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Developmental Paper

Benefits from business model renewal depends on entrepreneurial mindset

Abstract

This study aims to explore the relationship between business model change frequency and its impacts on the rate of firms' performances, comparing between preventive and promotive mindset entrepreneurs. This study offers a more nuanced view on the inherently assumed positive effects of opportunity-driven business model renewal on performance. The total eligible sample in wave 1 was 599 young firms. After the follow up in wave 2 and 3, 414 new firms remained in our sample. Preliminary findings showed that well-performing entrepreneurs tended to change their business model more frequently. However, entrepreneurs who made more changes in their business model, perceived that their performance growth was slower compared to those who made less changes. Further, the growth of subjective performance was slower among preventive mindset than promotive mindset entrepreneurs. When the objective performance (actual annual profits) is used, the growth of profits significantly and slowly increased among preventive mindset entrepreneurs, but neutral effect among promotive mindset entrepreneurs.

Keyword: Business Model, Strategic Renewal, Entrepreneurs, Mindsets

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Introduction

Business model changes are about renewing firms' strategic directions (e.g. George & Bock, 2011; Schmitt, Raisch, & Volberda, 2016). While there are no general accepted definitions of business model (George & Bock, 2011; Zott, Amit, & Massa, 2011), our point of view defines the business model as a firm's business plan which influences on decision-making process, methods, and practices. There are clear times when a business plan is required to change or be renewed as a response to the context, including market and competitive pressures (Johnson, Christensen, & Kagermann, 2008). This is a firms' reactive process in responding to exogenous technological and regulatory shocks (Martins, Rindova, & Greenbaum, 2015). Should business owner-managers change their business model with a proactive mindset in order to maximize their benefits from the changes? This question may lead to a critical role of managerial mindset, which focuses beyond the material aspects of business models (Tikkanen, Lamberg, Parvinen, & Kallunki, 2005).

Entrepreneurs' mindset is "the [cognitive] ability to rapidly sense, act, and mobilize, even under uncertain conditions"(Haynie, Shepherd, Mosakowski, & Earley, 2010, p. 217).

Entrepreneurs change their business model to improve their performance and respond to environmental changes (Doz & Kosonen, 2010; Gulati & Puranam, 2009). While past research observes the impact of business model on firms' performance, there is a limited knowledge about managerial mindset behind these changes. This mindset is the thinking process of bringing firms into alignment with their standards and goals (Brockner, Higgins, & Low, 2004). The current study considers the Regulatory Focus Theory (RFT) as our cognitive framework, explaining that

entrepreneurs may regulate their action through promotion mindset (nurturance related) or preventive mindset (security related)(Higgins, 1998). Much of entrepreneurship research which adopted RFT as the entrepreneurial cognitive framework (e.g. Brockner et al., 2004; Covin & Miles, 2006; Covin, 1991) frequently assume that entrepreneurial and opportunity-driven (promotion) characters (opposing to prevention) have a stronger positive influence on new venture performance (Wiklund & Shepherd, 2011). Yet, will business model renewal have similar effects on shaping entrepreneurial performance in both entrepreneurial mindsets? From a cognitive perspective, business model change may operate differently in a risk-averse environment than it would be in new ventures continuously searching for new opportunities. Yet, while these entrepreneurial orientations have generated a large amount of attention and the increasing focus on entrepreneurial mindsets in research on business model renewal, these literatures surprisingly have not been connected.

Drawing from the RFT, our study thus proposes that entrepreneurial mindsets may shed light on the relationship between business model renewal and firms' performances. Our study aims to explore "to what extent can entrepreneurs' promotive-preventive mindsets further explain the relationship between the business model change and entrepreneurial performances?" Our contributions are twofold. First, our study contributed to the literature on business model change by focusing on the post-launch phase of new ventures, i.e. young firms, which are operational and less than five years old (Davidsson, Steffens, & Gordon, 2011). Prior studies have extensively investigated how entrepreneurs go about developing their business before the launch, but there is limited insight into business model changes after the post-launch stage (cf. Baker et al., 2003; Nicholls-Nixon et al., 2000; Hmieleski and Baron, 2008). Second, we build on a small but growing literature on strategic renewal in new ventures by investigating the

moderating influence of entrepreneurial mindsets (promotion versus prevention) on how business model renewal shapes entrepreneurial performance. Our study offers a more nuanced view on the inherently assumed positive effects of opportunity-driven business model renewal on performance.

