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# Dynastic Control without Ownership: Evidence from Post-war Japan

By

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**ABSTRACT**

Dynastic-controlled firms are led by founding-family CEOs while the family owns an insignificant share of equity (defined as less than 5%). They represent 7.4% of listed firms in post-war Japan, include well-known firms such as Casio, Suzuki, and Toyota, and are often grouped with widely held firms in the literature. These firms differ in key performance measures from both traditional family firms and non-family firms, and evolve from the former as equity-financed growth dilutes family ownership over time. In turn, the transition from dynastic control to non-family status is driven by a diminution of family legacy and talent.

JEL Codes: G32; L26
Keywords: Family control; Ownership; Succession

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*"Ever since he was a little boy, his mother always told him, 'One day you'll be president.'"* [1]
About Toyota's President, Akio Toyoda

## 1. Introduction

Can business dynasties continue to exercise control over firms they founded, even when their ownership stakes become insignificant? We define dynastic-controlled[2] firms as those in which a member of the founding family serves as the CEO[3] while the family owns less than 5% of equity. Despite anecdotal evidence on the presence of dynastic-controlled firms in other advanced economies including the U.S., we provide the first systematic documentation on their prevalence, persistence, and performance, based on the universe of publicly listed firms in post-war Japan.[4]

The Japanese governance system is ideal for studying dynastic control for two reasons. First, unlike the US, Japan does not permit dual-class voting shares, so the one-share-one-vote rule applies. Second, unlike many other Asian countries, pyramidal ownership structures are, as a rule, absent in Japan.[5] Thus, voting control and ownership go hand in hand in Japan, and a loss in ownership is strictly correlated with a loss in voting control.

This study makes four distinctive contributions to the literature on family firms. First, we show the prevalence of dynastic-controlled firms is non-trivial – they represent



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[1] Jason Clenfield and Yuki Hagiwara, Doubting Toyota Prince Defeats Crisis to Prove Self Wrong: Cars, Bloomberg, November 21, 2013 (online).

[2] The term *dynastic-controlled* is motivated by the seminal work of Jensen and Meckling (1976) on the separation of ownership and management control.

[3] In Japan, the highest-ranking executive officer is the *shacho*, or president, of the company. In keeping with the literature (see Kaplan, 1994; Crossland and Hambrick, 2007), we take the *shacho* position as the CEO, and use the terms top management and CEO interchangeably in the rest of the paper. For instance, Crossland and Hambrick (2007) note that "In Japan, the top executive is the *Shacho* (president)".

[4] Where such firms have merited mention, they have been bracketed either with a broader group of traditional family firms that have control plus ownership or, more commonly, with widely held non-family firms. See, for instance, Masulis et al. (2011), footnote 6: "There are a few cases where a sample firm is reported to be effectively controlled by the founding family through executive and board positions, but the family has divested its interests to below 10% of voting rights (e.g., the Banco Santander group in Spain). For consistency, these firms are categorized as widely held." See also section 3 and footnote 24 for further discussion.

[5] Masulis et al. (2011) document that Japan resembles the UK and the US in the absence of pyramidal ownership structures. See also Morck and Nakamura (1999) and Morck, Nakamura, and Shivdasani (2000).

7.4% of all listed firms, and 16.3% of all firms incorporated as family firms, on Japanese exchanges between 1955 and 2000. In IPO time, such firms represent 10.1% of all firms incorporated as family firms that survive 10 years after their IPO, and 20.7% of those that survive 20 years after their IPO. To further illustrate the importance of dynastic-controlled firms, we highlight the cases of Casio, Suzuki, and Toyota Motor in section 2.

Second, we provide an extended literature review of 112 empirical papers on family firms. The literature relies on binary definitions of family firms (a firm either is or is not a family firm), and more than half of the 135 definitions in our survey use ownership as the sole criterion to define a family firm – the most common minimum ownership threshold is 20% of equity for publicly traded firms. The rest use a variety of definitions including management control and board presence. Three out of four definitions group dynastic-control firms with widely held non-family firms, and the rest categorize them as family firms together with firms in which the family has significant ownership with or without the CEO position.

Third, we compare dynastic-controlled firms with two groups of firms: first, *traditional family firms*, in which the founding family retains significant ownership (>5%) and the CEO's position; and second, *ex-family firms,* in which the founding family's ownership is less than 5% and it has relinquished the CEO position permanently. We find dynastic-controlled firms have better accounting performance than ex-family firms, but underperform traditional family firms.

Our final contribution is to analyze the factors that drive traditional family firms to evolve into dynastic-controlled firms and, eventually, the factors that drive dynastic-controlled firms to become ex-family firms. We find the former is driven by a growth-induced need for finance, whereas the latter is correlated with diminution of family resources, such as legacy, education, and talent.

Our documentation of the prevalence and persistence of dynastic-controlled firms provides a new perspective on the Berle and Means (1932) thesis that the modern widely held firm is fated to be taken over by a cadre of professional managers as the founding family's ownership declines over time to minuscule levels. Our paper weakens this conjecture by establishing that many families are able to retain control of their firms well after their ownership has become insignificant.

The rest of the paper is organized as follows. In the next section, we provide case studies of Casio, Suzuki, and Toyota Motor to illustrate three different ways that families retain control when their ownership is materially diluted. In section 3, we provide a short summary of the literature review of 112 studies covering 135 family-firm definitions and show how extant literature categorizes dynastic-controlled firms. The full survey is included as an Internet Appendix. Section 4 describes our data. Section 5 documents the prevalence of dynastic-controlled firms among publicly listed firms in post-war Japan. In section 6, we show dynastic-controlled firms are different from both traditional family firms and non-family firms along widely followed performance metrics. Section 7 identifies factors driving the transition from traditional family firms to dynastic-controlled firms, and eventually from dynastic-controlled firms to ex-family firms. We conclude in section 8.

## 2. Case studies: Casio, Suzuki and Toyota Motor



Three well-known Japanese companies, Casio, Suzuki, and Toyota Motor, illustrate how founding families maintain management control through talent, advanced governance mechanisms, and board control in situations in which they have very little ownership. Fig. 1 shows the evolution of family ownership and top management from 1960-2019 for the three firms. In each case, the ownership stake of the founding family was either never significant, or reduced to an insignificant level (defined as less than 5%) by the end of the sampling period. Coupled with a member of the founding family serving as the current CEO, we classify all three firms as dynastic-controlled today.

### *2.1. Casio Computer Company: Control through talented family members*

We start with Casio, the iconic calculator and electronic watch company, and show how equity-financed growth has diluted founding-family ownership over time. We propose that family talent nevertheless has kept the founding family in control to this day.

Casio was founded in 1946 as *Kashio Seisakujo* by a team of founders: a father and four sons from the Kashio family. The Kashio men worked together to develop the world's first electronic calculator, which was launched in 1957. To finance expansion, Casio went public in 1970 on the Tokyo Stock Exchange, with the family retaining 60% of the shares. Casio listed on the Amsterdam Stock Exchange in 1973 and on the Frankfurt Stock Exchange in 1979. These listings and the equity issuances following them resulted in a steep decline in the founding family's relative equity ownership, as shown in Fig. 1: 19.3% in 1980, 8.1% in 1990, 5.7% in 2000, and below 5% in most subsequent years.[6] Categorizing Casio today as a widely held firm, with financial institutions as its largest shareholders, is easy.

In reality, however, the Kashio family has always run Casio. The Kashio brothers have taken turns holding top management positions at the firm.[7] Casio's first CEO was the founding father, and was succeeded by his son, Tadao, who had a reputation as a financial wizard and served as CEO for 28 years. Tadao retired at the age of 71 in 1988 and remained as Casio's adviser until his death in 1993. The second brother, Toshio (born in 1925), was the inventor of many of Casio's top products and served as board chairman from 1988 until 2011, and then as honorary chairman until his death in 2012 at the age of 87. The third brother, Kazuo (born in 1929), with an expertise in sales and marketing, led Casio as its third CEO from 1988 and held the dual positions of CEO and board Chairman in 2011. The fourth brother, Yuiko (born in 1930), was the production chief and served as vice president from 1991 until his retirement in 2014 at the age of 84. Casio's current CEO is Kazuhiro Kashio, the son of Kazuo Kashio, and represents the third generation of the founding family to run the firm.

