

CONTEXTUAL AMBIDEXTERITY IN SMEs IN INDONESIA: A STUDY ON HOW IT MEDIATES ORGANIZATIONAL CULTURE AND FIRM PERFORMANCE AND HOW MARKET DYNAMISM INFLUENCES ITS ROLE ON FIRM PERFORMANCE

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ABSTRACT

During the last decades, we have recognized the critical importance for firm to contextually balance two opposing tensions of exploration and exploitation. However, the mechanisms and processes associated with each are still not understood well enough. Contextual ambidexterity is a firm's paramount conduct for the short-term and long-term success, especially when the firm operates in a dynamic environment where uncertainty is high. In this paper, drawing on data from 133 Indonesia's SMEs in creative industry, we conceptualize organizational culture as a multidimensional construct consisting of bureaucratic and innovative culture, and examine its impact on contextual ambidexterity and firm performance in the setting of high and low market dynamism. Using partial least squares-structural equation modeling (PLS-SEM), the researchers find that there are significant relationships between organizational culture, contextual ambidexterity and firm performance. Further, contextual ambidexterity mediates the impact of organizational culture on firm performance. This study also finds that the influence of contextual ambidexterity on firm performance is dependent on organizational culture and its effectiveness also depends on market dynamism, rather than the size and age of the firm.

Keywords: Contextual Ambidexterity; Competence Exploration; Competence Exploitation; Organizational Culture; Bureaucratic Culture; Innovative Culture; Firm Performance; Market Dynamism.

1. INTRODUCTION

The term 'organizational ambidexterity' has become one of the important concepts to emerge in organizational learning field in the last two decades. This term was originally coined to refer to a firm's ability to reconcile the dilemma between knowledge exploration

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and knowledge exploitation (Gibson & Birkinshaw, 2004, Benner and Tushman 2003; Kane and Alavi, 2007). As the popularity of the term grew further, researchers began to use different perspectives to address this issue. Despite the abundant research on organizational ambidexterity (e.g. Tushman and O'Reilly, 1996; He & Wong, 2004; Gibson and Birkinshaw, 2004), the literature exploring the relationship between organizational ambidexterity and firm performance remains inconclusive (Li et al., 2008). There are still challenges for most researchers to understand under what condition and how firms may facilitate ambidexterity to improve performance.

In this article, the authors highlight contextual ambidexterity as a focal variable and test the idea of adding market dynamism as a moderating variable affecting the relationship between contextual ambidexterity and firm performance. Further we also add contributions by exploring organizational culture as a variable that influences organizational ambidexterity and firm performance.

This study uses the setting of SMEs engaged in the creative industries in Indonesia. Many SMEs in Indonesia are still faced with managerial dilemmas to grow, for example, whether to implement differentiation or low cost as a strategy for SMEs (Porter, 1980), to adopt mechanistic or organic structure (Burns & Stalker, 1961), or to prioritize control or flexibility (Ghoshal and Bartlett 1994, Tushman & O'Reilly, 1996). Assuming that it is more important for SMEs to maintain a balance between these dilemmas, we raise the issue of contextual ambidexterity as a focal variable in this research.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

2.1. Theoretical Framework

2.1.1. Contextual Ambidexterity

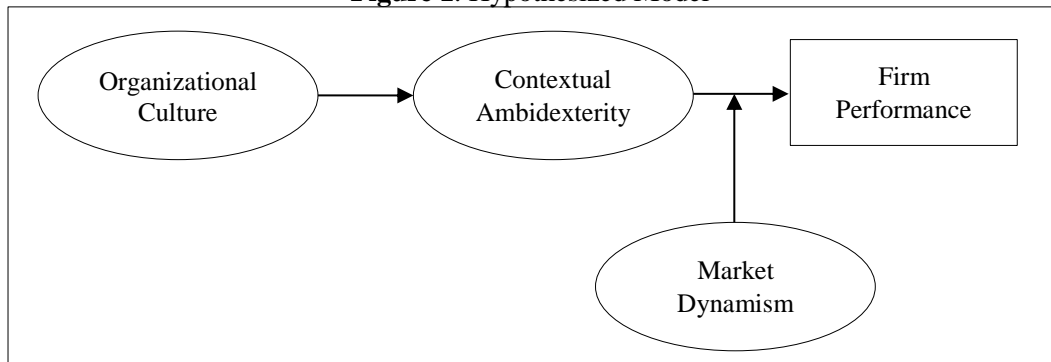
Contextual *ambidexterity* is a firm's ability to balance two opposing tensions of exploring new competences and exploiting existing competences (March, 1991; Tushman and O'Reilly, 1996; Gibson and Birkinshaw, 2004; Almahendra and Ambos, 2015). Exploration and exploitation are believed to be competing organizational activities (Duncan, 1976 in Gibson and Birkinshaw, 2004; Duncan, 1976 in Wang and Rafiq, 2014). Competence exploration is conducted to obtain a new competence that potentially produces greater organizational benefits even though the results of the exploration are not necessarily predictable (Junni et al., 2013; March, 1991). Competence exploitation is conducted to enhance the quality of existing competence with more predictable outcomes (Junni et al., 2013; Yeung et al., 1999; March, 1991). Therefore, balancing both competences requires separate approaches to structural or temporal mechanism (Gupta et al., 2006; Simsek et al., 2009). However, Gibson and Birkinshaw (2004) argue that exploration and exploitation can be best balanced by contextual mechanism within the organization. The implementation of contextual ambidexterity requires a contextual factor that will shape individual and organizational behavior (Gibson and Birkinshaw, 2004; Ghoshal and Bartlett, 1994).

2.1.2. Organizational Culture

Defined as “a complex set of values, beliefs, assumptions, and symbols that define the way a firm conducts its business” (Barney, 1986: 657), organizational culture is one such contextual factor thought to play a role in the implementation of exploration and exploitation simultaneously (Wang and Rafiq, 2014; Gibson and Birkinshaw, 2004). It can be divided into the “hard” and “soft” elements (Wang and Rafiq, 2014; Sobirin, 2009; Detert et al., 2000; Denison and Mishra, 1995). The hard element, here referred to as “bureaucratic culture,” encourages firms to be committed to ensuring that they remain focused on their goal by stable operation over time (Cameron and Quinn, 2011; Deshpandé *et al.*, 1993; Wallach, 1983). The soft element, here referred to as “innovative culture,” encourages firms to be creative and innovative in order to adapt to environmental changes (Andriopoulos, 2001; McLean, 2005; Jelinek and Schoonhoven, 1993, in Wang and Rafiq, 2014).

