



International business competence and innovation performance: The role of ambidextrous organizational culture and environmental dynamism

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3 **International business competence and innovation performance: The role of**
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5 **ambidextrous organizational culture and environmental dynamism**
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12 **Abstract**

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14 **Purpose** – This study seeks to examine the influence of international business competence
15 (IBC) on innovation performance of organizations activating in global markets. The study also
16 explores whether ambidextrous organizational culture (AOC) acts as an antecedent of IBC and
17 whether the environmental dynamism affects the IBC–innovation performance relationship.
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23 **Design/methodology/approach** – The authors assessed the hypothesized relationships using
24 data collected from a sample of companies operating in the Norwegian seafood industry. The
25 direct, mediating, and moderating effects were tested using partial least squares (PLS) with
26 SmartPLS software application.
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32 **Findings** – The empirical analysis revealed that AOC is positively associated with IBC, while
33 IBC is a significant predictor of innovation performance. The findings also corroborated the
34 proposed mediation effect of IBC, but refuted the moderating role of environmental dynamism.
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40 **Originality** – This study contributes to the international business literature by suggesting that
41 companies equipped with IBC can excel in innovative undertakings and that organizational
42 culture can be effectively leveraged to develop such competences.
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49 **Keywords:** international business competence (IBC); innovation performance; ambidextrous
50 organizational culture (AOC); environmental dynamism
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Introduction

In today's fast-moving knowledge-based economy, the capacity to innovate is considered a crucial element in the performance and longevity of organizations (Spraggon & Bodolica, 2020). Succeeding in the face of rapid innovation is even more important for firms engaged in international business operations due to the rapidly changing customer demands and market trends. Therefore, companies operating across national boundaries need to equip themselves with a set of capabilities and competences, commonly referred to as international business competence (IBC), that can become a source of competitive advantage (Knight & Kim, 2009; Ibrahim *et al.*, 2016).

It is believed that access to global markets enriches corporate experiences by providing diverse sources of knowledge and skills, which in turn can result in higher levels of innovation (Bodolica & Spraggon, 2020). Two different views exist in the literature regarding the causal relationship between internationalization and innovation. The supportive view suggests that internationalization enables innovation through greater accessibility to diverse sources of knowledge (Hitt *et al.*, 1994; Kotabe *et al.*, 2002), while the opposing view argues that innovation confers market power that facilitates internationalization (Pla-Barber & Alegre, 2007; Rogers, 2004). The supportive view prompted substantial scholarly interest in the exploration of competences needed to achieve success in international markets. Knight and Kim (2009) conceptualized the IBC construct, which incorporates major firm characteristics that collectively enhance international performance. This assertion is reinforced by empirical evidence that uncovers superior performance outcomes in global markets for organizations that possess IBC (Sørensen & Madsen, 2012).

Although the importance of IBC in facilitating competitive advantage (Ruokonen & Saarenketo, 2009), superior export outcomes (Escandon-Barbosa *et al.*, 2019) and firm performance in global markets (Gerschewski *et al.*, 2015) has been previously demonstrated,

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3 the extent to which IBC influences the innovative performance of organizations received less
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5 consideration. This is especially critical in today's economy where a firm's capacity to innovate
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7 has become a tenet of success in international settings (Efrat & Shoham, 2012; Escandon-
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9 Barbosa *et al.*, 2019; Knight & Cavusgil, 2004). Moreover, most studies on the beneficial role
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11 of IBC in global environments have focused on a specific organizational capability. Extant
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13 research offers only a limited understanding of whether IBC becomes more relevant for firm
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15 outcomes under dynamic conditions. Recent evidence indicates that companies with high
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17 international orientation are active in turbulent markets, which leads to increased performance
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19 (Escandon-Barbosa *et al.*, 2019). This paper aims to address these gaps in the literature, by
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21 examining the relationship between IBC and innovation performance under the contingent
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23 effect of environmental dynamism.
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29 Among the key contextual influencers of IBC development, researchers uncovered the
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31 proactive entrepreneurial orientation of top management teams (Kalinic & Forza, 2012), the
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33 availability of tangible and intangible resources (Baum *et al.*, 2015), and the involvement in
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35 networks and networking activities (Coviello, 2006). Nonetheless, the empirical evidence on
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37 the role of internal factors, such as the organizational culture, in shaping IBC remains
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39 overlooked (Joseph & Gaba, 2020; Kassem *et al.*, 2019; Sandhu & Kulik, 2018). The
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41 organizational culture was found to complement or substitute the formal components of the
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43 firm's social system (Galbreath, 2010). Recently, the role of ambidextrous organizational
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45 culture (AOC) received more consideration with respect to its beneficial effects for exploration
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47 and exploitation activities (Wang & Rafiq, 2014). This is particularly important because
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49 foreign environments often make for a higher degree of complexity and dynamism
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51 (Gooderham *et al.*, 2013) that involve competing possibilities in terms of achieving a balance
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53 between efficiency and innovation, and ambidextrous organizations can better position
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55 themselves in such environments (Zhang *et al.*, 2015). Thus, an AOC characterized by the
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3 simultaneous pursuit of disparate norms and values, such as shared vision and diversity (Wang
4 & Rafiq, 2014), may act as a key contextual resource for building IBC. Thus, another objective
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6 of this study is to explore whether AOC may predict the development of IBC.
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10 Prior literature employed IBC either as an antecedent (Birru *et al.*, 2019; Escandon-
11 Barbosa *et al.*, 2019; Knight & Kim, 2009; Lee *et al.*, 2019) or as a consequence (de
12 Vasconcellos *et al.*, 2019; Andresen *et al.*, 2021), but paid little attention to its role as a
13 mediator. The rationale for the mediating role of IBC is that contextual variables, such as
14 organizational structure and culture, may lead to the achievement of superior firm performance
15 by providing a context that allows the development of certain meta-capabilities (Gibson &
16 Birkinshaw, 2004). More research is, therefore, warranted to develop a better understanding of
17 whether IBC acts as a mediator in the relationship between AOC and innovation performance.
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19 Our study aims to contribute to the literature by examining whether the effects of organizational
20 culture on firm innovation are materialized through IBC.
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35 **Theoretical background and hypotheses**

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37 In the following subsections, we review prior literature in the field (Bodolica & Spraggon,
38 2018) to, first, provide conceptual clarity on the constructs that compose our theoretical
39 framework and, second, formulate hypotheses to test the theorized direct, moderating and
40 mediating relationships.
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49 **AOC**

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51 Traditionally, ambidexterity has been defined as an organization's ability to simultaneously
52 embrace two disparate orientations, such as efficiency and flexibility (Adler *et al.*, 1999), or
53 adaptability and alignment (Gibson & Birkinshaw, 2004). Three views on ambidexterity –
54 structural, temporal, and contextual – can be distinguished in the extant literature. According
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3 to the structural view, explorative and exploitative activities constitute competing goals so they
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5 should be undertaken independently in different organizational units (Benner & Tushman,
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7 2003; Lavie *et al.*, 2010). The temporal view suggests the need for a temporal sequencing of
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9 exploration and exploitation in the same organizational unit (Puranam *et al.*, 2006). The
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11 contextual view is consistent with the paradox approach to management (Lewis, 2000), which
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13 suggests that firm functioning inherently involves dualities (Gibson & Birkinshaw, 2004;
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15 Raisch & Birkinshaw, 2008) that coexist in organizational settings and may be synergistic
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17 (Cameron & Quinn, 1999).
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21 Consistent with the contextual ambidexterity view, researchers have focused on the role
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23 of both macro- and micro-level paradoxes in organizations that enable the pursuit of opposing
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25 realities and competing demands. Among the most frequently analyzed dualities are
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27 formalization and centralization (Al-Atwi *et al.*, 2019), cultural norms of diversity and
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29 sharedness (Wang & Rafiq, 2014), and structural and relational behavioral orientation of firm
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31 members (Caniëls & Veld, 2019; Zhang *et al.*, 2015). Balancing exploration and exploitation
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33 priorities (Khan & Mir, 2019), AOC recognizes that external adaptation and internal integration
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35 are two fundamental concerns, which can be solved by developing task- and relationship-
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37 oriented norms and values (Schein, 2010).
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42 We build on Wang and Rafiq's (2014) conceptualization of AOC, which suggests that
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44 organisational diversity and shared vision are values that reinforce each other to create AOC.
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46 While organizational diversity fosters receptivity to differences and encourages diversity in
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48 perspectives, skills and knowledge (Ferner *et al.*, 2005), shared vision reflects the active
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50 involvement of firm members in the development, dissemination and implementation of
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52 corporate goals (Wang & Rafiq, 2014). Organisational diversity encompasses norms and
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54 values that nurture creativity and entrepreneurial behaviour in employees and inspire novelty
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56 in solutions. Yet, for successful innovation, companies do not only need to generate novel
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3 ideas, but also evaluate diverse perspectives so that a balanced and objectives-aligned point of
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5 view may emerge (Spraggon & Bodolica, 2017). In the presence of shared vision, corporations
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7 are enabled to relate different viewpoints to the existing knowledge and pursue creative ideas
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9 that are consistent with firm goals.
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12 13 14 **IBC**