*2.2. Suzuki Motor Corporation: Control through arranged marriages and adult adoptions*

Since going public in 1949, the founding Suzuki family has *never been* listed among the top 10 shareholders of their iconic namesake company. For more than 70 years, family ownership has been less than 1%. Suzuki's largest shareholders have been banks and insurance companies that have held their shares for several decades.

[6] At the end of 2019, total ownership by the Kashio brothers via the Casio Bros Corp. stood at 3.86%.We include shares held by the unlisted Casio Brothers Limited and the Casio Science Foundation alongside the direct equity stakes held by the Kashio family.

[7] Casio company website, accessed on September 10, 2020, https://www.casio.co.jp/company/history/.

Suzuki was established by Michio Suzuki in 1909. Osamu Suzuki, the current CEO and patriarch, entered the Suzuki family through an arranged marriage to the eldest daughter of Suzuki's second CEO, Shunzo Suzuki. Osamu adopted the Suzuki surname, began working at Suzuki in 1958, and rose quickly through the ranks to senior management positions. In 1978, when Chairman Shunzo passed away and Suzuki's third CEO, Jitsujiro Suzuki, had health problems, Osamu was promoted as Suzuki's fourth CEO at the age of 48. Osamu's two predecessor CEOs, Shunzo and Jitsujiro, were also the founder's adopted sons-in-law who took on the Suzuki name after arranged marriages.

Osamu followed the family's succession tradition by grooming his son-in-law, Hirotaka Ono, to be the next CEO, but unfortunately, Ono died of cancer in 2007 at the age of 52. In 2008, partly to cope with the financial crisis, Osamu, aged 78 at the time, assumed the positions of joint CEO/chairman. In 2015, his 55-year-old eldest son, Toshihiro Suzuki, was appointed as the CEO, while Osamu continued serving as chairman and has shown no signs of retiring even as he turned 90 in 2020.

The Suzuki family has always controlled their namesake company without any significant ownership stakes. This control has been possible through advanced governance mechanisms focused on increasing the potential pool of talent through arranged marriages and the adoption of sons-in-law.

*2.3. Toyota Motor Company: Control through intra-group board ties*

Toyota Motor is one of the world's largest automobile manufacturers, with a market capitalization at its peak of USD 220 billion in fiscal year 2015. The Toyota Motor case illustrates how complex ownership and management structures over a group of firms can empower the family, even when direct family-ownership stakes are insignificant.

Toyota Motor is part of the Toyota Group comprising a network of companies connected to each other via cross shareholdings and shared top executives from the extended Toyoda clan. Over the last 50 years, the largest shareholders in Toyota Motor have been banks, financial investors, and a handful of group firms such as Toyota Industries

Corporation and Denso Corporation. The Toyoda family's direct ownership stake in Toyota Motor was insignificant throughout our sample period.

After the war, Toyota Motor was led by the founder's son, Kiichiro Toyoda, and was on the brink of bankruptcy in 1949. The apex firm in the Toyota group, Toyota Industries, sent its CEO, Taizo Ishida, to rescue Toyota Motor and act as the family's caretaker. Following the death of Kiichiro in 1952, Taizo continued running Toyota Motor until 1961, while grooming young Eiji Toyoda as the next successor (Bennedsen et al., 2016). Eiji was named as Toyota Motor's fifth CEO in 1967, a position he held until 1981 when he became the chairman of its board. Eiji grew Toyota Motor into a global leader in the automotive industry.

Toyota Motor's sixth CEO was Shoichiro Toyoda, the first son of Kiichiro and a designated heir by birth. Shoichiro served as CEO from 1982-1991 and groomed his younger brother, Tatsuro, for succession. Tatsuro was promoted to Toyota Motor's seventh CEO in 1991 when Shoichiro became chairman. Toyota Motor's next three CEOs were career employees (or *sararimen*), namely, Hiroshi Okuda (1995-1999), Katsuaki Watanabe (1999-2005), and Fujio Cho (2005-2009). During this high-growth decade, Toyota Motor looked as if it had transformed itself to become a non-family firm run by professional managers. However, two Toyoda seniors, Eiji and Shoichiro, retained influential board positions, and in reality, the professionalization of top management proved to be temporary.[8]

Like his father, Akio Toyoda, the only son of Shoichiro, was told by his mother since he was little that "One day you'll be president."[9] The prophecy came true in June 2009 when 49-year-old Akio was named as Toyota Motor's 11th CEO. His appointment came on the heels of the company's largest recall scandal, its worst crisis in decades. The company needed the Toyoda family name to affirm that it would restore the values, quality, and reputation upon which the business was founded. Toyota's share price increased by 3% when Akio's appointment was announced (Bennedsen et al., 2016).

[8] Family tensions and succession manoeuvring darken Toyota's top ranks, *Sentaku,* December 2016, accessed on January 18, 2018, https://www.sentaku.co.jp/articles/view/16445.

[9] See footnote 1.

Mr. Akio's equity ownership in Toyota Motor is less than 0.1% (his father owned 0.2%, as of 2008). Based solely on equity ownership, the Toyoda family's control over the firm might appear puzzling.

Casio, Suzuki, and Toyota Motor reflect three different ways that founding families have retained management control when rapid growth diluted their ownership to insignificant levels. The Kashio family has kept control through a line of talented family managers. The Suzuki family has broadened its talent pool for succession through the use of arranged marriages and adult adoptions for three successive generations. The Toyoda family has retained control via board presence supported by cross shareholdings within the Toyota group of firms and the use of career professional CEOs during periods in which family heirs were not ready to take the helm.

*2.4. Non-Japanese cases of dynastic-controlled firms*

Do dynastic-controlled firms exist outside Japan? In the next section, we note that the handful of cases of dynastic control without ownership in the literature are not time persistent – all but one of these firms have been acquired over time. Furthermore, many of the time-persistent cases are supported by control-enhancing mechanisms such as dual class shares.[10]

Nevertheless, dynastic-controlled firms do exist outside Japan and our first example is the Taiwanese Sinon Corporation,[11] founded in 1955 by Tien-Fa Yang with support from the Horng family. Sinon grew from a single agrochemical factory into a diversified business group with more than 3,000 employees, mainly in Taiwan but with subsidiaries in China, Thailand, the US, and Australia. Tien-Fa Yang passed away in 1989 and was succeeded by his son Wen-bin Yang, who listed the company on the Taiwan Stock Exchange. The

[10] Examples include many European-listed family-controlled companies and the J. M. Smucker Company in the U.S. Smucker has been run by the eponymous family for four generations, even though their equity stake in the firm is now less than 6%. A unique aspect of their share structure is time phased voting. Under this set-up, one share in Smucker equals one vote if held for less than four years and equals 10 votes if held for more than four years. A few other well-established companies such as the Ford Motor Company and the New York Times also vest control in the hands of the founding family with very little equity ownership, albeit in both cases, dual voting shares empower the founding family to exercise board control of the firms.

[11] We are indebted to Hsi-Mei Chung and Yi-Chun Lu for suggesting this case, providing ownership and management data and translating press coverage around the death of Wen-bin Yang.

company expanded and diversified over the next 30 years leading to a steady decline in the Wang family's share of ownership. The family ownership was about 6% in 1997, fell to 4.5% in 2003, 2.8% in 2010, and has stayed between 2% and 3% since then. From 1989 to 2015, Wen-bin Yang held both the title of chairman and group manager (CEO). In 2015, Wen-bin Yang suddenly passed away and left a succession vacuum. The press emphasized that Mr. Po-Yen Horng[12] took up the chairman position temporarily until the third generation of the Yang family was ready.[13] Dynastic control by the Yang family appears to be supported by both the Horng family and long-term investors.