Bureaucratic culture is internal process-oriented with an emphasis on the values of efficiency and consistency with a strong role of leadership in all business activities (Cameron and Quinn, 2011; Wallach, 1983). These values encourage firms to be disciplined in operating efficiently and consistently over time (Cameron and Quinn, 2011; Deshpandé et al., 1993; Wallach, 1983; Jelinek and Schoonhoven, 1993, in Wang and Rafiq, 2014). *Innovative culture* is results-oriented with an emphasis on the values of creativity, challenge and risk-taking (Cameron and Quinn, 2011; Wallach, 1983). These values encourage firms to seek new ways of doing business through experimentation on new resources (Ireland *et al.*, 2006; March, 1991).

Figure 1: Hypothesized Model



2.2. Hypothesis Development

2.2.1. Organizational Culture and Contextual Ambidexterity

While innovative and bureaucratic cultures seem to have competing values and orientations, Quinn (1998 in Gregory et al., 2009) points out that a key success of an organization depends on the integration and balance of both cultures. In this way, the implementation of contextual ambidexterity requires the integration between these “hard” and “soft” elements (Gibson and Birkinshaw, 2004; Ghoshal and Bartlett, 1994). Firms with highly innovative culture will learn through research and implementation of new procedures, structures and

routines that aim to create and deliver a better value for customers (Zhou et al., 2005). But innovative culture requires a system that supports the firm to be creative and innovative (Wallach, 1983; Hurley and Hult, 1998; Detert et al., 2000). In this way, firms with highly bureaucratic culture are thought to have a better ability to support their innovation activities (Yeung et al., 1999; March, 1991).

Both elements cannot be separated because they will complement and reinforce each other (Ghoshal and Bartlett, 1994; Denison and Mishra, 1995; Detert et al., 2000; Sobirin, 2009), thus supporting the implementation of contextual ambidexterity (Wang and Rafiq, 2014; Simsek et al., 2009; Gibson and Birkinshaw, 2004; Ghoshal and Bartlett, 1994). The integration of both cultures will produce the best output, particularly when firms operate in a dynamic environment (Gregory et al., 2009). If firms only focus on developing one type of culture, it will be difficult for them to respond to different conditions. Firms without innovative culture will find it difficult to adapt to environmental changes and firms without bureaucratic culture will find it difficult to enhance work processes that support their innovation activities.

Hypothesis 1: Organizational culture has a positive impact on contextual ambidexterity

2.2.2. Contextual Ambidexterity and Firm Performance

Even though there is evidence for the positive impact of contextual ambidexterity on firm performance (Wang and Rafiq, 2014; Sarkess et al., 2010; Cao et al., 2009; Lubatkin et al., 2006; Atuahena-Gima, 2005; Auh and Menguc, 2005; Gibson and Birkinshaw, 2004; He and Wong, 2004), there is little empirical evidence of the relationship in emerging economy (Raisch and Birkinshaw, 2008; Simsek et al., 2009). In emerging economy, business environment experience unpredictable changes, unstable financial conditions, and economic and political climate that could impede organizational survival (Atuahena-Gima, 2005; Hoskisson et al., 2000; Jaramillo and Schiantarelli, 2002; Jaworski and Kohli, 1993). Therefore, firms must adapt and change in order to survive and face further changes (Junni et al., 2013; Gibson and Birkinshaw, 2004; Tushman and O'Reilly, 1996; March, 1991; Fiol and Lyles, 1985).

Conceptually, contextual ambidexterity enables firms to adapt well to environmental changes, thus enabling them to flourish by producing a superior performance (Junni et al., 2013; Raisch et al., 2009; Raisch and Birkinshaw, 2008; Gibson and Birkinshaw, 2004; He and Wong, 2004; Levinthal and March, 1993; March, 1991). According to Simsek (2009), the integration and balance of competence exploration and exploitation enhances firm performance by enabling an organization to be innovative, flexible, and effective without losing the benefits of stability, routine, and efficiency. Based on organizational learning theory, the integration and balance between competence exploration and exploitation embodies a learning process (March, 1991; Levinthal and March, 1993; Crossan et al., 1999).

Previous studies suggest that contextual ambidexterity contributes not only to financial performance (Cao *et al.*, 2009; Rothaermel and Alexandre, 2009; Sarkess *et al.*, 2010; Jansen *et al.*, 2012) but also to non-financial performance (Wang and Rafiq, 2014; Sarkess *et al.*, 2010; Atuahena-Gima, 2005). Firms that are able to integrate and balance competence

exploration and exploitation will able to create and deliver a better value rather than the competitors (Wang and Rafiq, 2014; Gibson and Birkinshaw, 2004; Levinthal and March, 1993; Yeung et al., 1999; Fiol and Lyles, 1985; Amabile, 1988; Prahalad and Hamel, 1990; Bogner et al., 1999; Barney, 1991). Therefore, they can maximize customers' satisfaction through their products and services (Gibson and Birkinshaw, 2004; Yeung et al., 1999).

Hypothesis 2: Contextual ambidexterity has a positive impact on firm performance

2.2.3. Mediating Effect of Contextual Ambidexterity

Some scholars believe that organizational culture has an impact on firm performance. This is supported by empirical evidence over the last two decades (Deshpandé et al., 1993; Ogbonna and Harris, 2000; Fey and Denison, 2003; Wei et al., 2013). However, prior research has focused on direct effects of organizational culture on firm performance (Denison and Mishra, 1995; Ogbonna and Harris, 2000). There is still a lack of research exploring possible mediators of this relationship. Moreover, empirical evidence shows that prior research found inconsistent results on the relationship between organizational culture and firm performance. There are several scholars showing positive effects in the organizational culture-performance relationship (e.g. Deshpandé et al., 1993; Fey and Denison, 2003; Ogbonna and Harris, 2000; and Wei et al., 2013), particularly innovation culture and bureaucratic culture. Conversely, past studies did not find a positive effect in the organizational culture-performance relationship, such as Terziovski et al (2010) on innovative culture and Ogbonna and Harris (2000) on bureaucratic culture.

