

How Firm Performs Under Stakeholder Pressure: Unpacking the Role of Absorptive Capacity and Innovation Capability

Sanjay Kumar Singh , Manlio Del Giudice, Melita Nicotra, and Fabio Fiano

Abstract—Organizational innovation capability is a critical competitive strategy to generate and execute ingenious ideas necessary to offer new services, processes, and products to stay relevant and competitive. This becomes important in the context of small and medium-sized enterprises (SMEs) who depend significantly on stakeholders for an uninterrupted supply of relevant resources to produce and provide offerings to the markets amidst fierce market competition to stay competitive. We draw upon resource dependence and dynamic capabilities theory to investigate how stakeholder pressure acts upon SMEs to utilize their absorptive capacity of developing innovation capability to improve their overall performance. We collected data from 291 SMEs from the manufacturing sector to test the hypotheses of the study. Results suggest that absorptive capacity mediates the influence of stakeholder pressure on innovation capability. Furthermore, innovation capability too mediates the relationship between absorptive capacity and firm performance. This article contributes to theoretical and practical implications.

Index Terms—Absorptive capacity (ACAP), firm performance (FPERF), organizational innovation capability, small- and medium-sized enterprises (SMEs) stakeholder pressure.

I. INTRODUCTION

FIRM innovation capability (FIC) is relevant [96] when firms face increased stakeholder pressure (SKTPRES) [37] to practice environmental management practices [93] to stay competitive. The innovation capability of firms denotes its capability to convert strategic resources into new products/goods and processes [98] while meeting environmental standards to the level of satisfaction of their key stakeholders [93], [96]. A firm's perception of SKTPRES vis-à-vis innovative products and services reflects its strategic responses [37], [65], [68] to engage

and collaborate with stakeholders to stay relevant. Thus, firms' strategic responses to the SKTPRES aim at gaining legitimacy for the express purpose of ensuring an uninterrupted and continuous supply of resources from their varied stakeholders [14] for firms to survive and thrive.

Notwithstanding the increasing empirical interests in SKTPRES on small- and medium-sized enterprises (SMEs) [19] to embed ecology in their innovative capabilities [16], [25], [38], [55], our current understanding remains very limited. We propose that SKTPRES pushes SMEs to develop and leverage their absorptive capacity (ACAP) to stimulate their innovative capabilities for enhanced market and financial performance (FINP). Thus, we theoretically and empirically examine how SMEs use their ACAP and innovative capability as a strategic response to SKTPRES and taking care of their market and FINP. We used resource dependence theory (RDT) [30], [63] and dynamic capabilities theory (DCT) [17], [80] to examine how resource-dependent SMEs [30], [63] use dynamic capabilities (DCs) [17], [80], namely, ACAP and innovative capabilities to attain their aims and objectives. Accordingly, our study addresses gaps in the literature on how SMEs use their ACAP to reconfigure their routines, systems, and processes [84] to adhere to SKTPRES for uninterrupted access to critical resources under the control of the stakeholders [28].

We contribute to RDT [30], [63] and DCT [17], [80] while understanding how SMEs use SKTPRES to their advantage and develop learning and innovation capabilities for enhancing their market and FINP. Our study extends prior research works on the growing interest in how SKTPRES and SMEs intentions to produce and sell innovative products and service can coexist together [23], [39], [70], [92], [94]. Next, this article emphasizes the interdependence of ACAP and innovation capabilities as the acquisition (ACQ) of the external knowledge and their assimilation (ASSIM) with the prior established competitive knowledge does not have any value if the firm lacks innovation capabilities. Finally, the article contributes to the IEEE Transactions on Engineering Management by exploring the external environment that affects organizational strategies and practices, namely, SMEs' ability to absorb external knowledge with past knowledge to develop innovative capabilities to stay relevant and competitive in the markets.

The rest of this article is organized as follows. Theoretical lenses and hypotheses formulation are discussed in Section II,

Manuscript received November 21, 2019; revised November 3, 2020; accepted November 15, 2020. Review of this manuscript was arranged by Department Editor D. Sarpong. (*Corresponding author: Sanjay Kumar Singh.*)

Sanjay Kumar Singh is with the School of Business, Maynooth University, W23 Maynooth, Ireland (e-mail: sanjay.singh@mu.ie).

Manlio Del Giudice is with the Paris School of Business, 75013 Paris, France, and also with Link Campus University, 00165 Rome, Italy (e-mail: m.delgiudice@unilink.it).

Melita Nicotra is with the Università degli Studi di Catania, 95124 Catania, Italy (e-mail: menicotra@unicat.it).

Fabio Fiano is with the Link Campus University, 00165 Rome, Italy (e-mail: f.fiano@unilink.it).

Color versions of one or more of the figures in this article are available at doi.org/10.1109/TEM.2020.3038867.

Digital Object Identifier 10.1109/TEM.2020.3038867

followed by methods in Section III, results in Section IV. Finally Section V, concludes this article.

II. THEORY AND HYPOTHESES FORMULATION

This article used the RDT and DCT as theoretical lenses to understand and examine how firms use the ACAP to navigate through varied SKTPRES to develop innovation capability that augments superior firm performance (FPERF). The assumption underlying the RDT is that enterprises are not self-contained but they depend on external environments' resources to attain their objectives [30], [63]. In other words, RDT attempts to explicate how dependence on assets external to the firms influences the focal firm's actions, network exchanges, and outcomes [63]. Furthermore, RDT builds on numerous microviewpoints (e.g., exchange, control, and culture) to comprehend how organizations develop strategies, plans, and policies to employ and manage their external business environment [30]. Therefore, the degree of dependency between firms and the external environment depends upon, namely, resources necessary to produce products/goods and services, availability of alternative sources of cost-effective raw materials, and who owns the resources and his/her discretion over the resources [8], [9], [64]. Drawing upon the RDT, we argue that to understand the firm's behaviors, one should understand the context of that firm's behaviors [63] through leaders and managers for the firm to plan and act in a manner best suited to reduce ecological uncertainty and dependence [30]. Hence, we posit that the more the firm depends on resources at the discretion of its stakeholders, the firm will have little choice but to use its absorptive to enhance its innovation capability [83]

In such a context, we argue that firms need to sharpen and leverage their DCs to understand, analyze, absorb, and integrate SKTPRES, who control vital resources that the firm needs, into existing products/goods through developing its innovation capability. The DCT suggests that organizations that use their potentialities in all its totality to develop DCs have a better chance to stay competitive in the markets and have superior FPERF [80]. Teece *et al.* [80] define DCs as a firm's abilities to install, integrate, construct, and remodel the capabilities both inside and outside its boundary in a manner best suited to resolve pulls and pressure exerted upon firms in the dynamic business environment. DC is of inherent strategic importance to the organization as it supports the firms to augment their profits in dynamic and uncertain business environments [44]. Therefore, the organization should rely on their DCs to stay relevant and competitive in the markets [80]. The DCs enable the organizations to monitor incessantly, and control and refurbish their useful capabilities in reply to a fast-changing business environment [10]. Extant literature suggests that ACAP should be considered as DCs that support collaborative learning and communication in the organization [36], [97]. Zahra and George [97] while modifying Cohen and Levinthal [12] model of ACAP into potential and realized ACAP that organizations use to identify, distinguish, and integrate external knowledge for the commercial use to stay competitive in the dynamic and uncertain markets. Therefore, we contend that ACAP is a firm's DC that

needs to adjust to the changes in the external environment and to reply suitably to prevailing uncertainty [24], [97] through DC as the theoretical lens has its own share of criticism [71].

