

# The Intervening Role of Absorptive Capacity in the Nexus of Effectual Actions and Performance in Small Businesses

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## ABSTRACT

**Purpose:** This study interrogates the interfering role of absorptive capacity in the relationship between the effectual actions of small businesses and their performance.

**Design/methodology/approach:** Structured questionnaires were used to generate primary data from 685 small businesses from a variety of sectors in South Africa. The data was used to interrogate the hypothesized relationships using the partial least squares structural equation modeling technique.

**Findings:** The findings report a significantly positive relationship between effectuation and small business performance. Further, it is revealed that absorptive capacity partially mediates the relationship between effectuation and small business performance.

**Research limitations/implications:** The limitations of this study include the use of primary data from a sample of small businesses in South Africa and dependence on specific modeling techniques. The implications of this research provide a deeper understanding of the mediating effects of absorptive capacity on the relationship between effectual actions and small business performance.

**Practical implications:** This study provides fresh insights into the mediating effects of the absorptive capacity capability of small businesses in the continuous interaction between their effectual actions and performance. As such, it highlights the connection between the growing theory of effectuation and existing theories in the field of management sciences. This study enables the emergence of knowledge that could spur small businesses to effectively navigate the endemic uncertainties prevalent in their contexts.

**Originality/value:** This study contributes to the understanding of the role of absorptive capacity in the relationship between effectual actions and small business performance, thus adding value to the literature on small business management.

**Paper type:** This research is empirical.

**Keywords:** Effectuation; Business Performance; Absorptive Capacity; Entrepreneurial Action.

## I. INTRODUCTION

Entrepreneurs operate in extremely fluid and uncertain environments (Fisher *et al.*, 2020; Townsend *et al.*, 2018). To navigate and mitigate the impact of such contexts, entrepreneurs employ a variety of behaviors and actions. In recent times, effectuation has attracted attention in the extant literature as one such behavior that describes the actions of entrepreneurs as they traverse continuously changing contexts (Reymen *et al.*, 2015; Sarasvathy and Dew, 2008; Welter and Kim, 2018). The traditional understanding of effectuation captures the concept as a decision process used by expert entrepreneurs in the development of new ventures (Sarasvathy, 2001). Increasingly, however, effectuation has assumed a much broader understanding as a set of heuristics, actions, capabilities, reasoning, behaviors, or decision-making logics employed by entrepreneurs as they navigate uncertainty and strive to exert control over the environment (McKelvie *et al.*, 2020).

The significance of effectual actions for the success of entrepreneurial endeavors is buttressed by the increasing number of empirical studies (see Eyana, *et al.*, 2018; Laskovaia *et al.*, 2017; Osuigwe and Eresia-Eke, 2022) interrogating the relationships between effectuation and business performance. However, despite

the avowed importance of effectuation in entrepreneurial activities, the findings presented by these studies have been varied. The mixed outcomes of these studies warrant the need to investigate the relationship between effectuation and other concepts within the context of firm performance. Such studies will respond to the call by Perry et al., (2012) who argue for the interrogation of the possible interconnectivity of the concept of effectuation with other recognized management concepts.

It is against this background that the current study is poised to investigate the connections between small businesses' effectual actions, absorptive capacity, and firm performance. The current study leverages Zahra and George (2002)'s conceptualization of absorptive capacity as a dynamic capability. Consequently, absorptive capacity is perceived as the acquisition of external knowledge, assimilation of the acquired knowledge, transformation of the new knowledge with existing knowledge as well as the exploitation of the recombined knowledge for value creation. On this score, this study therefore projects that the ability of small businesses to identify, assimilate, transform, and exploit emergent data from their context may strengthen the connection between their effectual actions and firm performance.

Consequently, the purpose of this study is to explore the possible intervening role of absorptive capacity on the relationship between effectual actions and firm performance in small businesses. Specifically, this study seeks to contribute to the continued development of effectuation literature by fostering an improved understanding of the concept's interactions with established constructs in management studies. More so, this study adds to the scholarly debates on the relationship between predictive and non-predictive logic of control. Extant literature (Djuricic and Bootz, 2019; Smolka *et al.*, 2018; Steinert *et al.*, 2020) supports the link between non-predictive logics such as effectuation and predictive logics that comprise absorptive capacity. Additionally, the study also aims to provide empirical evidence on the nature of the relationship between effectual actions and firm performance. Additionally, it is anticipated that the findings of this study would engender deeper insights as it concerns the nexus between effectual actions and firm performance by evaluating the intervening effects of absorptive capacity.

## II. LITERATURE REVIEW

### 2.1 Effectuation and absorptive capacity

Absorptive capacity has been recognized for its ability to interact with other theories in a variety of disciplines (Apriliyanti & Alon, 2017). Insights from extant literature related to key areas of uncertainty and information acquisition, as well as the exploitation of opportunities are used to deductively project possible connections between effectuation and absorptive capacity.