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17 Organizational capabilities refer to complex bundles of skills and collective learning that allow
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19 firms to effectively make use of their resources and set them apart from competitors (Daugherty
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21 *et al.*, 2009). By building IBC, organizations may have an edge in the international
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23 marketplace. IBC comprises four capabilities – international orientation, international
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25 innovativeness, international market orientation, and international marketing skills (Knight &
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27 Kim, 2009). International orientation is a firm’s overall inclination to operate globally and
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29 assign resources to international activities (Sørensen & Madsen, 2012). According to Knight
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31 and Kim (2009, pp. 260-262), international innovativeness is a firm’s “capacity to develop and
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33 introduce new products, services or ideas to international markets”; international market
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35 orientation is “the extent to which the firm’s international business activities are oriented
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37 toward customers and competitors, and the extent to which these activities are coordinated
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39 across functional areas in the firm”; and international marketing skills refer to “a firm’s ability
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41 to create value for foreign customers through effective segmentation and targeting, and through
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43 integrated international marketing activities”.
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51 Figure 1 about here
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54 In this paper, we draw on the resource-based view (Barney, 1991) and contingency theory
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56 (Baskarada *et al.*, 2017) to examine the role of AOC in fostering IBC and the influence of IBC
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58 on innovation performance under various levels of environmental dynamism. The resource-
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3 based view, which states that firm competitiveness originates from unique resources and assets,
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5 provides the basis for examining the role of AOC as an antecedent of IBC that is necessary for
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7 doing business across borders. The same view sheds explanatory light on the relationship
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9 between IBC and innovative performance, in which IBC may influence firms to perform well
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11 in innovation (Spraggon & Bodolica, 2020). Many empirical studies in the resource-based
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13 tradition examined the consequences of possessing valuable, rare, and inimitable resources in
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15 organizations. Prior literature analyzed the role of intangible resources, such as reputation,
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17 knowledge, and organizational culture (Spraggon & Bodolica, 2012; Zheng *et al.*, 2010), in the
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19 development of intra-firm capabilities that could have competitive implications. An
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21 ambidextrous culture requires ample time to develop and is less likely to be imitated (Gibson
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23 and Birkinshaw, 2004), thereby acting as an important intangible resource. Similarly, IBC
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25 constitutes a distinctive capability that, being difficult to duplicate, gives an organization an
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27 edge over its competitors (Escandon-Barbosa *et al.*, 2019; Gerschewski *et al.*, 2015).
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34 The contingency theory offers an explanatory grounding for our expectation regarding
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36 the contingent effect of environmental dynamism in the relationship between IBC and
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38 innovation performance. The contingency lens suggests that the influence of a firm's internal
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40 characteristics on their outcomes (Baskarada *et al.*, 2017) may depend on the level of stability
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42 or dynamism in the organizational environment. Consistent with this view, several studies find
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44 that strategies designed to achieve innovation performance are contingent upon external factors
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46 (Gibson & Birkinshaw, 2004; Jansen *et al.*, 2006).
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51 *AOC and IBC*

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53 International markets are characterized by intense rivalry among competing firms coupled with
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55 ever-changing customer demands (Bhatt *et al.*, 2010). Thus, global environments often make
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57 for a higher degree of complexity and dynamism (Gooderham *et al.*, 2013) and firms that have
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3 the capacity to handle such uncertainties can reap the benefits of internationalization
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5 (Vermeulen & Barkema, 2002). To reach out to foreign customers and achieve global success,
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7 companies should have the ability to invest resources in their international activities, find new
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9 methods of market entry (Jantunen et al., 2008), and produce superior goods and services
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11 (Knight & Kim, 2009). Operating in global or novel contexts requires achieving a balance
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13 between efficiency and innovation to compete in mature markets and develop new products for
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15 emerging markets, respectively (Tushman & O'Reilly, 1996). This requires a paradox-based
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17 lens to better understand how to deal with increasing uncertainties that often involve competing
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19 possibilities.
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24 Past research suggests that ambidextrous organizations may position themselves more
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26 effectively in complex environments (Zhang *et al.*, 2015). AOC embodies the dual aspects of
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28 exploration and exploitation that provide a milieu for organizations to balance these opposing
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30 activities. By espousing both diversity and sharedness, such a culture engenders norms of
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32 variability to explore opportunities in international markets and, at the same time, shared values
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34 to utilize existing competencies to thrive in international contexts. Thus, we argue that cultural
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36 ambidexterity will foster a firm's international focus, by boosting its ability to operate in
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38 various markets and continuously updating itself in terms of new products, services, and ideas.
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40 This implies that global businesses need to both transform their resources to commercial ends
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42 and continuously renew and expand their knowledge base (Andriopoulos & Lewis, 2009),
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44 which may be facilitated by a culture of diversity and sharedness.
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49 Organizational diversity espouses values that encourage autonomous and innovative
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51 thinking and behavior, and the generation of multiple perspectives that prompt creative
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53 solutions, which have beneficial effects on the development of IBC (de Vasconcellos *et al.*,
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55 2019). According to Knight and Cavusgil (2004), an entrepreneurial cultural orientation fosters
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57 global technological competence, quality focus, and global distribution skills. Runyan *et al.*
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(2008) also argue that being flexible and externally oriented fosters a sense of exploring new market opportunities. Yet, to achieve global objectives, companies need to both promote a culture of promoting novel ideas and socialize firm members to share a common vision about how to succeed in international markets. Thus, valuing organizational sharedness is equally important for translating diverse ideas into actions in line with organizational goals (Calantone *et al.*, 2002). Therefore, we hypothesize the following relationship:

H1: AOC positively influences IBC of organizations

IBC and innovation performance

Supporting the idea that internationalization leads to innovation, Drucker (1993) argued that “innovation starts with the analysis of opportunities”, which may ensue from the internal capabilities of firms. Prior research shows that companies with an international orientation exhibit a greater willingness to take risks in their pursuit of new markets (Kuivalainen *et al.*, 2007; Martin *et al.*, 2018). They could operate across various territories and increase their innovative capability by utilizing knowledge from multiple countries and scientists (Kafouros *et al.*, 2008). The internationalization of business activities also provides access to superior technical expertise, which improves the ability to innovate (Cheng & Bolon, 1993). According to Kotabe *et al.* (2002), the primary aim of firms is to minimize the costs associated with innovation, and internationalization may play a vital role in reducing such costs.

