research can contribute theoretical implications to the implementation of the RBV theory concept. This can be seen from the role of the second generation CEO in encouraging increased innovation in family companies. Where the increase in innovation is due to the cadre process of CEO candidates, which encourages the previous CEO to provide guidance, increase the level of education and provide experience to children or family members who will be appointed as CEO, so that when the second generation CEO has occupied the position they are aware of the need to innovate to maintain the competitiveness and existence of higher managed family companies.

Furthermore, the results obtained at the hypothesis testing stage can also provide practical implications, where the findings obtained will become a reference and consideration for the CEO to carry

out regeneration, and prepare succession candidates with additional levels of education and experience, so that the selected succession candidates will have quality. higher human resources, so that it can encourage innovation in family companies which of course can be one of the efforts to maintain the sustainability of family companies in the long term

The researcher realizes that the current research still has a number of limitations, namely the sample size used is relatively small, which also influences the research results obtained. Therefore, it is important for future researchers to try again to increase the number of observations processed, such as increasing the number of family companies and extending the research period that will be carried out in the future. Innovation measurements are carried out using binary numbers (1 and 0) so that the analysis is only carried out using binary logistic regression. Researchers suggest making different innovation measurements such as using a nominal scale using a proxy for R & D costs, or the percentage of the number of patents in a year. Apart from that, there are a number of other variables that can also influence innovation in family companies that have not been used in this research, namely nationality and religiosity. Therefore, it is important for future researchers to try to use one of these variables.

References

Attah-Boakye, Rexford, Kweku Adams, Danson Kimani, and Subhan Ullah. 2020. "The Impact of Board Gender Diversity and National Culture on Corporate Innovation: A Multi-Country Analysis of Multinational Corporations Operating in Emerging Economies." Technological Forecasting and Social Change 161(January): 120247.

Ballal, Juili, Varadraj Bapat, and Juili Milind Ballal. 2019. "How Does Family Succession Impact Family Firms' Innovation?" Asian Journal of Innovation and Policy 8: 302–24. https://www.researchgate.net/publication/348304445.

Baltazar, Juliana R., Cristina I. Fernandes, Veland Ramadani, and Mathew Hughes. 2023. "Family Business Succession and Innovation: A Systematic Literature Review." Review of Managerial Science 17(8): 2897–2920.

Bannò, Mariasole, Graziano Coller, and Giorgia M. D'Allura. 2021. "Family Firms, Women, and Innovation." Sinergie 39(2): 59–74.

Barney, Jay. 1991. "Firm Reources Ad Sustained Competitive Advantege." Journal of Management 17(1): 99–120.

Barney, Jay B. 2012. "Purchasing , Supply Chain Management and Sustained Competitive ..." Journal of Supply Chain Management (April): 3–6.

Barney, Jay B, and S William Hesterly. 2015. Strategic Management and Competitive Advantage

Concepts & Cases.

Chemmanur, Thomas J., and Xuan Tian. 2018. "Do Antitakeover Provisions Spur Corporate Innovation? A Regression Discontinuity Analysis." Journal of Financial and Quantitative Analysis 53(3): 1163–94.

Chi, Jing, Jing Liao, and Jingjing Yang. 2019. "Institutional Stock Ownership and Firm Innovation: Evidence from China." Journal of Multinational Financial Management 50: 44–57.

Chirico, Francesco, and Franz W. Kellermanns. 2022. "When Does Time Enhance Family Firm Performance? Examining Family Generation in Control and Family Control Dispersion through a Mixed-Gamble Logic." Long Range Planning (May 2021): 102272.

Cioca, Andriana, Kassam Wehbe, Delia Popescu, and Constanja Popescu. 2020. "Innovation in Family Business Groups." The 3rd International Conference on Economics and Social Sciences Innovative 3(3): 786–802.

Cirillo, Alessandro, Mario Ossorio, and Luca Pennacchio. 2019. "Family Ownership and R&D Investment: The Moderating Role of Banks and Private Equity." Management Decision 57(7): 1675–94.

Cuthbertson, Richard W., and Peder Inge Furseth. 2022. "Digital Services and Competitive Advantage: Strengthening the Links between RBV, KBV, and Innovation." Journal of Business Research 152(January 2021): 168–76.

Dahl, Gordon B., and Enrico Moretti. 2008. "The Demand for Sons." Review of Economic Studies 75(4): 1085–1120.