Previous studies also assert that organizational culture does not directly affect firm performance, except to create an environment for shaping the behavior of organizational members (Wang and Rafiq, 2014; Güttel and Konlechner, 2009; Gibson and Birkinshaw, 2004; Ghoshal and Bartlett, 1994). Contextual ambidexterity is a firm's paramount conduct to survive and produce a superior performance in the dynamic environment (Junni et al., 2013; Raisch et al., 2009; Raisch and Birkinshaw, 2008; Gibson and Birkinshaw, 2004; He and Wong, 2004; Levinthal and March, 1993; March, 1991). Contextual ambidexterity serves not only as an antecedent to firm performance, but also as a mediator between organizational culture and performance. Competence exploitation and exploration are the outcomes of organizational culture considering that both competences are developed through a learning process supported by organizational values and norms (Wang & Rafiq, 2014; Güttel & Konlechner, 2009; Detert et al., 2000; Ogbonna & Harris, 2000; Barney, 1986; Bogner et al., 1999; Crossan et al., 1999; Amit and Schoemaker, 1993; Ashforth and Mael, 1989). In turn, both competences are utilized to help produce new products and services (Wang and Rafiq, 2014; Atuahene-Gima, 2005; Bogner et al., 1999; Yeung et al., 1999; Prahalad & Hamel, 1990), maximize customer satisfaction (Gibson and Birkinshaw, 2004; Sarkess et al., 2010; Yeung et al., 1999), and firm performance (Gibson and Birkinshaw, 2004; He and Wong, 2004; Lubatkin et al., 2006), thus becoming a firm's competitive advantage (Barney, 1991, 1986; Wernerfelt, 1984). Our argument is supported by Wang and Rafiq's study (2014), showing the meditational role of contextual ambidexterity in the relationship between organizational culture and firm performance.

Hypothesis 3: Contextual ambidexterity mediates the positive impact of organizational culture on firm performance

2.2.4. Moderating Effect of Market Dynamism

Previous research seems to neglect the dynamics of market conditions as an essential factor (Wang et al., 2015; Atuahena-Gima, 2005; Jaworski and Kohli, 1993). It plays an important role in determining an organization's success. Any change in the environment will affect how firms respond to the environment (Hurley and Hult, 1998; Jaworski and Kohli, 1993; Porter, 1980). Environmental conditions may also become a boundary condition for a firm's conduct, especially in the context of contextual ambidexterity (Gibson and Birkinshaw, 2004). The effectiveness of the balancing between competence exploration and exploitation may vary depending on the level of market dynamism (He and Wong, 2004). In other words, market dynamism is expected to affect the effectiveness of contextual ambidexterity implementation (Raisch and Birkinshaw, 2008; Gibson and Birkinshaw, 2004; Eisenhardt and Martin 2000; Hurley and Hult, 1998; Jaworski and Kohli, 1993).

Market can motivate and provide new ideas for companies to respond to environmental changes (Hurley and Hult, 1998; Jaworski and Kohli, 1993; Porter, 1980). A dynamic market can affect the effectiveness of firm's conduct (Eisenhardt and Martin 2000; Porter, 1980; Jaworski and Kohli, 1993; Atuahene-Gima, 2005; Amit and Schoemaker, 1993). A dynamic market occurs when changes in the behavior of market players (competitors and customers) within the business environment is considered important for a company (Jaworski and Kohli, 1993). Further, changes in competitors' behavior occur quickly and uncertainly, while changes in customers' behavior are difficult to predict because the needs and tastes of customers toward a product is likely easy to change (Wang et al., 2015; Atuahene-Gima, 2005; Jaworski and Kohli, 1993; Porter, 1980).

At *low market dynamism*, changes occur frequently but its linear paths and the results and directions of the changes can be more easily predicted. Firms will know who the market players are and what the role of the market players is (Eisenhardt and Martin, 2000). In this type of market, firms' behavior depends on existing knowledge (tacit knowledge) to analyze the business environment and plan and organize business activities in the future (Burns and Stalkers, 1966 in Eisenhardt and Martin, 2000). Typically, firms have more structured work processes for efficiency purpose (Eisenhardt and Martin, 2000; Fiol and Lyles, 1985; Levinthal and March, 1993). In addition, firms can also satisfy the market players through creating and delivering better values over time (Gibson and Birkinshaw, 2004; Levinthal and March, 1993; Yeung *et al.*, 1999). Therefore, work processes will be efficient using the existing knowledge so that the implementation of contextual ambidexterity will be predominantly exploitation activities rather than exploration activities for successful firms (Eisenhardt and Martin, 2000; He and Wong, 2004; Gupta *et al.*, 2006).

At *high market dynamism*, changes occur frequently as well but its nonlinear paths, and the results and directions can hardly be predicted. Firms do not know who the market players are and what the role of the market players is (Eisenhardt and Martin, 2000). In this type of market, the effectiveness of a firm's behavior depends on new knowledge than existing knowledge because the former can help firms to solve problems and capture emerging opportunities, providing a broader view of doing business (Eisenhardt and Martin, 2000). High market dynamism makes firms become more responsive toward environmental changes (Junni et al., 2013; March, 1991; Fiol and Lyles, 1985). Work process will become more effective using new knowledge in this situation (Eisenhardt and Martin, 2000).

Therefore, the implementation of contextual ambidexterity will be predominantly exploration activities rather than exploitation activities for successful firms (He and Wong, 2004; Gupta et al., 2006).

According to contingency theory, a firm's ability to survive and become more effective will depend on whether the firm can create a fit between its conduct and environmental conditions (Dranzin and Van de ven, 1985; Miller, 1981). Therefore, to become more efficient and effective, thus generating high performance, firms should be able to create a fit between modes of contextual ambidexterity (exploitation or exploration) and types of market dynamism (high or low) (Dranzin and Van de ven, 1985; Miller, 1981).

Hypothesis 4: Market dynamism moderates a positive impact of contextual ambidexterity on firm performance, which is higher when market dynamism is high rather than when it is low.