Business model changes are about renewing firms' strategic directions

Strategic renewal is well established as a concept regarding established firms, but does the concept of strategic renewal apply to new firms? It is clear that new firms are still in a more fluid stage than established firms (Gersick, 1994; Nicholls-Nixon, Cooper, & Woo, 2000), but this does not have to imply that strategic renewal is not a meaningful concept regarding new firms. Despite the diversity of strategic renewal literature, there seem to be three aspects that are central to the concept of strategic renewal. There is wide consensus on the first two aspects, strategy renewal has to be “strategic” and about “renewal” (Agarwal & Helfat, 2009; Schmitt et al., 2016). Opinions diverge on the third aspect of whether strategic renewal includes changes to the organizational structure or is limited to changes in the strategy.

First, strategic renewal involves a *strategic* aspect. We follow Guth and Ginsberg (1990, p. 5) in defining strategic renewal as “the transformation of the organization through renewal of the key ideas on which they are built”. These key ideas include the complex set of knowledge about products/services, processes, how to approach customers and deal with competitors (Grandi & Grimaldi, 2005). Such key ideas are strategic if they “relate to the long-term prospects of the company and have a critical influence on its success or failure” (Agarwal & Helfat, 2009, p. 281). Small businesses and start-ups often have narrower strategies than large established firms that may utilize a range of strategies at any given time (Kuratko & Audretsch, 2009), which makes any alteration of a new venture strategy a core change. Small businesses

and start-ups often have little room to recover from taking an irrelevant direction (West & Meyer, 1997), suggesting renewal in new firms is very strongly tied to success and failure (Ben-Menahem, Kwee, Volberda, & Van Den Bosch, 2013).

Second, it is about *renewal*, meaning that it “is intentionally limited to the phenomenon in which new business strategies differ significantly from past practices in ways that better leverage the firm’s resources or more fully exploit available product-market opportunities” (Covin & Miles, 2006, p. 53). There is debate whether we can speak of an “established” strategy in new firms. Some authors rather speak of strategic improvisation (Baker, Miner, & Eesley, 2003) or strategic experimentation (Nicholls-Nixon et al., 2000), because of the strategy being in a flux and under development. Looking at a firm from a temporal perspective, in the very early stages of the venture creation process there is no clearly identified strategy (Hitt, Ireland, Camp, & Sexton, 2001), but at some point in the life of a venture one can speak of a strategy. Bhave (1994) argued the transition point is the first sale. A first sale vindicates the business concept and makes the link between concept, products and markets concrete, whereas prior to first sales those links are conceptual (Baker et al., 2003; Bhave, 1994). Baker et al. (2003) refer to this as a “design-precedes-execution” approach towards new firms. The pre-launch process of venture creation is one of conceptual, iterative experimentations with various strategies to find the right business concept. After first sales, it is about execution of the selected strategy. After first sale, changes to the selected strategy have conceptually moved from strategy development/experimentation to strategic renewal.

Regarding the third condition of strategic renewal there is less consensus. The dominant stream of research seems to view strategic renewal as conceptually distinct from *changing organizational structures and systems* (Covin & Miles, 2006; Dess et al., 2003). Others argue

that strategic renewal includes changes to the administrative systems, as they are intrinsically linked (Miles, Snow, Meyer, & Coleman, 1978; Volberda, Baden-Fuller, & Van den Bosch, 2001). Those administrative systems are a main source of inertia and effective renewal may only occur when those systems are changed too (Burgelman, 2002). The latter stream of authors does recognize that changes to organizational forms are not always needed as part of a renewal process (Volberda et al., 2001). In other words, the inclusion of organizational changes is dependent on the context and type of renewal studied. In the context of new firms, inclusion of administrative systems may not be appropriate, as there often are very limited structures and systems to be able to speak of renewal (Nicholls-Nixon et al., 2000). Moreover, administrative systems in new firms are characterized by high fluidity (Gersick, 1994), thus inclusion of organizational systems in renewal processes from the viewpoint of inertia has limited validity in new firms.

Drawing from above discussion, our study defines business model changes as the level of changes in products, processes, marketing and customers since the business first started trading on regular basis.