Dai, Ye, Gukdo Byun, and Fangsheng Ding. 2019. "The Direct and Indirect Impact of Gender Diversity in New Venture Teams on Innovation Performance." Entrepreneurship: Theory and Practice 43(3): 505–28.

Dang, Cat My, and Aki Harima. 2020. "Dual Embeddedness and Entrepreneurial Activities of Second-Generation Ethnic Entrepreneurs: Multiple Case Studies with Vietnamese Entrepreneurs in Germany." Journal of Entrepreneurship and Innovation in Emerging Economies 6(1): 84–113.

Darmono, Laksito Adi. 2019. "Deloitte Tawarkan Konsultasi Total Bisnis Keluarga Indonesia."

Daya Qarsa. 2022. "Pembelian Menurun, Padahal Perusahaan Keluarga Pendorong Ekonomi Indonesia."

George, Jennifer M., and Jing Zhou. 2001. "When Openness to Experience and Conscientiousness Are Related to Creative Behavior: An Interactional Approach." Journal of Applied Psychology 86(3): 513–24.

Harasheh, Murad, Alessandro Capocchi, and Andrea Amaduzzi. 2022. "Capital Structure in Family Firms: The Role of Innovation Activity and Institutional Investors." EuroMed Journal of Business.

He, Kang, Wanyi Chen, and Liguang Zhang. 2021. "Senior Management's Academic Experience and

Corporate Green Innovation." Technological Forecasting and Social Change 166(January): 120664.

Hermundsdottir, Fanny, and Arild Aspelund. 2022. "Competitive Sustainable Manufacturing - Sustainability Strategies, Environmental and Social Innovations, and Their Effects on Firm Performance." Journal of Cleaner Production 370(August): 133474.

Hillebrand, Sebastian. 2019. "Innovation in Family Firms – a Generational Perspective." Journal of Family Business Management 9(2): 126–48.

Hirofumi Uchida, Kazuo Yamada, Alberto Zazzaro. 2023. "Management Innovations in Family Firms after CEO Successions: Evidence from Japanese SMEs Hirofumi." Journal Pre-Proof: 131234. https://doi.org/10.1016/j.snb.2021.131234.

Hoang, Ngoc, Daehoon Nahm, and Michael Dobbie. 2021. "Innovation, Gender, and Labour Productivity: Small and Medium Enterprises in Vietnam." World Development 146: 105619.

Holmstrom, Bengt. 1989. "Agency Costs and Innovation." Journal of Economic Behavior and Organization 12(3): 305–27.

Hou, Xiaohui, Bo Wang, Jiale Lian, and Kong lin Ke. 2021. "Do CEO's Early-Life Marketization Experiences Affect the Innovation Behavior of SMEs?" Journal of Asian Economics 75(28): 101339.

Hua, Changhua, Li Zhao, Qile He, and Ziguang Chen. 2023. "When and How Workplace Ostracism Leads to Interpersonal Deviance: The Moderating Effects of Self-Control and Negative Affect." Journal of Business Research 156(December 2021): 113554. https://doi.org/10.1016/j.jbusres.2022.113554.

Huang, Haijie, Changjiang Lyu, and Xiaowen Zhu. 2019. "Second Generation Involvement and Corporate Innovation: Evidence from China." Nankai Business Review International 10(4): 526–45.

Huang, Yi Chun, Min Li Yang, and Ying Jiuan Wong. 2016. "The Effect of Internal Factors and Family Influence on Firms' Adoption of Green Product Innovation." Management Research Review 39(10): 1167–98.

Jaidi, Nahiyah et al. 2022. "Ambidexterity Behavior of Creative SMEs for Disruptive Flows of Innovation: A Comparative Study of Indonesia and Taiwan." Journal of Open Innovation: Technology, Market, and Complexity 8(3): 141. https://doi.org/10.3390/joitmc8030141.

Jia, Jing, Zhongtian Li, Yuanyuan Hu, and Baoshan Tao. 2022. "Does Top Management Team's Job Mobility Experience Matter for Corporate Innovation?" Pacific Accounting Review 34(3): 426–50.

Jiang, Li, and Yu Bai. 2022. "Strategic or Substantive Innovation? -The Impact of Institutional Investors' Site Visits on Green Innovation Evidence from China." Technology in Society 68(August

2021): 101904.