Because internationalization helps businesses develop networks that enable a continuous flow of information (Kafouros *et al.*, 2008; Kimberly & Evanisko, 1981), firms with high levels of IBC possess better chances of getting access to information (Knight & Kim, 2009). Sørensen and Madsen (2012) assert that firms high on such competences are better skilled at compiling and interpreting key data related to international markets. These companies have greater capacity to capture strategically important information across borders, and they leverage

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3 informal networks and global contacts to disseminate the information throughout the entire
4 organization (Bartlett & Beamish, 2018). This information flow consists of market or scientific
5 knowledge and tends to enhance the innovation capacity of organizations (Jaffe, 1986).
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10 Firms with high IBC are characterized by a superior ability to control marketing activities
11 and greater competence in targeting individual markets that may help them seize opportunities
12 to offer innovative solutions. When a sudden increase in customer demand occurs or a
13 revolutionary technology appears, firms with higher IBC can grasp such opportunities more
14 quickly than competitors with lower IBC (Bartlett & Beamish, 2018). High IBC companies
15 also have a better understanding of the environment they face, which ensures faster response
16 to competitor initiatives and customer needs, and more creativity in new product development.
17 Knight and Kim (2009) argue that a firm's accumulated knowledge and market intelligence are
18 important for developing international innovativeness. High IBC firms may accumulate a better
19 knowledge of international markets for adapting to dynamic market conditions, which may
20 help identify innovative solutions and facilitate the acquisition of new knowledge leading to a
21 greater capacity to innovate (Boso *et al.*, 2013; Cavusgil & Knight, 2015). Consequently, we
22 suggest the following hypothesis:
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40 *H2: IBC is positively related to firm innovation performance*

41 42 43 44 **Mediating role of IBC**

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47 Prior research shows that organizational ambidexterity generates positive implications for
48 innovative performance (Hafkesbrink & Schroll, 2014; He & Wong, 2004). Firms exploring
49 new knowledge and exploiting existing competences simultaneously, tend to achieve high
50 performance in innovation (Gibson & Birkinshaw, 2004; Katila & Ahuja, 2002; Mladenka *et*
51 *al.*, 2015; Simsek *et al.*, 2009). This indicates a positive relationship between organizational
52 ambidexterity and innovativeness, but it is not clear if such an association is mediated by other
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3 variables. More recently, scholars have specifically focused on AOC, arguing that it influences
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5 innovation indirectly by fostering contextual ambidexterity (Khan & Mir, 2019; Wang & Rafiq,
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7 2014). This suggests that AOC may affect innovation via other organizational variables, such
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9 as the development of IBC.
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12 Earlier studies suggest that factors, such as culture, structure or leadership, affect superior
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14 performance by providing a context that allows certain capabilities to flourish. Distinct sets of
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16 capabilities develop gradually over time through the interaction of various features of an
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18 organization's context (Gibson & Birkinshaw, 2004). Being a unique organizational capability,
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20 IBC tends to have a complex and time-consuming process of development (Escandon-Barbosa
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22 *et al.*, 2019; Gerschewski *et al.*, 2015) and may require a supportive firm environment to
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24 proliferate. According to Gibson and Birkinshaw (2004), market orientation is a complex
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26 capability that needs high-quality market intelligence prerequisites in order to develop. In the
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28 same vein, the capacity to introduce new products, services or ideas to international markets
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30 results from the internal accumulated knowledge and external market intelligence (Knight &
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32 Kim, 2009). Thus, we expect that AOC geared towards integration of exploration and
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34 exploitation will provide an appropriate context for IBC to develop, which will then contribute
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36 to innovation by directing firms to diversify, adapt and renew themselves to meet the changing
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38 conditions in the international business environment. Consequently, we suggest the following
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40 relationship:
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46 *H3: IBC mediates the relationship between AOC and innovation performance*
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51 ***Moderating role of environmental dynamism*** 52

53 Environmental dynamism refers to the extent of unpredictable change in an organization's
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55 external context (Goll & Rasheed, 2004; Seo *et al.*, 2020). In dynamic environments, products
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57 become obsolete at a rapid pace raising the need for new ones (Pertusa-Ortega & Molina-
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Azorín, 2018), which requires firms to be innovative and explore new market opportunities. Therefore, businesses operating in dynamic environments ought to improve their capabilities (e.g., knowledge management) to have a better sense of the ambiguous environment and take the right course of action to obtain greater innovation value (Spraggon & Bodolica, 2008).

Cavusgil et al. (2007) argue that under dynamic conditions the requirement of firms to develop and deploy particular capabilities tends to increase. This may be the case for IBC in view of the higher need for companies to frequently analyse the environment for clients and competitors' actions and to develop competences that support international activities (Dimitratos & Plakoyiannaki, 2003; Escandon-Barbosa *et al.*, 2019). Past research suggests that firms operating internationally are often active in turbulent markets that also brings beneficial outcomes for such firms (Boso *et al.*, 2013). When faced with dynamism, they dedicate additional resources to increase their capacity to explore more business opportunities and innovate at a higher rate through greater product adaptation and development (Escandon-Barbosa *et al.*, 2019). This suggests that the effect of IBC on innovation performance will be most evident at high levels of environmental dynamism. We argue that the relationship between IBC and innovative performance will be stronger when the external environment is more dynamic. Thus, the following hypothesis is suggested:

H4: Environmental dynamism positively moderates the IBC–innovation performance relationship, such that the relationship becomes stronger when the environmental dynamism is high

Methods

Sample and data collection

The data for this study was collected from firms in the Norwegian seafood industry. This industry is specifically relevant in the context of IBC because its market is global and, in the

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3 context of the Norwegian economy, the seafood industry is second only to the gas and
4 petroleum industry in generating export revenues. About 180 online questionnaires were
5 distributed to senior managers via e-mail. A total of 76 participants completed the survey, but
6 after cleaning and screening data, a final sample of 71 responses remained for data analysis. In
7 the final sample, 86% of participating firms fell in the age category of 1–50 years, 6% were in
8 the category of 51–100 years, and 8% fell in the 101–150 years category. Moreover, 83% of
9 sample firms had 50 or less employees, while firms with over 50 employees accounted for 17%
10 of the sample firms. Finally, to measure the intensity of spending on research and development
11 (R&D), the survey asked respondents to rate their firm at either a low, medium, or high level.
12 45% of respondents rated their firm's intensity of spending on R&D as low, 44% – as medium,
13 and 11% – as high.

31 **Measurements**

32 We assessed all the study constructs based on scales used in prior literature (see Appendix A).
33 IBC was operationalized as a second-order higher construct of four dimensions (first-order
34 constructs) using the scale developed by Knight and Kim (2009). The four first-order constructs
35 included international orientation, international marketing skills, international innovativeness,
36 and international market orientation.

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45 To measure ambidexterity, two different approaches have often been used in previous
46 research. Ambidexterity was treated either as a bi-polar construct of exploration and
47 exploitation (Simsek *et al.*, 2009), or as a construct composed of these two distinct dimensions
48 (Gibson & Birkinshaw, 2004). The latter approach prevails in the literature, with the common
49 usage of multiplication techniques to account for the simultaneous occurrence of exploration
50 and exploitation (Al-Atwi *et al.*, 2019; Gibson & Birkinshaw, 2004; Lee *et al.*, 2019). There
51 are also instances of assessing ambidexterity using reflective (Khan & Mir, 2019) and
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3 formative (Pertusa-Ortega & Molina-Azorín, 2018) measurements. Nevertheless, the reflective
4 approach is irrelevant for cultural ambidexterity because organizational diversity and
5 sharedness are two separate and non-substitutable cultural dimensions (Caniëls & Veld, 2019),
6 while the formative measurement received a lot of criticism due to the issues of interpretational
7 confounding and external consistency (Howell *et al.*, 2007). In this study, we adopted the
8 dominant approach to measuring AOC by creating a multiplicative interaction term for shared
9 vision and organizational diversity using the scales developed by Wang and Rafiq (2014).

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12 We measured innovative performance based on the works of Vera and Crossan (2005)
13 and Alegre and Chiva (2008), in which innovative performance is assessed on a composite
14 scale consisting of both product/service and process innovation. To estimate environmental
15 dynamism, we employed the scale developed by Li and Liu (2014). We used a 7-point Likert
16 scale with 1 and 7 representing ‘strongly disagree’ and ‘strongly agree’ responses, respectively,
17 to gauge the items for all constructs. We controlled for the effects of firm age, size, and level
18 of spending on R&D.