Business model change and firms' outcomes

Business model change processes have the intent to deliver positive performance outcomes (Agarwal & Helfat, 2009). The change can be seen as trial and error actions which are driven by the environment and learning (Nicholls-Nixon et al., 2000). Entrepreneurs work towards their first "steady-state", and may not have their competitive advantage fully developed at inception.(Nicholls-Nixon et al., 2000). Thus, these entrepreneurs need to learn and experiment which involves frequent changes to the emerging business idea to shape a more

unique offering. Learning takes place through trial and error, with entrepreneurs learning from their successes as well as mistakes (McGrath, 1995). This learning and changing of the business idea is progressive (Crossan & Berdrow, 2003), so the more strategic renewal, the higher we expect the venture's unique advantage and subsequent performance to be. The literature often captures the effectiveness of business model change as a single event. For example, a measurement of revenues and net incomes before and after introducing iTunes/iPod business model. While literature establishes a linear relationship between business model change and firm performance, a question remains that would the rate of change impact on firm performance? Do more frequent changes lead to higher performance over time? Due to an exploratory nature of the question, instead of a directional hypothesis, we propose a research question to be explore as below.

Research question 1: Does the business model change increase the positive change in performance over time.

Entrepreneurs' mindset through the Regulatory Focus Theory (RTF)

From a cognitive perspective, the managerial mindsets refer to core beliefs (Walsh, 1995), mental maps (Barr et al., 1992), and what managers pay attention to (Eggers and Kaplan, 2009). It is the interpretive role of managers that allows us to understand organizational outcomes (Woo et al., 1994; Eggers and Kaplan, 2009). In relation to entrepreneurship literature, many different typologies have been used to indicate strategic mindsets, which can be conceptualized based on the RTF.

The RTF (Higgins, 1998) is widely established in behavioural and psychological sciences study. The RTF explains how individuals are motivated to approach pleasure and avoid pain.

Accordingly, there are two distinct self-regulatory systems, i.e. promotion focus and the prevention focus which can explain ones' action. Higgins (1997, 1998) defines promotion focus is nurturance related, whereas prevention is security related and impact on ones' action. This type of cognitions can influence on creativity (Lieberman, Idson, Camacho, & Higgins, 1999), idea generation (Salter, Wal, Criscuolo, & Alexy, 2015), opportunity recognition (Brockner et al.) , openness to change (Jackson, Hill, Payne, Roberts, & Stine-Morrow, 2012). Past studies conclude that strategic differences based on regulatory foci can determine how problems are solved and decisions are made (Higgins, 1998).

In business context, entrepreneurial orientations are defined based on Miles and Snow's (1978) archetypes, and in particular their defender and prospector type. Covin (1991) argued that the conservative (preventive) versus entrepreneurial (promotive) firm or posture typology was better able to grasp the variance in strategies than some prior models such as Miles and Snow's archetypes. In entrepreneurship literature these scales have evolved in the entrepreneurial orientation construct (Cappelli, Czarnitzki, & Kraft, 2014; Lumpkin & Dess, 1996).

Entrepreneurs with the preventive mindset focus more on minimizing losses, which is a reactive and risk averse approach (Brockner, Higgins, Low, 2004). Entrepreneurs with a preventive mindset are more likely to take a rational, causal approach of planning the strategic direction of the venture (Sarasvathy, 2001). Being more risk averse, they tend to gradually commit more resources instead of large upfront investments, a strategy that is very common in new product development processes in established firms (Cooper, 1986).

On the other hands, Entrepreneurs with the promotive mindset focus on maximizing opportunities, which is a proactive, aggressive and innovative approach (Lumpkin and Dess,

1996; Hmieleski and Baron, 2008). Promotive mindset entrepreneurs might also grasp additional opportunities when they come along. Aiming to maximize the value out of the opportunities they pursue, entrepreneurs will have to start exploiting opportunities when there is still a relatively high degree of uncertainty (Choi and Shepherd, 2004). Under this larger degree of uncertainty, they can rely less on planning but need more improvisatory behavior (Baker et al., 2003). Following this entrepreneurial mindset, it is likely that these entrepreneurs search for and experiment with opportunities that can provide them with strong competitive advantage.

