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Adomako, Samuel

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## RESEARCH ARTICLE

# The effect of foreign knowledge acquisition on international performance: The mediating roles of international orientation and business model innovation

Samuel Adomako 

Birmingham Business School, University of Birmingham, Birmingham, UK

## Correspondence

Samuel Adomako, Birmingham Business School, University of Birmingham, Edgbaston Park Rd, Birmingham B15 2TY, UK  
Email: [s.adomako@bham.ac.uk](mailto:s.adomako@bham.ac.uk)

## Abstract

Research on how business model innovation (BMI) in international markets affects international performance continues to proliferate. However, existing research is sparse on primary predictors of this relationship. Drawing upon knowledge creation theory, this article investigates a serial mediation model that supports the role of the indirect effects of foreign knowledge acquisition (FKA) via international orientation (IO) and BMI on international performance. Utilizing time-lagged survey data from multiple respondents in Ghana ( $N = 352$ ), the results revealed that high levels of FKA enhance BMI via increased IO, and BMI ultimately improves international performance. Implications relating to theory and practice are discussed.

## KEYWORDS

business model innovation, foreign knowledge, international orientation, international performance, SMEs, sub-Saharan Africa

## 1 | INTRODUCTION

The global competitive environment has pushed small and medium-sized enterprises (SMEs) to pursue international strategies (Hilmersson, 2014; Pisani et al., 2017; Prange & Pinho, 2017) to bolster their market positions. The pursuit of cross-border activities tends to yield higher performance for firms (Schwens et al., 2018). However, SMEs face several challenges posed by global competition, which ultimately impact their business model innovation (BMI) and international performance (Lu & Beamish, 2001; Prange & Pinho, 2017). The international business (IB) literature has examined the relationship between internationalization and BMI (Cavallo et al., 2020; Hennart, 2014) and has emphasized that BMI is considered “architecture of the value creation, delivery, and capture mechanisms [a firm] employs” (Teece, 2010, p. 191). Given that internationalization is costly and risky, which is attributed to inadequate knowledge and experience (Denk et al., 2012; Zaheer, 1995) and liability of newness (Renko et al., 2016), knowledge acquisition

becomes critical. The acquisition of foreign knowledge may help international ventures to innovate in the business model. Thus, it requires that firms acquire knowledge about foreign business environments (e.g., markets, foreign institutions, and technology) to understand the opportunities and risks in foreign contexts.

Without this knowledge about foreign markets, SMEs risk adequately engaging in cross-border activities. For example, Wiklund and Shepherd (2003, p. 1308) suggest that “knowledge about market and technology are two strands of procedural knowledge that [...] increase a firm's ability to discover and exploit opportunities.” In essence, foreign knowledge about markets and technologies could help SMEs modify and restructure their business models in international markets (Blomstermo et al., 2004) and help SMEs exploit unexploited opportunities in these markets (Ireland et al., 2001). This reasoning has been emphasized in various IB and international entrepreneurship studies, including internationalization theory (Johanson & Vahlne, 1977, 2009), early internationalization literature (Casillas et al., 2015; De Clercq et al., 2012), international performance literature (Kotabe

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et al., 2011; Lyles & Salk, 1996; Musteen et al., 2014), and international orientation (IO) (Williams et al., 2020).

Despite the theorized and observed importance of the outcomes of foreign knowledge acquisition (FKA), scant research exists to explain the dynamics of such effects, especially in the context of emerging economies. More importantly, while previous IB studies have improved our understanding of the performance outcomes of FKA with a growing number of studies (Fang et al., 2013; Li, Wei, & Liu, 2010; Naldi & Davidsson, 2014), we know little about the potential processes through which FKA influences SMEs' international performance. This is surprising given that FKA is considered a necessity for SMEs to succeed (Oviatt & McDougall, 1994; Zahra, 2005) and overcome constraints (Fletcher & Harris, 2012; Tsang, 2002) at internationalization. This study seeks to address these important gaps in the IB literature by examining the performance outcomes of FKA in the context of SMEs in developing economies. Although SMEs in developing economies are considered the engine of growth (Radas & Božić, 2009; Tambunan, 2009), they face several challenges related to institutional impediments, and heightened foreign competition in their home markets (Adomako et al., 2019; Ibeh et al., 2012). Thus, it is not surprising that SMEs in such economies look to international markets to attenuate their reliance on environments characterized by uncertainty.

Based on the theory of knowledge creation (Nonaka, 1994; Nonaka & Takeuchi, 1995), this paper (1) examines the process through which FKA influence SMEs' international performance, (2) investigates the antecedents of BMI, and (3) highlights the performance outcomes of BMI. The main rationale for using this theory is that when international SMEs acquire new knowledge from the international market, they can be utilized the knowledge to connect and arrant new existing knowledge for innovation (Nonaka et al., 2000; Nonaka & Takeuchi, 1995). This can further open up new growth opportunities and incentives for international performance as the new knowledge acquired from international markets enhance performance in both domestic and international markets (Naldi & Davidsson, 2014). Using time-lagged survey data from international SMEs in a developing economy in sub-Saharan Africa (Ghana,  $N = 352$ ) provides support for the hypotheses.