19 20 21 **Analytical procedure**

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23 The analysis was conducted using SmartPLS, which is a partial least squares path modeling
24 technique that simultaneously tests measurement (relationship between indicators and their
25 constructs or latent variables) and structural model (relationship between constructs). PLS is
26 useful for exploring new theoretical relationships and for model estimation purposes, when the
27 sample size is small and when the model is complex, involving many constructs, indicators and
28 relationships (Hair *et al.*, 2016). In our study, the use of PLS is appropriate because our sample
29 is relatively small, our model is complex with many constructs to be examined, and the
30 hypothesized relationships have been implied but not explicitly tested in the extant literature.
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Findings

Assessment of the measurement model

The measurement model attempted to confirm whether the manifest variables capture the theoretical constructs. We assessed the measurement model with respect to individual item reliability, internal consistency, and discriminant validity. To accept item loadings, we used the minimum level of 0.05 (Green *et al.*, 1995). Only one item from the environmental dynamism (EDM3) construct was deleted from subsequent analysis due to poor loading. The loadings for the rest of the indicators exceeded 0.70, suggesting an adequate correlation between the indicators and their respective constructs. Moreover, all the composite reliability (CR) ratios were above 0.70, which indicates adequate internal consistency of the measures. To assess convergent and discriminant validity, Fornell and Larcker's (1981) criterion was used in which convergent validity is confirmed if average variance extracted (AVE) exceeds 0.50. The AVE for all the constructs was above 0.50, which establishes the convergent validity of the latent constructs. The results also confirmed the existence of discriminant validity among the constructs. The discriminant validity is confirmed if the square root of AVE for all variables is greater than the correlation between pairs of constructs. Table 1 reports loadings, CR, and AVE values. Discriminant validity coefficients are presented in Table 2.

Tables 1 & 2 about here

Assessment of higher-order constructs

IBC was assessed as a second-order construct of its four dimensions as first-order constructs. The reliability and validity assessment of the higher-order construct draws on its relationship with its lower-order components (Sarstedt *et al.*, 2019). The first-order constructs were interpreted as indicators of a second-order construct. The reflective relationships between the higher-order construct and its lower-order components were interpreted as loadings.

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3 All four first-order constructs exceeded the benchmark value, suggesting an adequate
4 correlation between first-order and higher-order constructs. A composite reliability (CR) value
5 above 0.70 indicated adequate internal consistency of measures, while at the same time, the
6 value of AVE above 0.50 confirmed the convergent validity of the construct.
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12 The reliability and validity assessment of AOC was not relevant as it was operationalized
13 as a multiplicative interaction term of shared vision and organizational diversity. The reliability
14 and validity of interaction term constructs are meaningless because the cross-product indicators
15 do not stem from one specific conceptual domain and are simply an auxiliary measurement to
16 facilitate the interaction term generation (Sarstedt *et al.*, 2019). Table 3 shows loadings, CR,
17 and AVE values for IBC.
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27 Table 3 about here
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32 ***Common method variance***

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34 Since we collected data from a single source using a cross-sectional method, common method
35 variance (CMV) issues might arise. To address this concern, we conducted Harman's (1976)
36 one-factor test, which assumes that CMV may occur if the unrotated factor solution results in
37 a single factor or one factor explains most of the variance in the variables (Podsakoff & Organ,
38 1986). An exploratory factor analysis revealed that the largest factor explained only 24.21% of
39 overall variance, suggesting the absence of CMV concerns.
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50 ***Assessment of the structural model***

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52 The significance of path coefficients was assessed with bootstrap analysis in SmartPLS. Figure
53 1 shows the path estimates of the model's structural main direct effects between the latent
54 variables. Table 4 presents path coefficients, *t*-values, effect size, and variance inflation factor
55 (VIF) scores.
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Table 4, 5, & 6 about here

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8 The estimation of the inner model revealed that it explains 39% of IBC variance and 31%
9 of innovative performance. Further, the path coefficients show a positive association between
10 AOC and IBC ($\beta = 0.523, p < 0.001$), finding that corroborates Hypothesis 1. The analysis also
11 provides evidence in support of Hypothesis 2, which states that IBC has a positive effect on
12 innovative performance ($\beta = 0.314, p < 0.05$).
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19 We also proposed that IBC would act as a mediating mechanism between AOC and
20 innovative performance. The results illustrate that AOC has an indirect effect on innovative
21 performance via IBC. The bootstrapping estimations support the indirect effect of AOC on
22 innovative performance ($t > 1.96$, two-tailed, $p < 0.05$). The mediation effect was assessed
23 following the approach of Preacher and Hayes (2004) and Zhao *et al.* (2010), which further
24 suggests evaluating confidence intervals to confirm mediation. If the 95% confidence interval
25 for indirect effect does not straddle a zero, the presence of a mediation effect is supported. In
26 the case of AOC, the 95% confidence interval (0.093–0.406) further confirms the mediation
27 effect as there is no zero in between the interval end points, thus supporting Hypothesis 3.
28 Table 5 shows the results of significant indirect effects.
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42 Contrary to our expectations, the results of the structural model assessment offered no
43 support ($\beta = 0.154, p > 0.05$) for Hypothesis 4, which proposed that environmental dynamism
44 would moderate the relationship between IBC and innovation performance.
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49 Moreover, R&D spending was the only categorical variable with a significant
50 relationship to both endogenous variables – IBC and innovative performance. To examine
51 whether this categorical variable acts as a control variable, we ran the analysis in SmartPLS
52 again without R&D as an independent variable to assess whether the strength of relationship
53 between the constructs of interest would be influenced by the absence of R&D variable. The
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3 PLS algorithm in the absence of R&D revealed that the beta value (β) increased from 0.523 to
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5 0.564 for the relationship between AOC and IBC. Similarly, the strength of relationship
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7 between IBC and innovative performance was also influenced by the absence of R&D as the
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9 beta value increased from 0.314 to 0.410, indicating that R&D spending acts as a control
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11 variable and influences the strength of relationships in the model.
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17 **Discussion**

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19 **This study explored the impact of IBC on innovative performance and the contingent role that**
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21 **environmental dynamism plays in this relationship.** We also assessed whether AOC nurtures
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23 IBC and if this beneficial effect is transmitted onward by IBC to boost the innovation
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25 performance of organizations. Our findings demonstrate that IBC has a significant impact on
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27 innovative performance regardless of the level of dynamism in the external environment. The
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29 results further reveal that AOC acts as an antecedent of IBC, and IBC mediates the relationship
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31 between AOC and innovative performance.
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37 ***Theoretical implications***