A. Stakeholder Pressure

Stakeholder refers to any person or group who affects and gets affected by the achievements of an organization's key goals [23], [50]. An organization produces externalities that affect several individuals or groups internal and external to the organization [23]. These externalities regularly result in increased pressure from varied stakeholders to reduce negative impacts and increase positive ones [70]. Social legitimacy requires an organization to engage with its varied stakeholders, the internal and the external, to develop and sustain organizational capabilities [70] as the organizational capabilities help firms to deal with varied, conflicting pressures from the stakeholders [69] productively. The regulatory bodies and the government being the most obvious external stakeholders [23] push an organization's internal stakeholders to reconfigure its systems, routines, processes, and strategy [92] to develop its innovation capabilities for enhanced performance. Therefore, for an organization to be successful and competitive in the markets, it becomes imperative for them to manage its relationships with all its stakeholders, i.e., the individuals, the groups, the agency, and the governmental bodies, who have even little or more interest or stake in the organization [3]. Drawing upon the RDT, the firms always depend upon resources under the control of the external stakeholders [62]. The firms receive these resources uninterruptedly if external stakeholders perceive them legitimate [32]. Therefore, the firms should adhere to SKTPRES for uninterrupted access to critical assets under the control of the primary stakeholders [28] and that in a way triggers the firm's ACAP to stay relevant and competitive in the business environment [84].

B. Absorptive Capacity

ACAP denotes an enterprise's capability to advance its understanding, assessment, absorption, and application of outside knowledge by incorporating particular undertakings that the firm has been pursuing [12] to attain the competitive advantage and superior performance. Cohen and Levinthal [12] suggest that an effective ACAP possesses an incredible amount of past knowledge to detect the worth of new facts, information, and knowledge that it integrates and uses during the value creation processes. Therefore, ACAP becomes a bridge between the firm's external environmental factors and innovation related activities [40], [47], [51] to create value for enhanced performance [45], [74]. ACAP denotes the firm's capability to produce and organize knowledge for increasing the operational capabilities to attain competitive advantage [97]. Furthermore, ACAP is a multidimensional construct that helps the firm identify, acquire, create, and arrange critical knowledge in its systems, processes, and routines to enhance its innovation capability [83] but it is also a known fact that ACAP is developed for other reasons than the innovation capabilities of the firms [61]. The absorbed knowledge enables the firm to adjust and develop its abilities by reconfiguring strategic resources to achieve the present and

future needs and make appropriate responses to the changes in the business environment [97].

C. Firm Innovation Capability

While there are different ways an organization achieves a competitive advantage, innovation and strategic flexibility are two of the most important ones to have a competitive edge over rivals in the dynamic markets [4]. FIC refers to what an organization offers (product/service innovation) to the markets and how it produces and provides (process innovation) those offerings [22]. Innovation capability enhances the firm's performance [7], [86]. Firms' capabilities to obtain and install innovation resources explain the performance differential amongst organizations in the same industry segment [17], [75], [80]. The innovation capability of a firm comprises the generation and execution of ingenious ideas [6], [41] necessary for the enhanced FPERF [33], [66] through the introduction of new services, processes, and products to stay relevant and competitive [81]. Therefore, innovation capability is vital for firms. It allows companies to offer new products and services to the customers [5], [59] to beat competitions from rivals and enhance the FPERF [6], [81]. As such, innovation capability is an essential activity for enterprises, and if they fail to innovate, they risk eliminated from the marketplace [48].

D. SKTPRES and Absorptive Capacity

RDT explains how organizations often depend on resources under the control of the stakeholders [62] and they made resources available to organizations when they consider enterprises as legitimate [78]. Therefore, it is pertinent for firms to develop organizational capabilities to foster and facilitate stakeholder engagement [70] to reduce varied SKTPRESs [69]. Such organizational capabilities push the firms to engage in organizational learning and use their ACAP to obtain, integrate, convert, and exploit external information and knowledge for the companies [2], [89]. ACAP is path dependent, in that if the firm has a history of successfully absorbing SKTPRES through continuous engagement with them to stay competitive, there is a high probability that the firms will use their capabilities to do so in the future too [12]. Drawing upon the RDT, we posit that organizations adhere to SKTPRES [70] as the later control over the vital resources that firms require to stay competitive [28] should engage in leveraging its ACAP to stay relevant and competitive. Thus, the SKTPRESs act upon the firm to leverage its ACAP [84] to exploit relevant knowledge and resources to stay competitive through enhanced FPERF [12], [26], [97]. As a result, we hypothesize the following:

- 1) *H1a: Regulatory SKTPRES influences ACAP.*
- 2) *H1b: Community SKTPRES influences ACAP.*
- 3) *H1c: Organizational SKTPRES influences ACAP.*

E. Absorptive Capacity and FIC

ACAP is path dependent that builds on a firm's current knowledge [13] and collects strategically relevant data,

information, and knowledge from the business environment to nurture strong innovation capabilities [20], [49]. The ACAP is that an organization uses to create and utilize knowledge [97] through the higher order investments [13], [87], [97] and that explains differential competitive advantage amongst the companies [20]. Firms that make it a habit to assimilate and exploit strategic market information and knowledge continuously develop a tendency to capitalize on fluctuating business environments through enhancing innovation capabilities to produce and sell innovative goods to meet the needs of the customers and beat rivals in the markets [40], [99]. Several researchers suggest that firms should question their well-established beliefs, values, norms, routines, and problem-solving skills to increase organizational ACAP to strengthen and enhance their innovation capabilities to stay competitive and relevant in the dynamic markets [57], [76], [77], [95]. As organizations have access to varied external knowledge, it helps develop their dispositions to question their established premises and enlarge their problem-solving repertoire essential for FICs [40], [58], [74]. Therefore, the following hypothesis is proposed.

H2: ACAP positively influences FICs.

F. FICs and Firm Performance

Innovation occurs if firms have an appropriate set of abilities to bring about changes in their offerings that they introduce to the markets [42]. Firm innovates to keep pace with the intense market competition, fast-changing needs of the customers, and innovative products to beat rivals' offerings to enhance competitive advantage for superior market and FINP [15], [40]. Innovation capability is the firms' strategic internal capabilities that result in an enhanced performance [60]. FICs help respond to the market demands and thereby realize their aim of sustaining or enhancing their overall performance [15], [75]. On the other hand, there are conflicting results for the relationships between innovation and FPERF [54], [88] as it is not sure that the customers will like and buy new products and services as offered to them [102]. Therefore, we argue that innovation capability influences the FPERF as several colleagues found that FICs result in innovative products and services offerings to the customers and that helps cope with the changing business environment and offerings from the rival companies [31], [79]. Drawing upon the DCT, we posit that organizations with specific innovation capabilities, namely, product and process innovation capability, achieve enhanced performance [11], [53], [56]. Thus, the following hypothesis is proposed.

H3: FICs positively influence FPERF.

G. SKTPRES and FICs: The Role of ACAP

Firms with ACAP have enhanced abilities to convert external information and knowledge into innovative goods and services that they offer to the customers. ACAP requires a stock of prior knowledge that the firm has along with new information and knowledge [49], [67] to generate innovative products and services [72], [100]. We argue that firms could

absorb external business-related information and knowledge when their organizational knowledge repositories and individual employees' cognitive minds are receptive to external knowledge-based [1], [67]. Simultaneously, firms having cooperative relations with their key stakeholders will positively affect their competitive advantage [23]. Therefore, firms need to appropriately utilize their ACAP to recognize, manage, and respond to what their stakeholders ask them to [43]. The most apparent stakeholders, namely, the regulatory bodies, the customers, and the government [23] push internal stakeholders to discover how an organization can reconfigure its systems, routines, processes, and strategy [92], [94] to develop its innovation capabilities for superior performance. SKTPRES forces firms to engage in innovations in goods and services [70], [101] through reconfiguration in their systems, processes, and routines [17], [80] for them to keep receiving resources uninterrupted [32]. Drawing upon both the RDT and the DCT, we posit that organizations receive an uninterrupted supply of necessary resources if the stakeholders perceive them legitimate [32]. Thus, in search of legitimacy from the stakeholder, firms need to use their ACAP to acquire and assimilate the external knowledge for superior innovation capabilities necessary to stay competitive in the markets. Therefore, we propose the following hypothesis.