This article contributes to the IB literature in three important ways. First, this article is motivated by the dearth of studies that consider the extent to which FKA serves as a driver of IO and BMI in SMEs. Moreover, this investigation was motivated by the need to extend the theory regarding FKA on SMEs' international performance. In doing so, this paper expounds upon the importance of recognizing the performance outcomes of international knowledge and explores important orientations that can affect the way international ventures pursue BMI which ultimately, contributes to firm-level performance. Second, this paper extends previous research that explains the determinants of OI in international SMEs (Williams et al., 2020). This is considered a worthy research agenda because, despite the growing research attention on the role of FKA in international business performance in developing economies (Anh et al., 2006; Becheikh, 2013; Lin et al., 2020; Park, 2010), very limited research effort has been given

to exploring how new knowledge acquired from international markets enhances IO. Third, this article extends the IB literature by focusing on the role of IO in driving SMEs' BMI for their international markets. This is considered an important extension because it highlights the antecedents of SMEs' international BMI and confirms the outcomes of such business models. In addition, this paper explores the mediating mechanisms of the effect of FKA on BMI and international performance. In this way, this paper advances the IB literature by showing how BMI mediates the hypothesized link between FKA and BMI. Finally, it contributes to the emergent literature on BMI by showing that BMI drives the international performance of SMEs in a developing economy (i.e., Ghana).

This article proceeds as follows: First, a brief literature review of the primary variables included in this investigation and construct hypotheses aligning with the theories developed and modeled in extant research are provided. Sampling and analysis are explained, then results are reported. Inferences from the results are discussed regarding scholarly and managerial applications. This article concludes with suggestions for future research that extend the findings, scope, and implications for theory and practice.

## 2 | THEORETICAL BACKGROUND AND HYPOTHESES

### 2.1 | Theory of knowledge creation

The theory of knowledge creation suggests that a firm actively acquires knowledge from many sources (Nonaka, 1994; Nonaka & Takeuchi, 1995). Based on the assumptions of this theory, knowledge acquisition processes are essential for firms to achieve success. Through knowledge acquisition, employees in the organization can collectively utilize knowledge to serve its markets. This suggests that new knowledge acquired from expansion is critical for the firm's success. In particular, knowledge is an important component of Penrose's theory (Naldi & Davidsson, 2014; Pitelis, 2007). In essence, the acquisition of new knowledge is an important enabling factor for international opportunity identification and exploitation for international performance. Increased foreign knowledge tends to enhance the firm's international productive opportunity set that can be put into use to pursue new opportunities (Foss, 1999). For example, international expansion requires that managers increase their knowledge about the resources possessed by the firm and how the resources could be put into productive activities.

The IB literature suggests that knowledge acquired from foreign markets has a stronger impact on international business success (De Clercq et al., 2014; Naldi & Davidsson, 2014). In particular, the amount of foreign knowledge a firm acquires depends on its learning effort in the external markets (Cohen & Levinthal, 1990). Therefore, the ability to learn about international markets enhances the degree to which the firm devotes significant resources to foreign knowledge acquisition in cross-border activities (Ocasio, 1997). The IB literature shows that foreign knowledge acquisition and learning provides an

opportunity for firms to increase their international performance (Fang et al., 2013; Li, Poppo, & Zhou, 2010; Zahra et al., 2000). Thus, investigating the processes through which FKA enhances international performance should provide valuable insights into deeper mechanisms that underlie firms' international competitive position.

Drawing on Nonaka's theory of knowledge creation (Nonaka & Takeuchi, 1995), this article suggests that foreign knowledge acquisition plays an important role that provide firms with incentives and means to reap the benefits of cross-border activities. Accordingly, knowledge is conceptualized as a set of collective know-how that helps firms utilize resources in a productive manner (Tsoukas & Vladimirou, 2001). It also follows the notion that knowledge resides in people and is acquired through experience (King & Zeithaml, 2003). Following prior IB literature (Williams & Du, 2014; Yli-Renko et al., 2001), this study captures the acquisition of knowledge concerning foreign competition, sales channels, and managerial techniques, technology, technical manuals from foreign sources. Accordingly, in the sub-section that follows, hypotheses are developed to predict how FKA influences IO and how IO impacts BMI. In addition, this article argues that IO mediates the relationship between and BMI. Moreover, the model suggests that BMI mediates the relationship between IO and international performance. This reasoning is captured in Figure 1 below.

## 2.2 | Foreign knowledge acquisition and international orientation

Foreign knowledge acquisition, conceptualized as the acquisition of knowledge about foreign competition, sales channels, and managerial techniques, technology, technical manuals from foreign sources (Naldi & Davidsson, 2014; Williams & Du, 2014), is an important driver of a firm's IO (Williams et al., 2020). The knowledge creation theory suggests that a firm's knowledge acquisition process allows it to enhance knowledge embedded internally and transfer knowledge into operational activities to improve business performance (Nonaka & Takeuchi, 1995). Thus, when firms acquire foreign knowledge about the market, technology, and institutions, it allows them to understand the opportunities and risks in foreign markets. This is likely to help firms engaged in cross-border activities strategically position themselves in the international business environment. This notion has been captured in various IB literature, including internationalization theory (Johanson & Vahlne, 1977), international entrepreneurship or born global literature (Coviello, 2015; Hennart, 2014),