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39 **The current literature offers valuable insights on the beneficial effects of IBC, but the focus**
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41 **has generally been on export performance capturing IBC with a single competence, such as**
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43 **international orientation (Escandon-Barbosa *et al.*, 2019). Our current understanding of how**
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45 **such a capability can be internally fostered is limited. By considering IBC as a meta-capability**
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47 **of a set of competences (Knight & Kim, 2009), our study contributes to the literature by**
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49 **showing that firms equipped with IBC can excel in innovation, and organizational culture can**
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51 **be leveraged to develop such competences. We emphasize crafting of an ambidextrous cultural**
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53 **context for nurturing IBC, which in turn acts as a unique capability for meeting new trends in**
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3 international markets. This is consistent with the general view that intangible resources tend to
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5 have an important role in organizational success (Barney, 1991).
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8 The significant relationship between IBC and innovation performance supports past
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10 studies, which unveil the gains brought about by IBC in international operations of
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12 organizations (Gerschewski *et al.*, 2015; Ruokonen & Saarenketo, 2009). Our findings indicate
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14 that firms that have a strong international orientation, focus on customer needs and competitor
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16 moves, reach out customers in mature and emerging markets, and respond to the fast-changing
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18 trends in international markets, are able to achieve superior innovation performance. This
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20 suggests that IBC can be added as a source of innovation to the existing repertoire of
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22 organizational capabilities that have been reported to have beneficial effects on innovation
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24 performance (Park Hong *et al.*, 2019; Liao & Li, 2019).
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29 This finding is also relevant to our study context. In the Norwegian seafood industry,
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31 most companies are small and medium enterprises (SMEs), and by virtue of their size, these
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33 firms may lack tangible resources and assets compared to larger businesses. Thus, developing
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35 IBC to achieve diverse sources of knowledge and expertise is of great utility to enhance
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37 innovative performance. This is consistent with prior assertions that the internal capabilities
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39 are the most important aspects for small firm success in international markets (Knight &
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41 Cavusgil, 2004; Zahra *et al.*, 2000). Thus, developing IBC means greater probability of
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43 successful internationalization with positive implications for innovation (Genc *et al.*, 2019),
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45 which is also supported by Norwegian evidence showing that firms with strong international
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47 connections are highly innovative (Frøystad, 2014).
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52 The finding that AOC is an antecedent of IBC aligns with the broader consensus in the
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54 literature that organizational ambidexterity leads to positive firm outcomes (Cao *et al.*, 2009;
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56 Khan & Mir, 2019; Raisch & Birkinshaw, 2008). Our theoretical arguments and the subsequent
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58 empirical support for AOC as an antecedent of IBC are fully substantiated. To succeed, firms
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3 need to adopt a two-pronged approach of satisfying existing customers and being futuristic to
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5 explore potential changes in customer bases (Caniëls & Veld, 2019). These activities involve
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7 efficiency and innovation, and organizations with an ambidextrous culture may have the
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9 capacity to simultaneously demonstrate these competing requirements. By embracing the
10
11 opposing values of organizational diversity and shared vision, AOC may nurture the capability
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13 to both be attentive to customers' changing preferences and achieve coherence among all the
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15 patterns of activities via effective internal coordination, participation, and communication
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17 (Schein, 2010). Corporate diversity has long been recognized for promoting creativity in
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19 organizations, which impacts IBC through the development of innovative and entrepreneurial
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21 capabilities (de Vasconcellos *et al.*, 2019). Further, AOC may promote common goal orientation
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23 within organizations, which may ultimately help firms to exploit their existing resources and
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25 capabilities and excel in international markets (Wang & Rafiq, 2014).
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31 Our finding regarding the indirect effect of AOC on innovation performance via IBC is
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33 also consistent with prior research. Wang and Rafiq (2014) and Khan and Mir (2019) found
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35 that the influence of AOC on innovation is mediated by contextual ambidexterity. This suggests
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37 that AOC not only creates a milieu that promotes IBC development, but also enhances the
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39 innovative performance by nurturing IBC. This is aligned with prior studies that suggest that
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41 complex capabilities are time consuming to develop and, to achieve performance, companies
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43 need to carefully craft a supportive internal environment, such as an ambidextrous context, for
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45 the development of such capabilities (Gibson & Birkinshaw, 2004). This also consistent with
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47 prior assertions that organizations achieve superior performance through chains of capabilities
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49 that are distally or more proximally related to performance outcomes (Bhatt *et al.*, 2010; Knight
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51 & Cavusgil, 2004).
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56 Contrary to our expectations, the results did not support the contingent effect of
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58 environmental dynamism on the relationship between IBC and innovation performance. This
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3 is not consistent with the moderating role of environmental dynamism reported in past studies
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5 (Mao *et al.*, 2020; González-Zapatero *et al.*, 2019), such as firms become active in dynamic
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7 environments and these activities lead to enhanced performance (Boso *et al.*, 2013). One
8
9 possible explanation is that companies with high levels of IBC are proactive and future
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11 oriented, and they invest their energy in innovative actions regardless of the turbulence in the
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13 external environment. Firms with high IBC might have sufficiently developed the ability of
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15 exploring new opportunities in global markets and the capacity of reconfiguring business
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17 activities to meet changing customer demands in the task environment. This means that under
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19 dynamic conditions, firms that have already achieved a sufficiently high level of IBC may find
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21 it less beneficial for their innovation to dedicate additional resources to further develop such
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23 competences. It is possible that low IBC companies conduct their work for controlled reasons
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25 (e.g., external contingencies) and depend heavily on the dynamism in their environment to
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27 continuously adapt to new market trends.
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35 ***Practical implications***

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37 Our study has important implications for companies engaged in business operations across
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39 national boundaries. First, global organizations that strive to remain competitive by
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41 maintaining consistently high levels of innovation despite the heightened turbulence in the
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43 external environment (Bodolica & Spraggon, 2021) should prioritize the development of their
44
45 IBC. Second, these types of companies may find relevant to focus on nurturing a culture that
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47 is characterized by norms and values emphasizing both sharedness and diversity. Cultivating
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49 such an internal culture and encouraging firm members to internalize its values will not only
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51 help organizations develop IBC, but also generate sizable innovation-related performance
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53 outcomes.
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3 Our findings may specifically benefit entities operating in the Norwegian seafood
4 industry, which is mainly comprised of SMEs. This is important because SMEs possess fewer
5 resources and tangible assets than larger corporations and do not tend to invest heavily in R&D.
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7 Fostering a specific type of organizational culture and a set of competences that can contribute
8 to their staying innovative could help compensate for these shortcomings. Consistent with our
9 suggestion, small businesses with a higher level of IBC have been previously found to perform
10 better in foreign markets (Knight & Kim, 2009).
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22 *Limitations and future research*

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24 Despite its contributions, this study is not without limitations. First, our sample includes a
25 single industry in one national setting, which might affect the generalizability of the findings.
26 For instance, the preference for an ambidextrous firm culture may be a reflection of the societal
27 norms of Norway. Norwegian culture is characterized by institutional collectivism and
28 egalitarianism (House *et al.*, 2004), suggesting a preference for collaboration and equality
29 irrespective of differences that foster sharedness and diversity in organizations. Likewise, the
30 patterns of relationships might be different in industries mainly comprised of large firms in a
31 more dynamic environment than that of the seafood industry. Therefore, future research could
32 verify our findings by using a multi-industry sampling frame that may include both large and
33 small firms that experience various levels of environmental dynamism.
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47 Second, to capture AOC, we focused on how diversity and shared vision complement
48 each other, which assumes a balanced presence of these two culture types. However, it is
49 possible that an organizational culture includes both types, but they vary in their magnitude.
50 Thus, it would be relevant to explore their interaction effects on both IBC and innovation under
51 different scenarios (e.g., high diversity and high sharedness, high diversity and low sharedness,
52 high sharedness and low diversity, and low diversity and low sharedness). This can be done
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3 using a response surface analysis technique. Moreover, further research may corroborate our
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5 findings using other approaches to operationalize cultural ambidexterity, such as employing a
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7 formative measurement model with ambidexterity as a formative construct of organizational
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10 diversity and sharedness.

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12 Third, we confined our study to the ambidexterity of organizational culture, but
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14 ambidextrous leadership and ambidextrous structure might also have implications for the
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16 development of IBC and innovation. Thus, future studies might examine both the unique and
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18 joint effects of these three types of ambidexterity. Our final suggestion relates to the
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20 insignificant moderation effect uncovered in our study and the differing assertions in the extant
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22 literature about the role of environmental dynamism as a driver of organizational capabilities
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24 or a moderator of their effects. A relevant research question which is worthy of further
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26 examination is whether companies develop superior IBC under turbulent conditions or when
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28 the external environment is stable.
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References

- Adler, P.S., Goldoftas, B., & Levine, D.I. (1999). Flexibility versus efficiency? A case study of model changeovers in the Toyota production system. *Organization Science*, 10(1), 43-68.
- Al-Atwi, A.A., Amankwah-Amoah, J., & Khan, Z. (2019). Micro-foundations of organizational design and sustainability: The mediating role of learning ambidexterity. *International Business Review*, 30(1), 101656.
- Alegre, J., & Chiva, R. (2008). Assessing the impact of organizational learning capability on product innovation performance: An empirical test. *Technovation*, 28(6), 315-326.
- Andresen, M., & Bergdolt, F. (2021). Individual and job-related antecedents of a global mindset: An analysis of international business travelers' characteristics and experiences abroad. *International Journal of Human Resource Management*, 32(9), 1953-1985.
- Andriopoulos, C., & Lewis, M.W. (2009). Exploitation-exploration tensions and