- 1) *H4a: ACAP mediates the influence of regulatory SKTPRES on FICs.*
- 2) *H4b: ACAP mediates the influence of community SKTPRES on FICs.*
- 3) *H4c: ACAP mediates the influence of organizational SKTPRES on FICs.*

H. ACAP and Firm Performance: The Role of FICs

ACAP helps a firm to collect, assimilate, absorb, and exploit external knowledge from the business environment with prior established knowledge [52], [97] necessary for sharpening its innovation capabilities to produce products and services to satisfy customer's needs [40], [99]. ACAP helps organizations wisely select their customers, ascertain their needs, and tailor their products to satisfy their customers' needs, thereby generating superior customer satisfaction and loyalty [85]. Organizations with developed ACAP are in a position to seize and exploit available opportunities in dynamic markets [35] and convert these prospects into money-making goods and services [85], [97]. Furthermore, ACAP acts as a bridge between the fast-changing business environment and innovation-related activities inside an organization [40], [47] to create value in the firms' offerings to attain competitive advantage and superior performance. As a result, previous studies suggest that ACAP positively influences FPERF [40], [97]. Simultaneously, several studies found that ACAP strengthens and enhances FICs to produce innovative products and services necessary for an organization to stay competitive and relevant in its business environment [76], [77], [95]. Innovation capability is the strategic internal capabilities that influence superior FPERF [60]. Organizations with developed innovation capabilities respond swiftly to the market demands, resulting in increased performance [15]. Therefore, we propose the following hypothesis.

H5: FICs mediate the influence of ACAP on FPERF.

Based on the hypotheses derived from the aforementioned extant literature, we propose a conceptual research framework in Fig. 1.

III. METHODS

A. Sample and Procedure

We approached 647 manufacturing sector SMEs in the United Arab Emirates (UAE) and talked to their chief executive officer and/or chief operating officers (COOs) about the study's purpose and requested them to participate in this article. However, only 597 SMEs agreed to participate in this article. We distributed the in-person survey questionnaire on SKTPRES and FPERF to the COOs, and the ACAP questionnaire to the human resource managers and the firm's innovation capabilities managers. As per the understanding, we visited these participating SMEs after two weeks of distributing the survey questionnaire and received filled innovation-related from only 187 and made a request to the rest of the SMEs, who agreed to participate in our study, to return the questionnaire in next two weeks. In the second and third field visit, we received filled-in questionnaires from another 154 SMEs. After that, we stopped collecting filled-in questionnaires from the remaining 251 SMEs, to whom we had distributed the questionnaires, as they were not showing interest in taking part in our study. Thus, we received a filled-in survey questionnaire from 341 SMEs but could use 291 response sets. The remaining 50 sets of triadic responses were not valid for our study's purpose, as the respondents had left many items unanswered. Following [104], we used the translation-back-translation method to develop a questionnaire in Arabic and English for the convenience of the participating respondents in this article as many of them were fluent in Arabic than English.

Table II presents 291 triads ($n = 291 \times 3$) from 291 SMEs ($N = 291$) who participated in the study. The average age of the COOs was 43.6 years, about 70% of them were male, and around 95% had minimum bachelor-level degrees in humanities, sciences, social sciences, engineering, and technology. Similarly, the HR managers' average age was 39.26 years, around 71% of them were male, and approximately 84% of them had bachelor degrees from across humanities, science, business, engineering, and technology. On the other hand, the average age of the production managers was 37.52 years, 80% were male, and about 92% had minimum bachelor degrees in science, engineering, technology, and business. Furthermore, Table II illustrates that approximately 60% of the SMEs in this article were born between 2002 and 2006, and the remaining about 40% of the SMEs were born between 2007 and 2011. About 60% of the SMEs had employee counts in the range 201–300 with 7% of them had a minimum of 50 to a maximum of 100 employees at the study time.

Furthermore, Table I suggests that those who responded early and those who responded after several reminders did not differ significantly in their responses to the items in the survey questionnaire. Therefore, we do not find any evidence of nonresponse bias. It means that the sample represents the populations from where they were picked and the results of the study could be

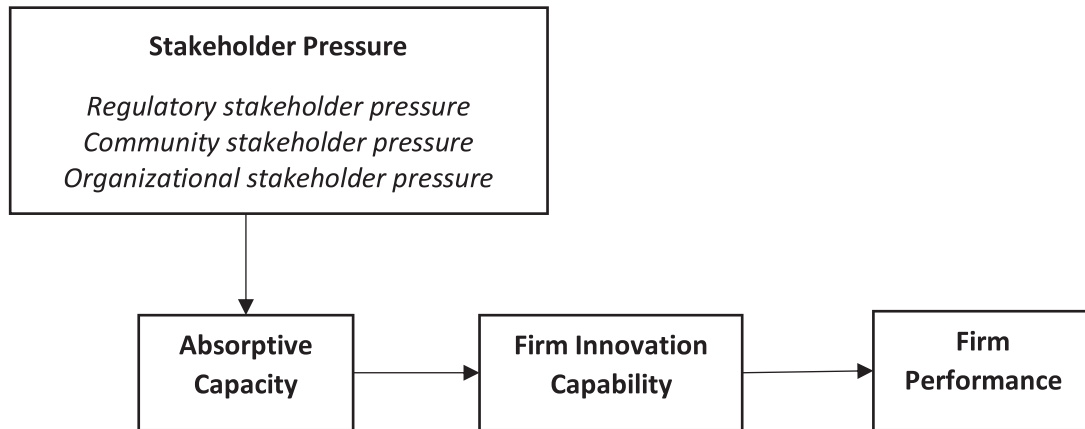


Fig. 1. Conceptual research framework.

TABLE I
TEST FOR NONRESPONSE BIAS

	Wave	Mean	Std. Deviation	Levene Statistics	Significance Level
Stakeholder Pressure (SKTPRES)	Wave 1	55.9744	5.82093	2.068	0.151
	Wave 2	56.8074	6.70876		
Absorptive Capacity (ACAP)	Wave 1	82.3205	10.06686	0.009	0.923
	Wave 2	80.0074	9.62389		
Firm Innovation Capability (FIC)	Wave 1	27.7308	4.00217	0.187	0.665
	Wave 2	27.4667	3.92618		
Firm Performance (FPERF)	Wave 1	49.4679	7.44218	0.016	0.900
	Wave 2	49.5333	7.51695		

TABLE II
DETAILS ABOUT SAMPLE AND ORGANIZATION

Chief Operating Officer	Details	Production Manager	Details	HR Manager	Details	SMEs	Percentage
Age (in Years)	43.6	Age (in Years)	37.52	Age (in Years)	39.26	Year when born 2002-2006 2007-2011	173 (59.45%) 118 (40.55%)
Gender Male Female	228 (78.35%) 63 (21.65%)	Gender Male Female	234 (80.41%) 57 (19.59%)	Gender Male Female	209 (71.82%) 82 (28.18%)	Employee Counts 50-100 101-200 201-300 >301	21 (7.22%) 89 (30.58%) 174 (59.79%) 7 (2.41%)
Educational Qualification Bachelor Master	276 (94.85%) 15 (5.15%)	Educational Qualification Bachelor Master	268 (92.10%) 23 (7.90%)	Educational Qualification Bachelor Master	245 (84.19%) 46 (15.81%)		

TABLE III
TESTING FOR CONVERGENT VALIDITY OF SKTPRES AND ACAP

		Indicators	Std Loading	Variance	Error	Cronbach Alfa	SCR	AVE	
Stakeholder Pressure (SKTPRES)	<i>Regulatory Stakeholder Pressure (RSP)</i>					0.887	0.889	0.669	
		RSP1	0.795	0.632	0.368				
		RSP2	0.843	0.711	0.289				
		RSP3	0.87	0.757	0.243				
		RSP4	0.76	0.578	0.422				
	<i>Community Stakeholder Pressure (CSP)</i>						0.826	0.824	0.611
		CSP1	0.873	0.762	0.238				
		CSP2	0.76	0.578	0.422				
		CSP3	0.702	0.493	0.507				
	<i>Organizational Stakeholder Pressure (OSP)</i>						0.79	0.79	0.557
		OSP1	0.759	0.576	0.424				
		OSP2	0.737	0.543	0.457				
	OSP3	0.742	0.551	0.449					
Absorptive Capacity (ACAP)	<i>Acquisition (ACQ)</i>					0.901	0.903	0.7	
		ACQ1	0.864	0.764	0.254				
		ACQ2	0.827	0.683	0.316				
		ACQ3	0.848	0.719	0.281				
		ACQ4	0.807	0.651	0.349				
	<i>Assimilation (ASSIM)</i>						0.853	0.854	0.661
		ASSIM1	0.796	0.634	0.366				
		ASSIM2	0.787	0.619	0.381				
		ASSIM3	0.855	0.731	0.269				
	<i>Transformation (TRF)</i>						0.888	0.888	0.667
		TRF1	0.805	0.648	0.352				
		TRF2	0.802	0.643	0.357				
		TRF3	0.846	0.716	0.284				
		TRF4	0.812	0.659	0.341				
	<i>Exploitation (EXPLT)</i>						0.857	0.857	0.6
		EXPLT1	0.781	0.61	0.39				
		EXPLT2	0.761	0.579	0.421				
		EXPLT3	0.762	0.581	0.419				
		EXPLT4	0.793	0.631	0.371				

generalized to a larger population of SMEs in the UAE. The COOs responded to a questionnaire on SKTPRES and FPERF at one point in time. In contrast, the HR manager and the production managers responded to ACAP and FIC, respectively.