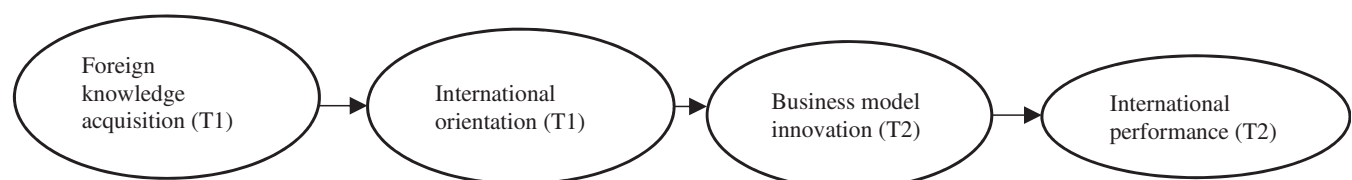
as well as international performance literature (Asemokha et al., 2019; Brouthers et al., 2015; Crespo et al., 2021).

Indeed, the IB literature has contended that foreign knowledge acquisition is critical for SMEs to succeed at internationalization (Oviatt & McDougall, 1994; Zahra, 2005). FKA is important for firms to overcome the liability of foreignness that may hinder the internationalization process and could help firms in developing economies to better overcome problems associated with being "small" in the process of accessing international markets (Bohata & Mladek, 1999). Given that FKA enhances the absorptive capacity in firms and makes additional knowledge acquisition easier, it helps managers be more confident to deal with risk associated with cross-border activities (Liesch et al., 2011). More importantly, FKA makes it easier for developing country SMEs to position themselves in the international market effectively. This helps firms to be more oriented toward the identification and development of useful business networks to avoid costly mistakes related to initial cross-border activities. For example, the Uppsala stages model of internationalization suggests that firms tend to engage in internationalization in the incremental process following their learning in the foreign market (Johanson & Vahlne, 1977). More importantly, Johanson and Vahlne (2009) pointed out that knowledge from international network partners helps firms overcome the liability of being an outsider. However, whether cross-border activities follow the staged approach espoused by the Uppsala model or the network approach to enhance opportunities in the international market, FKA acquisition informs the decision-making process of internationalizing forms. Collectively, the IB literature highlights the critical importance of FKA in driving a firm's stance on internationalization (Dichtl et al., 1990; Musteen et al., 2014; Zou & Cavusgil, 2002). Thus, FKA should make help SMEs in developing economies to better position themselves to address the challenges they are likely to face in the internationalization process. Based on the foregoing argument, this study suggests that:

**Hypothesis 1.** Foreign knowledge acquisition is positively related to international orientation.

## 2.3 | International orientation and international BMI

BMI reflects the identification of how firms do business to create value (Demil et al., 2015) or a specific combination of resources that allows firms to generate value for their customers (Clauss, 2017). In



**FIGURE 1** Research model.

this study, BMI is conceptualized as “the content, structure, and governance of transactions designed to create value through the exploitation of business opportunities” (Amit & Zott, 2001, p. 511).

SMEs' business models in international markets tend to differ from those used in the domestic market. Indeed, cross-border activities require SME managers to consider how to succeed in the international market. These include factors such as how to create value in the international market, export channels to use, and competitive strategies to adopt. These factors may require the firm to adapt business developed for domestic markets to suit international market contexts (Child et al., 2017; Onetti et al., 2012). Firms with IO tend to have distinctive characteristics such as competencies and outlook toward pursuing international opportunities (Knight & Kim, 2009; Mort & Weerawardena, 2006). Thus, having proactive IO suggests the exploration of new business opportunities beyond the domestic market. The IB literature suggests that firms that actively explore opportunities abroad tend to innovate and adapt their business models to fit the host country's conditions (Landau et al., 2016). Thus, firms oriented toward international activities are likely to create new offerings, new channels, new markets, and new customer relationships. In addition, firms with IO actively build new capabilities, technology, processes, and new partnerships for cross-border activities. Given that internationalization can be viewed as a way to enhance a firm's competitive advantage and value through increased economies of scale and scope, a firm's stance on internationalization is considered a relevant source of BMI (Demil et al., 2015) to compete abroad. Taken together, IO is likely to give rise to new opportunities abroad, and the firm should be able to create new processes, practices, and decision-making structures related to its business model to target new markets abroad. Thus, this study argues that:

**Hypothesis 2.** International orientation is positively related to business model innovation.

This article further argues that IO mediates the link between FKA and BMI. First, knowledge about business conditions in foreign markets helps firms tend to guide a firm's stance on cross-border activities (Autio et al., 2000; Dichtl et al., 1990; Zhou et al., 2007). In addition, given that the foreign expansion decision outcome is highly uncertain, the knowledge required to proceed to international markets is considered crucial (Johanson & Vahlne, 1977). In essence, foreign expansion decisions are likely to be affected by foreign knowledge acquisition. Prior research shows that knowledge about international markets helps to reduce the uncertainty associated with international expansion (Nielsen & Nielsen, 2011). This is likely to increase awareness of international opportunities and help overcome the “psychic distance” associated with doing business abroad. Thus, FKA can serve as a surrogate for decisions associated with cross-border activities.