The relationship between the RFT and sunk cost may further explain the possibility that preventive mindset entrepreneurs may engage less renewal behaviour than the promotive mindset entrepreneurs. An experimental study by Higgins et al. (2000), examined this relationship by asking research participants to imagine themselves as an airline president. They invested US\$10 million for an undetectable plane. They discovered another firm has developed and launched the same product when their product is at 90% completion. The preventive entrepreneurs were more willing to abandon the initial course of action, in spite of the sunk costs, while promotive entrepreneurs would engage in the sunk cost fallacy and continue on with the project. Optimism, self-efficacy and internal locus of control are characterised among promotive focus (Crowe & Higgins, 1997). Under a highly uncertain environment (e.g. changing business strategy), promotive founder-owners are more likely to engage risky decision (e.g. sunk cost fallacy).

Preventive-Promotive mindsets as a buffer between business model renewal and outcomes

As stated before, the business model renewal process has the intent to deliver positive performance outcomes (Agarwal & Helfat, 2009). This suggests that entrepreneurs learn and

experiment and create opportunity over time (Ardichvili, Page, & Wentling, 2003; Rae, 2017).

Entrepreneurs are likely to frequently change their business idea as they progressively learn more about how to best exploit opportunities (Lumpkin and Lichtenstein, 2004). While past research observes the impact of business model on firms' performance, there is a limited knowledge about the managerial mindset behind these changes.

Entrepreneurial mindsets play an essential role in the business model renewal. It is the interpretive role of entrepreneurs that allows us to understand entrepreneurial outcomes (Eggers & Kaplan, 2009; Woo, Daellenbach, & Nicholls-Nixon, 1994). Yet, the relationship between the renewal and its outcome could be influenced by the different mindsets among entrepreneurs. The difference between promotive and preventive mindsets is not only the goal orientation (maximizing profits or minimizing losses), but it is also about the outcome sensitivity (Crowe & Higgins, 1997; Higgins, 1998). Promotive mindset enhances sensitivity toward positive outcomes while preventive mindset enhances sensitivity toward negative outcomes. Preventive mindset may engage the business model renewal based on a concern for business survival and meeting obligations (e.g. changes due to clients' requirement). The aim of these business model changes is to preserve their current performance. Therefore, it is possible that preventive mindset entrepreneurs may perceive only little improvement to business performance. On the other hand, promotive mindset entrepreneurs pursue a new opportunity for growth via their business model renewal. It is possible that promotive mindset entrepreneurs may perceive greater business improvement due to the enacted changes. Overall, the business model renewal leads to business improvement, but perhaps the level of perceived improvement may be different based on individuals' mindset. We thus aim to answer research question 2 that proposes that

entrepreneurial mindset may influence the relationship between renewing their business model and the consequences of those changes.

Research question 2: Over time, is the relationship between business model renewal and firm performance stronger among preventive mindset entrepreneurs compared to promotive mindset entrepreneurs?

Methods

The current study investigates the proposed hypotheses by using three-wave data from the Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE) project¹ (Davidsson, Steffens, Gordon, & Reynolds, 2008). This study uses data on business owner-manager of young firms, which are operational and less than five years old (Davidsson et al., 2011).

Measures

Business model change. This construct measured a level of change in wave 1 relating to a core business idea since firms commenced trading.

Entrepreneurial mindsets. This construct referred to entrepreneurs' mindset of the business model of the firm they are developing (Walsh, 1995).

¹ This study builds on the general empirical approach of the Panel Study of Entrepreneurial Dynamics (PSED(-II)) studies in the US (Gartner, Shaver, Carter, & Reynolds, 2004; Reynolds & Curtin, 2008). The CAUSEE study used computer assisted telephone interviewing (CATI) to select and interview respondents. It involved random-digit dialing of 28,383 adults (with equal male/female representation) to generate a sample of nascent and new firms. For the purpose of this study, new firms with one owner are selected.

Entrepreneurial performance (subjective measure). Company perceptual performance in wave one to wave three comparison was measured including net profit, sales growth, cash flow and company value growth in each year.

Entrepreneurial performance (objective measure). The annual profit reported by the business owners is used.

Control variables. Level of business model renewal can be influenced by previous perceived performance and experiences among entrepreneurs (a number of start-ups that an individual previously involved in).