3. METHOD

3.1. Research Design and Sample

We conducted this study in context of SMEs in the creative industries in Yogyakarta, Indonesia. This study focused on four fields of the creative industries (i.e. culinary, fashion, photography, and handicrafts) and those that had been operating for at least three years as our criteria for purposive sampling (Cooper and Schindler, 2014). These SME sectors have a lower level of entry barrier, which will encourage more rivalries in the industry. It triggers a high level of competition and forces each SME to be sustainable yet flexible enough to maintain high levels of performance in the dynamic market. Therefore, we argue that choosing these SME sectors in the creative industries will be appropriate to study contextual ambidexterity. Moreover, SMEs in the creative industries in Indonesia had provided a significant contribution to the Indonesia's GDP consistently from 2010 to 2013 (Kemenparekraf, 2014). A self-administered questionnaire using a five-point Likert scale was used to gather data from respondents. We adopted and adapted all measurements from previous literatures measuring contextual ambidexterity (Atuahena-Gima, 2005) and market dynamism (Wang et al., 2015). All questions were related to issues at the business unit level of the creative industries in the context of SMEs. The questionnaire was distributed to CEOs or managing directors of SMEs over a period of 2 months (October–November 2015). Following the suggestion made by Dess and Robinson (1984) and Lubatkin et al., (2006), we targeted CEOs and managing directors of SMEs as our primary respondents given their familiarity with the culture, structure and market conditions surrounding their company. We distributed 200 questionnaires and received 168 returned questionnaires (84% response rate). After eliminating 12 unusable responses, we verified 156 valid questionnaires coming from 133 different SMEs (68 from culinary, 22 from fashion, 22 from photography, and 21 from handicraft).

3.2. Measures

Organizational culture. Organizational culture consists of innovative culture (IC) and bureaucratic culture (BC). IC was measured using a six-item scale from Terziowski (2010),

which explains how firms adapt to environmental changes. BC was measured using a four-item scale from Deshpandé et al., (1993). IC and BC were hypothesized as the component factors of organizational culture. In calculating organizational culture, an interaction term between IC and BC was used.

Contextual ambidexterity. Contextual ambidexterity is a two-dimensional construct consisting of exploration and exploitation (Gibson and Birkinshaw, 2004; Simsek et al., 2009; Menguc and Auh, 2008; Almahendra and Ambos, 2015). Both dimensions (CER for exploration and CEP for exploitation) are treated as different constructs of contextual ambidexterity, so that an interaction term between both forms (multiplication) can be obtained (Gibson and Birkinshaw, 2004). This interaction term was counted as a measure of contextual ambidexterity. Each dimension consists of five items taken from Atuahene-Gima (2005).

Market dynamism. Market dynamism consists of three aspects: speed of change in competition (SCC), uncertainty of change in competition (UCC) and uncertainty of customer behavior (UCB). Adapting from Atuahene-Gima (2005) and Jaworski and Kohli (1993), the scales were developed by Wang et al. (2015). Each aspect consists of two items to draw changes in behavior of market players (customers and competitors) in the market who can change the direction of competition (Wang et al., 2015).

Firm performance. Several previous measures of firm performance focus on a limited single dimension such as sales (He and Wong, 2004; Venkatraman et al., 2007), profitability (Rothaermel and Alexandre, 2009; Jansen et al., 2006), and new product (Wang and Rafiq, 2014; Atuahene-Gima, 2005). Using a single measure of performance could cause bias (Junni et al., 2013; Raisch and Birkinshaw, 2008) and measurements error (Boyd et al., 2005). Therefore, we need a multidimensional measure of firm performance to indicate firms' success (Junni et al., 2013; Raisch and Birkinshaw, 2008; Boyd et al., 2005). The measures are: revenue, profitability, customer satisfaction, and new product, based on Sarkess et al., (2010). Each construct is represented with one measurement item, collectively illustrating both financial and non-financial performance (overall performance). We adopt this construct measurement based on previous studies (Sarkess et al., 2010; Lubatkin et al., 2006; Dess and Robinson, 1984).

Control Variables. Previous studies suggested that ambidexterity in the organization also depends on several factors, such as size and age of the firm. Small firm tend to become more responsive in adapting and changing than the bigger firm (Hannan and Freeman, 1984; Moore, 1997). It is because the bigger and older firm often trapped on the paradox of success, so that they tend to become less innovative in adapting towards the environmental changes (Hannan and Freeman, 1984; Moore, 1997). Therefore, the we used two control variables: (a) firm size (based on the number of employees), categorized into small firms (n = 93) and medium firms (n = 63); and (b) firm age (from birth), grouped into three categories of age ≤ 5 years (N = 83), age between 6-10 years (N = 45), and age above 10 years (N = 28).

3.3. Construct Validity

We tested the construct validity of all variables (organizational culture—two dimensions, contextual ambidexterity—two dimensions, firm performance, and market dynamism—three dimensions) in this research using confirmatory factor analysis (CFA); to make sure all of

measured items reflected the theoretical latent constructs that those items were designed to measure (Hair et al., 2010). We used convergent and discriminant validity to assess the construct validity (Hair et al., 2014; Hair et al., 2010). Table 1 shows all item measurements with loadings and cross loadings greater than 0.5 (Hair et al., 2014). There are several items that have a factor loading below 0.5 and do not fit into the construct. We dropped several items from innovative culture (IC1, IC5, IC6), competence exploitation (CEP5) and unpredictability of change in the competition (UCC1 and UCC2) (see Appendix). CFA of all items in this research had loadings above 0.623, with correlations among constructs below 0.542. From Table 1, we can observe each loading and cross loading from all item measurements, thus confirming construct validity.