B. Measures

SKTPRES: It had ten items for measuring regulatory, community, and organizational SKTPRES, adopted from Henriques and Sadorsky [29]. The sample item includes “pressure from governmental agencies and pressure from the customer.” The Cronbach’s alpha was 0.887, 0.826, and 0.790 for regulatory,

community, and organizational SKTPRES, respectively (see Table III) and the goodness of fit indices of SKTPRES measuring instruments ($\chi^2/df = 1.693$; $p < 0.008$; TLI = 0.977; CFI = 0.983; SRMR = 0.039; RMSEA = 0.049) were in the acceptable range.

ACAP: It had 15 items, four for ACQ, three for ASSIM, four for transformation (TRF), and four for exploitation (EXPLT), adopted from Jansen *et al.* [34]. The sample item includes “employees regularly interact with customers to obtain business-related new knowledge.” The Cronbach’s alpha for ACQ, ASSIM, TRF, and EXPLT dimensions of the ACAP scale was 0.901, 0.853, 0.888, and 0.857, respectively. The goodness of fit indices

TABLE IV
TESTING FOR CONVERGENT VALIDITY OF FIC AND FPERF

		Indicators	Std Loading	Variance	Error	Cronbach Alfa	SCR	AVE	
Firm Innovation Capability	<i>Firm Innovation Capability (FIC)</i>					0.873	0.872	0.579	
		FIC1	0.796	0.634	0.366				
		FIC2	0.765	0.585	0.415				
		FIC3	0.719	0.517	0.483				
		FIC4	0.791	0.626	0.374				
		FIC5	0.731	0.534	0.466				
Firm Performance (FPERF)	<i>Financial Performance (FINP)</i>					0.932	0.932	0.733	
		FINP1	0.784	0.615	0.385				
		FINP2	0.855	0.731	0.269				
		FINP3	0.854	0.729	0.271				
		FINP4	0.864	0.746	0.254				
	<i>Market Performance (MKTP)</i>						0.894	0.894	0.679
		MKTP1	0.804	0.646	0.354				
		MKTP2	0.82	0.672	0.328				
		MKTP3	0.837	0.701	0.299				
		MKTP4	0.834	0.696	0.304				

of ACAP scale ($\chi^2/df = 2.168$; $p < 0.001$; TLI = 0.954; CFI = 0.963; SRMR = 0.039; RMSEA = 0.063) were in the acceptable zone.

FIC: It had five items adapted from Calantone *et al.* [6]. The sample item includes “*my firm pursues novel ways to do things.*” The Cronbach’s alpha was found to be 0.873 (see Table IV). The FICs scale was assessed for the goodness of fit indices ($\chi^2/df = 2.403$; $p < 0.035$; TLI = 0.979; CFI = 0.989; SRMR = 0.021; RMSEA = 0.070) and they were in the acceptable zone.

FPERF: It had nine items, five items for financial and four items for market performance (MKTP), adopted from Tippins and Sohi [82] and [103]. The sample item includes “*my firm enters the new market quickly as compared with the competitors.*” The Cronbach’s alpha was 0.932 and 0.894 for financial and MKTP, respectively (see Table IV) and the goodness of the fit of the measures ($\chi^2/df = 2.879$; $p < 0.001$; TLI = 0.961; CFI = 0.972; SRMR = 0.041; RMSEA = 0.069) were in the acceptable range.

IV. RESULTS

A. Measurement Scale Validation

We calculate both convergent and discriminant validity of all the measurement instruments used in this article. The Cronbach’s alpha for the measuring instruments was found above 0.70 and they all range from 0.790 to 0.932 (see Tables III and IV). According to Fornell and Larcker [21], the measuring scales should have average variance explained (AVE) > 0.50, and the scale composite reliability (SCR) should be > 0.70. Tables III

and IV depict that AVE for the constructs ranged from 0.557 to 0.733 and the SCR ranged from 0.790 to 0.932, suggesting that the constructs have convergent validity [21]. Furthermore, we tested for the discriminant validity of the constructs. We found that the factor loading of individual items on their respective construct ranged from 0.719 to 0.919 (see Tables III and IV) and the square roots of AVE were greater than the correlations amongst the constructs in this article (see Table V). Therefore, measuring instruments used to measure the respective constructs in this article had discriminant validity [18].

B. Structural Model

1) *Testing for Direct Hypotheses:* Table VI illustrates that Hb1 [ACAP<—CSP], H2 [FIC<—ACAP], and H3 [FPERF<—FIC] are supported ($\beta = 0.253$; $t = 3.814$; $p < 0.001$), ($\beta = 0.505$; $t = 9.959$; $p < 0.001$), and ($\beta = 0.356$; $t = 6.483$; $p < 0.001$), respectively. On the other hand, H1a [ACAP<—RSP] and H1c [ACAP<—OSP] were rejected ($\beta = 0.098$; $t = 1.527$; $p < 0.127$) and ($\beta = 0.030$; $t = 0.514$; $p < 0.607$), respectively. Thus, this article supports the previous findings, wherein community SKTPRES positively influences ACAP [28], [70], ACAP to positively influence FIC [e.g., [40], [99]], and FIC positively affects FPERF [40] and [60]. On the other hand, our study suggests that regulatory and organizational SKTPRES do not impact the firm’s ACAP.

2) *Testing for Indirect Hypotheses:* The results in Table VII depicts that H4b [FIC<—ACAP<—CSP] and H5 [FPERF<—FIC<—ACAP] are supported ($\beta = 0.128$; $p < 0.001$) and (β

TABLE V
TESTING FOR DISCRIMINANT VALIDITY

S. N.		Mean	Std. Deviation	1	2	3	4	5	6
1	Regulatory Stakeholder Pressure (RSP)	5.77	0.927	(.818)					
2	Community Stakeholder Pressure (CSP)	5.75	0.816	.492**	(.782)				
3	Organizational Stakeholder Pressure (OSP)	5.34	0.764	0.111	.290**	(.746)			
4	Absorptive Capacity (ACAP)	5.42	0.661	.225**	.310**	.114	(.810)		
5	Firm Innovation Capability (FIC)	5.52	0.792	.139*	.464**	.185*	.505**	(.761)	
6	Firm Performance (FPERF)	5.50	0.829	.341**	.496**	.221**	.334**	.356**	(.840)

#Diagonal bold value shows square roots of average variance extracted.