Kellermanns, Franz W., Kimberly A. Eddleston, Tim Barnett, and Allison Pearson. 2008. "An Exploratory Study of Family Member Characteristics and Involvement: Effects on Entrepreneurial Behavior in the Family Firm." Family Business Review 21(1): 1–14.

Kim, Sahrok, K. Praveen Parboteeah, and John B. Cullen. 2022. "Social Institutions Approach to Women's Firm Ownership and Firm Bribery Activity: A Study of Small-Sized Firms in Emerging Markets." Journal of Business Research 144(January): 1333–49.

Korede, Tayo, Abdullah Al Mamun, Paul Lassalle, and Andreas Giazitzoglu. 2023. "Exploring Innovation in Challenging Contexts: The Experiences of Ethnic Minority Restaurant Owners during COVID-19." International Journal of Entrepreneurship and Innovation 24(1): 19–31.

Lee, In Hyeock, and Matthew R. Marvel. 2014. "Revisiting the Entrepreneur Gender-Performance Relationship: A Firm Perspective." Small Business Economics 42(4): 769–86.

Lee, Jangwook, and Jiyoon Chung. 2022. "Women in Top Management Teams and Their Impact on Innovation." Technological Forecasting and Social Change 183(August): 121883.

Liaqat, Muhammad Usman, Abbott J Haron, and Hassan Shakil Bhatti. 2021. "The Effect of Succession on Family Business Innovation and Leadership: Case Analysis of Australia SMEs." Journal of Entrepreneurship & Organization Management 10(2): 1–8.

López-Bonilla, Jesús Manuel, and Luis Miguel López-Bonilla. 2012. "Sensation-Seeking Profiles and Personal Innovativeness in Information Technology." Social Science Computer Review 30(4): 434–47.

Martínez-Alonso, Rubén, María J. Martínez-Romero, and Alfonso A. Rojo-Ramírez. 2022. "Refining the Influence of Family Involvement in Management on Firm Performance: The Mediating Role of Technological Innovation Efficiency." BRQ Business Research Quarterly 25(4): 337–51.

Marvel, Matthew R., In Hyeock Ian Lee, and Marcus T. Wolfe. 2015. "Entrepreneur Gender and Firm Innovation Activity: A Multilevel Perspective." IEEE Transactions on Engineering Management 62(4): 558–67.

De Massis, Alfredo, Josip Kotlar, Jess H. Chua, and James J. Chrisman. 2014. "Ability and Willingness as Sufficiency Conditions for Family-Oriented Particularistic Behavior: Implications for Theory and Empirical Studies." Journal of Small Business Management 52(2): 344–64.

Miller, Steve, Bin Qiu, Bin Wang, and Tina Yang. 2022. "Monitoring Institutional Ownership and Corporate Innovation." Journal of Empirical Finance 69(August 2021): 144–65.

Na, Kyunga, and Kwangsoo Shin. 2019. "The Gender Effect on a Firm's Innovative Activities in the Emerging Economies." Sustainability (Switzerland) 11(7): 1–24.

Nguyen, Minh Hoang et al. 2022. "Gender Issues in Family Business Research: A Bibliometric Scoping

Review." Journal of Asian Business and Economic Studies 29(3): 166–88.

Njinyah, Sam Zisuh, Sally Jones, Ali Alsiehemy, and Bader Aldawaish. 2022. "An Examination of the Institutional Implication of the Relationship between the Managerial Level of Education and Experience on Firm Innovation in Africa." Management Research Review.

Pereira, Vijay, and Umesh Bamel. 2021. "Extending the Resource and Knowledge Based View: A Critical Analysis into Its Theoretical Evolution and Future Research Directions." Journal of Business Research 132(December 2020): 557–70.

Putra, Hermansyah, and Muhammad Nasir. 2015. "Analisis Faktor-Faktor Yang Mempengaruhi Produksi Padi Di Propinsi Aceh." Jurnal Agrisep 16(1): 53–60.

Quintana-García, Cristina, and Carlos A. Benavides-Velasco. 2016. "Gender Diversity in Top Management Teams and Innovation Capabilities: The Initial Public Offerings of Biotechnology Firms." Long Range Planning 49(4): 507–18.