- 1
2
3 organizational ambidexterity: Managing paradoxes of innovation. *Organization Science*,
4 20(4), 696-717.
5
6
7 Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of*
8 *Management*, 17(1), 99-120.
9
10
11 Bartlett, C.A., & Beamish, P.W. (2018). *Transnational Management*. Cambridge: Cambridge
12 University Press.
13
14
15 Baskarada, S., Watson, J., and Cromarty, J. (2017). Balancing transactional and
16 transformational leadership. *International Journal of Organizational Analysis*, 25(3),
17 506-515.
18
19
20
21 Benner, M.J., & Tushman, M.L. (2003). Exploitation, exploration, and process management:
22 The productivity dilemma revisited. *Academy of Management Review*, 28(2), 238-256.
23
24
25 Bhatt, G., Emdad, A., Roberts, N., & Grover, V. (2010). Building and leveraging information
26 in dynamic environments: The role of IT infrastructure flexibility as enabler of
27 organizational responsiveness and competitive advantage. *Information & Management*,
28 47(7-8), 341-349.
29
30
31
32 Birru, W.T., Runhaar, P., Zaalberg, R., Lans, T., & Mulder, M. (2019). Explaining
33 organizational export performance by single and combined international business
34 competencies. *Journal of Small Business Management*, 57(3), 1172-1192.
35
36
37
38 Bodolica, V., & Spraggon, M. (2018). An end-to-end process of writing and publishing
39 influential literature review articles: Do's and don'ts. *Management Decision*, 56(11),
40 2472-2486.
41
42
43
44 Bodolica, V., & Spraggon, M. (2021). Leadership in times of organizational decline: A
45 literature review of antecedents, consequences, and moderators. *International Journal of*
46 *Organizational Analysis*, 29(2), 415-435.
47
48
49
50 Bodolica, V., & Spraggon, M. (2020). Pure structures or ambidextrous configurations? A
51 grounded theory of knowledge-focused organizational design in innovative ventures.
52 *Journal of Management & Organization*, doi: 10.1017/jmo.2020.34.
53
54
55 Boso, N., Story, V. M., Cadogan, J. W., Micevski, M., & Kadić-Maglajlić, S. (2013). Firm
56 innovativeness and export performance: Environmental, networking, and structural
57 contingencies. *Journal of International Marketing*, 21(4), 62-87.
58
59
60

- 1
2
3 Calantone, R.J., Cavusgil, S.T., & Zhao, Y. (2002). Learning orientation, firm innovation
4 capability, and firm performance. *Industrial Marketing Management*, 31(6), 515-524.
5
6
7 Cameron, K.S., & Quinn, R.E. (1999). *Diagnosing and changing organizational culture:
8 Based on the competing values framework*. Reading, MA: Addison Wesley.
9
10
11 Cao, Q., Gedajlovic, E., & Zhang, H. (2009). Unpacking organizational ambidexterity:
12 Dimensions, contingencies, and synergistic effects. *Organization Science*, 20(4), 781-
13 796.
14
15
16
17 Caniels, M.C., & Veld, M. (2019). Employee ambidexterity, high performance work systems
18 and innovative work behavior: How much balance do we need? *International Journal of
19 Human Resource Management*, 30(4), 565-585.
20
21
22
23 Cavusgil, S.T., & Knight, G. (2015). The born global firm: An entrepreneurial and capabilities
24 perspective on early and rapid internationalization. *Journal of International Business
25 Studies*, 46(1), 3-16.
26
27
28
29 Cavusgil, E., Seggie, S.H., & Talay, M.B. (2007). Dynamic capabilities view: Foundations and
30 research agenda. *Journal of Marketing Theory and Practice*, 15(2), 159-166.
31
32
33
34 Cheng, J.L., & Bolon, D.S. (1993). The management of multinational R&D: A neglected topic
35 in international business research. *Journal of International Business Studies*, 24(1), 1-18.
36
37
38
39 Coviello, N.E. (2006). The network dynamics of international new ventures. *Journal of
40 International Business Studies*, 37(5), 713-731.
41
42
43
44 Daugherty, P.J., Chen, H., Mattioda, D.D., & Grawe, S.J. (2009). Marketing/logistics
45 relationships: Influence on capabilities and performance. *Journal of Business Logistics*,
46 30(1), 1-18.
47
48
49
50 de Vasconcellos, S.L., Garrido, I.L., & Parente, R. C. (2019). Organizational creativity as a
51 crucial resource for building international business competence. *International Business
52 Review*, 28(3), 438-449.
53
54
55
56 Dimitratos, P., & Plakoyiannaki, E. (2003). Theoretical foundations of an international
57 entrepreneurial culture. *Journal of International Entrepreneurship*, 1(2), 187-215.
58
59
60 Drucker, P.F. (1993). The rise of the knowledge society. *The Wilson Quarterly*, 17(2), 52-72.
61
62
63
64 Efrat, K., & Shoham, A. (2012). Born global firms: The differences between their short-and
65 long-term performance drivers. *Journal of World Business*, 47(4), 675-685.

- 1
2
3 Escandon-Barbosa, D., Rialp-Criado, J., Fuerst, S., Rodriguez-Orejuela, A., & Castro-
4 Aristizabal, G. (2019). Born global: The influence of international orientation on export
5 performance. *Heliyon*, 5(11), 1-12.
6
7
8
9 Ferner, A., Almond, P., & Colling, T. (2005). Institutional theory and the cross-national
10 transfer of employment policy: The case of 'workforce diversity' in US
11 multinationals. *Journal of International Business Studies*, 36(3), 304-321.
12
13
14 Frøystad, M.K. (2014). *Geographical Sources of Firm Innovation: Maritime Suppliers in Møre*
15 *& Romsdal*.
16
17
18 Galbreath, J. (2010). Drivers of corporate social responsibility: The role of formal strategic
19 planning and firm culture. *British Journal of Management*, 21(2), 511-525.
20
21
22 Gerschewski, S., Rose, E.L., & Lindsay, V.J. (2015). Understanding the drivers of international
23 performance for born global firms: An integrated perspective. *Journal of World*
24 *Business*, 50(3), 558-575.
25
26
27
28 Gibson, C.B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of
29 organizational ambidexterity. *Academy of Management Journal*, 47(2), 209-226.
30
31
32 Goll, I., & Rasheed, A. A. (2004). The moderating effect of environmental munificence and
33 dynamism on the relationship between discretionary social responsibility and firm
34 performance. *Journal of Business Ethics*, 49(1), 41-54.
35
36
37
38 González-Zapatero, C., González-Benito, J., & Lannelongue, G. (2019). Effect of purchasing
39 and marketing integration on new product development speed: The moderating role of
40 environmental dynamism. *Advances in Production Engineering and Management*, 14(2),
41 213-224.
42
43
44
45 Gooderham, P.N., Grøgaard, B., & Nordhaug, O. (2013). *International Management: Theory*
46 *and Practice*. Edward Elgar Publishing.
47
48
49 Green, D.H., Barclay, D.W., & Ryans, A.B. (1995). Entry strategy and long-term performance:
50 Conceptualization and empirical examination. *Journal of Marketing*, 59(4), 1-16.
51
52
53 Hafkesbrink, J., & Schroll, M. (2014). Ambidextrous organizational and individual
54 competencies in open innovation: The dawn of a new research agenda. *Journal of*
55 *Innovation Management*, 2(1), 9-46.
56
57
58
59 Hair, J.F., Sarstedt, M., Matthews, L.M., & Ringle, C.M. (2016). Identifying and treating
60