TABLE VI
TESTING FOR DIRECT EFFECT

Direct effect	Standardized Direct Effect	Standard Error	t value	Sig. level	Hypothesis Testing
ACAP<---RSP	0.098	0.171	1.527	$p < 0.127$	H1a Rejected
ACAP<---CSP	0.253	0.269	3.814	$p < 0.001$	H1b Accepted
ACAP<---OSP	0.030	0.251	0.514	$p < 0.607$	H1c Rejected
FIC<---ACAP	0.505	0.020	9.959	$p < 0.001$	H2 Accepted
FPERF<---FIC	0.356	0.103	6.483	$p < 0.001$	H3 Accepted

TABLE VII
TESTING FOR INDIRECT EFFECT

Indirect effect	Standardized Indirect Effect	Sig. level	Lower bound	Upper bound	Hypothesis Testing
FIC<---ACAP<---RSP	0.049	$p < 0.094$	0.001	0.099	H4a Rejected
FIC<---ACAP<---CSP	0.128	$p < 0.001$	0.067	0.193	H4b Accepted
FIC<---ACAP<---OSP	0.015	$p < 0.576$	-0.031	0.065	H4c Rejected
FPERF<---FIC<---ACAP	0.180	$p < 0.000$	0.119	0.243	H5 Accepted

= 0.18; $p < 0$), respectively. On the other hand, Table VII depicts that H4a [FIC<---ACAP<---RSP] and H4c [FPERF<---FIC<---OSP] are rejected ($\beta = 0.049$; $p < 0.094$) and ($\beta = 0.015$; $p < 0.576$), respectively. We found that ACAP mediates the influence of community SKTPRES on FICs. Therefore, this article advances the extant literature [32], [101], [70] on how the firm leverages its ACAP to gain social legitimacy for uninterrupted supply of resources from the stakeholders to produce innovative products and services. Similarly, we found that FIC mediates on the influence of ACAP on FPERF and that our study's finding advances the previous studies in the field [40], [60].

V. DISCUSSION AND CONCLUSION

This article extends prior research related to intricate linkages among SKTPRES, ACAP, innovation capability, and FPERF. This article also offers practical implications for leaders and policymakers.

A. Theoretical Implications

This article contributes to the advance theory in several ways. First, it contributes to the advance resource-dependency theory [30], [63] and DCT [105], [80] to understand how community SKTPRES and ACAP help SMEs to develop strong innovation capability for superior FPERF. This article suggests that SMEs' are not self-contained as they depend on resources from the external environments to attain their objectives [30], [63]. That attests that leaders and managers comprehend how they should develop a firm's strategies, plans, and policies to employ and manage their external business environment [30]. Therefore, SMEs should use their ACAP to enhance their innovation capabilities [80] and produce innovative products and services to satisfy the needs of their customers [24], [46], [97].

Second, this article contributes to the rising interest in integrating community SKTPRES and ACAP perspectives into investigating SMEs' innovation capacity [23], [69], [73], [92], [94]. Recent literature suggests that the firm produces externalities that affect internal and external stakeholders [23] and invites

varied SKTPRES on the firm to gain social legitimacy [70]. In the search for social legitimacy, firms fall back on their ACAP for twin purposes, namely, to deal effectively with a fast-changing business environment and speed up innovation-related activities [40], [47] to stay relevant in the markets. Our study extends their views that ACQ and EXPLT of external information and knowledge (e.g., [40] and [47]) and their ASSIM with established knowledge power innovation capacity and that the firm uses to offer innovative products and services to their customers. Therefore, this article suggests that firms should keep reinventing their established beliefs, values, norms, and routines to sharpen and strengthen their ACAP in a manner best suited to enhance their innovation capabilities [76], [77], [95].

Third, this article contributes to advancing knowledge on the linkages among ACAP, innovation capabilities, and performance. We suggest that SMEs' performance depends upon their innovation capabilities. In addition to that, innovation capabilities mediate the influence of ACAP on FPERF. Therefore, this article advances previous studies on how firms should utilize their innovation capabilities to produce innovative products and services to satisfy the customers' needs to stay competitive in their markets and earn profits [31], [79]. Moreover, this article offers an understating of why and how SMEs should utilize their innovation capabilities to augment their market and FINP [53].

Overall, this article contributes to advancing the theoretical understanding of symbiotic relationships between SMEs' ecology, ACAP, and innovation capabilities and their impact on the firm's market and FINP.

B. Managerial Implications

This article makes three vital practical contributions. First, SMEs should engage their community stakeholders to get their feedback about their offerings and their behaviors in the markets vis-à-vis the offerings of their competitors. In general, SMEs depend upon resources under the control of the external stakeholders. They keep receiving these critical resources uninterrupted if stakeholders perceive the firm's behaviors and offerings as legitimate. Therefore, as the SMEs are resource-dependent, they should develop their strategies, plans, and policies to satisfy their critical stakeholders in anticipation of an uninterrupted supply of strategic resources for the former to stay alive, competitive in the markets be relevant. Second, this article suggests that what is relevant today may not stay relevant tomorrow. Therefore, SMEs should engage in continuous renewal processes for the seamless ASSIM and EXPLT of external knowledge with the established knowledge for enhancing innovation capabilities to produce products, goods, and services that have a feature to satisfy the customers' present and future needs. In that sense, SMEs should possess capabilities to produce and organize knowledge essential for increasing their operational capabilities to achieve and withstand competitive advantage in the markets. Third, it is true that innovative products and services do not always guarantee enhanced FPERF but they increase the probability of better market and FINP. SMEs' innovation capabilities are their strategic internal capabilities for continuous growth when the markets are populated with too many offerings from the

competitors that the customers have varied choices. They will undoubtedly prefer those products and services, which have features to satisfy their current and future needs. Last but not least, note that this article context is the UAE and the findings of this article have significant implications for the sustainable economic growth of the UAE, wherein the government intends to attain sustainable growth while preserving its environment.

C. Limitations and Direction for Future Research

Like any other study, this article has its limitations. First, this used quantitative techniques to study what makes SMEs perform well. We suggest that future studies utilize mixed methods to unravel new facts to understand and explain what makes SMEs perform well. Second, we used the organizational-level variables to investigate how resource-dependent SMEs use their DCs to stay relevant in the markets. We suggest that future studies use individual and organizational-level variables to understand, explain, and predict SMEs' market and FINPs. Third, we conducted this article on the manufacturing sector SMEs, limiting its generalizations to all kinds of SMEs. Therefore, future research should extend our research model to conduct a comparative study on SMEs' manufacturing and service sectors for greater generalization of the study's findings.

REFERENCES

- [1] S. A. A. Ahabbi, S. K. Singh, S. Balasubramanian, and S. S. Gaur, "Employee perception of impact of knowledge management processes on public sector performance," *J. Knowl. Manage.*, vol. 23, pp. 351–373, 2019.
- [2] A. Aribi and O. Dupouët, "The role of organizational and social capital in the firm's absorptive capacity," *J. Knowl. Manage.*, vol. 19, no. 5, pp. 987–1006, 2015.
- [3] M. L. Barnett and R. M. Salomon, "Does it pay to be really good? Addressing the shape of the relationship between social and financial performance," *Strategic Manage. J.*, vol. 33, no. 11, pp. 1304–1320, 2012.
- [4] J. Barney, "Firm resources and sustained competitive advantage," *J. Manage.*, vol. 17, no. 1, pp. 99–120, 1991.
- [5] M. Battor and M. Battor, "The impact of customer relationship management capability on innovation and performance advantages: Testing a mediated model," *J. Marketing Manage.*, vol. 26, nos. 9/10, pp. 842–857, 2010.
- [6] R. J. Calantone, S. T. Cavusgil, and Y. Zhao, "Learning orientation, firm innovation capability, and firm performance," *Ind. Marketing Manage.*, vol. 31, no. 6, pp. 515–524, 2002.
- [7] F. Campanella, M. R. D. Peruta, and M. D. Giudice, "The effects of technological innovation on the banking sector," *J. Knowl. Econ.*, vol. 8, no. 1, pp. 356–368, 2017.
- [8] C. J. M. Caniëls and C. J. Gelderman, "Power and interdependence in buyer supplier relationships: A purchasing portfolio approach," *Ind. Marketing Manage.*, vol. 36, no. 2, pp. 219–229, 2007.
- [9] J. P. Cannon and W. D. Perreault Jr., "Buyer-seller relationships in business markets," *J. Marketing Res.*, vol. 36, no. 4, pp. 439–460, 1999.
- [10] Q. Cao, J. Baker, and J. J. Hoffman, "The role of competitive environment in studies of strategic alignment: A meta-analysis," *Int. J. Prod. Res.*, vol. 50, no. 2, pp. 567–580, 2012.
- [11] D.-N. Chen and T.-P. Liang, "Knowledge diversity and firm performance: An ecological view," *J. Knowl. Manage.*, vol. 20, no. 4, pp. 671–686, 2016.
- [12] W. M. Cohen and D. A. Levinthal, "Absorptive capacity: A new perspective on learning and innovation," *Administ. Sci. Quart.*, vol. 35, no. 1, pp. 128–152, 1990.
- [13] W. M. Cohen and D. A. Levinthal, "Fortune favors the prepared firm," *Manage. Sci.*, vol. 40, no. 2, pp. 227–251, 1994.
- [14] P. A. Dacin, M. T. Dacin, and M. Matear, "Social entrepreneurship: Why we don't need a new theory and how we move forward from here," *Acad. Manage. Perspective*, vol. 24, no. 3, pp. 37–57, 2010.

