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Brian S. Anderson

*University of Colorado-Boulder, USA, [brian.s.anderson@colorado.edu](mailto:brian.s.anderson@colorado.edu)*

Yoshihiro Eshima

*Osaka University of Economics, Japan*

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## FIRM GROWTH, STRATEGIC ADAPTABILITY, AND ENTREPRENEURIAL ORIENTATION



*Brian S. Anderson, University of Colorado-Boulder, USA  
Yoshihiro Eshima, Osaka University of Economics, Japan*

### ABSTRACT

This paper posits that strategic adaptability is the mechanism through which a firm's prior growth influences the exhibition of future entrepreneurial strategies. Defined as the firm's ability to recognize opportunistic changes to its product offerings based on evolving market demand, strategic adaptability is an outcome of a firm's prior growth and the corresponding impetus to respond to changing market conditions in order to maintain the firm's growth trajectory. Firms then exploit these opportunities by increasing their entrepreneurial orientation. We find support for our research model in a two-study series conducted in South Korea and the United Kingdom.

### INTRODUCTION

Firm growth proceeds largely from the exploitation of new product/market opportunities (Shepherd & Wiklund, 2009); adopting an entrepreneurial orientation (EO)—the joint exhibition of innovative and proactive entrepreneurial behaviors, and a managerial willingness to pursue opportunities with uncertain outcomes—is the principal mechanism to achieve that growth (Rauch et al., 2009). Firm growth, however, is a dynamic process (Lockett et al., 2011). While there exist ample constraints on a firm's ability to maintain its growth (Fombrun & Wally, 1989), once embarked on a growth trajectory, managers tend to seek mechanisms to perpetuate increases in size and market influence (Penrose, 1959). As such, entrepreneurial activity is as much of antecedent of firm growth as it is a consequence (Davidsson, Delmar, & Wiklund, 2006).

Despite the conceptual connection between firm growth and future entrepreneurial activity, the specific mechanisms underlying this relationship are less clear (Covin & Lumpkin, 2011). We posit that strategic adaptability—the firm's ability to recognize opportunistic changes to its product offerings based on evolving market demand—translates the impetus to perpetuate the firm's growth trajectory into the recognition of specific entrepreneurial opportunities (Shane and Venkataraman, 2000). In turn, the firm increases its EO as the strategic mechanism to capture the potential value of these opportunities (Hitt et al., 2001). Our study addresses a conceptual gap in the EO literature by describing how firm growth influences EO as well as the necessary enabling conditions for this relationship to manifest. We further contribute to the firm growth literature by outlining why prior growth is a key antecedent to exposing new entrepreneurial opportunities that are necessary to enable the firm to persist on its growth trajectory.

### HYPOTHESES DEVELOPMENT

The quantity of research on firm growth as an antecedent to theoretically meaningful organizational capabilities pales in comparison to those studies adopting growth as an outcome (McKelvie & Wiklund, 2010). As Penrose (1959) noted, however, firm growth is a dynamic process; future growth is a function of previous growth as firms leverage the knowledge and resources

accumulated in prior periods to identify and exploit opportunities in the future. Modeling this dynamic relationship is problematic however, and empirical support for the preceding is mixed (Lockett et al., 2009). We suggest that what is missing from the growth-as-antecedent conversation is an examination of the causally adjacent phenomenon that translate the search behaviors stemming from resource and knowledge acquisition to the identification of new opportunities for value creation (McKelvie & Wiklund, 2010).

Firms high on strategic adaptability quickly recognize and assimilate information from changing market conditions that reveal new opportunities for value creation (Green, Covin, & Slevin, 2008). A necessary input to strategic adaptability is thus exposure to changing market conditions (Dean & Thibodeaux, 1994). Regardless of current performance, environmental exigencies encompassing even the most conservatively managed firm will change (Bettis & Hitt, 1995). However, by expanding their boundaries rapidly, high growth firms experience—or even create—environmental conditions that reveal gaps in the firm's understanding of current customer expectations at a rate faster than their slower growing peers (Mueller et al., 2012). As such, we expect that strong prior growth will positively influence strategic adaptability.

Such adaptability generates the understanding of how and in what way the firm should adjust its offerings to meet changing market conditions and to capture new value creation opportunities (Dean & Thibodeaux, 1994). The next step, however, is translating this understanding to strategic action that exploits potential value, perpetuating the firm's growth trajectory. This mechanism is the firm's entrepreneurial orientation—the observed innovative and proactive entrepreneurial behaviors that place the firm in novel domains, supported by a managerial willingness to pursue opportunities with uncertain outcomes (Anderson et al., 2014). Importantly, because EO has both behavioral and attitudinal elements that together form the higher order construction of EO, we must specify antecedent relationships directly to EO's lower order dimensions of entrepreneurial behaviors and managerial attitude towards risk rather than EO directly (Anderson et al., 2014).