Table 1: Loading and cross loading

	Bureaucratic Culture	Innovative Culture	Competence Exploitation	Competence Exploration	Firm Performance	Speed of Change in the Competition	Uncertainty of Customer Behavior
BC1	0.622	0.197	0.194	0.297	-0.014	-0.109	0.176
BC2	0.803	0.058	0.341	0.411	0.269	0.067	0.123
BC3	0.779	0.057	0.299	0.412	0.181	-0.016	0.158
BC4	0.712	0.221	0.347	0.402	0.244	0.233	0.114
IC2	0.199	0.815	0.281	0.332	0.116	0.146	0.278
IC3	0.141	0.812	0.258	0.300	0.141	0.175	0.219
IC4	0.070	0.771	0.153	0.374	0.062	0.205	0.208
CEP1	0.344	0.265	0.842	0.436	0.173	-0.089	0.077
CEP2	0.230	0.328	0.815	0.439	0.174	0.001	0.022
CEP3	0.334	0.218	0.820	0.396	0.214	0.126	0.038
CEP4	0.446	0.161	0.859	0.534	0.302	0.059	0.004
CER1	0.417	0.348	0.454	0.738	0.296	0.141	0.115
CER2	0.349	0.376	0.447	0.750	0.262	0.131	0.127
CER3	0.460	0.263	0.482	0.873	0.424	0.175	0.069
CER4	0.414	0.297	0.369	0.765	0.317	0.142	0.122
CER5	0.360	0.338	0.318	0.700	0.219	0.169	0.248
FP1	0.144	0.043	0.202	0.234	0.814	0.128	-0.070
FP2	0.152	0.108	0.133	0.352	0.832	0.152	0.002
FP3	0.250	0.242	0.288	0.385	0.721	0.263	0.047
FP4	0.211	0.019	0.182	0.259	0.678	0.228	0.110
SCC1	-0.012	0.203	0.007	0.191	0.228	0.906	0.322
SCC2	0.130	0.193	0.045	0.167	0.218	0.906	0.234
UCB1	0.191	0.286	0.047	0.130	0.097	0.244	0.884
UCB2	0.149	0.235	0.028	0.175	-0.057	0.299	0.884

Note: Bold values are loading for items are above the recommended value of 0.5.

Convergent validity is the extent to which a measure correlates positively with alternative measures of the same construct (Hair et al, 2014; Hair et al, 2010). Hair et al. (2010, 2014) suggest using factor loadings and average variance extracted to assess the convergent validity. From Table 2, the loading for all items exceeds the recommended value of 0.5 (Hair et al, 2014; Hair et al, 2010). They further suggest that the average variance extracted (AVE) value should be 0.5 or higher to show adequate convergence. The construct that has an AVE's value greater than 0.5 can explain more than half of the variance of its indicators. The AVE is in the range from 0.537 to 0.821 (see Table 2), indicating that all measurements are adequately convergent to each construct.

Table 2: Descriptive Statistics and Correlations of the constructs (N = 156)

Variable	Mean	SD	AVE	SRAVE	BC	IC	CEP	CER	FP	SCC	UCB
BC	4.12	0.51	0.537	0.733	0.733						
IC	3.79	0.70	0.639	0.800	0.173	0.800					
CEP	4.12	0.60	0.696	0.834	0.407 ^a	0.290 ^a	0.834				
CER	3.84	0.63	0.589	0.768	0.523 ^a	0.418 ^a	0.542 ^a	0.768			
FP	3.66	0.78	0.583	0.764	0.243 ^b	0.134	0.260 ^b	0.401 ^a	0.764		
SCC	3.38	0.85	0.821	0.906	0.065	0.218	0.029	0.197	0.246 ^b	0.906	
UCB	3.39	0.59	0.781	0.844	0.192	0.295 ^a	0.042	0.172	0.023	0.307 ^a	0.844

Notes: Significance: ^a p-value < 0.001, ^b p-value < 0.05. AVE = average variances extracted; SRAVE = square root of average variances extracted; BC = bureaucratic culture; IC = innovative culture; CEP = competence exploitation; CER = competence exploration; FP = firm performance; SCC = speed of change in competition; UCB = uncertainty of customer behavior.

To test the discriminant validity, we used cross loadings of the indicators and Fornell-Larcker criterion as suggested by Hair et al. (2014). First, an indicator's outer loadings on a construct should be higher than all its cross loadings with other constructs. It is shown that the cross loadings in this research are low and all measurements are distinct from one another (see Table 1). Second, using the Fornell-Larcker criterion, we compared the square root of the average variance extracted (SRAVE) from every construct to correlations among constructs in the model. If the SRAVE's value of each construct is greater than the correlations between that construct and other constructs, it suggests that the constructs in this research are distinct from one another. It is shown that all constructs or variables have a SRAVE's value greater than the correlations between them and all other constructs or variables (see Table 2). These results indicate that all constructs are truly distinct from other constructs by empirical standards. Based on these results, the measurement model demonstrates adequate convergent validity and discriminant validity.

Table 3: Result of reliability test

Constructs	Measurement items	Cronbach's α	Composite Reliability	Number of items
Bureaucratic culture	BC1, BC2, BC3, BC4	0.708	0.821	4 (4)
Innovative culture	IC2, IC3, IC4	0.717	0.842	3 (6)
Competence exploitation	CEP1, CEP2, CEP3, CEP4	0.854	0.902	4 (5)
Competence exploration	CER1, CER2, CER3, CER4, CER5	0.824	0.877	5 (5)
Firm performance	FP1, FP2, FP3, FP4	0.759	0.848	4 (4)
Speed of change in competition	SCC1, SCC2	0.782	0.902	2 (2)
Uncertainty of customer behavior	UCB1, UCB2	0.720	0.887	2 (2)

Note: Final items numbers (initial numbers)

To test the reliability of this measurement, we used the Cronbach’s alpha coefficient and composite reliability with the rule of thumb of 0.7 (Hair et al., 2014). The higher the value of each criterion, the higher level the reliability. Table 3 summarizes the Cronbach’s alpha and composite reliability. It can be seen that all alpha values ranged from 0.708 to 0.854. The composite reliability values also range from 0.821 to 0.902. Based on these results, we can conclude that our measurements are reliable.