The second example is Banco Santander from Spain, with a market capitalization of around 75 billion euros in 2019, which puts it among the top 15 banks in the world. Santander is listed on five global stock exchanges and all shares carry equal votes. The Botín family has run Banco Santander since 1857 for four generations. As was his father, Emilio Botín was groomed to be the successor, entering the bank at the age of 24 and rising quickly through the executive ranks. At the age of 52 in 1986, Emilio replaced his father as CEO and steered Banco Santander from a small regional bank to become not only the largest bank in Spain but also in the eurozone. Due to rapid expansion, the family ownership fell to around 2% by the time of his sudden death in 2014. Following his death, Ana Botín, his 53-year-old daughter, was nominated as the chairperson to run the banking empire. When Ana Bótin was appointed to the top position, the press highlighted that she possessed strong family assets associated with the family's heritage, continuity, and network. During Ana's tenure running Banco Santander, the family's ownership had declined to less than 0.15% by 2019. Currently, asset management companies and investment banks are among the bank's top 10 shareholders.

[12] Po-Yen Horng and his family own less than 4% of Sinon's equity.

[13] The third generation are Wen-bin Yang's second daughter, Renya Yang, and two nephews, Renming and Renyou Yang. The current interim group manager is a long-term career employee, Tsu-fang Yen.

## 3. Categorization of dynastic-controlled firms in the family-business literature[14]

In this section, we describe the large variety of family-firm definitions employed in the literature and show how existing studies have failed to recognize dynastic-controlled firms as a separate class. Definitions matter in generating even the most basic insight about family firms. For example, Anderson and Reeb (2003) find superior performance for family firms relative to non-family firms. However, subsequent papers contest this result: Villalonga and Amit (2006) and Miller et al. (2007) show the superior performance of family firms is driven by the presence of founder-controlled firms. If founder-controlled family firms are accorded a separate category, the remaining class of heir-managed firms' performance is significantly lower (Bennedsen et al., 2007).

Extant definitions of family firms are based on multiple criteria including equity ownership, family involvement in executive management, boards, and planned or realized succession within the family. Almost all empirical papers take a binary approach, categorizing firms into mutually exclusive family or non-family firms.[15]

Our survey includes 112 studies spanning 135 family-firm definitions. We find that in approximately half of the studies (49% of the studies and 53% of the definitions), ownership is the sole and sufficient basis for defining a family firm.[16] The vast majority of these studies use a minimum qualifying threshold varying from 5% of equity to more than 50%.[17] In another 14% of studies (12% of the definitions), ownership and top management jointly determine if the firm is classified as family firm. In these studies, family-firm status

[14] This section is based on a summary of our survey of 112 empirical papers on family firms (see Internet Appendix for the full survey).

[15] An alternative to the binary approach is to start with the universe of all firms and then analyze how particular family structures influence governance (see, e.g. Bennedsen et al., 2007; Bertrand and Schoar, 2006).

[16] Examples include Ang, Cole, and Lin (2000), Franks et al. (2005), and Maury (2006). A few studies do not specify exact threshold values but either require family to be the largest shareholder or the ultimate controller, or that the firm self-declares as a family firm.

[17] The specific ownership threshold used is subject to data availability. For instance, in many countries, owners do not have to declare ownership below 5%. In such cases, using ownership as a defining criterion will fail to capture firms in which the founding family has, say, 3% of equity but does not need to declare it. Furthermore, equity ownership is defined as the fraction of outstanding shares in the hands of the family, with only a handful of studies (e.g., Masulis et al., 2011) defining ownership based on the fraction of ultimate voting rights that may be disproportional to cash-flow rights under a variety of control enhancing mechanisms such as dual class shares and pyramidal ownership structures.

is affirmed when the family owns more than the threshold equity level *and* a family member is the CEO of the company.[18] Third, about 9% of the studies (7% of the definitions) use the top executive position as the sole criterion to define a family firm.[19] Fourth, 4% of the studies (3% of the definitions) use either ownership or top management position independently as sufficient criteria.[20] In the remaining quarter of all studies, board membership is a determinant of family-firm status.[21]

We distinguish between cases in which the family-firm classification requires that the incumbent family be related to the founder, versus those in which the distinction is not noted. In total, we find that 37 papers (33% of the surveyed 112 papers) explicitly require that the controlling family be related to the founders. We cannot tell from the samples in the remaining studies how many firms are run by families that are not related to the founder.

None of the studies we have surveyed define dynastic-controlled firms as an independent category. Based on our survey, 73% of the definitions would categorize dynastic-controlled firms as widely held non-family firms[22] and the rest as family firms.[23] In the following sections, we provide evidence that dynastic-controlled firms are different with respect to firm value, accounting performance, and other frequently used metrics from both traditional family firms and non-family firms.

Only four studies in our survey acknowledge the existence of dynastic-controlled firms, albeit as isolated cases. In these studies, the authors provide an example and then proceed to include such firms in the broader group of family firms in which the family has significant ownership, or alongside widely held firms. Furthermore, in all but one case



[18] Examples include Gomez-Mejia et al. (2001) and Smith and Amoako-Adu (1999).

[19] Examples include Fahlenbrach (2009) and McConaughy et al. (1998).

[20] Examples include Mehrotra et al. (2013) and Miller et al. (2007).

[21] Nine percent of studies (7% of definitions) use board presence, ownership, and CEO position as individually sufficient conditions. Eighteen percent of studies (14% of definitions) employ board presence in combination with ownership and/or top management to bestow family status. See the Internet Appendix for further details.

[22] Examples include Masulis (2011) who employs a 10% ownership threshold, and Claessens et al. (2000), who require that the family has the largest share of voting rights.

[23] Examples include Anderson and Reeb (2003) and Anderson, Manzi and Reeb (2003), who use ownership of the founding family with no lower threshold level as the definition of family firms.

mentioned in the literature, family control has not been time persistent: these firms were eventually sold to other companies via takeovers that ended family control.[24]

To summarize, our extensive survey of the literature shows no single study that analyzes dynastic-controlled firms as a separate category, and the highlighted cases have not been time persistent. In the rest of this paper, we show dynastic control is not only prevalent and time persistent, but also that these firms differ in important ways from traditional family and non-family firms.

## 4. Data sources

We construct a dataset of all companies that went public in the post-war period in Japan (after the stock exchanges re-opened in 1949). Ownership data are from the Development Bank of Japan database for 1981 through 2000, and our accounting data are from 1962 through 2000. The Toyo Keizai database provides information on stock prices and board composition from 1989 through 2000. We exclude a small number of the firms for which financial or ownership data are missing. The final sample covers almost the entire universe of publicly listed firms in Japan from 1955 to2000.