Analysis procedure

The latent growth curve (LGC) analysis is used to examine (a) *the possibility that the level of business model renewal predicts the initial growth and linear growth of entrepreneurial performances* and (b) *whether entrepreneurial mindsets moderates the relationship between business model renewal and entrepreneurial performances* (Figure 1). LGC model, a variant of structural equation modelling, is used to describe group differences in longitudinal change between and within those unobserved groups by using a mean-level change pattern and the maximum-likelihood estimation of the individual variation within the change pattern (Duncan & Duncan, 2004).

 Figure 1 about here

Expected results and discussion

The preliminary analysis found that (RQ1) well-performed firms tended to change their business model more frequently (as shown in the relationship between initial growth of business model change and performances). However, entrepreneurs who made more changes in their business model perceived that their performance growth slower than those who made less changes. Interestingly, entrepreneurs feel that frequent business model changes increase, but slowly, their performance growth. This could be that these entrepreneurs may have high expectations with their performance improvement influenced by the business model renewal. Thus, the possibility that the entrepreneurial mindset moderates the relationship between business model renewal and performances was examined (RQ 2).

Due to sensitivity toward outcomes, the growth of subjective performance (as a result of business model renewal) was slower among promotive mindset ($\beta = -.62$) than preventive mindset ($\beta = -.11$) entrepreneurs. This could be due to higher expectation among promotive entrepreneurs, who aimed to change their business model in order to gain more benefits. Their business could be profitable at the current stage. However, the promotive mindset entrepreneur may set a significant higher goal as a result for this change. Therefore, they expected more radical instead of incremental improvement of the performance. On the other hand, preventive mindset entrepreneurs changed their business model in order to minimize their loss. They perhaps only expected changing in their business model would lead to a small improvement in order to remain in a current business (e.g. from negative to break even). Preventive mindset entrepreneurs may expect the business model change would help them from not losing current customers, but not gaining any new customers. Therefore, the discrepancies between the perception of performance between preventive and promotive entrepreneurs were relative different.

On the other hand, when the objective performance (actual annual profits) is used, the growth of profits (as a results of business model changes) significantly and slowly increased among preventive mindset entrepreneurs, but non-significant effect among promotive mindset entrepreneurs. With preventive mindset, they make changes less frequently than promotive mindset entrepreneurs and perhaps resulting in incremental financial improvement. Does this mean promotive entrepreneurs would do more radical changes and be more beneficial from the change? The answer is no, because the current finding shows that the business model change does not significantly improve the actual profits. Drawing from the current findings, higher performers tend to apply more changes. This higher frequency of change requires extensive commitment of resources. However, “allocation of resources to innovative activity does not necessarily result in improved financial performance” (Gopalakrishnan, 2000, p. 141). This could be that the multi changes in the business models did not create synergies among these activities. Therefore, the frequent changes of business models may provide a neutral effect on financial performance.

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APPENDIX A: Measures and Items of Independent and Dependent Variables

Business model change

How many important changes to your business idea since this business first started trading on a regular basis.

- The products or services that you sell or intend to sell
- The method for producing or sourcing
- The method for promoting or selling
- What customers you sell to

Entrepreneurial mindsets

Which is truer for your business in the last twelve months...

- Making losses as small as possible in case things go wrong – targeting the highest possible profits in case things go well
- Working to position your business to benefit from opportunities you had foreseen in an existing market – working to directly create market so as to shape new opportunities
- Making smaller investments focused on getting the money back sooner – making larger investments to capture as much value as possible from future success

Thinking about the most important surprise in the past 12 months, if any:

- We built on the surprise to create a new or partly new direction for the business – we worked around the surprise to stay on the original track[®]

What is truer about your collaborative relationships in the past 12 months, if any:

- They were mostly formed through our existing personal contacts – they were mostly formed through a broad search for relevant partners^b
- We have used them to help us achieve our original goals – we have also let them influence the direction or goals of our business^b

Which is truer for the most important change in the past 12 months:

- The change was mostly driven by us acquiring new resources and skills – the change was mostly driven by us using our original resources and skills differently^b
- Despite the change we stay true to our original goals – the change also included changing the goals for the business

Objective performances: Actual profit

- Log transformation of number which is equal to revenue minus expenses

Subjective performances: Perceptual performance^a

Results been better or worse compared to other businesses in your industry since you started this business.