- 1
2
3 unobserved heterogeneity with FIMIX-PLS: part I—method. *European Business Review*,
4 28(1), 63-76.
5
6
7 Hair, J.F., Hult, G.T.M., Ringle, C.M., & Sarstedt, M. (2014). *A Primer on Partial Least
8 Squares Structural Equation Modeling (PLS-SEM)*. Thousand Oaks, CA: Sage.
9
10 Harman, H.H. (1976). *Modern Factor Analysis*. University of Chicago Press.
11
12
13 He, Z.-L., & Wong, P.-K. (2004). Exploration vs. exploitation: An empirical test of the
14 ambidexterity hypothesis. *Organization Science*, 15(4), 481-494.
15
16
17 Hitt, M.A., Hoskisson, R.E., & Ireland, R.D. (1994). A mid-range theory of the interactive
18 effects of international and product diversification on innovation and performance.
19 *Journal of Management*, 20(2), 297-326.
20
21
22
23 House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Culture,
24 leadership, and organizations: The GLOBE study of 62 societies*. Sage Publications.
25
26
27 Howell, R.D., Brevik, E., & Wilcox, J.B. (2007). Reconsidering formative measurement.
28 *Psychological Methods*, 12(2), 205-218.
29
30
31 Ibrahim, Z., Abdullah, F., & Ismail, A. (2016). International business competence and small
32 and medium enterprises. *Procedia-Social and Behavioral Sciences*, 224, 393-400.
33
34
35 Jantunen, A., Nummela, N., Puumalainen, K., & Saarenketo, S. (2008). Strategic orientations
36 of born globals—Do they really matter? *Journal of World Business*, 43(2), 158-170.
37
38
39 Jaworski, B.J., & Kohli, A.K. (1993). Market orientation: Antecedents and consequences.
40 *Journal of Marketing*, 57(3), 53-70.
41
42
43 Joseph, J., & Gaba, V. (2020). Organizational structure, information processing, and decision-
44 making: A retrospective and road map for research. *Academy of Management Annals*,
45 14(1), 267-302.
46
47
48 Kafouros, M.I., Buckley, P.J., Sharp, J.A., & Wang, C. (2008). The role of internationalization
49 in explaining innovation performance. *Technovation*, 28(1-2), 63-74.
50
51
52 Kalinic, I., & Forza, C. (2012). Rapid internationalization of traditional SMEs: Between
53 gradualist models and born globals. *International Business Review*, 21(4), 694-707.
54
55
56 Kassem, R., Ajmal, M., Gunasekaran, A., & Helo, P. (2019). Assessing the impact of
57 organizational culture on achieving business excellence with a moderating role of ICT.
58 *Benchmarking: An International Journal*.
59
60

- 1
2
3 Katila, R., & Ahuja, G. (2002). Something old, something new: A longitudinal study of search
4 behavior and new product introduction. *Academy of Management Journal*, 45(6), 1183-
5 1194.
6
7
8
9 Khan, S.J., & Mir, A.A. (2019). Ambidextrous culture, contextual ambidexterity and new
10 product innovations: The role of organizational slack and environmental factors.
11 *Business Strategy and the Environment*, 28(4), 652-663.
12
13
14 Kimberly, J.R., & Evanisko, M.J. (1981). Organizational innovation: The influence of
15 individual, organizational, and contextual factors on hospital adoption of technological
16 and administrative innovations. *Academy of Management Journal*, 24(4), 689-713.
17
18
19 Knight, G.A., & Cavusgil, S.T. (2004). Innovation, organizational capabilities, and the born-
20 global firm. *Journal of International Business Studies*, 35(2), 124-141.
21
22
23 Knight, G.A., & Kim, D. (2009). International business competence and the contemporary
24 firm. *Journal of International Business Studies*, 40(2), 255-273.
25
26
27 Kotabe, M., Srinivasan, S.S., & Aulakh, P.S. (2002). Multinationality and firm performance:
28 The moderating role of R&D and marketing capabilities. *Journal of International*
29 *Business Studies*, 33(1), 79-97.
30
31
32
33 Kuivalainen, O., Sundqvist, S., & Servais, P. (2007). Firms' degree of born-globalness,
34 international entrepreneurial orientation and export performance. *Journal of World*
35 *Business*, 42(3), 253-267.
36
37
38
39 Lavie, D., Stettner, U., & Tushman, M. L. (2010). Exploration and exploitation within and
40 across organizations. *Academy of Management Annals*, 4(1), 109-155.
41
42
43 Lee, Y.-Y., Falahat, M., & Sia, B.-K. (2019). Impact of digitalization on the speed of
44 internationalization. *International Business Research*, 12(4), 1-11.
45
46
47 Lee, J. Y., Seo, Y., Jeung, W., & Kim, J. H. (2019). How ambidextrous organizational culture
48 affects job performance: A multilevel study of the mediating effect of psychological
49 capital. *Journal of Management & Organization*, 25(6), 860-875.
50
51
52
53 Lewis, M. W. (2000). Exploring paradox: Toward a more comprehensive guide. *Academy of*
54 *Management Review*, 25(4), 760-776.
55
56
57 Li, D.-Y., & Liu, J. (2014). Dynamic capabilities, environmental dynamism, and competitive
58 advantage: Evidence from China. *Journal of Business Research*, 67(1), 2793-2799.
59
60

- 1
2
3 Liao, Y., & Li, Y. (2019). Complementarity effect of supply chain competencies on innovation
4 capability. *Business Process Management Journal*.
5
6
7 Mao, L., Li, J., & Guo, C. (2020). Integrator's coordination on technological innovation
8 performance in China: The dual moderating role of environmental dynamism.
9 *Sustainability*, 12(1), 308.
10
11
12
13 Martin, S. L., Javalgi, R. R. G., & Ciravegna, L. (2018). Service advantage built on service
14 capabilities: An empirical inquiry of international new ventures. *Journal of Business*
15 *Research*, 88, 371-381
16
17
18 McAuley, J. (1994). Exploring issues in culture and competence. *Human Relations*, 47(4), 417-
19 430.
20
21
22
23 Park, H.Y., Misra, K., Reddy, S., & Jaber, K. (2019). Family firms' innovation drivers and
24 performance: a dynamic capabilities approach. *Journal of Family Business Management*.
25
26
27 Pertusa-Ortega, E.M., & Molina-Azorín, J.F. (2018). A joint analysis of determinants and
28 performance consequences of ambidexterity. *BRQ Business Research Quarterly*, 21(2),
29 84-98.
30
31
32
33 Pla-Barber, J., & Alegre, J. (2007). Analyzing the link between export intensity, innovation
34 and firm size in a science-based industry. *International Business Review*, 16(3), 275-293.
35
36
37 Podsakoff, P.M., & Organ, D.W. (1986). Self-reports in organizational research: Problems and
38 prospects. *Journal of Management*, 12(4), 531-544.
39
40
41 Preacher, K.J., & Hayes, A.F. (2004). SPSS and SAS procedures for estimating indirect effects
42 in simple mediation models. *Behavior Research Methods, Instruments, & Computers*,
43 36(4), 717-731.
44
45
46 Puranam, P., Singh, H., & Zollo, M. (2006). Organizing for innovation: Managing the
47 coordination-autonomy dilemma in technology acquisitions. *Academy of Management*
48 *Journal*, 49(2), 263-280.
49
50
51
52 Raisch, S., & Birkinshaw, J. (2008). Organizational ambidexterity: Antecedents, outcomes,
53 and moderators. *Journal of Management*, 34(3), 375-409.
54
55
56 Rogers, M. (2004). Networks, firm size and innovation. *Small Business Economics*, 22(2), 141-
57 153.
58
59
60 Runyan, R., Droge, C., & Swinney, J. (2008). Entrepreneurial orientation versus small business