To identify family firms, we follow Mehrotra et al. (2013). Ownership data disclosed in annual reports include (1) the stake of each of the top 10 shareholders, (2) the combined stake of all banks and other financial sector firms, and (3) the combined stake of all other

[24] Six cases have been proposed as examples of family firms possessing control with little ownership: the Ablon family controlling the Ogden company (Anderson and Reeb, 2003); the Cadbury and Schweppes families controlling their namesake companies, and the three GKN families controlling the GKN company (both in Franks et al., 2009); family control of Tektronik during 1994–1996 (Villalonga and Amit, 2006); and, finally, the family control of Anheuser-Busch (the referee). Ogden was acquired by Danielson Holding Company in 2004 and is called Covanta Energy today. Franks et al. (2009) highlight the Cadbury family's control over the management of the eponymous company since its establishment in 1824, even when the family's beneficial ownership stake fell to negligible levels. The family's ownership was diluted first upon the private merger with J.S.Fry & Sons in 1919 (another Quaker family firm), then through an initial public offering in 1962, and, finally, via a merger with Schweppes in 1969. Eventually, with little material ownership and after they were forced by aggressive financial shareholders to split up Cadbury and Schweppes, the Cadbury family lost a bitter battle for control against an unsolicited takeover by Kraft Foods (now Modelez) in 2010 (see Bennedsen and Cadbury, 2013). GKN was family controlled since 1758 but was acquired by Melrose Industries in a controversial hostile takeover in 2018. Tektronix was acquired by Danaher Corporation in 2007 in an unsolicited takeover. Anheuser-Busch was served briefly by a fourth-generation Busch family scion until the firm was acquired by Inbev in a hostile takeover in 2008. Finally, as we discussed in footnote 4, Masulis et al. (2011) mention Banco Santander as an example of family control but categorize it as a widely held company without further discussion.

firms. Board data include detailed information on each director's education (alma mater, major, and graduation year), birth date, year initially hired, year appointed to the board, year made CEO (*shacho*) or chairman (*kaicho*), and prior work experience.

We identify each firm's founder by consulting the following sources: (1) commemorative volumes celebrating company anniversaries, (2) Toyo-keizai Shimposha (1995), (3) Nihon Keizai Shimbun (2004), and (4) company websites. To identify relationships within the founding family, we use various Japanese language sources: (1) *Tokiwa Shoin* (1977) provides the family trees of 1002 business leaders, (2) a series of books published by *Zaikai Kenkyusho* (1979, 1981, 1982, 1983, 1985) provides the names of family members of the boards of listed firms, and (3) a set of 38 Nihon Keizai Shimbun (2004) volumes provides the biographies of 243 prominent post-war business leaders.

Additional information on family relationships is obtained from the following sources: Japanese equivalent of Who's Who published by *Jinjikoshinjo*, the Nikkei Telecom 21 database of corporate news items published from 1975 onwards in the Nikkei group of newspapers (Nihon Keizai Shimbun, the Nikkei Business Daily, the Nikkei Financial Daily, and the Nikkei Marketing Journal), company archives, Koyano (2007), and website searches. Using all this information, we annotate family trees with the names and business roles of all members of each firm's founding family. This information lets us identify each firm's founder(s) and ultimate owners, and ascertain each CEO/chairman's relationship, if any, to the founding family by blood, marriage, or adoption.



## 5. The prevalence and persistence of dynastic-controlled firms

In this section, we analyze the prevalence and persistence of dynastic-controlled firms in post-war Japan. We start with charting the number of dynastic-controlled firms as a fraction of all listed firms over this period. We then analyze the share of family-listed firms that become dynastic-controlled over time.

Panel A in Fig. 2 describes the prevalence of dynastic-controlled firms in calendar time over our sample period. The solid black line depicts the share of dynastic-controlled firms out of all publicly listed firms using the 5% ownership threshold. The upper grey line shows the share of dynastic-controlled firms with a 20% minimum ownership threshold.

First, using the 5% ownership threshold to define dynastic control, we note they represent 7.4% of all listed firms across our sample period of 1955-2000. In terms of numbers, dynastic-controlled firms represent anywhere from around 50 firms in the late 1950s, to almost 200 firms at their peak in the late 1980s. By construction, the fraction of dynastic-controlled firms is significantly higher (22% of all listed firms) when the higher threshold of 20% is used to define dynastic control. We also note the relative abundance of dynastic-controlled firms appears to be pro-cyclical with the Nikkei Index.[25] Thus, towards the end of the so-called lost decade of the 1990s when the Nikkei was down more than 50% from its peak in 1989, we find the share of dynastic-controlled firms is reduced to 5% of listed firms using the 5% ownership threshold and to 15% of listed firms using the 20% threshold. The share of dynastic-controlled firms was highest in the late 1980s, when they represented one out of 10 listed firms using the 5% ownership threshold and a quarter of all listed firms using the 20% threshold.

As noted earlier, when family firms are defined on the basis of minimum ownership thresholds, all dynastic-controlled firms risk being classified as non-family firms. We find this miscategorization to be non-trivial: with a 5% ownership threshold, it varies between 5% and 10% of all publicly listed firms, and with a 20% ownership threshold, it is between 15% and 25% of listed firms over our sample period of 1955-2000. As an illustration, Claessens et al. (2000) use a 20% ownership threshold and conclude that in 1996, "fewer than one-tenth of Japanese companies (9.7%) are now controlled by families."[26] When we add dynastic-controlled firms using the same 20% ownership threshold, the share of family firms in Japan increases from 9.7% to 29.7%. In general, the higher the minimum ownership threshold for defining family firms, the larger the bias in undercounting dynastic-controlled firms and, by extension, of underreporting the presence of family firms.

[25] To the extent equity issuances are more common when market valuations are high, transitions from traditional family firms to dynastic control firms become more likely.

[26] Prior to Claessens et al. (2000), La Porta et al. (1999) found a similar share of family firms using a 20% ownership threshold in a smaller sample of large and medium sized listed Japanese firms.

In Fig. 2, Panel B, we describe the evolution of dynastic-controlled firms in IPO time. The graph shows the likelihood of a traditional family firm transitioning to dynastic-controlled status as the founding-family ownership is diluted over the firm's life cycle. We begin with the population of firms that are listed as family firms, identify the proportion represented by dynastic control, and repeat this process each year after the IPO. The dark black line depicts the share of dynastic-controlled firms among the surviving firms using a 5% ownership threshold. The grey line depicts the share using a 20% minimum ownership threshold.

Beginning with dynastic-controlled firms based on the default 5% ownership cut-off, we find that at the end of the IPO year, fewer than one out of 40 firms are dynastic-controlled. Five years later, 4.5% of the surviving firms are dynastic-controlled. This fraction increases to 10% in year 10, and is more than 20% in year 20. Thirty years after their IPO, almost a quarter of the surviving firms are led by dynastic CEOs. By construction, the relative share of dynastic-controlled firms among surviving firms is higher when the 20% minimum ownership threshold is employed to define them. For example, 10 years after their IPO, 44% of all surviving firms are led by dynastic CEOs with ownership stakes below the 20% threshold. By the 12$^{th}$ year, the odds are higher that a surviving firm is dynastic-controlled versus a traditional family firm.

To sum up, we find dynastic-controlled firms represent a large and persistent fraction of exchange-listed firms in post-war Japan. This finding is important for two reasons. First, as a rule, the literature has underestimated the share of family firms by categorizing dynastic-controlled firms as non-family firms. Second, the literature has underestimated the persistence of families in business by not realizing many families keep control of their companies even when their ownership share becomes very small.

## 6. Dynastic-controlled firms: comparisons with traditional family firms and non-family firms

In this section, we compare dynastic-controlled firms with the two groups the literature has grouped them with – traditional family firms and non-family firms – and show dynastic-controlled firms differ from both groups along widely used performance measures.

To identify our reference groups, we categorize family firms into three groups: (i) *traditional family firms,* as described earlier (the founding family owns more than 5% of the shares and a family member is the CEO); (ii) *dynastic-controlled firms,* as described earlier (a founding family member is the CEO, but the family owns less than 5% of equity); and (iii) *professionally managed family firms* where the CEO is non-family but the founding family ownership exceeds 5% or in which the non-family CEO is a temporary placeholder.[27] In addition, we create two groups of non-family firms: *ex-family firms*, which were family firms at the time of the IPO but the family has permanently relinquished both ownership and management; and *never family firms,* which were not listed by a family or an individual at the IPO time. We repeat all our tests below with higher minimum ownership thresholds as robustness checks.[28]

In Table 1, we describe firm characteristics and key performance measures. Our sample contains 30,150 firm years, which includes 14,709 traditional family firm-years, 4,606 dynastic-controlled firm-years, 5,600 professionally-managed family firm-years, and 5,235 ex-family firm-years spanning 1955-2000. In addition, we also have 26,273 never family firm-years spanning the same period. The table begins by providing the means of all the variables for each group, and follows this exercise by providing mean pairwise differences between dynastic-controlled firms and the three relevant comparison groups (traditional family firms, ex-family firms, and never-family firms).