Second, internationalizing firms tend to modify their domestic market business models to fit the international business context. This implies that an SME's IO is likely to predict its business model abroad. For example, doing business abroad entails firm managers considering how the firm could serve its international markets. In this way, the

firm tends to consider its export channels, competition, and institutional development in the host country. In addition, IO tends to influence BMI and adaptation to better fit the specific context of the firm's international markets (Landau et al., 2016). Thus, a firm's IO contributes to BMI.

Third, IO serves as a conduit through which knowledge impacts a firm's BMI (Guo et al., 2017). As has been indicated above, if a firm fails to learn and acquire knowledge related to its foreign markets, it can hardly profit from its internationalization effort. IO enables a firm to take advantage of the knowledge acquired from international markets by engaging in activities such as innovation (Child et al., 2017). Thus, it is suggested that:

**Hypothesis 3.** International orientation mediates the positive, indirect relationship between foreign market acquisition and business model innovation.

## 2.4 | International orientation, BMI, and international performance

This article also argues that business models adopted by SMEs in foreign markets will be positively associated with SMEs' performance abroad. A firm's BMI helps create value from identified international opportunities, which allows the firm to achieve performance (Child et al., 2017; George & Bock, 2011). Thus, this study argues that BMI adopted by SMEs for international business activities relates to international performance and this relationship is mediated by IO. First, IO can facilitate BMI as IO enables SMEs to identify foreign business opportunities (Ozgen & Baron, 2007). Given that a firm's domestic business model is adapted to fit or exploit international business opportunities, it is likely to be driven and encouraged by IO.

Second, BMI is considered an important strategy for a firm's competitiveness (Teece, 2007, 2010). The dynamic capability perspective suggests that a firm should adapt and renew its business model to reap superior performance (Mitchell & Coles, 2003; Teece et al., 1997). Indeed, SMEs take advantage of new opportunities abroad through their business model, which may help contribute to performance abroad. The positive relationship between a firm's BMI and performance has been well established (Giesen et al., 2007; Guo et al., 2017). Third, BMI serves as a catalyst through which IO impacts a firm's international performance. Consequently, IO facilitates processes, practices, and decision-making processes related to new opportunities abroad (Knight & Kim, 2009; Mort & Weerawardena, 2006), which could contribute to performance abroad (Dichtl et al., 1990; Knight & Cavusgil, 2004). In addition, IO could help firms adapt their business models when entering international markets (Casadesus-Masanell & Ricart, 2010) and can boost performance abroad (Johansson & Abrahamsson, 2014). Thus, the business models that SMEs adopt for foreign markets should effectively exploit opportunities that yield profits from international activities. In essence, BMI helps firms take advantage of opportunities abroad by engaging in several activities such as networks,

organizational designs, and knowledge management (Dencker & Gruber, 2015; Foss et al., 2013). Thus, it is suggested that:

**Hypothesis 4.** Business model innovation is positively related to international performance.

**Hypothesis 5.** Business model innovation mediates the relationship between international orientation and international performance.

### 3 | METHOD

#### 3.1 | Sample and data collection

The focus of this study was on manufacturing firms engaged in cross-border activities such as exporting and joint ventures (Adomako et al., 2020). Ghana was selected as the study context because of its contemporary reforms in terms of deregulation, privatization, and liberalization to ease cultural, regulatory, and political constraints. These efforts have helped to cultivate an atmosphere for the development and internationalization of new ventures (Adomako et al., 2020).

The sampling frame for the study was developed from the Ghana Business Directory's database. The sampling strategy met the following criteria: (1) independent entities with no affiliation to any group of companies, (2) firms owned and controlled by entrepreneurs/founders, (3) firms involved in international (e.g., exporting and joint ventures), and (4) firms employing a maximum of 250 full-time employees.

Data were collected in two waves. The questionnaire was designed such that chief executive officers (CEOs) provided answers to the international orientation and foreign knowledge acquisition questions in Wave 1. The CEOs of the 1200 firms were approached by going door-to-door in areas in the four cities where firms involved in international activities are concentrated. A survey booklet was given to the CEO for participation. Each CEO was asked to leave his or her contact information. The survey was conducted within 3 months, from December 2019 to March 2020. This was done to mitigate the influence of time-varying factors on response. At the end of Wave 1, we obtained 453 responses after discounting missing values.

In Wave 2 of the survey, the CEOs and finance managers/chief accountants of the 453 firms were approached to capture BMI and international performance measures. In the second survey, CEOs provided answers to the BMI, while finance managers/chief accountants answered questions on international performance. Firms that could not identify a finance manager or if the CEO was also the finance manager were excluded from the participation. The second wave of the survey occurred because single-informant self-reported data are often associated with common method bias (Podsakoff et al., 2003). Overall, we obtained 366 complete responses from the second wave. After discounting missing values, we obtained 352 matched responses from

Waves 1 and 2 for our analysis. This represents a 29.33% response rate.

