

The Role of Business Succession in Environmental Behaviors of Family SMEs

○Tianyi Shi*, Hakaru Iguchi**, Hajime Katayama***

1. Introduction

Because small and medium-sized enterprises (SMEs) constitute the majority of businesses, their aggregate environmental impact is non-negligible (OECD, 2015). However, SMEs are generally less proactive in their sustainability efforts than large companies (Brammer et al., 2012; Cassels and Lewis, 2011), which motivate previous studies to examine the determinants of SMEs' sustainability practices. This study extends the literature by exploring whether SMEs' environmental behaviors are shaped by uncertainty about managerial succession to the next generation that is critical, especially for family SMEs' continuity. We hypothesize that the presence of a potential successor encourages a family SME to make long-term environmental investments, because it lowers the likelihood of business closure due to failure in succession and thereby increases the likelihood of recouping the investments. We also hypothesize that a family SME is more eager for daily environmental practices if there is a potential successor than otherwise, because the current CEO is motivated to ingrain good practices into the organization for its future. This study will examine the relevance of these hypotheses by using firm-level survey data.

2. Data

To test our hypotheses, a CEO survey was conducted in 2016. The sample consists of 15,111 SMEs located in special wards of Tokyo. We obtained responses from 1,340 firms with a response rate of 8.7%. We restrict our observations to family firms where the business succession problem is particularly relevant. For this purpose, we use the ownership-based definition (Astrachan & Kolenko, 1994) for family owned firms.

Table 1: Estimation Results

	# of Env. Practices		Env. Investment
	(1)	(2)	(3)
Subjective Succession Prob.	0.144 *** (0.048)	0.094 (0.108)	-1.580 *** (0.605)
Subjective Succession Prob. ×CEO Age 40s (d)			1.451 ** (0.657)
×CEO Age 50s (d)			1.326 ** (0.640)
×CEO Age 60s (d)			1.799 *** (0.633)
×CEO Age 70s (d)			2.181 *** (0.641)
CEO Age 40s (d)	0.038 (0.122)	0.094 (0.254)	-0.548 (0.425)
CEO Age 50s (d)	-0.004 (0.122)	0.024 (0.254)	-0.583 (0.422)
CEO Age 60s (d)	-0.113 (0.124)	0.002 (0.259)	-0.800 * (0.427)
CEO Age 70s and above (d)	-0.115 (0.135)	0.021 (0.290)	-1.022 ** (0.453)

Note 1: Robust standard errors in parentheses for column (1), while we show the standard errors in parentheses for column (2) and (3). (d) means a dummy variable.

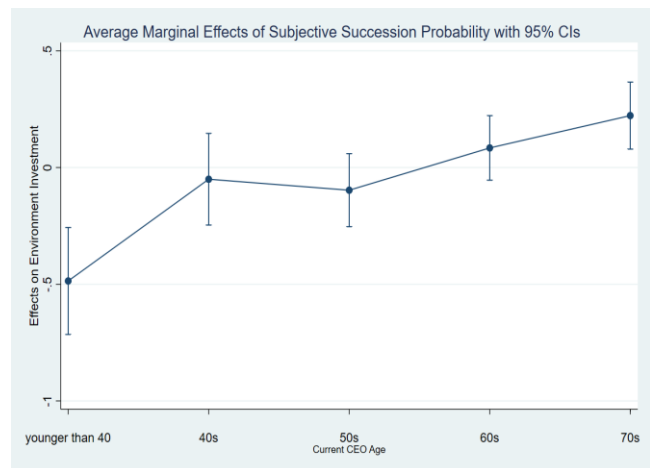
Note 2: *, **, and *** imply that the coefficient is significantly different from zero at the 10%, 5%, and 1% levels, respectively.

Note 3: To save space, we do not report the coefficients of control variables.

* Graduate School of Commerce, Waseda University
1-6-1 Nishiwaseda, Shinjuku-ku, Tokyo 169-8050 E-mail: tianyi@ruri.waseda.jp
** Department of Management and Information, Kyoto College of Economics
*** Graduate School of Commerce, Waseda University

To understand the effect of the uncertainty about succession, we construct a variable using the question, “(h)ow likely is it that there will be a successor to take over the firm?”, for which we asked the respondents to report probabilistic expectations (range from 0 to 1). Hereafter, this variable is referred to as “subjective succession probability”. We also asked CEOs whether their firms adopt each of the 19 environmental practices listed on the survey questionnaire, such as requiring employees to reduce copies, which reflect a firm’s daily environmental practices. The number of practices for which CEO answered “yes” is used as a dependent variable. We further asked the respondents whether they have implemented investments in energy saving and energy efficiency improvement which reflect a firm’s long-term environmental investment. We created a dummy variable that takes the value of one if the firm makes the environmental investment(s) and zero if otherwise and used this variable as another dependent variable.

Figure 1: Marginal Effects of Subjective Succession Probability on Environmental Investment



3. Results

As in Column (1) of Table 1 (Poisson model), subjective succession probability is found to be positively and significantly associated with the number of environmental practices. In contrast, subjective succession probability is not significantly associated with environmental investments, as presented in Column (2) (Probit model). To account for the possibility that the effect of subjective succession probability on environmental investments depends on CEO’s retirement plan, we interacted subjective succession probability with dummies for CEO age categories (that partially capture CEOs’ career horizons). As in column (3) (Probit model), the coefficients on all interaction terms are found to be positive and significant. Figure 1 presents marginal effects of subjective succession probability across CEO age categories. The results show that the marginal effect is negative and significant when CEO age is below 40, while being positive and significant when CEO age is above 70 (i.e., when CEO will retire in near future).

4. Conclusion

According to our results, CEOs' expectations about succession matter to their firms' eagerness for daily environmental practices that may effectively work as knowledge transfer to their successors. CEOs who will retire in near future seem to consider environmental investments as beneficial if they think that their firms are likely to be succeeded, while younger CEOs might consider other long-term investments to be more valuable for their successors.