[27] We define a temporary place holder as a non-family CEO that is later replaced with a family CEO. In the Japanese context, such placeholders are often appointed until the family successor is old enough, usually 50, to assume the top job. In the case of temporary place-holders, ownership may be less than 5%.

[28] We run all tests and tables with 10% and 20% minimum ownership thresholds. Because the results do not change qualitatively, we only present tables using the 5% threshold. Results using higher minimum ownership thresholds are available upon request.

We begin by comparing earnings performance. The mean ROA for dynastic-controlled firms is 4.2%, versus 5.3% for traditional family firms, 3.4% for ex-family firms, and 4.2% for never family firms. The difference between dynastic-controlled firms and each of the other family and ex-family firms is statistically significant at the 1% level. However, the ROA for dynastic-controlled firms and never family firms is statistically indistinguishable.

In row 2, we observe that traditional family firms and dynastic-controlled firms have similar valuation (Tobin's Q= 1.49), followed by ex-family firms (1.46) and non-family firms (1.39). Mean Q-ratios for dynastic-controlled firms are not statistically different from traditional family firms but higher than those of ex-family and never-family firms. Thus, dynastic-controlled firms fare no worse than traditional family firms, whereas both are valued higher than ex-family and never family firms. Dynastic control in the absence of ownership does not appear to be related to a valuation discount in the eyes of investors.

The volatility of industry sales is lower in dynastic-controlled firms than in traditional family firms and ex-family firms, but higher than in never family firms. In terms of book assets, dynastic-controlled firms are larger than traditional family firms. This finding is only natural, because ownership dilution is correlated with asset growth. Dynastic-controlled firms have the highest leverage, with the exception of never family firms, and they tend to be older than traditional family firms from which they evolve. Foreign ownership tends to be low across all categories, but tends to increase as family ownership declines.

Next, we focus on proxies for family-related variables. Traditional family firms are more likely to be *legacy* firms, defined as those in which the founding family and firm names are the same, than are dynastic-controlled and ex-family firms, indicating a reluctance of legacy heirs to disengage from their firms. For the same reason, dynastic-controlled firms are more likely to be legacy firms than are ex-family firms, indicating the role of family ties in preserving management control in the face of insignificant ownership. Likewise, dynastic-controlled firms are more likely to have a family member on the board vis-à-vis ex-family firms; they are also more likely to be graduates of elite universities than ex-family firms. Note that dynastic-controlled firms are more likely to have elite family members on their boards than traditional family firms, consistent with the idea that stronger family assets empower families to control firms even when their ownership stakes are non-material (Bennedsen et al., 2015).

Our univariate mean analysis provides support for the claim that dynastic-controlled firms are different from the two categories of firms they have been bundled with in the literature. Compared with traditional family firms they are larger, have weaker accounting performance but similar firm value, and even though they are less likely to have family members on the board, both family and non-family board members are more likely to be graduates of elite universities. Compared with firms in which the family has exited, they display superior performance and have a marginally higher firm value, similar size but higher leverage, are more likely to be *l*egacy firms, and have more family board members with and without elite education, but fewer outside board members who are educated at elite universities. These results point to biases that can result from bracketing dynastic-controlled firms with traditional family firms or with widely-held non-family firms.

Note that our findings are based on correlations supported by mean comparisons.[29] We do not claim the findings are causal. Family heirs are invited to serve as CEOs in many more firms than we observe but might choose only the better performing ones. Similarly, transitions to ex-family firms may be motivated by declining performance, and not to a loss of family control. Finally, both ownership structure and performance could be determined by unobserved third factors.



## 7. Transition into and out of dynastic control

In this section, we study the determinants of the origins and loss of dynastic control. We begin by documenting how traditional family firms evolve into dynastic-controlled firms as the founding family's ownership erodes over time. We then examine how dynastic-

[29] We confirm the performance and valuation results of the univariate comparison in unreported multivariate regression analysis.

controlled firms eventually lose management control and evolve into widely-held non-family firms.

*7.1 Transitions to and from dynastic control*

Table 2 provides the transition map of how family firms move in and out of dynastic control status. In Panel A, we describe the origins of dynastic control. Using a minimum ownership threshold of 5%, we find 63% of dynastic-controlled firms originated as traditional family firms when the founding family's ownership level was diluted but the CEO position was retained by heirs of the founding family. A smaller fraction, 22%, originated from professionally-managed family firms.[30] Finally, about 15% were identified as dynastic-controlled firms at the time of the IPO, meaning the founding-family ownership was already less than 5% at the end of the IPO year. When the minimum ownership threshold to define dynastic control is set at 20%, the fraction originating from traditional family firms is lower (52%), and the IPO fraction is larger (46%).

Panel B describes dynastic-controlled firms' exit path. Not surprisingly, most (77%) of the transitions are to the ex-family-firm group. A smaller fraction, 22%, involves transition to a professionally-managed firm – almost all of these transitions are to placeholder professional CEOs, who are eventually succeeded by family CEOs. When the higher ownership threshold of 20% is employed, 98% of dynastic-controlled firms transition to ex-family status.

*7.2. Determinants of transitions from traditional family firm to dynastic control*

In Table 3, Panel A, we explore the determinants of transitions from traditional family firms to dynastic-controlled firms. By definition, this transition is a change in ownership while (family) management is retained. As we saw in our three case studies, the dilution of ownership has much to do with the imperatives of financing growth. Thus, a priori, we expect finance to play an important role in these transitions.

[30] These firms are the ones in which the family typically has less than 5% of ownership but has a temporary non-family CEO in place until the next family CEO is ready.

We present three models: Model (1) focuses only on finance factors; Model (2) focuses only on family-related factors; and, Model (3) includes both finance and family factors. Model 1 shows a positive correlation between firm size and the odds of transitioning from a traditional family firm to dynastic control. This observation is consistent with larger firms needing more capital for their investments. Leverage is also positively correlated with these transitions, underscoring a rising need for external capital for firms with tighter balance sheets. Finally, the equity-issuance variable has a significantly positive coefficient, highlighting the role of finance in hastening the transition.

In the transition from traditional family firm to dynastic control, management control is unchanged; hence, we conjecture that family legacy, talent and other variables related to family resources are less important. This theory is confirmed in Models (2) and (3) in which, among the family factors, only the size of family ownership and the size of stable ownership are correlated with transitions to dynastic control. Firms with smaller ownership stakes are more likely to fall below the threshold ownership level. Note that having a strong network, as measured by the stability of ownership, makes families less likely to dilute their ownership. In Model 3, we add both finance and family variables. The results are robust except we now find firm age is negatively correlated with transition and firm size loses its significance.[31] Overall, we interpret the results in Panel A of Table 3 as affirming the importance of finance in transitioning from traditional family firms to dynastic control, largely through the dilutive effects of growth.

*7.3. Determinants of exit paths from dynastic control to ex-family status*

Panel B of Table 3 explores the correlates of a transition from dynastic control to ex-family status. We find in Model 4 that profitable firms are less likely to transit, indicating strong performance makes stakeholders and boards more likely to retain family CEOs. On the other hand, we find larger and older firms are more likely to transit. This finding is

[31] Turning to the control variables, we find transitions from traditional family firm to dynastic control are more likely when the CEO is younger. This finding is consistent with younger CEOs being more prone to risk-taking and thus more likely to accept ownership dilution as part of a growth process. Second, for a given CEO age, tenure on the job correlates positively with a transition from traditional family firm to dynastic control – without the backing of ownership, job experience matters. Finally, whereas CEOs from elite universities are more likely to be retained when family ownership is being diluted, we also notice they are more likely to generate an exit for dynastic-controlled firms.

consistent with the relation-specific capital of family CEOs being more important for smaller and younger firms, and less so for larger and older firms. Foreign ownership appears to expedite exit to ex-family status as well – we cannot distinguish if this correlation is due to a selection bias whereby foreign investors shun firms with dynastic control, or if foreign owners actively advocate for a transition from dynastic control to widely held status. These effects are both economically relevant and statistically significant at the 1% level, and also confirmed in Model (6).