Given that entrepreneurial activity is the principal mechanism to achieving new organic growth (Rauch et al., 2009), we would expect that firms wishing to continue growing at a similar rate are more likely to increase their entrepreneurial orientation from the level that led to the prior period's rate (Wiklund, 1999). Because growth rate is an exponential function, maintaining the same rate starting from a subsequently larger base requires a corresponding increase in EO from the prior period (McKelvie & Wiklund, 2010). As such, we would expect that strong prior firm growth would result in a positive increase in the firm's EO. However, because EO is fundamentally an opportunity exploitation mechanism (Anderson & Kreiser, 2013), the firm must first identify valuable product/market opportunities with which to exploit through their entrepreneurial behaviors. Hence, strategic adaptability is a necessary antecedent that translates the knowledge generated by strong prior growth into future entrepreneurial activity. As such, we posit that:

*Hypothesis 1: Strategic adaptability mediates the relationship between firm growth and entrepreneurial behaviors, and between firm growth and managerial attitude towards risk.*

## METHOD AND RESULTS – STUDY 1: SOUTH KOREA

### Sample

We collected data from the senior-most executive at 610 small to medium-sized South Korean businesses randomly selected from the membership rolls of the Korean Venture Business Association (KOVA). KOVA is a trade organization located in Seoul, South Korea, that operates

analogously to a chamber of commerce in the United States. We collected data in partnership with KOVA, with the number of respondents driven by budgetary constraints. Specifically, our budget allowed for the collection of roughly 600 responses from KOVA's 11,248 members at the time of data collection, for a response rate of  $\approx 5$  percent. We contacted member businesses by phone until we obtained the predetermined number of responses. Comparisons of firm age and firm size between the responding and non-responding firms revealed no significant differences; neither did comparisons between early and late respondents. The survey was originally written in English, translated into Korean by a native Korean language speaker fluent in English, and then back-translated into English by a second native Korean speaker to verify that the translation process did not materially alter the meaning of the indicators (Brislin, 1980). Because our focus is on small to medium sized businesses, we constrained our sample to firms with between 5 and 250 employees (Anderson & Eshima, 2013). After accounting for firms with missing data on the variables of interest, the final sample contained 535 observations.

### Measures

We measured firm growth using two, 5-point likert-style indicators for the respondent's estimate of the firm's revenue and asset growth relative to industry peers over the preceding three years (Wall et al., 2004). We measured strategic adaptability using three, 7-point likert-style indicators modified from Jansen, Van Den Bosch, and Volderba (2005): 1) New opportunities to serve our customers are quickly understood; 2) We quickly analyze and interpret changing market demands; and 3) My business unit considers the consequences of changing market demand in terms of new products and services. We measured entrepreneurial behaviors and managerial attitude towards risk following the Covin and Slevin (1989) entrepreneurial orientation scale. For our control variables, we included the log of the firm's age and total sales, and a single, continuous indicator each for environmental hostility and environmental dynamism. Note that we did not estimate a path from either entrepreneurial behaviors or managerial attitude towards risk to a higher order formative construction of EO (Anderson et al., 2014). The reason for this is the high likelihood of endogeneity in the causal paths between the lower order reflectively measured dimensions and the higher order EO identified using two global reflective indicators (Diamantopoulos, 2008). While this approach diminishes the theoretical contribution of strategic adaptability to EO in the broad sense, it is empirically more precise (Anderson et al., 2014).

### Measurement Model

Our initial confirmatory factor analysis revealed a poor fit for our measurement model ( $\chi^2 = 327.20$ ,  $p < .001$ ). Examining the modification indices indicated that four of the nine EO indicators were significantly loading on other intended constructs—a finding common in CFA models of the Covin and Slevin (1989) scale (e.g., Anderson & Eshima, 2013). Eliminating these items left three indicators for entrepreneurial behaviors: 1) During the past three years changes in product or service lines have usually been quite dramatic; 2) My business unit typically initiates actions to which competitors respond; and 3) My business unit is very often the first business to introduce new products or services, administrative techniques, operating technologies, etc. We retained two indicators for managerial attitude towards risk: 1) The top managers of my business unit have a strong proclivity for high risk projects; and 2) The top managers of my business unit believe that owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives. After freeing a measurement error covariance between two entrepreneurial behavior indicators, our final measurement model exhibited excellent fit to the data ( $\chi^2 = 60.02$ ,  $p > .1$ ; RMSEA: 0.017; CFI: 0.997; SRMR: 0.20).