- [15] F. Damanpour, R. M. Walker, and C. N. Avellaneda, "Combinative effects of innovation types and organizational performance: A longitudinal study of service organizations," *J. Manage. Studies*, vol. 46, no. 4, pp. 650–675, 2009.
- [16] M. D. Giudice, V. Scuotto, A. Garcia-Perez, and A. M. Petruzzelli, "Shifting wealth II in Chinese economy. The effect of the horizontal technology spillover for SMEs for international growth," *Technol. Forecast. Soc. Change*, vol. 145, pp. 307–316, 2019.
- [17] K. M. Eisenhardt and J. A. Martin, "Dynamic capabilities: What are they?," *Strategic Manage. J.*, vol. 21, no. 10/11, pp. 1105–1121, 2000.
- [18] S. E. Fawcett, C. Wallin, C. Allred, and G. Magnan, "Supply chain information-sharing: Benchmarking a proven path," *Benchmarking, Int. J.*, vol. 16, no. 2, pp. 222–246, 2009.
- [19] J. J. Ferreira, E. G. Carayannis, D. F. J. Campbell, L. Farinha, H. L. Smith, and S. Bagchi-Sen, "Geography & entrepreneurship: Managing growth and change," *J. Knowl. Econ.*, vol. 9, no. 3, pp. 500–505, 2018.
- [20] T. C. Flatten, G. I. Greve, and M. Brettel, "Absorptive capacity and firm performance in SMEs: The mediating influence of strategic alliances," *Eur. Manage. Rev.*, vol. 8, no. 3, pp. 137–152, 2011.
- [21] C. Fornell and D. F. Larcker, "Structural equation models with unobservable variables and measurement error: Algebra and statistics," *J. Marketing Res.*, vol. 18, no. 3, pp. 382–388, 1981.
- [22] D. Francis and J. Bessant, "Targeting innovation and implications for capability development," *Technovation*, vol. 25, no. 3, pp. 171–183, 2005.
- [23] R. E. Freeman, *Strategic Management: A Stakeholder Approach*. Cambridge, U.K.: Cambridge Univ. Press, 2010.
- [24] E. García-Sánchez, V. J. García-Morales, and R. Martín-Rojas, "Influence of technological assets on organizational performance through absorptive capacity, organizational innovation and internal labour flexibility," *Sustainability*, vol. 10, no. 3, 2018.
- [25] P. Garrone, L. Grilli, and B. Mrkajic, "The role of institutional pressures in the introduction of energy-efficiency innovations," *Bus. Strategy Environ.*, vol. 27, no. 8, pp. 1245–1257, 2018.
- [26] P. Gluch, M. Gustafsson, and L. Thuvander, "An absorptive capacity model for green innovation and performance in the construction industry," *Construction Manage. Econ.*, vol. 27, no. 5, pp. 451–464, 2009.
- [27] P. Heisig, O. A. Suraj, A. Kianto, C. Kembai, G. P. Arrau, and N. F. Easa, "Knowledge management and business performance: Global experts' views on future research needs," *J. Knowl. Manage.*, vol. 20, no. 6, pp. 1169–1198, 2016.
- [28] B. Helmig, K. Spraul, and D. Ingenhoff, "Under positive pressure: How stakeholder pressure affects corporate social responsibility implementation," *Bus. Soc.*, vol. 55, no. 2, pp. 151–187, 2016.
- [29] I. Henriques and P. Sadowsky, "The relationship between environmental commitment and managerial perceptions of stakeholder importance," *Acad. Manage. J.*, vol. 42, no. 1, pp. 87–99, 1999.
- [30] A. J. Hillman, M. C. Withers, and B. J. Collins, "Resource dependence theory: A review," *J. Manage.*, vol. 35, no. 6, pp. 1404–1427, 2009.
- [31] J.-P. Huhtala, A. Sihvonen, J. Frösén, M. Jaakkola, and H. Tikkanen, "Market orientation, innovation capability and business performance: Insights from the global financial crisis," *Baltic J. Manage.*, vol. 9, no. 2, pp. 134–152, 2014.
- [32] P. Ingenbleek and D. Dentoni, "Learning from stakeholder pressure and embeddedness: The roles of absorptive capacity in the corporate social responsibility of Dutch agribusinesses," *Sustainability*, vol. 8, no. 10, 2016.
- [33] H. Inkinen, "Review of empirical research on knowledge management practices and firm performance," *J. Knowl. Manage.*, vol. 20, no. 2, pp. 230–257, 2016.
- [34] J. J. P. Jansen, F. A. J. V. D. Bosch, and H. W. Volberda, "Managing potential and realized absorptive capacity: How do organizational antecedents matter?," *Acad. Manage. J.*, vol. 48, no. 6, pp. 999–1015, 2005.
- [35] J. J. P. Jansen, F. A. J. V. D. Bosch, and H. W. Volberda, "Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators," *Manage. Sci.*, vol. 52, no. 11, pp. 1661–1674, 2006.
- [36] M. M. Jiménez-Barrionuevo, V. J. García-Morales, and L. M. Molina, "Validation of an instrument to measure absorptive capacity," *Technovation*, vol. 31, nos. 5/6, pp. 190–202, 2011.
- [37] S. Jollands, C. Akroyd, and N. Sawabe, "Management controls and pressure groups: The mediation of overflows," *Account. Audit. Account. J.*, vol. 31, pp. 1644–1667, 2018.
- [38] N. Kawai, R. Strange, and A. Zucchella, "Stakeholder pressures, EMS implementation, and green innovation in MNC overseas subsidiaries," *Int. Bus. Rev.*, vol. 27, no. 5, pp. 933–946, 2018.
- [39] P. Kilintzis, E. Samara, E. G. Carayannis, and Y. Bakouros, "Business model innovation in Greece: Its effect on organizational sustainability," *J. Knowl. Econ.*, vol. 11, pp. 949–967, 2020, doi: [10.1007/s13132-019-0583-z](https://doi.org/10.1007/s13132-019-0583-z).
- [40] K. Kostopoulos, A. Papalexandris, M. Papachroni, and G. Ioannou, "Absorptive capacity, innovation, and financial performance," *J. Bus. Res.*, vol. 64, no. 12, pp. 1335–1343, 2011.
- [41] K. Kwon and D. Cho, "How transactive memory systems relate to organizational innovation: The mediating role of developmental leadership," *J. Knowl. Manage.*, vol. 20, no. 5, pp. 1025–1044, 2016.
- [42] S. Laforet, "A framework of organisational innovation and outcomes in SMEs," *Int. J. Entrepreneurial Behav. Res.*, vol. 17, no. 4, pp. 380–408, 2011.
- [43] A. O. Laplume, K. Sonpar, and R. A. Litz, "Stakeholder theory: Reviewing a theory that moves us," *J. Manage.*, vol. 34, no. 6, pp. 1152–1189, 2008.
- [44] B. Lawson and D. A. Samson, "Developing innovation capability in organisations: A dynamic capabilities approach," *Int. J. Innov. Manage.*, vol. 5, no. 3, pp. 377–400, 2001.
- [45] A. Leal-Millán, J. L. Roldán, A. L. Leal-Rodríguez, and J. Ortega-Gutiérrez, "IT and relationship learning in networks as drivers of green innovation and customer capital: Evidence from the automobile sector," *J. Knowl. Manage.*, vol. 20, no. 3, pp. 444–464, 2016.
- [46] C. S. Lee and K. Y. Wong, "Development and validation of knowledge management measurement constructs for small and medium enterprises," *J. Knowl. Manage.*, vol. 19, no. 4, pp. 711–734, 2015.
- [47] X. Li, "Sources of external technology, absorptive capacity, and innovation capability in Chinese state-owned high-tech enterprises," *World Develop.*, vol. 39, no. 7, pp. 1240–1248, 2011.
- [48] S.-H. Liao, W.-C. Fei, and C.-C. Chen, "Knowledge sharing, absorptive capacity, and innovation capability: An empirical study of Taiwan's knowledge-intensive industries," *J. Inf. Sci.*, vol. 33, no. 3, pp. 340–359, 2007.
- [49] T.-J. Liao and C.-M. J. Yu, "The impact of local linkages, international linkages, and absorptive capacity on innovation for foreign firms operating in an emerging economy," *J. Technol. Transfer*, vol. 38, no. 6, pp. 809–827, 2013.
- [50] J. Liu, Y. Feng, Q. Zhu, and J. Sarkis, "Green supply chain management and the circular economy: Reviewing theory for advancement of both fields," *Int. J. Phys. Distrib. Logistics Manage.*, vol. 48, no. 8, pp. 794–817, 2018.
- [51] Y. Liu, L. Wang, C. Yuan, and Y. Li, "Information communication, organizational capability and new product development: An empirical study of Chinese firms," *J. Technol. Transfer*, vol. 37, no. 4, pp. 416–432, 2012.
- [52] S. Mariano and C. Walter, "The construct of absorptive capacity in knowledge management and intellectual capital research: Content and text analyses," *J. Knowl. Manage.*, vol. 19, no. 2, pp. 372–400, 2015.
- [53] M. Mitrega, S. Forkmann, G. Zaefarian, and S. C. Henneberg, "Networking capability in supplier relationships and its impact on product innovation and firm performance," *Int. J. Oper. Prod. Manage.*, vol. 37, no. 5, pp. 577–606, 2017.
- [54] R. E. Morgan and P. Berthon, "Market orientation, generative learning, innovation strategy and business performance inter-relationships in bio-science firms," *J. Manage. Stud.*, vol. 45, no. 8, pp. 1329–1353, 2008.
- [55] A. A. Muhammad, Z. Mohamed, M. N. Shamsudin, J. Sharifuddin, and F. Ali, "External pressure influence on entrepreneurship performance of SMEs: A case study of Malaysian herbal industry," *J. Small Bus. Entrepreneurship*, vol. 32, 2020, doi: [10.1080/08276331.2018.1509504](https://doi.org/10.1080/08276331.2018.1509504).
- [56] S. Najafi-Tavani, Z. Najafi-Tavani, P. Naudé, P. Oghazi, and E. Zeynaloo, "How collaborative innovation networks affect new product performance: Product innovation capability, process innovation capability, and absorptive capacity," *Ind. Marketing Manage.*, vol. 73, pp. 193–205, 2018.
- [57] A. Natalicchio, L. Ardito, A. M. Petruzzelli, and M. D. Giudice, "The origins of external knowledge inflows and the impact of university technologies," *R&D Manage.*, vol. 49, no. 4, pp. 639–651, 2019.
- [58] F. L. Oliva *et al.*, "Innovation in the main Brazilian business sectors: Characteristics, types and comparison of innovation," *J. Knowl. Manage.*, vol. 23, no. 1, pp. 135–175, 2019.
- [59] G. O. Oparaocha, "Towards building internal social network architecture that drives innovation: A social exchange theory perspective," *J. Knowl. Manage.*, vol. 20, no. 3, pp. 534–556, 2016.
- [60] A. Perna, E. Baraldi, and A. Waluszewski, "Is the value created necessarily associated with money? On the connections between an innovation process and its monetary dimension: The case of Solibro's thin-film solar cells," *Ind. Marketing Manage.*, vol. 46, pp. 108–121, 2015.