Turning to family assets in Model (5), we find the proxy for family legacy lowers the odds of exit to ex-family status, although the coefficient is only significant in the full regression (Model 6). Put simply, eponymous firms are more likely to retain dynastic control, consistent with family legacy being a strong driver of business strategy and the family deriving private utility from managing a namesake company (Bennedsen et al., 2015; Belenzon et al., 2017).

Not surprisingly, having a family member in general and an elite educated one in particular on the board of the company slows the exit to non-family status, though only the latter coefficient is statistically significant, underscoring the role of talent in helping family heirs retain control. The elite-education variable has been used as a proxy for talent in Perez-Gonzales (2006) and Mehrotra et al. (2013), and our results indicate both monitoring and talent are important family resources that help preserve dynastic control. Although the role of monitoring has previously been addressed, we believe the role of family talent in preserving family control has not been documented before. Finally, we investigate whether stable ownership slows the likelihood of exit to non-family status. We hypothesize that strong family networks engender stable block holders that can preserve the status quo for a longer time. The results in Model (5) do not support such a hypothesis.[32]

[32] In all regression specifications, we notice succession concerns loom large – the presence of older CEOs (as well those with a longer service record) increases the odds of an exit. This correlation has been noted in the literature (see Klasa, 2007) and indeed, succession is often seen as the Achilles' heel of family firm longevity (see, e.g., Burkart, Panunzi and Shleifer, 2003). The last of the control variables is the educational attainment of the outgoing CEO. We would expect this variable to have a negative sign indicating talented CEOs continue in their position for a longer period. Instead, we find the coefficient on the elite dummy is positive, perhaps because talented CEOs have better outside opportunities and hence support a timely sale of their firm.

Note Model (4) and Model (5) have very similar pseudo R-squares, indicating family variables can explain the transitions to widely held status as well as finance variables can – this observation is noteworthy because the literature has focused on finance as a propeller of exit from family control, and has missed out on a set of family factors that are statistically similar in their ability to jointly explain the loss of family ownership and control. Including both sets of variables in Model (6) yields similar results.

The results in Table 3, Panel B, shed light on factors that help in preserving dynastic control in the absence of direct share ownership. Smaller, younger, and legacy firms, especially those with elite board members, are more likely to retain dynastic control, whereas larger and older firms with higher foreign ownership are less so. Overall, the transitions analyzed in Table 3 paint the following picture. Equity-financed growth appears to expedite the transformation of traditional family firms to dynastic control. In turn, dynastic control is preserved with the aid of family resources.

## 8. Conclusion

Using the universe of publicly listed firms in post-war Japan, we find that founding families continue to exercise control over their companies even in the absence of material share ownership. We define such firms as dynastic-controlled, and find they represent 7.4% of all listed firms during 1955-2000. We document that they differ in accounting performance and valuation metrics both from traditional family firms and from widely-held firms, the two groups that the existing literature has categorized them with. Our findings indicate family firms in Japan are more prevalent than the very low family ownership documented in extant studies would suggest, and persist long after the firm's IPO. We have also highlighted two non-Japanese examples of time-persistent dynastic control; however, how prevalent this practice is in other countries is an open question.

Our results provide a new perspective on the Berle and Means (1932) thesis that growth-induced ownership dilution implies family firms are fated to be effectively taken over by a cadre of professional managers. Our analysis weakens this conjecture by showing many families are able to continue controlling their firm well after their ownership level has declined to miniscule levels. This finding raises the question of why non-family shareholders favor family heirs over professional managers. Our findings indicate family managers are preferred when they possess relationship-specific assets such as family legacy, networks, and talent.

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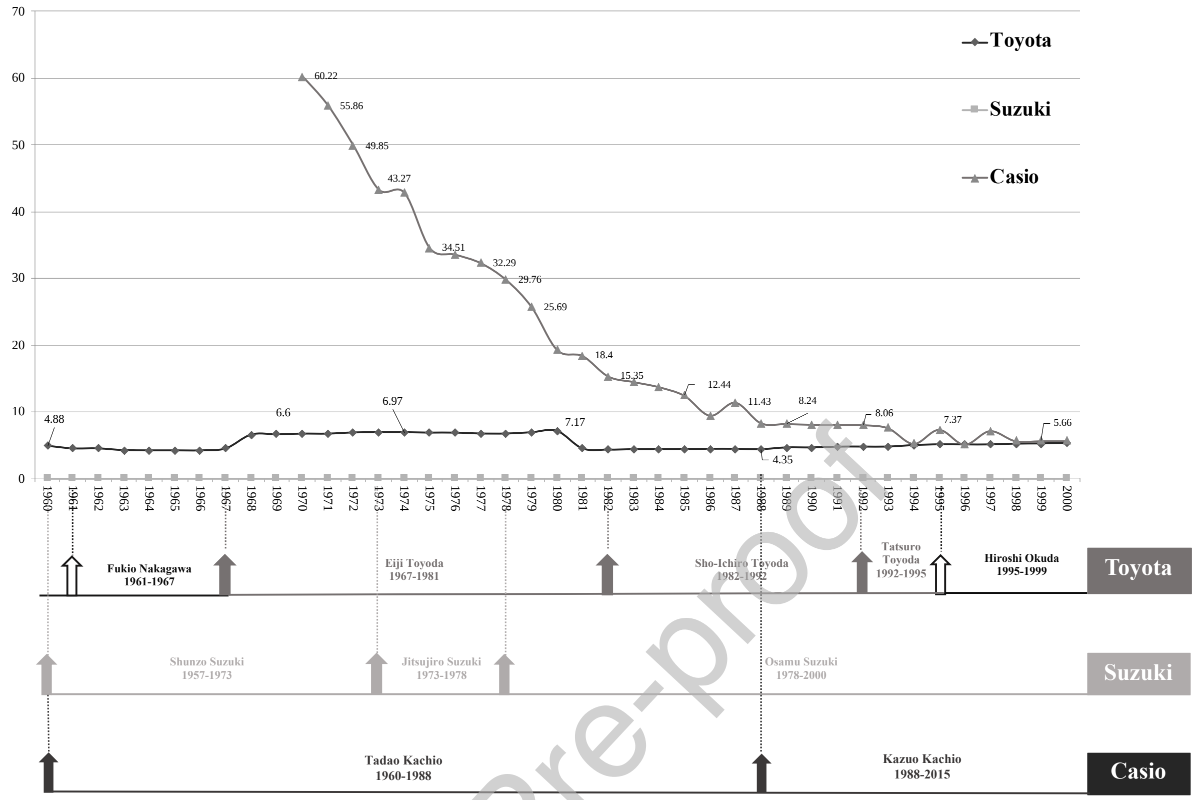
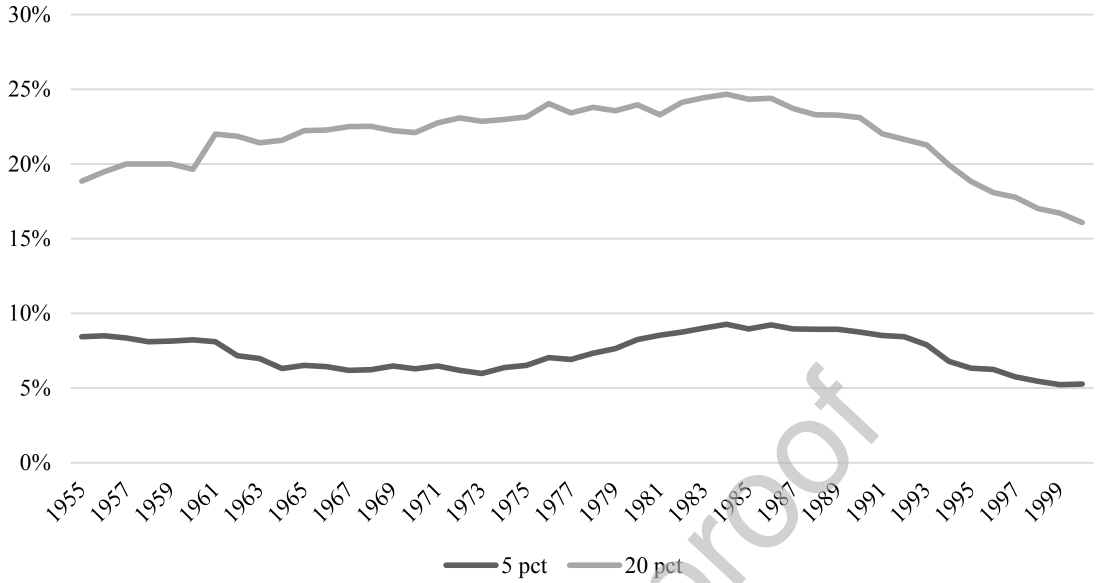
**Fig. 1. Family Ownership of Casio, Suzuki and Toyota Motor (1951-2019)**