To evaluate non-response bias, the respondents and non-respondents were compared for the final sample. The information of non-respondents such as the age of the firm and international experience was obtained from the database that was used to draw the sampling frame. Using Pearson's chi-square test (Greenwood & Nikulin, 1996), results indicate that the respondents were not significantly different from non-respondents in terms of firm age, firm size, industry, research and development (R&D) expenditure, and international experience. Thus, non-response bias is not considered a serious threat to our results (Rogelberg & Stanton, 2007).

The firms are small and medium-sized enterprises employing an average of 125 people with US\$ 1.16 million. The average international experience was 7 years and foreign sales accounted for 65% of total annual sales. The majority of the firms do business in the African regional market (59%), and 22% of the firms are actively involved in cross-border activities in Asia and the Middle East. The rest of the firms (19%) represented the European Union, North America, South America, and the Caribbean.

#### 3.2 | Measures

All the multi-item constructs were measured on a seven-point Likert scale. Table 1 displays the multi-item measures, validity, and reliability of the constructs.

*Foreign knowledge acquisition (T1).* The six-item scale measuring foreign knowledge acquisition was adopted from previous studies (Williams & Du, 2014; Yli-Renko et al., 2001). This scale captures the acquisition of knowledge concerning foreign competition, sales channels, and managerial techniques, technology, technical manuals from foreign sources.

*International orientation (T1).* Five items were adopted from Knight and Kim (2009) to measure international orientation.

*International business model innovation (T2).* This construct was captured using six items from Zott and Amit (2007, 2008). The items were reworded to reflect BMI in the international business environment.

*International performance (T2)* was measured using both subjective and objective indicators. The subjective international performance measures were taken from Boso et al. (2013). Finance managers were asked to self-report the extent to which international activities have yielded benefits in terms of profitability, growth in profitability, and margins relative to the industry average on a Likert scale ranging from 1 = "below average" to 7 = "above average." The objective international performance scale was also taken from Boso et al. (2013). Accordingly, finance managers were asked to self-reported average international profit (before tax) and average international sales turnover to capture objective international performance. For example, managers were asked the following question: "Over the past three years, approximately what has been the average total international profit (before tax) of your company?"



**TABLE 1** Measures and results of validity tests of multi-item constructs.

Measurement items	Standardized loadings (t-values)
International orientation: $\alpha = 0.93$ ; CR = 0.94; AVE = 0.76	
Top management tends to see the world as our firm's marketplace	0.90 (1.00)
The prevailing organizational culture is conducive to the active exploration of new business opportunities abroad	0.95 (22.12)
Management continuously communicates its mission to succeed in international markets	0.89 (20.12)
Top management is experienced in international business	0.85 (18.39)
Management communicates information regarding successful and unsuccessful customer experiences abroad	0.76 (10.45)
Foreign knowledge acquisition: $\alpha = 0.89$ ; CR = 0.90; AVE = 0.66	
Our company acquires knowledge about how foreign competition flows effectively through the organization to the top management team	0.87 (1.00)
Our company acquires new managerial techniques from foreign sources	0.83 (14.67)
Our company acquires written knowledge about technology from foreign sources	0.75 (12.13)
Our company acquires procedural or technical manuals from foreign sources	0.84 (15.23)
Our company acquires written knowledge about management techniques from foreign sources	0.78 (13.22)
Business model innovation: $\alpha = 0.92$ ; CR = 0.93; AVE = 0.67	
Our international business model offers new combinations of products, services, and information	0.81 (1.00)
Our international business model attracts a lot of new suppliers and partners	0.85 (15.96)
Our international business model attracts a lot of new customers	0.84 (14.88)
Our international business model bonds participants together in novel ways	0.82 (13.65)
Our international business model links participants to transactions in novel ways	0.83 (14.51)
We are pioneers of the international business model	0.78 (13.41)
Subjective international performance: $\alpha = 0.86$ ; CR = 0.86; AVE = 0.68	
Compared with your industry average, how would you grade your company's international performance over the past 3 years on the following indicators?	
Profitability	0.89 (1.00)
Growth in profitability	0.80 (11.85)
Margins	0.78 (10.51)
Objective international performance: $\alpha = 0.85$ ; CR = 0.87; AVE = 0.61	
On average, what has been the total international sales turnover of your company over the past 3 years?	0.90 (1.00)
Over the past 3 years, approximately what has been the average total international profit (before tax) of your company?	0.85 (14.78)

Note: t-values in parentheses.

Abbreviations: AVE, average variance extracted; CR, composite reliability;  $\alpha$ , Cronbach alpha value.

### 3.2.1 | Control variables

Several control variables were added to account for possible confounds. The international business literature suggests that firm size, firm age, industry types, international experience, and R&D expenditure may influence the international performance of firms (Boso et al., 2013; Kuivalainen et al., 2007; Sundqvist et al., 2012). Firm size was measured as the number of full-time employees. Firm age was measured as the number of years since the company was established. The international experience of the firm was the number of years the firm has been involved in international activities. R&D intensity was captured as the log transformation of the annual R&D expenditure of the firm.