- [61] A. M. Petruzzelli and T. Savino, "Search, recombination, and innovation: Lessons from haute cuisine," *Long Range Planning*, vol. 47, no. 4, pp. 224–238, 2014.
- [62] J. Pfeffer, *Power in Organizations*. New York, NY, USA: Pitman, 1981.
- [63] J. Pfeffer, G. R. Salancik, and C. Wetherell, *The External Control of Organizations: A Resource Dependence Perspective*. New York, NY, USA: Harper & Row, 1978.
- [64] J. Pfeffer and G. R. Salancik, *The External Control of Organizations: A Resource Dependence Perspective*. Stanford, CA, USA: Stanford Univ. Press, 2003.
- [65] S. Pondeville, V. Swaen, and Y. D. Rongé, "Environmental management control systems: The role of contextual and strategic factors," *Manage. Accounting Res.*, vol. 24, no. 4, pp. 317–332, 2013.
- [66] J. Rhee, T. Park, and D. H. Lee, "Drivers of innovativeness and performance for innovative SMEs in South Korea: Mediation of learning orientation," *Technovation*, vol. 30, no. 1, pp. 65–75, 2010.
- [67] N. Roberts, P. S. Galluch, M. Dinger, and V. Grover, "Absorptive capacity and information systems research: Review, synthesis, and directions for future research," *MIS Quarterly*, vol. 36, no. 2, pp. 625–648, 2012.
- [68] M. Rodrigue, M. Magnan, and E. Boulianne, "Stakeholders' influence on environmental strategy and performance indicators: A managerial perspective," *Management Accounting Research*, vol. 24, no. 4, pp. 301–316, 2013.
- [69] N. Roome and F. Wijan, "Stakeholder power and organizational learning in corporate environmental management," *Org. Stud.*, vol. 27, no. 2, pp. 235–263, 2006.
- [70] J. Sarkis, P. Gonzalez-Torre, and B. Adenso-Diaz, "Stakeholder pressure and the adoption of environmental practices: The mediating effect of training," *J. Oper. Manage.*, vol. 28, no. 2, pp. 163–176, 2010.
- [71] O. Schilke, S. Hu, and C. E. Helfat, "Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research," *Acad. Manage. Ann.*, vol. 12, no. 1, pp. 390–439, 2018.
- [72] V. Scuotto, M. D. Giudice, and E. G. Carayannis, "The effect of social networking sites and absorptive capacity on SMEs' innovation performance," *J. Technol. Transfer*, vol. 42, no. 2, pp. 409–424, 2017.
- [73] A. Serenko and N. Bontis, "Understanding counterproductive knowledge behavior: Antecedents and consequences of intra-organizational knowledge hiding," *J. Knowl. Manage.*, vol. 20, no. 6, pp. 1199–1224, 2016.
- [74] S. Sindakis, A. Depeige, and E. Anoyrkati, "Customer-centered knowledge management: Challenges and implications for knowledge-based innovation in the public transport sector," *J. Knowl. Manage.*, vol. 19, no. 3, pp. 559–578, 2015.
- [75] S. K. Singh, M. D. Giudice, S. Y. Tarba, and P. D. Bernadi, "Top management team shared leadership, market-oriented culture, innovation capability, and firm performance," *IEEE Trans. Eng. Manage.*, to be published, doi: [10.1109/TEM.2019.2946608](https://doi.org/10.1109/TEM.2019.2946608).
- [76] K. G. Smith, C. J. Collins, and K. D. Clark, "Existing knowledge, knowledge creation capability, and the rate of new product introduction in high-technology firms," *Acad. Manage. J.*, vol. 48, no. 2, pp. 346–357, 2005.
- [77] M. Subramaniam and M. A. Youndt, "The influence of intellectual capital on the types of innovative capabilities," *Acad. Manage. J.*, vol. 48, no. 3, pp. 450–463, 2005.
- [78] M. C. Suchman, "Managing legitimacy: Strategic and institutional approaches," *Acad. Manage. Rev.*, vol. 20, no. 3, pp. 571–610, 1995.
- [79] N. Taherparvar, R. Esmailpour, and M. Dostar, "Customer knowledge management, innovation capability and business performance: A case study of the banking industry," *J. Knowl. Manage.*, vol. 18, no. 3, pp. 591–610, 2014.
- [80] D. J. Teece, G. Pisano, and A. Shuen, "Dynamic capabilities and strategic management," *Strategic Manage. J.*, vol. 18, no. 7, pp. 509–533, 1997.
- [81] S. Thornhill, "Knowledge, innovation and firm performance in high- and low-technology regimes," *J. Bus. Venturing*, vol. 21, no. 5, pp. 687–703, 2006.
- [82] M. J. Tippins and R. S. Sohi, "IT competency and firm performance: Is organizational learning a missing link?," *Strategic Manage. J.*, vol. 24, no. 8, pp. 745–761, 2003.
- [83] G. Todorova and B. Durisin, "Absorptive capacity: Valuing a reconceptualization," *Acad. Manage. Rev.*, vol. 32, no. 3, pp. 774–786, 2007.
- [84] W. Tsai, "Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance," *Acad. Manage. J.*, vol. 44, no. 5, pp. 996–1004, 2001.
- [85] N. Tzokas, Y. A. Kim, H. Akbar, and H. Al-Dajani, "Absorptive capacity and performance: The role of customer relationship and technological capabilities in high-tech SMEs," *Ind. Marketing Manage.*, vol. 47, pp. 134–142, 2015.
- [86] M. Vicente, J. L. Abrantes, and M. S. Teixeira, "Measuring innovation capability in exporting firms: The INNOVSCALE," *Int. Marketing Rev.*, vol. 32, no. 1, pp. 29–51, 2015.
- [87] H. W. Volberda, N. J. Foss, and M. A. Lyles, "Perspective—Absorbing the concept of absorptive capacity: How to realize its potential in the organization field," *Org. Sci.*, vol. 21, no. 4, pp. 931–951, 2010.
- [88] R. M. Walker, "Innovation and organisational performance: Evidence and a research agenda," *Adv. Inst. Manage. Res. Working Paper 002*, 2004.
- [89] C. L. Wang and P. K. Ahmed, "Dynamic capabilities: A review and research agenda," *Int. J. Manage. Rev.*, vol. 9, no. 1, pp. 31–51, 2007.
- [90] C. L. Wang, C. Senaratne, and M. Rafiq, "Success traps, dynamic capabilities and firm performance," *Brit. J. Manage.*, vol. 26, no. 1, pp. 26–44, 2015.
- [91] L. Wang and J. Li, "The antecedents and innovation outcomes of firms' absorptive capacity in global buyer–supplier relationships," *J. Technol. Transfer*, vol. 42, no. 6, pp. 1407–1430, 2017.
- [92] R. Watson, H. N. Wilson, P. Smart, and E. K. Macdonald, "Harnessing difference: A capability-based framework for stakeholder engagement in environmental innovation," *J. Prod. Innov. Manage.*, vol. 35, no. 2, pp. 254–279, 2018.
- [93] Z. Wei, H. Shen, K. Zhou, and J. J. Li, "How does environmental corporate social responsibility matter in a dysfunctional institutional environment? Evidence from China," *J. Bus. Ethics*, vol. 140, no. 2, pp. 209–223, 2017.
- [94] J. West, A. Salter, W. Vanhaverbeke, and H. Chesbrough, "Open innovation: The next decade," *Res. Policy*, vol. 43, no. 5, pp. 805–8011, 2014.
- [95] J. Wu and M. T. Shanley, "Knowledge stock, exploration, and innovation: Research on the United States electromedical device industry," *J. Bus. Res.*, vol. 62, no. 4, pp. 474–483, 2009.
- [96] D. Yang, A. X. Wang, K. Z. Zhou, and W. Jiang, "Environmental strategy, institutional force, and innovation capability: A managerial cognition perspective," *J. Bus. Ethics*, vol. 159, no. 3, pp. 1147–1161, 2019.
- [97] S. A. Zahra and G. George, "Absorptive capacity: A review, reconceptualization, and extension," *Acad. Manage. Rev.*, vol. 27, no. 2, pp. 185–203, 2002.
- [98] K. Z. Zhou, G. Y. Gao, and H. Zhao, "State ownership and firm innovation in China: An integrated view of institutional and efficiency logics," *Administ. Sci. Quarterly*, vol. 62, no. 2, pp. 375–404, 2017.
- [99] C. J. Chen and J. W. Huang, "Strategic human resource practices and innovation performance—The mediating role of knowledge management capacity," *J. Bus. Res.*, vol. 62, no. 1, pp. 104–114, 2009.
- [100] M. D. Giudice, V. Maggioni, J. Cruz-González, P. López-Sáez, J. E. Navas-López, and M. Delgado-Verde, "Directions of external knowledge search: Investigating their different impact on firm performance in high-technology industries," *J. Knowl. Manage.*, vol. 18, no. 5, pp. 847–866, 2014.
- [101] J. L. Murillo-Luna, C. Garcés-Ayerbe, and P. Rivera-Torres, "Barriers to the adoption of proactive environmental strategies," *J. Cleaner Prod.*, vol. 19, no. 13, pp. 1417–1425, 2011.
- [102] W. E. Baker and J. M. Sinkula, "Environmental marketing strategy and firm performance: Effects on new product performance and market share," *J. Acad. Market. Sci.*, vol. 33, no. 4, pp. 461–475, 2005.
- [103] N. Wang, H. Liang, W. Zhong, Y. Xue, and J. Xiao, "Resource structuring or capability building? An empirical study of the business value of information technology," *J. Manage. Inf. Syst.*, vol. 29, no. 2, pp. 325–367, 2012.
- [104] R. W. Brislin, "The wording and translation of research instruments," in *Field Methods in Cross-Cultural Research*. W. L. Lonner and J. W. Berry, Eds. Newbury Park, CA, USA: Sage, 1986, pp. 137–164.
- [105] D. J. Teece, "The foundations of enterprise performance: Dynamic and ordinary capabilities in an (economic) theory of firms," *Acad. Manage. Perspect.*, vol. 28, no. 4, pp. 328–352, 2014.