## Instruments

Given that growth is an outcome of entrepreneurial orientation (Rauch et al., 2009), as is rapid adjustment to changing market conditions (Anderson, Covin, & Slevin, 2009), we adopted an instrumental variable approach following (Antonakis et al., 2014) to address endogeneity present in the model. Given the specified mediation model, we required two instruments for firm growth and another two for strategic adaptability, allowing us to identify a full phi matrix of all possible disturbance term covariances for each structural path. For firm growth, we asked respondents his/her satisfaction—weighted by importance—of the firm's total sales and cash flow. For strategic adaptability, we collected two, 7-point likert-style indicators: 1) Employees [of my business unit] hardly ever share practical experiences with each other; and 2) My business unit has a clear division of roles and responsibilities. In our structural model, each instrument was a significant predictor ( $p < .001$ ) of its focal endogenous latent construct.

## Structural Model

Adding our hypothesized structural paths to the model indicated support for our research model, and the model fit the data well ( $\chi^2 = 100.53$ ,  $p > .05$ ; RMSEA: 0.02; CFI: 0.994; SRMR: 0.02). As posited, firm growth has a positive and significant relationship to strategic adaptability ( $\beta = 0.30$ ;  $p < .01$ ; results reported with robust standard errors). Similarly, strategic adaptability relate positively and significantly—although at different magnitudes—with entrepreneurial behaviors and managerial attitude towards risk ( $\beta = 0.54$ ;  $p < .001$ ;  $\beta = 0.32$ ;  $p < .01$ , respectively). Further, we observed insignificant paths between firm growth and EO's lower order dimensions (i.e.,  $p > .1$ ) providing evidence of full mediation. Bootstrap analysis supported our primary findings that the effect of firm growth on entrepreneurial behaviors and managerial attitude towards risk precedes largely through the firm's strategic adaptability (Preacher & Hayes, 2004). We observed no significant correlations among the disturbance terms for the endogenous variables, indicating that our instruments effectively dealt with any potential correlation between the disturbance terms that would render our structural estimates inconsistent (Antonakis et al., 2014). Furthermore, examination of the modification indices revealed no material correlation between the instruments and the endogenous variable disturbance terms, indicating that the instruments are properly excluded from the second stage equations (Wooldridge, 2010).

## METHOD AND RESULTS – STUDY 2: UNITED KINGDOM

### Sample

We collected data from the senior-most executive at 134 small to medium-sized (SME) businesses drawn from an initial sample of 6,000 SMEs randomly selected from FAME database in the United Kingdom (Souitaris & Maestro, 2010), for a response rate of  $\approx 2$  percent. Budget restrictions prohibited multiple contacts of non-respondents. However, comparisons of industry sector, employees, and total assets responding and non-responding firms revealed no significant differences. Again, because our focus is on SMEs, we constrained our sample to firms with between 5 and 250 employees (Anderson & Eshima, 2013). After accounting for firms with missing data on the variables of interest, the final sample contained 107 observations.

### Measures

We used the same indicators for our focal latent constructs and control variables in Study 2 as in Study 1, with the exception of firm growth. Using the FAME database, we constructed observed measures of sales growth rate and of asset growth rate using sales and asset data from the

two full fiscal years preceding data collection. As is common with archival data, we winsorized both growth indicators to address skewness and kurtosis (Wooldridge, 2010). Replicating Study 1 and recognizing the endogeneity concerns, we omitted structural paths from entrepreneurial behaviors and managerial attitude towards risk to a higher-order formative construction of EO.

### Measurement Model

Our confirmatory factor model replicating the measurement model from Study 1 with the replacement of the two observed indicators for firm growth revealed a poor fit to the data ( $\chi^2 = 68.17$ ,  $p < .05$ ). However, freeing a measurement error covariance between two indicators of strategic adaptability resulted in an excellent fitting measurement model ( $\chi^2 = 46.22$ ,  $p > .1$ ; RMSEA: 0.016; CFI: 0.997; SRMR: 0.041).

### Instruments

Unfortunately given the archival nature of the two firm growth indicators, we were unable to find temporally appropriate instruments for firm growth. As such, we cannot rule out the possibility of inconsistent estimates between the two growth indicators and strategic adaptability. However, experimenting with specifications using our control variables as predictors of both growth measures suggested no material covariance between the growth disturbance terms and strategic adaptability. As such, we have some confidence that if present, endogeneity is not materially influencing these structural paths. Further, using the same instruments for strategic adaptability proved infeasible because of violations in the exclusion restriction. As such, we used two different 7-point Likert style instruments for strategic adaptability in Study 2: 1) My business unit is not responsive to customer complaints; and 2) Employees of my business unit have a common language regarding our products and services. In our structural model, each instrument was a significant predictor ( $p < .001$ ) of its focal endogenous latent construct.