- 1
2
3 orientation: what are their relationships to firm performance? *Journal of Small Business*
4 *Management*, 46(4), 567-588.
5
6
7 Ruokonen, M., & Saarenketo, S. (2009). The strategic orientations of rapidly internationalizing
8 software companies. *European Business Review*, 21(1), 17-41.
9
10
11 Sandhu, S., & Kulik, C.T. (2019). Shaping and being shaped: How organizational structure and
12 managerial discretion co-evolve in new managerial roles. *Administrative Science*
13 *Quarterly*, 64(3), 619-658.
14
15
16 Sarstedt, M., Hair, J.F., Cheah, J.-H., Becker, J.-M., & Ringle, C.M. (2019). How to specify,
17 estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing*
18 *Journal*, 27(3), 197-211.
19
20
21
22 Schein, E.H. (2010). *Organizational Culture and Leadership*. San Francisco, CA: Jossey-Bass.
23
24
25 Seo, E.H., Kim, C.Y., & Kim, K. (2020). A study on the mechanisms linking environmental
26 dynamism to innovation performance. *Sustainability*, 12(23), 9999.
27
28
29 Shehvat, S., Kumar, A., Kumar, R., & Dutta, S. (2018). The state of ambidexterity research:
30 A data mining approach. *International Journal of Organizational Analysis*, 26(2), 343-
31 367.
32
33
34 Simsek, Z., Heavey, C., Veiga, J.F., & Souder, D. (2009). A typology for aligning
35 organizational ambidexterity's conceptualizations, antecedents, and outcomes. *Journal*
36 *of Management Studies*, 46(5), 864-894.
37
38
39 Sørensen, H.E., & Madsen, T.K. (2012). Strategic orientations and export market success of
40 manufacturing firms. *International Marketing Review*, 29(4), 424-441.
41
42
43 Spraggon, M., & Bodolica, V. (2012). A multidimensional taxonomy of knowledge transfer
44 processes. *Journal of Business Research*, 65(9), 1273-1282.
45
46
47 Spraggon, M., & Bodolica, V. (2017). Collective tacit knowledge generation through play:
48 Integrating socially distributed cognition and transactive memory systems. *Management*
49 *Decision*, 55(1), 119-135.
50
51
52
53 Spraggon, M., & Bodolica, V. (2008). Knowledge creation processes in small innovative hi-
54 tech firms. *Management Research Review*, 31(11), 879-894.
55
56
57 Spraggon, M., & Bodolica, V. (2020). On the heterogeneity and equifinality of knowledge
58 transfer in small innovative organizations. *Management Decision*, doi: 10.1108/MD-03-
59
60

2019-0318.

- Sui, S., & Baum, M. (2014). Internationalization strategy, firm resources and the survival of SMEs in the export market. *Journal of International Business Studies*, 45(7), 821-841.
- Tushman, M.L., & O'Reilly, C.A. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38(4), 8-29.
- Vera, D., & Crossan, M. (2005). Improvisation and innovative performance in teams. *Organization Science*, 16(3), 203-224.
- Vermeulen, F., & Barkema, H. (2002). Pace, rhythm, and scope: Process dependence in building a profitable multinational corporation. *Strategic Management Journal*, 23(7), 637-653.
- Verona, G. (1999). A resource-based view of product development. *Academy of Management Review*, 24(1), 132-142.
- Wang, C.L., & Rafiq, M. (2014). Ambidextrous organizational culture, contextual ambidexterity and new product innovation: A comparative study of UK and Chinese high-tech Firms. *British Journal of Management*, 25(1), 58-76.
- Zahra, S.A., Ireland, R.D., & Hitt, M.A. (2000). International expansion by new venture firms: International diversity, mode of market entry, technological learning, and performance. *Academy of Management Journal*, 43(5), 925-950.
- Zhao, X., Lynch, J.G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197-206.
- Zhang, Y., Waldman, D.A., Han, Y.L., & Li, X.B. (2015). Paradoxical leader behaviors in people management: Antecedents and consequences. *Academy of Management Journal*, 58(2), 538-566.
- Zheng, W., Yang, B., & McLean, G.N. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, 63(7), 763-771.

Appendices

Appendix A. Construct operationalization scales

Appendix A: Scales used to operationalize study constructs	
Organizational Diversity	
OD1:	In our firm, we respect everyone's different view points
OD2:	In our firm, we value people from diverse backgrounds with diverse experiences and skills.
OD3:	In our firm, we encourage all our employees to generate as many alternative solutions to problems as possible
Shared Vision	
SV1:	All employees in our firm view themselves as partners in charting the direction of our firm.
SV2:	Future direction of our firm is clearly communicated to every employee.
SV3:	Everyone one in our firm is well aware of long term plans and direction of our firm
Formalization	
FM1:	Our work involves a large number of written rules and policies.
FM2:	There is a complete written job description for most jobs in our firm.
FM3:	Rules and procedures occupy a central place in our firm.
Centralization	
CT1:	There is a little action taken in our firm until a supervisor makes a decision.
CT2:	Even small matters in our firm are referred to someone with higher up for final decision.
CT3:	A person who wants to make his / her own decision is discouraged in our firm.
Innovative Performance	
IP1:	Our company frequently introduces new product/service innovations.
IP2:	Our company is able to continuously introduce new products/services to markets before our competitors.
IP3:	Our company is able to extend product/service range outside of main product/service field.
Environmental Dynamism	
ED1:	Product or service in our industry updates quickly.
ED2:	The technology in our industry progresses quickly.
ED3:	It is difficult to predict the change of customer needs.
International Orientation	
IO1:	Our top management tends to see the world as our firm's market place.
IO2:	Our management continuously communicates its mission to employees regarding success in international markets.
IO3:	Management develops human and other resources for achieving our goals in international markets.
International Marketing Skills	
IMS1:	Marketing planning process
IMS2:	Control and evaluation of marketing activities.
IMS3:	Skills to segment and target individual markets.
International Innovativeness	
IIN1:	Our firm is at the leading technological edge of our industry in international market.
IIN2:	Our firm is well known for technical expertise among channel members in international markets.
IIN3:	Our firm employs most skilled specialists in manufacturing products and offering services.
International Market Orientation	
IMO1:	All our managers understand how everyone in our firm contributes to create value for customers in market.
IMO2:	Top management frequently discusses the strengths and weaknesses of our major competitors.
IMO3:	Our business functions are integrated in serving the needs of international markets

Appendix B. Table 1 – Table 6 and Figure 1

Table 1. Loadings, CR and AVE

Table 1: Loadings, CR and AVE				
Constructs	CR	AVE	Indicators	Loadings
International Orientation	0.817	0.599	IOR1	0.712
			IOR2	0.786
			IOR3	0.820
			IMS2	0.865
			IMS3	0.877
International Innovativeness	0.892	0.733	INO1	0.850
			INO2	0.828
			INO3	0.889
International Market Orientation	0.800	0.571	IMO1	0.745
			IMO2	0.745
			IMO3	0.776
Shared Vision	0.906	0.763	SDV1	0.814
			SDV2	0.893
			SDV3	0.911
Organizational Diversity	0.872	0.694	ODV1	0.815
			ODV2	0.832
			ODV3	0.851
Innovative Performance	0.896	0.743	INP1	0.888
			INP2	0.895
			INP3	0.799
Environmental Dynamism	0.919	0.850	EDM1	0.967
			EDM2	0.853

Table 2. Discriminant validity coefficients

Table 2: Discriminant Validity Coefficients								
	1	2	3	4	5	6	7	8
Environmental Dynamism (1)	0,922							
International Innovativeness (2)	0,232	0,856						
International Marketing Skills (3)	0,074	0,406	0,840					
Innovative Performance (5)	0,214	0,471	0,373	0,276	0,862			
International Orientation (6)	0,030	0,332	0,318	0,444	0,243	0,774		
Organizational Diversity (7)	0,009	0,188	0,402	0,430	0,331	0,417	0,833	
Shared Vision (8)	0,206	0,176	0,458	0,488	0,347	0,517	0,680	0,873

Table 3. Loadings, CR and AVE (for second order construct)

Table 3: Loadings, CR and AVE				
Second Order Construct	CR	AVE	Indicators	Loadings
IBC	0.831	0.553	International Orientation	0.690
			International Marketing Skills	0.791
			International Innovativeness	0.692

Table 4. Path coefficients, effect size and variance

Table 4: Path Coefficients, Effect Size and Variance						
Criterion	Predictor	Beta Values	t-values	Effect Size	VIF	p-values
IBC, $R^2 = 0.395$	AOC	0.523	3.695***	0.400	1.130	0.000
INNOPERF, $R^2 = 0.318$	IBC	0.314	2.399**	0.122	1.183	0.017
	R&D - IBC	0.259	2.855**	0.110	1.007	0.004

*** $p < 0.001$; ** $p < 0.05$ (Two-tailed)

Table 5. Indirect effects

Table 5: Indirect Effects			
Association	Beta Values	t-values	95% Confidence Interval
AOC - IBC - INNOPERF	0.242	2.321**	0.093 - 0.406

** $p < 0.05$ (Two-Tailed)

Table 6. Moderating effects

Table 6: Moderating Effect					
Moderating Variable	Beta Value	t-value	Effect Size	VIF	p-value
Environmental Dynamism	0.154	0.800	0.026	1.275	0.296

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Figure 1. Conceptual model