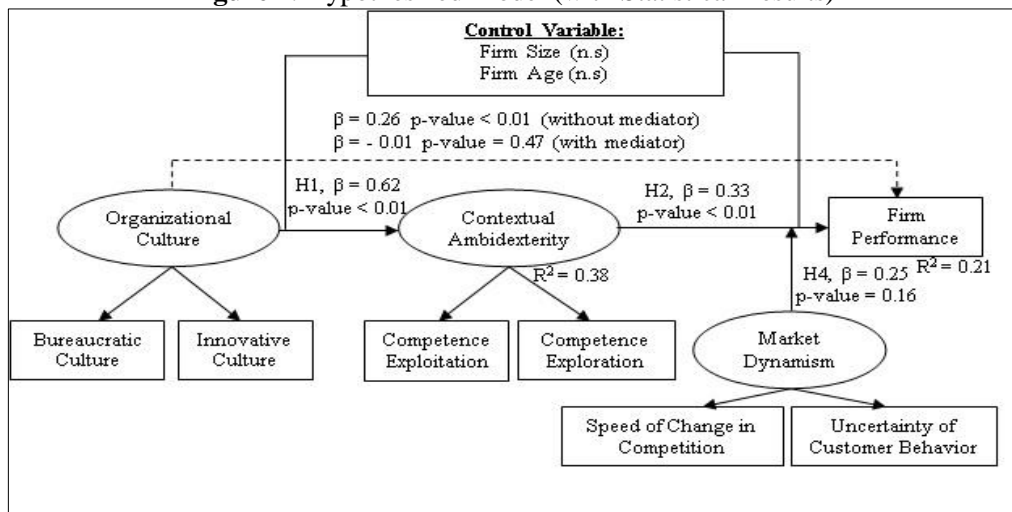
3.4. Common Method Bias

In this study, we controlled for potential common method bias that arises from using self-report data from single informants because of their tendency to overvalue by following three steps (Podsakoff and Organ, 1986; Podsakoff et al., 2003). First, we ensured the respondents of confidentiality and anonymity to reduce evaluation apprehension. Second, we collected data from key informants, owners, CEOs or managers who knew and understood strategy, performance, and market conditions of the company. Third, we conducted the Harman single-factor test, putting all the variables in the exploratory factor analysis (Podsakoff and Organ, 1986; Podsakoff et al., 2003). The assumption of this technique indicate that there is no single factor that emerges from factor analysis and also there is no one general factor that will clarify the majority of covariance among the measures. The subjective measures from self-reported data enable biases and errors. However, the subjective measures can be used when the objective measurements do not exist by selecting key informants, so that biases and errors can be reduced (Dess and Robinson, 1984; Lubatkin *et al.*, 2006; Richard *et al.*, 2009).

4. RESULTS AND ANALYSIS

4.1. Main Effects

Figure 2: Hypothesized Model (with Statistical Results)



To test hypotheses 1 and 2, partial least square structural equation modeling (PLS-SEM, WarpPLS 3.0) was used, with organizational culture, contextual ambidexterity and firm performance being three latent variables (see Figure 2). The model fit statistics was satisfactory (ARS = 0.294, AVIF = 1.401 and APC = 0.304). The R² values were 0.38 and 0.21, suggesting that 38% variance in extent of contextual ambidexterity can be explained by organizational culture and 21% variance in extent of firm performance can be explained by contextual ambidexterity. Path coefficients from organizational culture to contextual ambidexterity ($\beta = 0.62$; p-value < 0.01) and contextual ambidexterity to firm performance ($\beta = 0.33$; p-value < 0.01) were significant (see Table 5). Based on these results, hypotheses 1 and 2 are supported.

4.2. Mediating Effect

To test the mediation effect, we used the variance accounted for (VAF) method suggested by Hair et al. (2014). First, the direct effect of organizational culture on firm performance should be significant (without mediating variable). Second, the indirect effect from organizational culture on contextual ambidexterity and contextual ambidexterity on firm performance should be significant too (with mediator variable). Third, assess the VAF’s value (VAF = the indirect effect/total effect). The question here is the strength of the impact of contextual ambidexterity mediating the relationship between organizational culture and firm performance. The VAF value was 0.454 (45.4%). This value was in the range of 20% to 80%, it indicates contextual ambidexterity as a partial mediator (Hair et al., 2014). This result suggests that contextual ambidexterity mediates the relationship between organizational culture and firm performance. Thus, hypothesis 3 is supported.

4.3. Moderating Effect

Further, hypothesis 4 was tested (the moderating effect of market dynamism on the relationship between contextual ambidexterity and firm performance). We find a non-significant path coefficient ($\beta = 0.25$; p-value = 0.16). The f-squared effect size value was 0.079 (see Table 4), suggesting market dynamism has a small effect size in order to moderate

Table 4: Path coefficients and hypothesis testing

Hypothesis	Relationship	Coefficient	R ²	Standard Error	Effect Size	Supported
H1	Organizational Culture → Contextual Ambidexterity	0,62 ^a	0,38	0,109	0,382	Yes
H2	Contextual Ambidexterity → Firm Performance	0,34 ^a	0,21	0,102	0,128	Yes
H3	Organizational Culture → Firm Performance (Directly)	0,26 ^a	0,07	0,118	0,002	Yes
	Organizational Culture → Contextual Ambidexterity → Firm Performance	0,454 ^b		0,132	0,013	
H4	Contextual Ambidexterity *Market Dynamism → Firm Performance	0,25 ^c P = 0,16		0,252	0,079	No
<i>Goodness of Fit</i>		ARS=0,294 ^a ; AVIF=1,401 ^c ; APC=0,304 ^a				

Notes: Significance: ^a p-value < 0.001, ^cGood if < 5, ^bnon-significant; ^bVariance accounted for (VAF) value = Indirect effect (multiplication of path coefficient on OC-CA and CA-FP)/total effect {(multiplication of path coefficient on OC-CA and CA-FP)+ path coefficient on OC-FP directly }

the relationship between contextual ambidexterity and firm performance (Hair et al., 2014). In the practical point of view, it exhibits a weak effect from market dynamism on the relationship between contextual ambidexterity and firm performance. This result suggests that hypothesis 4 is not supported.

4.4. Effect of Firm Size and Age

Further, we used SEM’s multi-group analysis to examine if there was significant difference in the hypothesized relationships between one group and another group (Hair et al., 2014; Sholihin and Ratmono, 2013; Kock, 2014) based on the size and age of the firm. A multi-group analysis is conducted to see particular effects amongst variables within the same group (Anderson and Gerbing, 1982). Here, we categorized firm size into two groups (Group 1 = small, Group 2 = medium) and firm age into three groups (Group 1 = ≤ 5 year, Group 2 = 6-10 year, Group 3 = ≥ 11 year). The analysis shows that there is no significant difference in the impact of firm size and firm age on the hypothesized relationships, with t-value and p-value within all groups greater than 0.1 (see Table 5 and Table 6).