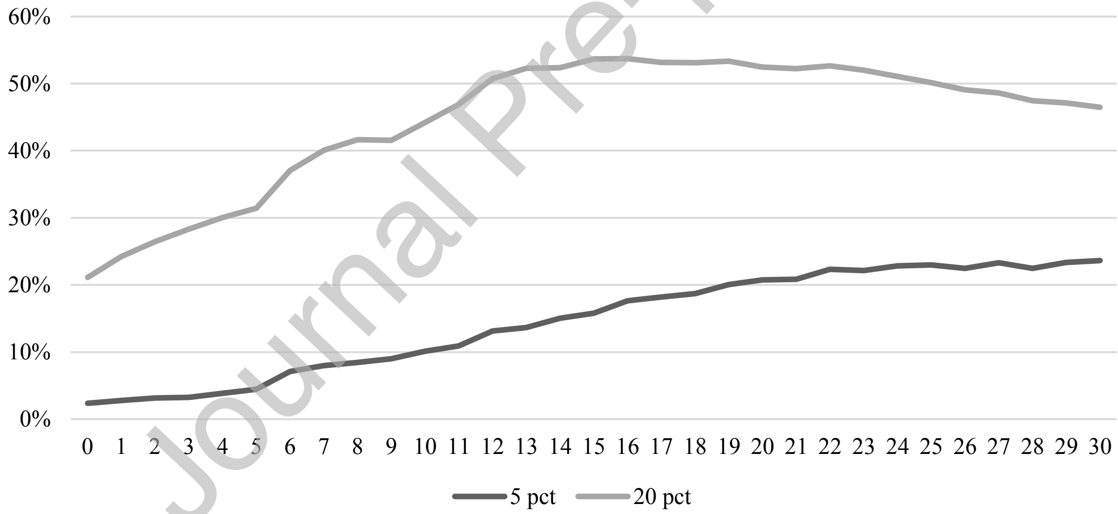

Notes: This figure presents the founding family ownership evolution of Casio, Suzuki, and Toyota Motor ranging from 1951 to 2019. The percentage of family shareholdings includes the ownership by the members of the founding family. Vertical axis numbers are in percent. The lower half of the figure reports CEO names and term of service of each firm for different periods, with hollow arrows representing firms being controlled by professional CEOs (outsiders)

**Fig. 2. Dynastic-controlled firms in calendar and IPO times**

**Panel A: Share of dynastic-controlled firms among all listed firms from 1955-2000**




**Panel B: Share of dynastic-controlled firms in IPO Time**




Notes: The charts depict the share of dynastic-controlled firms among all firms listed on major Japanese stock exchanges (i.e., the Tokyo, Osaka, Nagoya, and Fukuoka Stock exchanges) between 1955 and 2000. Panel A shows the share of dynastic-controlled firms among all listed firms using 5% (black line) and 20% (grey line) minimum ownership thresholds in calendar time. Panel B shows the share of dynastic-controlled firms in IPO time and is scaled by the number of surviving firms until that point in time after the IPO. As in Panel A, the black and grey lines represent the share of dynastic-controlled firms defined on the basis of 5% and 20% ownership thresholds.

**Table 1**
**Univariate Differences across firm types**

| Family-firm classification | TFF(1) | DCF(2) | PFF(3) | XFF(4) | NFF(5) | DCF-TFF(6) | DCF-XFF(7) | DCF-NFF(8) |
|---|---|---|---|---|---|---|---|---|
| ROA, % | 5.29 | 4.23 | 4.98 | 3.45 | 4.23 | -1.06 *** | 0.78 *** | -0.003 |
| Tobin Q | 1.49 | 1.49 | 1.56 | 1.46 | 1.39 | 0.003 | 0.04 *** | 0.10 *** |
| Volatility of industry sales | 20.68 | 20.59 | 20.90 | 20.70 | 20.33 | -0.09 *** | -0.10 *** | 0.26 *** |
| Firm size | 16.96 | 17.84 | 17.49 | 17.85 | 17.83 | 0.88 *** | -0.004 | 0.02 |
| Leverage | 20.46 | 21.30 | 17.81 | 19.71 | 23.59 | 0.84 *** | 1.59 *** | -2.29 *** |
| Equity-issuance dummy | 0.195 | 0.165 | 0.18 | 0.12 | 0.15 | -0.03 *** | 0.04 *** | 0.02 *** |
| Firm age, years | 38.63 | 48.55 | 42.12 | 50.04 | 46.83 | 9.92 *** | -1.49 *** | 1.72 *** |
| Foreign ownership, % | 0.67 | 1.14 | 0.84 | 2.14 | 1.56 | 0.47 *** | -1.00 *** | -0.43 *** |
| Family ownership, % | 21.27 | 0.00 | 20.80 | 0.00 | . | -21.27 *** | 0 | . |
| Family legacy | 0.35 | 0.29 | 0.34 | 0.24 | . | -0.06 *** | 0.05 *** | . |
| Family on the board | 0.32 | 0.25 | 0.37 | 0.13 | . | -0.07 *** | 0.12 *** | . |
| ELITE family on the board | 0.26 | 0.30 | 0.26 | 0.11 | . | 0.03 *** | 0.19 *** | . |
| Elite non-family on the board | 0.74 | 0.87 | 0.83 | 0.91 | . | 0.13 *** | -0.04 *** | . |
| Stable ownership, % | 22.27 | 15.83 | 25.78 | 32.40 | . | -6.43 *** | -16.57 *** | . |
| CEO age, years | 57.95 | 59.34 | 61.60 | 62.20 | . | 1.39 *** | -2.86 *** | . |
| CEO tenure, years | 16.56 | 14.03 | 5.08 | 4.55 | . | -2.53 *** | 9.49 *** | . |
| CEO eliteness | 0.15 | 0.22 | 0.31 | 0.39 | . | 0.07 *** | -0.17 *** | . |
| Number of observations | 14709 | 4606 | 5600 | 5235 | 26273 | 19315 | 9841 | 30879 |

