Internet Appendix

Dynastic Control without Ownership: Evidence from Post-war Japan

This appendix documents first the heterogeneity in how empirical studies have defined family firms, and second how dynastic controlled firms – defined as firms where a member of the founding family is the CEO but the family owns less than 5% of equity – have been classified in the literature, most commonly pooled with widely-held non-family firms, and on other occasions with traditional family firms, but never as a distinct stand-alone category.

We have summarized 112 published papers on family firms spanning a total of 135 definitions (a few papers have multiple definitions of family firms). We find that family firm definitions vary along two key dimensions: ownership and *de facto* control. Ownership is typically defined as the share of equity possessed by the founding family; where there is a wedge between cash flow rights and voting rights, the latter is frequently used. Control is defined as the presence of the founding family in the top echelons of management, usually as the CEO, but also, in some studies, in the board of directors of the firm.[1]

Table A-1 shows the distribution of the 135 definitions in our survey across 11 permutations based on the criteria of ownership (O), top management (M) and board presence (B). A majority of studies define family firms based on ownership, followed by top management and board presence respectively.

We summarize the distribution of the criteria used to define family firms in Panel A as follows:

- 53% of the definitions use ownership alone (O)[2]
- 7% use only the top management (CEO) position (M)[3]
- 16% use ownership AND/OR top management position (O+M and O/M)[4]

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[1] We find that 37 papers (33% of the surveyed 112 papers) explicitly require that the controlling family be related to the founders. The remaining studies do not make this distinction.

[2] Examples include Ang, Cole, and Lin (2000), Barth et al. (2005), Franks et al. (2005), Franks et al. (2012), Maury (2006).

[3] Examples include Chung et al. (2012), Fahlenbrach (2009), McConaughy et al. (1998) and McConaughy (2000)

[4] Examples include Gomez-Mejia et al. (2001), Karlsson (2018) and Smith and Amoako-Adu (1999) for O+M definition; Duran et al. (2019), Mehrotra et al. (2013), Miller et al. (2007) and Sestu et al. (2020) for O/M definition.

- 8 % use a board position AND/OR ownership (O+B and O/B)[5]
- 7% use either ownership, top-management or board involvement (O/M/B)[6]
- There were no studies where a board position was the sole criterion for defining a family firm.

A majority of the definitions employ specific minimum ownership thresholds to define family firms. In most cases, equity ownership is defined as the fraction of outstanding shares, with only a handful of studies 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. The lowest threshold ownership used is 5% - used by approximately 10% of studies in the ownership groups.[7] The most common ownership threshold is 25%, used by a quarter of the studies in the ownership groups.

In general, minimum ownership thresholds are higher for studies of private firms (often 50%) than for studies of public firms. Furthermore, studies focusing on public firms in the US seem to have lower threshold values than studies focusing on public firms in Europe or Asia. The heterogeneity in ownership thresholds employed means that a firm where the founding family owns 15% of equity can be classified as a family firm in some studies, but as a non-family firm in others.

The lack of consensus in defining family firms is worrying. 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 basic result: Villalonga and Amit (2006) and Miller et al (2007) show that the superior performance of family firms is driven by the presence of founder-controlled firms. Heir-controlled family firms' performance is significantly lower; in particular, when the CEO is a family member (Bennedsen et al 2007). Thus, to make consistent statements about corporate policy and outcomes in family firms, it is important to introduce a consistent set of rules in conferring family firm status.

The second purpose of this survey is to ascertain if dynastic control firms are accorded a separate stand-alone category in the literature. Table A-1 Part B documents that this is not the case – we do

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[5] Exmples include Anderson et al. (2003), Gomez-Mejia et al. (2003) and Klasa (2007) for O+B definition; Villalonga and Amit (2006) for O/B definition.

[6] Exmples include Ali et al. (2007), Chen et al. (2010), Chen and Yu (2014), Huang et al. (2015), and Villalonga and Amit (2006).