Table 5: Multi-group Analysis based on Firm Size

Path	Group 1 (Small Firms) (N = 93)		Group 2 (Medium Firms) (N = 63)		Group 1 vs. Group 2	
	PC1	SE1	PC2	SE2	Pooled Standard	Satterhwaite
					Error Method	Method
				(TM1)	(TM1)	
OC to CA	0.651 ^a	0.064	0.588 ^b	0.331	0.224 ^d	0.187 ^d
CA to FP	0.379 ^a	0.100	0.463 ^b	0.156	-0.478 ^d	-0.453 ^d

Notes: PC = Path coefficient; SE = Standard error; TM = T-value for multi-group difference; ^ap-value < 0.001, ^bp-value < 0.05, ^cp-value < 0.1, ^dnot significant

Table 6: Multi-group Analysis based on Firm Age

Path	Group 1 (Age ≤ 5 years) (N = 83)		Group 2 (Age = 6-10 years) (N = 28)		Group 3 (Age ≥ 11 years) (N = 45)	
	PC1	SE1	PC2	SE2	PC3	SE3
OC to CA	0.612 ^a	0.238	0.693 ^a	0.275	0.615 ^c	0.384
CA to FP	0.444 ^a	0.089	0.292	0.402	0.441 ^a	0.140

Path	Group 1 vs. Group 2		Group 1 vs. Group 3		Group 2 vs. Group 3	
	Pooled Standard Error Method	Satterhwaite Method	Pooled Standard Error Method	Satterhwaite Method	Pooled Standard Error Method	Satterhwaite Method
OC to CA	-0.185 ^d	-0.222 ^d	-0.007 ^d	-0.006 ^d	0.148 ^d	0.165 ^d
CA to FP	0.555 ^d	0.369 ^d	0.019 ^d	0.018 ^d	-0.418 ^d	-0.350 ^d

Notes: PC = Path coefficient; SE = Standard error; TM = T-value for multi-group difference; ^ap-value < 0.001, ^bp-value < 0.05, ^cp-value < 0.1, ^dnot significant

5. DISCUSSION

This study provides support on the influence of organizational context such as organizational culture on contextual ambidexterity in SMEs in the creative industries in Indonesia, using partial least square structural equation modeling (PLS-SEM) technique to test the hypothesis. We also examine the impact of contextual ambidexterity on firm performance in the dynamic market, particularly using market dynamism as a moderating variable. As an extension of the contextual ambidexterity study, we explore the role of contextual ambidexterity to mediate the relationship between organizational culture and firm performance. We also examine the quality of measurements assessed by looking at the validity and reliability of the measures carried out using the PLS-SEM approach. The results show that our measurements are at par with the criteria set up by other established researchers. As such, the measures in the model are valid and reliable.

Our study provides evidence to support the idea that contextual ambidexterity is an important construct in order to understand the dynamic landscape of SMEs in the creative industries. SMEs in the creative industries should be able to manage both conflicting tensions of exploitation and exploration as complementary to each other and to reinforce a superior performance in dynamic environments (Gibson and Birkinshaw, 2004; Raisch and Birkinshaw, 2008; Simsek et al., 2009). Our assumption is different from other perspectives saying that these two opposing tensions should be treated separately through structural mechanism (Duncan, 1976 in Gibson and Birkinshaw, 2004) or temporal mechanism (Gupta et al., 2006; Simsek et al., 2009). Both organizational activities can be developed by a learning (bottom-up) process involving organizational members (Crossan et al., 1999; Argyris and Schön, 1978), supported by organizational values and norms (Güttel & Konlechner, 2009; Detert et al., 2000; Ogbonna & Harris, 2000; Barney, 1986).

More importantly, our study sheds new light on the mechanism that allows contextual ambidexterity to take place in organizations especially in the context of small enterprises. In this paper, we examine the joint effect of bureaucratic culture and innovative culture as two complementary factors of organizational culture on contextual ambidexterity, on firm performance and the mediating effect of contextual ambidexterity in the organizational culture-firm performance relationship. The findings of this paper confirm that organizational culture has a significant impact on the implementation of contextual ambidexterity. This makes sense as an organizational culture must be facilitated and maintained by the organizational learning process to develop their capability through competence exploration and exploitation. Our results emphasize the role of values, beliefs and principles that simultaneously integrate bureaucratic culture and innovative culture to effectively integrate and balance between competence exploration and competence exploitation.

Contextual ambidexterity also has a significant impact on the performance of SMEs in the creative industries in Indonesia as an emerging economy, corroborating previous findings (e.g. Gibson and Birkinshaw, 2004; Atuahene-Gima, 2005; Lubatkin et al., 2006; and Sarkess et al., 2010). The implementation of contextual ambidexterity creates the firms' ability to survive and flourish by producing a superior performance in the dynamic market. Particularly, it is able to encourage firms to create and deliver a better value to maximize customer satisfaction through products and services than the competitors. In addition, contextual ambidexterity has partially mediated the relationship between organizational

culture and firm performance, indicating that part of the impact of organizational culture on firm performance have been taken over by contextual ambidexterity. The mediating effect of contextual ambidexterity in the organizational culture-firm performance relationship confirms the idea that organizational culture defines the way in which a firm conducts its business (Barney, 1986). As such, the organizational culture creates an environment to shape the behaviors of organizational members to support a learning process to develop competence exploration and exploitation (Gibson and Birkinshaw, 2004; Bogner et al., 1999; Crossan et al., 1999). In turn, both competences are utilized to help produce a superior performance through better products and services and maximize customer satisfaction. The key message from our findings is that the competing organizational values, norms and orientations that simultaneously integrate bureaucratic culture and innovative culture enable firms to effectively integrate exploitation and exploration in the dynamic market, allowing firms to produce a superior performance.