Notes: This table reports basic financial and management indicators for five categories of firms. ***TFF*** are traditional family firms where the founding family owns more than 5% shares and retains the CEO position. ***DCF*** are dynastic-controlled firms in which the family controls the top management position but has less than 5% of ownership. ***PFF*** are family firms in which the CEO is non-family but the founding-family ownership exceeds 5%, or in which the non-family CEO is a temporary placeholder. ***XFF*** are ex-family firms, in which the founding family ownership is less than 5% and the family has permanently left the CEO position. Lastly, ***NFF*** are non-family firms since their exchange listing. ***ROA*** equals operating income scaled by total assets, ***Tobin Q*** equals the market value of equity plus the book value of debt scaled by total assets, ***volatility of industry sales*** equals the standard deviation of industry sales, ***firm size*** equals the natural log of total assets, ***leverage*** equals total debt scaled by total assets, ***equity-issuance dummy*** takes the value of 1 when firms experience a change of shares outstanding of more than 10% from the previous year, ***firm age*** equals the number of years since incorporation, and ***foreign ownership*** refers to the fraction of shares held by foreign investors. Family indicators are listed as follows: ***family ownership*** is the fraction of total shares owned by the founding family, ***family legacy*** takes the value of 1 when the founding family name and firm name are the same, ***family on the board*** takes the value of 1 when at least one family member is on the board, ***ELITE family on the board*** takes the value of 1 when at least one ELITE family is on the board, ***ELITE non family on the board*** takes the value of 1 when at least one ELITE non-family is on the board, and ***stable ownership*** equals the percentage of shareholdings by investors who were listed among the top 10 shareholders for at least five consecutive years. Control variable include ***CEO age, CEO tenure*** *(number of years as CEO),* and ***CEO eliteness***, denoting if the CEO has a bachelor's degree from an elite university. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

**Table 2**

**Transitions to and from dynastic control**

| *Panel A: Transition to DCF* | | |
|---|---|---|
| *From* | 5% ownership | 20% ownership |
| TFF | 0.63 | 0.52 |
| PFF | 0.22 | 0.02 |
| IPO | 0.15 | 0.46 |
| *Panel B: Transition from DCF* | | |
| *To* | 5% ownership | 20% ownership |
| TFF | 0.01 | 0.01 |
| PFF | 0.22 | 0.01 |
| XFF | 0.77 | 0.98 |

Notes: Panel A describes the origins of dynastic-controlled firms. ***TFF*** are traditional family firms in which the founding family owns more than 5% shares and retains the CEO position. ***DCF*** are dynastic-controlled firms in which the family controls the top management position but has less than 5% of ownership. ***PFF*** are family firms in which the CEO is non-family but the founding family ownership exceeds 5%, or in which the non-family CEO is a temporary placeholder. ***XFF*** are ex-family firms, in which the family ownership less than 5% and the founding family has permanently left the CEO position. Panel B describes the transitions from ***TFF*** (dynastic-controlled firms) to ***TFF*** (traditional family firms), ***PFF*** (professionally-managed family firms), and ***XFF*** (ex-family firms). IPO means Initial Public Offering.

**Table 3**

| | Panel A(1-3) | | | Panel B(4-6) | | |
|---|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| **Finance factors** | | | | | | |
| ROA | -0.025 | | -0.012 | -0.133*** | | -0.130*** |
| | (1.38) | | (0.59) | (5.88) | | (5.78) |
| Tobin Q | 0.067 | | 0.161 | -0.232 | | -0.241 |
| | (0.42) | | (1.07) | (0.87) | | (0.90) |
| Volatility of industry sales | 0.328* | | 0.267 | -0.108 | | -0.115 |
| | (1.75) | | (1.39) | (0.62) | | (0.65) |
| Firm size | 0.167*** | | 0.009 | 0.339*** | | 0.343*** |
| | (2.86) | | (0.14) | (5.09) | | (4.88) |
| Leverage | 0.021*** | | 0.023*** | 0.010* | | 0.010 |
| | (3.74) | | (3.96) | (1.66) | | (1.52) |
| Equity issuance dummy | 0.508*** | | 0.518*** | -0.312 | | -0.300 |
| | (3.29) | | (3.33) | (1.25) | | (1.21) |
| Firm age | 0.001 | | -0.014** | 0.016** | | 0.018*** |
| | (0.26) | | (2.46) | (3.15) | | (3.53) |
| Foreign ownership | 0.021 | | -0.007 | 0.042** | | 0.045*** |
| | (1.02) | | (0.27) | (2.96) | | (3.22) |
| **Family factors** | | | | | | |
| Family ownership | | -0.077*** | -0.086*** | | | |
| | | (7.50) | (7.50) | | | |
| Family legacy | | -0.191 | -0.072 | | -0.285 | -0.378** |
| | | (1.27) | (0.47) | | (1.63) | (2.03) |
| Family on board | | -0.129 | -0.165 | | -0.284 | -0.270 |
| | | (0.81) | (1.02) | | (1.63) | (1.49) |
| ELITE family on board | | 0.199 | 0.282 | | -0.424** | -0.559*** |
| | | (1.14) | (1.57) | | (2.45) | (3.09) |
| Elite non-family on board | | 0.210 | 0.209 | | 0.553** | 0.250 |
| | | (1.11) | (1.08) | | (2.37) | (1.02) |
| Stable ownership | | -0.044*** | -0.043*** | | -0.0003 | 0.003 |
| | | (4.65) | (4.62) | | (0.05) | (0.54) |
| **Control factors** | | | | | | |
| CEO age | -0.017** | -0.027*** | -0.023** | 0.049*** | 0.054*** | 0.050*** |
| | (2.05) | (3.02) | (2.48) | (4.64) | (5.43) | (4.67) |
| CEO tenure | 0.016** | 0.026*** | 0.01*** | 0.016*** | 0.009 | 0.017*** |
| | (2.47) | (3.69) | (2.76) | (2.88) | (1.48) | (2.86) |
| CEO eliteness | -0.242 | -0.442** | -0.441** | 0.132 | 0.584*** | 0.455** |
| | (1.29) | (2.27) | (2.22) | (0.72) | (3.44) | (2.48) |
| Number of observations | 19803 | 19803 | 19803 | 20411 | 20411 | 20411 |
| Number of transitions | 233 | 233 | 233 | 190 | 190 | 190 |
| Pseudo R2 | 0.0574 | 0.1310 | 0.1465 | 0.1117 | 0.0664 | 0.1201 |

**Determinants of the transition to and from dynastic control**

Notes:Panel A reports the coefficient estimates from a logistic regression in which the dependent variable is the transition of a *traditional family firm* to a *dynastic-controlled firm*. Panel B reports the logistic regression coefficient estimates in which the dependent variable is a transition of a *dynastic-controlled firm* to an *ex-family firm.* Models 1 and 4 display coefficient estimates for finance variables, Models 2 and 5 contain family variables, and Models 3 and 6 include both. Finance variables include ***ROA***, defined as operating income/total assets; ***Tobin's Q***, defined as (total assets + market value of equity – book value of equity)/total assets; ***volatility of industry sales***, defined as the standard deviation of sales for the firm's industry over the past 5 years; ***firm size***, defined as the natural log of total assets; ***leverage***, defined as total debt/total assets, ***equity issuance dummy***, set to 1 when firms experience a change in shares outstanding from the previous year of more than 10%; ***firm age***, defined as the number of years since incorporation; and ***foreign ownership***, defined as the fraction of shares held by foreign investors among the firm's top 10 shareholders. Family variables include ***family ownership***, defined as the fraction of total shares owned by the founding family; ***family legacy***, as an indicator variable set equal to 1 when the founding family name and firm name are the same; ***family on board***, as an indicator variable set equal to 1 when there is at least one family member on the firm's board; ***ELITE***, defined as an indicator variable for graduation from the top national universities in Japan; and ***stable***

***ownership***, defined as the fraction of equity held for five consecutive years by top 10 shareholders. Control variables include ***CEO age***, ***CEO tenure (number of years as CEO)***, and CEO ***Elite*** status. *t*-statistics are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.