### 3.3 | Reliability and validity test

Potential common method variance was addressed by loading all the variables into an exploratory factor analysis (EFA). The results of the EFA suggest that no single factor accounted for the majority for the majority of the covariance. Besides, the EFA shows that five factors with eigenvalues >1.0 emerged, accounting for 79.70% of the variance. The largest factor accounted for 20.19% of the variance. Furthermore, we followed the approach recommended by Lindell and Whitney (2001) by identifying a marker variable that was conceptually related to any of the constructs in our model (i.e., "I think I am a special person"). This item measures CEO narcissism. The results from Lindell and Whitney (2001) show nonsignificant correlations ranging

from  $-0.01$  to  $0.05$ , suggesting no indication of common method bias. The coefficient alphas and composite reliabilities for the constructs are reported in Table 1. We obtained reasonable values that suggest the reliability and validity of the measures (Cronbach, 1951). Subsequently, we performed a confirmatory factor analysis (CFA) to ensure the discriminant validity of the six key variables, using LISREL 8.71. Various models were experimented with, ranging from five factors (five variables) to one factor (five variables) combined into one variable. The results of the five-factor model ( $\chi^2/\text{d.f.} = 2.39$ ; CFI = 0.94; NNFI = 0.96; RMSEA = 0.06, and SRMR = 0.07) fits the data better than the one-factor model ( $\chi^2/\text{d.f.} = 1.69$ ; CFI = 0.68; NNFI = 0.78; RMSEA = 0.09, and SRMR = 0.13). In addition, the values of the square root of the average variance extracted (AVE) for all multi-item constructs were calculated. The results indicated that for all constructs, each correlation of one construct with one another was smaller than the square root of its AVE, suggesting the discriminant validity of our constructs (Fornell & Larcker, 1981).

#### 4 | HYPOTHESIS TESTING

The path analysis (Preacher et al., 2010) with Mplus statistical software (Muthén & Muthén, 2010) was used as the estimation strategy. The correlations and descriptive statistics appear in Table 2. The results of the hypotheses test are reported in Table 3. It was predicted that FKA would be positively related to international orientation. Hypothesis 1 received support ( $\gamma = 0.22$ ,  $p < 0.01$ ). Hypothesis 2, proposing that international orientation positively affects BMI was supported ( $\gamma = 0.20$ ,  $p < 0.01$ ).

In Hypothesis 3, it was predicted that international orientation mediates the positive, indirect linkage between foreign knowledge acquisition and BMI. The results support Hypothesis 3 (The estimate thereafter ( $ab$ ) = 0.13,  $p < 0.05$ ; 95% CI: 0.05–0.22).

Hypothesis 4 proposes that BMI positively relates to international performance. The results show that BMI positively affects

both subject international performance ( $\gamma = 0.20$ ,  $p < 0.01$ ) and objective international performance ( $\gamma = 0.19$ ,  $p < 0.01$ ). Thus, Hypothesis 4 was supported. In Hypothesis 5, it was proposed that would BMI mediate the positive indirect linkage between IO and international performance. The results indicate that BMI mediates the relationship between IO and subjective international performance (estimate ( $ab$ ) = 0.19,  $p < 0.01$ ; 95% CI: 0.09–0.32) IO and objective international performance ( $ab$  = 0.13,  $p < 0.05$ ; 95% CI: 0.04–0.21).

#### 5 | DISCUSSION AND CONCLUSION

Drawing on knowledge creation theory, this article sought to develop and empirically test a conceptual model linking FKA to IO, BMI, and international performance. Specifically, this article investigated the effects of FKA on IO and, ultimately, international performance. Several relevant findings emerged from this study. First, the findings from the article show that FKA help determines the IO of SMEs. Second, the findings revealed that IO has an important bearing on BMI. Given that SMEs with greater IO have distinctive characteristics to pursue international opportunities (Knight & Kim, 2009; Mort & Weerawardena, 2006), they are required to adapt and innovate their business models to fit the foreign business environment. Third, it was also observed that OI mediates the relationship between FKA and BMI. Since most SME managers in developing economies have limited knowledge about business opportunities abroad, they are more likely to rely on knowledge acquired from doing business abroad to make subsequent international expansion decisions. Finally, the findings indicate that BMI is associated with international performance and BMI mediates the relationship between IO and international performance. Collectively, these findings have important implications for theory and practice.

**TABLE 2** Means, standard deviations, and correlations.

Variables	1	2	3	4	5	6	7	8	9
1. Firm age									
2. Firm size	−0.12								
3. International experience	0.09	0.03							
4. R&D expenditure <sup>a</sup>	−0.08	0.12	0.16*						
5. Business model innovation	0.05	0.09	0.09	0.23**					
6. Foreign knowledge acquisition	0.04	0.02	0.22**	0.16*	0.16*				
7. International orientation	−0.06	0.15*	0.08	0.16*	0.25**	0.20**			
8. Subjective international performance	−0.13*	−0.06	0.10	0.25**	0.19**	0.19**	0.22**		
9. Objective international performance <sup>a</sup>	−0.07	−0.03	0.14*	0.20**	0.15*	0.28**	0.33**	0.46**	
Mean	16.46	41.18	6.86	0.30%	4.67	4.60	5.03	5.30	2.72
SD	2.75	14.91	3.19	0.96	1.03	0.93	1.01	0.85	1.56

Abbreviation: SD, standard deviation.

<sup>a</sup>Natural logarithm transformation of the original values.