[7] Anderson and Reeb (2003) apply now lower bar for ownership. In such cases, actual categorization depends on data availability. In many countries, the law states that ownership has to be declared only if higher than 5 pct.

not find any studies in our extensive survey that do this. To the extent dynastic control firms exist in the samples used in the various studies, they are either bracketed with family firms in studies that use ownership or CEO as an "either/or" criteria for defining family firms, or as non-family firms in studies that use ownership as a necessary condition for defining family firms. Among the 135 definitions we survey, approximately 27% will categorize dynastic-controlled firms as family firms and 73% as non-family firms.

To illustrate the categorization of dynastic-controlled firms we use Casio an example. As described in the main paper (section 2), its founding family has less than 5% of the ownership for the last 20 years but the CEO has always been a member of the Kashio family. All studies that require ownership of 5% or higher as a necessary criterion will classify Casio as a non-family firm. By contrast, all studies that require the founding family member in the top management position (the CEO) will classify Casio as a family firm.

Table A-2 presents the 112 studies representing 135 definitions that are included in our survey. The first column provides the name of the author and the year of publication. The second column describes the sample, including the country and time period. Column 3 describes the data source. Column 4 provides the main definition(s) employed to qualify for family firm status. Column 5 states if the study requires the incumbent family to be related to the founding family. While such an assumption may be implicit in many studies, we flag those studies where this link is explicit. 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. This could happen, for example, if a firm is acquired by a family firm. We note that in our study of publicly-traded Japanese firms, we are not aware of any firms where the incumbent family is not related to the founder. Finally, Column 6 describes whether dynastic-controlled firms would be bundled together with family firms (FF) or with non-family firms (NFF).

Table A-1

Panel A displays the frequency of various permutations of Ownership (O), CEO (M) and Board (B) representation that are used in defining family firms. In total, there are 135 definitions from 112 published papers. The 11 permutations of O, M and B used in defining family firms (FF) are represented in columns (1) through (11). + and / represent the AND and OR operators respectively.

Panel B reports the share of family firm definitions under which dynastic controlled firms (DCF) would be classified as family firms (FF) and as non-family firms (NFF) for each of the 11 definitional permutations.

Panel A: Summary of definitions

	O	*M*	*O + M*	*O/M*	*O/M/B*	*O+B*	*O/B*	*M+B*	*M/B*	*O+M+B*	*O+(M/B)*	*Total*
Total	72	10	17	4	10	8	3	2	1	5	3	135
Pct	53.3%	7.4%	12.6%	3.0%	7.4%	5.9%	2.2%	1.5%	0.7%	3.7%	2.2%	100%

Panel B: Categorization of Dynastic Control Firms in existing studies

	O	*M*	*O + M*	*O/M*	*O/M/B*	*O+B*	*O/B*	*M+B*	*M/B*	*O+M+B*	*O+(M/B)*	*Total*
Bundle with FF	2*	10	1†	4	10	3‡	3	2	1	0	0	36
Percent	2.8%	100%	5.9%	100%	100%	37.5%	100%	100%	100%	0%	0%	26.7%
Bundle with NFF	70	0	16	0	0	5	0	0	0	5	3	99
Percent	97.2%	0%	94.1%	0%	0%	62.5%	0%	0%	0%	100%	100%	73.3%

* Anderson and Reeb (2003) use in two definitions ownership without lower threshold values as the defining criterion. Conditionally of having data for small ownership stakes, this categorize dynastic control firms as family firms.

† Bennedsen et al. (2015) make "family-driven, diffusely held companies whose family firms own minority stakes but continue to manage the firm" as one of the four family firm classifications, and that categorize dynastic control firms as family firms.

‡ Anderson, Mansi and Reeb (2003) and Anderson and Reeb(2003b) develop ownership-based dummy-variable as primary indicator which equals one whenever founding family has an equity stake in the firm; Deephouse and Jaskiewicz (2013) abandon dichotomous ownership definitions with exact cut-off point (5% as an example) when defining family firms, while use continuous level of family ownership instead. All of them would categorize DCF as FF.