By Using the PLS-SEM approach, we do not find a significant moderating influence of market dynamism on the relationship between contextual ambidexterity and firm performance. Further, we also find that the implementation of contextual ambidexterity is not affected by the size and age of the firm. First, we argue that resources between small and medium enterprises (SMEs) are not that distinct so that their responses toward environment are not that distinct either (Dean et al., 1998; Damanpour, 1992; Hannan and Freeman, 1984). Second, small and young firms have not had a stable work structure so that their foci are divided; they tend to do many learning activities (Hannan and Freeman, 1984). Third, SMEs' orientation tends to be profit-oriented than to expand the organization for the future (Sørensen and Stuart, 2000; Hannan and Freeman, 1984; Levitt and March, 1988). Fourth, we also argue that statistically the implementation of contextual ambidexterity is not affected by the size and age of the firm because the research context is an emerging economy (i.e. Indonesia). In the context of an emerging economy, business environment experiences changes continuously and unpredictably (Atuahena-Gima, 2005; Hoskisson et al., 2000; Jaworski and Kohli, 1993) and can impede organizational survival (Jaramillo and Schiantarelli, 2002). Therefore, any SME is required to perform learning continuously in order to respond to any changes well. This way, we do not see significant behavioral differences based on the size and age of the firm.

Practically, this research indicates that a firm is required to adopt a more bottom-up learning system, emphasizing the role of individuals as agents of learning, particularly in a dynamic market. The system is expected to develop organizational values, beliefs and principles that embody bureaucratic culture and innovative culture simultaneously and facilitate the integration and balance between exploration and exploitation. Firms that are able to become organizationally ambidextrous will find it easier to build a competitive advantage and generate superior performance in the dynamic environment. In addition, decision-makers should see the firm's capacity in Indonesia to respond to the environments and be aware of the importance of internal resources (i.e. organizational culture) to enable competence exploration and exploitation.

This research has several methodological limitations. First, while the survey method with cross-sectional approach seems to be appropriate in the context of an emerging economy (because there is no valid and credible database concerning SMEs), self-reported data from single informants potentially facilitate bias. Moreover, future research is expected to employ

a longitudinal research design (Lubatkin et al., 2006; Jansen et al., 2006; Podsakoff et al., 2003) or combine primary and secondary data (He and Wong, 2004; Lubatkin et al., 2006; Jansen et al., 2012; Podsakoff et al., 2003). Ideally, this research is done by taking a sample of the entire sub-sectors of the creative industry in Indonesia. But we decided to only take four main sub-sectors of the creative industries in Indonesia which are culinary, fashion, photography and crafts as the object of this research. Selection of Yogyakarta as the main setting for the study was conducted because Yogyakarta is known as one of the most influential creative industry centers in Indonesia. Future research is recommended to also perform data collection on other creative industry sub-sectors and some other cities in Indonesia. Although we use purposive sampling based on the judgment, we still anticipate the Common Method Bias with a series of tests to check the construct validity (Wang and Rafiq, 2014)

This study provides guidance for future research. First, this study only focuses on organizational culture as an antecedent of contextual ambidexterity in Indonesia. Future research may extend this research by conducting a comparative study between emerging economies and developing countries to examine the effect of contextual ambidexterity. Second, given that competence exploration and exploitation are conducted through the organizational learning process, they require absorptive capacity that supports individuals in a collective learning (Güttel and Konlechner, 2009; Cohen and Levinthal, 1990). Future research is expected to use absorptive capacity as a potential moderating variable or a context in order to examine the effect of contextual ambidexterity on firm performance.

6. CONCLUSION

We conceptualized organizational culture and examined its impact on contextual ambidexterity and firm performance in a dynamic market of the creative industries. This research exhibits a positive and significant impact of organizational culture on contextual ambidexterity and a positive and significant impact of contextual ambidexterity on firm performance. It also shows that contextual ambidexterity mediates the effect of organizational culture toward firm performance. This means that the implementation of contextual ambidexterity depends on a collective learning involving individuals to participate in a learning process. Organizational culture appears to develop from a more bottom-up approach, based on the firm's values, rather than a more top-down approach. Furthermore, contextual ambidexterity is applicable in the context of the creative industries in Indonesia as an emerging economy. Contextual ambidexterity as a distinctive firm's capacity is dependent on the firm's resources, particularly values, beliefs and principles embedded in a combination of bureaucratic culture and innovative culture, rather than on the size and age of the firm.

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APPENDIX

Key Construcs and Items

Bureaucratic culture

- a) This firm emphasizes Permanence and stability. Efficient, smooth operations are important
- b) This firm is very formalized and structured. Established procedures generally govern what people do
- c) The glue that holds this firm together is Formal rules and policies. Maintaining a smooth-running firm is important here
- d) The the head of this firm is generally considered to be a coordinators, an organizers or an administrators

Innovative culture

- a) Our culture rewards behaviors that relate to creativity and innovation*
- b) Our organization's culture encourages informal meetings and interactions
- c) Our culture encourages employees to monitor their own Performance
- d) Employees take risks by continuously experimenting with new ways of doing things
- e) Our culture encourages employees to share knowledge*
- f) Our culture focuses on teamwork long term performance*

Competence exploitation

Over the last three years, our firm has. . .

- a) upgraded current knowledge and skills for familiar products and services
- b) enhanced skills in exploiting well-established work system and process that improve productivity of current innovation operations
- c) enhanced competences in searching for solutions to customer problems that are close to established solutions rather than completely new solutions

- d) upgraded skills in product development processes in which the firm already possessed significant experience
- e) strengthened our knowledge and skills for projects that improve efficiency of existing innovation activities*

Competence exploration

Over the last three years, our firm has . . .

- a) acquired technologies and skills entirely new to the firm
- b) learned product development skills and processes entirely new to the firm (e.g. product design, creating new products, timing of new product introductions and customizing products for special request)
- c) acquired entirely new managerial and organizational skills that are important for innovation (e.g. planning and managing of new product development, forecasting customer trends; identifying new customer, marketing, manufacturing and other functions)
- d) learned new skills for the first time (e.g. funding new materials, product development, and training and development of product development's personnel).
- e) strengthened innovation skills in areas where it had no prior experience.

Firm performance

Over the last three years . . .

- a) our firm's revenue was higher than our major competitors
- b) our profits were higher than our major competitors
- c) customer levels were higher than our major competitors
- d) our firm's introduced more new products/services into the market than our major competitors

Market Dynamism

Speed of change in the competition

- a) The action and strategy of major competitors in our industry were changing quite rapidly
- b) The competition change in our industry were rapid

Unpredictability of change in the competition

- a) The action and strategy of major competitors in our industry were unpredictable*
- b) The market competitive condition were highly unpredictable*

Uncertainty of customer behavior

- a) Customers' product preferences changed quite rapidly
- b) Changes in customers' needs were quite unpredictable

Note: * Item deleted