\* $p < 0.05$ ; \*\* $p < 0.01$ .



**TABLE 3** Results of path analysis.

	Hypothesis	International orientation	Business model innovation	Subjective international performance	Objective international performance	
Controls						
Firm age (years)		0.06	0.07*	−0.06	−0.04	
Firm size (employees)		0.03	0.07*	−0.04	−0.01	
International experience		0.19***	0.06	0.08*	0.13**	
R&D expenditure <sup>a</sup>		0.14**	0.24***	0.27***	0.22***	
Main paths						
Foreign knowledge acquisition (FKA)	Hypothesis 1	0.22***	0.26***	0.27***	0.32***	
International orientation	Hypothesis 2		0.20***	0.20***	0.29***	
Business model innovation (BMI)	Hypothesis 4			0.20***	0.19***	
Model fit statistics						
R <sup>2</sup>		0.13	0.21	0.28	0.31	
Largest VIF		3.09	3.33	3.39	3.09	
				95% confidence interval		
				Estimate	CI Lower end	CI Upper end
Indirect paths						
Foreign knowledge acquisition →business model innovation (via international orientation)			Hypothesis 3	0.13**	0.05	0.22
International orientation→ subjective international performance (via business model innovation)			Hypothesis 5a	0.19***	0.09	0.32
International orientation→ objective international performance (via business model innovation)			Hypothesis 5b	0.13**	0.04	0.21

Note: Standardized coefficients are shown. The model was estimated simultaneously.

Abbreviation: CI, confidence interval.

\* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

## 5.1 | Theoretical contributions

The findings contribute to existing IB literature in three main aspects. First, the findings confirmed the full mediating effect of IO to explain the indirect effect of FKA on BMI. The findings extend our understanding of the process through which FKA influences BMI. Particularly, the finding that IO mediates the relationship between foreign knowledge from foreign markets and BMI has implications for knowledge creation theory. Previous IB literature highlights IO as a matter of overcoming the liability of being an “outsider” (Johanson & Vahlne, 2009; Karami & Tang, 2019) and has explained the contributing role of the knowledge creation process in organizations (Nonaka & Konno, 1998; Nonaka & Toyama, 2005). The knowledge creation theory views knowledge as an important resource that embodies the valuable assets of a firm (Nonaka, 1994). Knowledge facilitates economies of scale and scope, which are difficult to imitate by rivals (Nonaka & Toyama, 2005). Thus, findings from the current study add to this line of reasoning by showing the benefits of foreign knowledge are critical for BMI through IO. More importantly, the current study (i.e., especially Hypothesis 1 and Hypothesis 2) complements the

existing IB literature (Li, Poppo, & Zhou, 2010; Musteen et al., 2014; Park, 2011) by empirically testing how knowledge acquired from international markets could help SMEs introduce innovative offerings in the business models in international markets. This is because foreign knowledge about future foreign opportunities could facilitate IO, which in turn drives BMI. Therefore, this study provides a comprehensive understanding of how knowledge acquired from cross-border activities can boost their BMI in international markets.

Second, as noted by Child et al. (2017), theory and research on BMI in the international market have focused much more on outcomes than on antecedents. Though the outcomes are critical for venture success, a sound understanding of its drivers is critical to enable management theory to guide managers toward enhancing BMI. The findings that BMI facilitates international performance and that BMI mediates the link between IO and international performance help extend previous studies in IB (Child et al., 2017; Guo et al., 2017). An important contribution of this study to the IB literature derives from adding insights from the literature on BMI (Gavetti & Rivkin, 2007; Martins et al., 2015). Given that the internationalization process requires substantial changes and adaptation of the firm's business

model, the findings from this study highlight how BMI facilitates international performance. Specifically, the extant IB literature fails to capture this perspective.

Third, this article contributes to internationalization literature (De Clercq et al., 2012; Musteen et al., 2014; Williams et al., 2020; Zahra et al., 2009) by identifying knowledge acquisition from international markets as an antecedent of international performance. Early studies have explored the drivers of a firm's international performance (Nakos et al., 2014; Prange & Pinho, 2017). However, most of these studies do not focus on the processes and mechanisms through which foreign knowledge acquired from international operations facilitates international performance. The current study (i.e., Hypothesis 1–Hypothesis 5) fills this gap and shows that FKA could boost a firm's international performance through the mediating mechanism of IO and BMI. The findings highlight the performance benefits associated with foreign knowledge from the perspectives of SMEs. The results from this study suggest that SMEs that have a stockpile of foreign market knowledge are more likely to succeed in their internationalization process. In addition, the findings from the current study contribute to closing the gap in our understanding concerning the mediating mechanisms that link FKA to international performance. This was achieved by examining the indirect effects of FKA on SMEs' international performance from the contexts of two leading developing economies. Finally, given that the current study amounts to more than a single country study, it adds to the few studies of internationalization in developing country contexts. Thus, it provides evidence to highlight the need to consider the particular contexts in understanding the factors that drive SMEs' international performance.