Quintana-García, Cristina, Macarena Marchante-Lara, and Carlos G. Benavides-Chicón. 2022. "Boosting Innovation through Gender and Ethnic Diversity in Management Teams." Journal of Organizational Change Management 35(8): 54–67.

Rahim, R., Husni, T., Desyetti, D., & Ryswaldi, R. (2024). Role of Successor, Government Policy, and Collaboration Synergy on Sustainability Family Business: Moderation of Gender and Firm Age. Business Perspectives and Research, 22785337241239439.

Rondi, Emanuela, Alfredo De Massis, and Josip Kotlar. 2019. "Unlocking Innovation Potential: A Typology of Family Business Innovation Postures and the Critical Role of the Family System." Journal of Family Business Strategy 10(4): 100236.

Rosa, Peter, Sara Carter, and Daphne Hamilton. 1996. "Gender as a Determinant of Small Business Performance: Insights from a British Study." Small Business Economics 8(6): 463–78.

Salvato, Carlo, and Ken Moores. 2010. "Research on Accounting in Family Firms: Past Accomplishments and Future Challenges." Family Business Review 23(3): 193–215.

Schoar, Antoinette, and Luo Zuo. 2017. "Shaped by Booms and Busts: How the Economy Impacts CEO Careers and Management Styles." Review of Financial Studies 30(5): 1425–56.

Scholes, Louise et al. 2021. "Family Management and Family Guardianship: Governance Effects on Family Firm Innovation Strategy." Journal of Family Business Strategy 12(4): 100389.

Strohmeyer, Robert, Vartuhi Tonoyan, and Jennifer E. Jennings. 2017. "Jacks-(and Jills)-of-All-Trades: On Whether, How and Why Gender Influences Firm Innovativeness." Journal of Business Venturing 32(5): 498–518.

Sunon, Kamrul Hassan, Muzhtaba Tawkeer Islam, and M. Adnan Kabir. 2022. "Impact of Family Succession on Financial Performance: Empirical Evidence from Bangladesh." Journal of Family

Business Management 12(2): 337–54.

Tanan, Antonius, Hadi Cahyadi, Jacob Donald Tan, and Lee Kean Yew. 2023. "Family-Led Learning through Parenting in Family Business." Journal of Innovation and Entrepreneurship 12(1). https://doi.org/10.1186/s13731-023-00352-6.

Terjesen, Siri, Ruth Sealy, and Val Singh. 2009. "Women Directors on Corporate Boards: A Review and Research Agenda." Corporate Governance: An International Review 17(3): 320–37.

Tonoyan, Vartuhi, and Christopher J. Boudreaux. 2023. "Gender Diversity in Firm Ownership: Direct and Indirect Effects on Firm-Level Innovation across 29 Emerging Economies." Research Policy 52(4): 104716.

Villalonga, Belen, and Raphael Amit. 2006. "How Do Family Ownership, Control and Management Affect Firm Value?" Journal of Financial Economics 80(2): 385–417.

Villalonga, Belén, and Raphael Amit. 2020. "Family Ownership." Oxford Review of Economic Policy 36(2): 241–57.

Webb, Justin W., Theodore A. Khoury, and Michael A. Hitt. 2020. "The Influence of Formal and Informal Institutional Voids on Entrepreneurship." Entrepreneurship: Theory and Practice 44(3): 504–26.

Wen, Wen, Huijie Cui, and Yun Ke. 2020. "Directors with Foreign Experience and Corporate Tax Avoidance." Journal of Corporate Finance 62(January 2019): 101624.

Xu, Nianhang, Qingbo Yuan, Xuanyu Jiang, and Kam C. Chan. 2015. "Founder's Political Connections, Second Generation Involvement, and Family Firm Performance: Evidence from China." Journal of Corporate Finance 33: 243–59.

Ye, Shengchao et al. 2022. "The Intergenerational Succession and Financialization of Chinese Family Enterprises: Considering the Influence of Heirs' Growing Experience." Frontiers in Psychology 13(October): 1–15.

Young, Michael N. et al. 2008. "Corporate Governance in Emerging Economies: A Review of the Principal-Principal Perspective: Review Paper." Journal of Management Studies 45(1): 196–220.

Zahra, Shaker A. 2003. "International Expansion of U.S. Manufacturing Family Businesses: The Effect of Ownership and Involvement." Journal of Business Venturing 18(4): 495–512.