- Growth of the company's value
- Net profit
- Cash flow
- Sales growth

^a All items were measured on a five-point scale.

^b Item deleted after analysis; ® reversed item

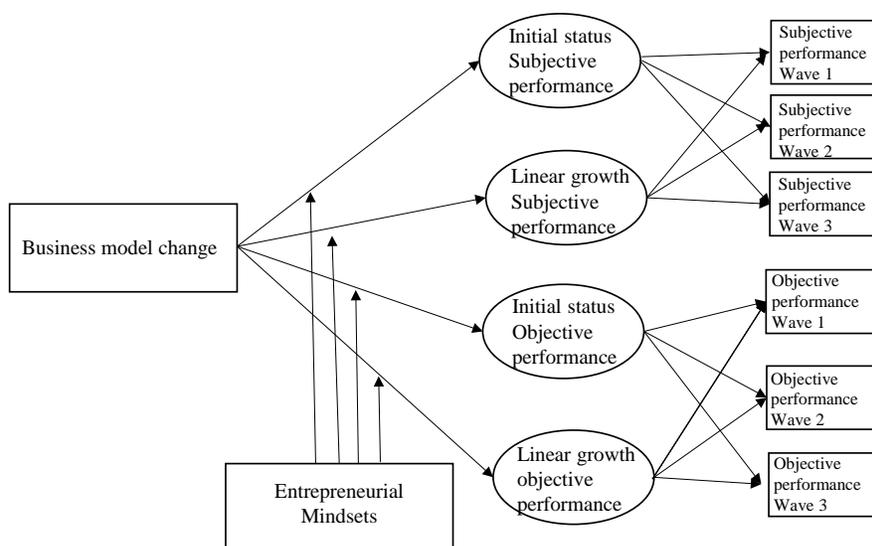


Figure 1: A proposed model: The role of entrepreneurial mindsets on the relationship between business model change and entrepreneurial performances. The model with three time points (representing repeated measures of subjective and objective performance) is presented. The initial status (intercept) is a constant for any individual across time, hence the fixed values of 1 for factor loadings on the repeated measures. The linear growth (slope) is an individual's performance discord trajectory. The factor loadings are bound to the time scale, hence the fixed values of 1, 2, 3 for factor loadings on the repeated measures.

Note: The business model change is controlled for previous entrepreneurial experience and firm perceived performance in previous year

Table 1: Descriptive and correlations among studied variables.

Variables	1	2	3	4	5	6	7	8	9	10
1. Business model change	(.71)	.266**	.002	.039*	-.010	.138**	.150**	.037**	.063**	.025*
2. Entrepreneurial mindsets		-	.047	.085	.164**	.165**	.093	.103	.138**	.166**
3. Objective performance Wave 1			-	.841**	.808**	.287**	.141**	.225**	.261**	.156**
4. Objective performance Wave 2				-	.888**	.290**	.222**	.213**	.306**	.218**
5. Objective performance Wave 3					-	.237**	.220**	.246**	.405**	.255**
6. Subjective performance Wave 1						(.80)	.345**	.439**	.056**	.163**
7. Subjective performance Wave 2							(.85)	.493**	.057**	.222**
8. Subjective performance Wave 3								(.87)	.174**	.248**
9. Previous entrepreneurial experience									-	.071**
10. Previous perceived performance										-
Mean	3.525	-	8.987	9.075	9.711	3.151	2.997	2.821	3.346	.446
SD	1.103	-	4.018	3.996	3.543	.665	.543	.570	.752	.497

Note: ** = $p < .01$; Objective performance (annual profit) uses a log transformation; Entrepreneurial mindsets are categorized into two group as explained in the method section, therefore no mean provided.

Table 2: A summary of path coefficients from the multisample approach based on the proposed model (Figure 1)

Models		Business model change	Business model change x promotive mindset	Business model change x preventive mindset
Initial growth	Subjective performance	.27***	.28***	.16***
	Objective Performance	.21***	.10***	.02 ns
Linear growth	Subjective performance	-.22***	-.62***	-.11***
	Objective Performance	-.15***	-.06***	-.01 ns

Note: *** = $p < .001$, ns = non-significant.