### Structural Model

The structural results from Study 2 largely mirror those of Study 1, and the model fit the data well ( $\chi^2 = 64.75$ ,  $p > .1$ ; RMSEA: 0.036; CFI: 0.983; SRMR: 0.041). However, in Study 2 only asset growth rate related significantly to strategic adaptability ( $\beta = 0.23$ ;  $p < .01$ ), a finding that merits further exploration. Bootstrap analysis again supported our primary findings, and we observed no significant correlations among the disturbance terms for the endogenous variables, indicating that our instruments effectively dealt with any potential inconsistency between the strategic adaptability and entrepreneurial behaviors/managerial attitude towards risk paths.

## DISCUSSION AND IMPLICATIONS

Scholars have rightly criticized the growth-as-antecedent literature as overlooking theoretically meaningful intervening mechanisms that facilitate continued growth (McKelvie & Wiklund, 2010). Modeling dynamic processes is inherently challenging (Wooldridge, 2010); in the entrepreneurship conversation specifically, the outcome of growth generally involves complex exponential and spiral-like relationships that complicate theoretical development (Shepherd, Patzelt, & Haynie, 2010). For example, consider firm  $i$  at time  $t$ , with sales of \$10MM. To grow 10% by time  $t+1$ , firm  $i$  must generate \$1MM in new growth. At time  $t+2$ , to maintain the same 10% growth rate firm  $i$  must generate \$1.1MM in new sales. *Ceteris paribus*, the level of entrepreneurial activity to generate growth in time  $t+2$  must be higher than that which generated growth in time  $t+1$ . As such, to better understand growth dynamics, we must consider causally

adjacent phenomenon that facilitate translating the new resources and knowledge generated by growth into new entrepreneurial opportunities that can be subsequently exploited. In our studies, we find support for strategic adaptability in this role.

As a distinct organizational competency, strategic adaptability exists independently of its critical antecedent—exposure to changing environmental exigencies (Dean & Thibodeaux, 1994). We suggest though that because of their trajectory, rapidly growing firms are exposed to changing market conditions at a faster rate, which uncover opportunistic changes to the firm's products that once exploited facilitate future organic growth (Hitt et al., 2001). Hence, adaptability increases as growth increases.

Knowledge creation and exploitation, and organizational change broadly, occupy a central role in the EO conversation. Frequently examined as outcomes of entrepreneurial activity (Kreiser, 2011), knowledge creation is also a salient antecedent to EO, although why and through what mechanisms knowledge influences EO remain underdeveloped (Anderson et al., 2009). What is necessary to address this gap is to construct theory accounting for the unique role that knowledge—and in particular knowledge of potentially valuable entrepreneurial opportunities—plays as an enabling mechanism for future entrepreneurial activity. Strategic adaptability again is a critical mechanism here, but requires that we think about the EO not as a fundamentally exploratory activity but rather as the set of strategic actions that exploit potentially valuable opportunities (Anderson & Kreiser, 2013).

To illustrate, consider that EO is fundamentally a resource consuming strategic posture (Covin & Slevin, 1991); the availability of slack resources is a necessary condition to enact entrepreneurial strategies (Anderson, 2010). Further, EO's effect on performance is strongest when employed in a disciplined, focused manner (Anderson et al., 2009). The preceding implies that EO's value creation potential depends on senior managers having a well-developed sense of the potential future value of an entrepreneurial opportunity before expending critical resources to capture that value. This does not imply the absence of uncertainty surrounding the opportunity (Kirzner, 1997). Rather, we suggest that firms engage in entrepreneurial activity not to experiment with potential opportunities (e.g., Patel et al., 2014), but rather to resolve opportunity uncertainty to better aid in value capture previously identified by senior managers.

Lastly, as discussed by Anderson et al. (2014), given that EO has distinct behavioral and attitudinal components, a given antecedent may differentially relate to each lower order dimension. In our studies, we found this to be the case; strategic adaptability strongly influences entrepreneurial behaviors while adaptability has a tenuous connection to managerial attitude towards risk. As such, it behooves scholars to explore EO's antecedent relationships to its lower order dimensions rather than directly to the higher-order conceptualization.

**CONTACT:** Brian S. Anderson; brian.s.anderson@colorado.edu; (T) 303-492-2820; Leeds School of Business, 419 UCB, University of Colorado, Boulder, CO 80309.