Sanjay Kumar Singh is currently a Faculty Member with the School of Business, Maynooth University, Maynooth, Ireland. His research interests include international and strategic HRM, innovation management, knowledge management, talent management, sustainability and ethics. He has authored or coauthored the *Journal of Business Research*, *International Journal of Human Resource Management*, *Asia Pacific Journal of Management*, *Personality and Individual Differences*, *Technological Forecasting and Social Change*, *Journal of Knowledge Management*, *International Journal of Information Management*, the IEEE TRANSACTIONS ON ENGINEERING MANAGEMENT, and *International Marketing Review*.

Manlio Del Giudice is currently a Professor of management with Link Campus University, Rome, Italy. He is affiliated as a Research Full Professor of entrepreneurship and management with the Paris School of Business, Paris, France. His research interests include knowledge management, entrepreneurship, technology transfer, and crosscultural management. He has authored or coauthored the *Journal of Business Research*, *Technological Forecasting and Social Change*, *Journal of Knowledge Management*, *R&D Management*, IEEE TRANSACTIONS ON ENGINEERING MANAGEMENT, *The Journal of Technology Transfer*, and *International Marketing Review*.

Fabio Fiano is currently with Link Campus University, Rome, Italy. His research interests include knowledge management, entrepreneurial knowledge, innovation management, big data analytics, and technological change. He has authored or coauthored the *Journal of Knowledge Management*, *Management Decision*, *Technological Forecasting and Social Change*, and *Corporate Ownership and Control*.

Melita Nicotra is currently a Researcher in economics and business management discipline with Università degli Studi di Catania, Catania, Italy. Her research interests include knowledge management, absorptive capacity, innovation management, and entrepreneurial ecosystem. She has authored or coauthored the *International Journal of Managerial and Financial Accounting*, *Journal of Knowledge Management*, *Journal of Intellectual Capital*, *Journal of Knowledge Economy*, and *The Journal of Technology Transfer*.