## 5.2 | Practice contributions

Apart from the theoretical contributions discussed above, this has three potential practical implications for policymakers and SME business managers. First, managers in SMEs could leverage their international knowledge acquisition processes to succeed in the international market. The results from three current studies show that FKA is an effective driver of a firm's international performance; that is, FKA not only helps SMEs overcome the liability of 'outsidership' but also proactively stimulates BMI and international performance. Therefore, SME managers are advised to leverage FKA to achieve international success.

Second, it appears that as SMEs acquire more knowledge from foreign sources, they can leverage the acquired knowledge to innovate their foreign business model. This is particularly important for SMEs in developing countries because SMEs from this region often lack the knowledge and resource to develop innovative business models to compete in international markets (Adomako et al., 2019, 2020). Understanding drivers and outcomes of international business models by SME managers in developing countries can help highlight the potential value creation and how this can yield success in the international context in which they do business. In this way, decision-makers in SMEs identify forms of innovation that are likely to offer a competitive advantage in international markets.

Finally, policymakers have often advocated for innovation-based entrepreneurial activities in developing economies. This study's findings on the positive influence of IO on willingness to adopt an innovative-based international business model show that it is appropriate to provide public support to encourage innovation in SMEs. This could be achieved through training, trade fairs, as well as providing the platform to expose SME managers to unfamiliar foreign markets. The main aim of such a policy is to enhance SME managers' knowledge of doing business in unfamiliar foreign territories. This could help reduce the perceived risks associated with doing business in such markets.

## 6 | LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Despite the important theoretical and practical implications highlighted in this study, it has some limitations that must be considered when interpreting the results. These limitations provide avenues for extending the findings of this study. The recommendations for future studies have been divided into three distinct but related trajectories, namely: theory, contexts, and methodology.

### 6.1 | Future directions—Theory

Theoretically, this study is limited in some respects, which are potential avenues for future studies. First, this study could not examine the micro drivers of knowledge acquisition in SMEs. Future studies may find value in investigating the micro predictors of FKA. This may include the content and sources of knowledge acquired. This study applied a rather broad or nondifferential approach to capture knowledge acquisition; as such future studies may examine more closely the specific knowledge domains. Previous research shows that social networking and interactions with key international customers drive knowledge acquisition (Yli-Renko et al., 2001). Future studies may investigate how new knowledge acquisition is influenced by the type of social network ties of SME managers in international markets, such as network relationships developed with suppliers, distributors, and agents.

Moreover, the IB literature shows that national contexts of firms influence the degree of IO or international venturing activities (Mainela et al., 2018). Nevertheless, gaps still exist in knowledge regarding how certain cultural factors (Hofstede, 2001) influence SME managers' international orientation. For example, to what extent do national cultural contexts in developing nations influence SME managers' orientations toward international venturing activities? Thus, future research may consider investigating the role of national cultural orientations on IO and international performance.

### 6.2 | Future directions—Contexts

Concerning the contexts, this study is limited in the following way. Particularly, the sample contained only SMEs from Ghana. SMEs differ

from large multinational companies in terms of resources and ownership structures. Consequently, the generalizability of the findings may be limited to SMEs from developing country contexts, and thus, extrapolating the findings from this study to other firms and countries should be done with caution. Future research should replicate and extend the findings to emerging and developed countries to provide additional insights into the external validity of the research model. Moreover, future research would benefit from a comparative study of foreign knowledge acquisition by SMEs across developed and emerging markets. This is likely to provide insightful findings because the results could differ between these contexts.

### 6.3 | Future directions—Methodology

Although we used time-lagged data by collecting data in two waves from multiple respondents, this study could not be considered longitudinal. Future research could consider a longitudinal research design by collecting data over 3-year period to test the hypotheses. In this case, future research could confidently make causal claims. Second, although this study used two informants to reduce common method bias concerns, it would be more appropriate to validate the findings of this study using secondary data. Thus, future research should consider using secondary data to capture SMEs' international performance to improve the reliability and validity of the outcomes. Third, factors such as innovativeness, competitive intensity, and channel networking capability tend to influence international performance (Boso et al., 2013). Future studies should control for these factors as these factors might influence the research model. While the manufacturing industry could be divided into high-technology and low-technology firms, our study failed to capture this categorization. Given that high-technology firms may be more likely to internationalize and succeed in international markets (Oviatt & McDougall, 2005), future studies would benefit from categorizing these industry types into high- or low-technology industries.

Despite these limitations, the paper contributes to the IB literature on SMEs' business models and international performance. Thus, the findings present a clearer picture of the mechanisms through which FKA predicts SMEs' international performance within developing market contexts.

#### ORCID

Samuel Adomako  <https://orcid.org/0000-0002-7139-0988>

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## AUTHOR BIOGRAPHY

Dr Samuel Adomako is an Associate Professor of Strategy and Innovation at the University of Birmingham. His research examined the nexus between strategy and innovation. His research has appeared in leading journals, including the *Journal of Product Innovation Management*, *British Journal of Management*, *International Small Business Journal*, *International Business Review*, *International Journal of Entrepreneurial Behavior and Research*, *Business Strategy and the Environment*, *Management International Review*, *Journal of Institutional Economics*, *Journal of Business Research*, *Journal of International Management*, and many others. He received his PhD

from the University of Warwick. He is a fellow of the Higher Education Academy of the UK.

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