Uncertainty describes the disparity between available information and the required information that is needed to complete defined tasks (Brettel *et al.*, 2012). While navigating uncertainty, effectual actors tend to use trial-and-error and iterative learning techniques to gather information (Sarasvathy, 2001). Arend *et al.*, (2015) argue that the generation of new information is consistent with the iterative process employed by effectual actors. As they interact and collaborate with others within their social network, effectual actors explore emergent information used in creating multiple outcomes (Djuricic and Bootz, 2019).

Notably, Patel (2019) recognizes absorptive capacity as an essential ability that ensures that effectual actors are alert to insights for opportunity creation emergent from the prevalent uncertainty in their context. Flatten *et al.*, (2011) specifically refer to absorptive capacity as a capability that boosts the sensing, understanding, transformation, and exploitation of emergent information in an uncertain environment. These perspectives from the literature encourage the present study to propose that effectual actors utilize absorptive capacity to leverage information emergent from their uncertain environment.

Jiang and Ruling (2019) as well as Patel (2019) suggest that effectual actors continuously create and select between multiple possible opportunities as the typical outcome of the effectual process. Such possible future outcomes are, however, unclear and require that effectual actors remain alert to emergent insights from the external environment. Using the concept of isotropy, Sarasvathy (2008) explains that in decisions and actions involving uncertain future consequences, it is not always clear, in advance, which data sets are worth paying attention to and which are not.

Consequently, when confronted by such decisions on multiple emergent opportunities, effectual actors may exploit substandard opportunities (Leenders *et al.*, 2007). Fernhaber and Patel (2012) argue that absorptive capacity combines the procedures and activities of small businesses thereby enabling them to interpret and exploit emergent opportunities for beneficial outcomes. Volberda (2010) concurs with this perspective and argues that businesses with absorptive capacity capabilities can create more effects from emergent opportunities in their context. On this note, it is conceivable that small businesses with absorptive capacity capabilities may be able to choose the ideal opportunities to pursue in uncertain times.

## 2.2 Effectuation and small business performance

Arguably, the view by Roach et al., (2016) that the theory of effectuation delivers a stimulating viewpoint into the understanding of small business performance provides the impetus for this study to utilize the effectual lens to examine small business performance. Scholars (see Arend et al., 2015; Bhowmick, 2015; Ye, 2016), in response to the call by Perry et al., (2012), have employed a variety of approaches in a bid to understand the appropriate outcomes of the effectual process. Despite the significant strides achieved in this endeavor, empirical research on effectuation and its wider implications in the entrepreneurship field remains scarce (McKelvie et al., 2013). Conceptually, Sarasvathy (2001) argues that effectuation may not be a predictor of small business performance while Read et al., (2009) provide an alternative view that holds that small business performance might be predicted by effectuation. Interestingly though, a study by Read and Sarasvathy (2005), proposes a possible relationship between effectuation and new business growth.

Meta-studies by McKelvie et al. (2020) and Perry et al. (2012) highlight the significance of more survey-based empirical research to interrogate this relationship. Despite the importance ascribed to such an interrogation, extant empirical studies have had varied results. For instance, researchers (see Eyana et al., 2018; McKelvie et al., 2013; Smolka et al., 2018; Osuigwe and Eresia-Eke, 2022) report findings that show varied outcomes in the relationship between effectuation, its dimensions, and business performance indicators. Other researchers (see Cai et al., 2017; Guo et al., 2016; Laskovaia et al., 2017; Peng et al., 2020; Wiltbank et al., 2009; Yu et al., 2018) however, report positive and/or significant effects in the relationship between effectuation and business performance indicators. Empirical studies by Eijdenberg et al. (2017) and Muhd Yusuf et al. (2018) have shown negative or non-significant impacts of effectuation on business performance indicators.

Cognizant of these findings from extant literature that provides some evidence of the existence of a relationship between effectuation and various strands of business performance, the present study chooses to hypothesize that:

**H1:** Effectuation has a positive relationship with small business performance

## 2.3 Effectuation, absorptive capacity, and small business performance

Volberda (2010) asserts that absorptive capacity can serve as a veritable node of various concepts in management studies given its appeal to a variety of disciplines. Instructively, Engelen et al. (2014) and Escribano et al. (2009) highlight that businesses operating in uncertain contexts require absorptive capacity to rapidly adapt to fluid situations. Additionally, Fernhaber and Patel (2012) as well as Patel (2019) note that absorptive capacity enhances the capability of small businesses to identify the worth of novel opportunities. In light of this, it is conceivable that absorptive capacity enables the swift detection and exploitation of emergent insights for the benefit of entrepreneurial ventures. In an attempt to understand the possible intervening role of absorptive capacity, several studies (Aljanabi, 2018; Khachlouf and Quélin, 2018; Patel et al., 2015) employing absorptive capacity as an intervening variable, have reported its mixed effects on the relationship between different business-related concepts.

There is an interest in understanding the effects of other variables in the relationship between effectual actions and performance indicators (Fischer et al., 2021). Specifically, a study by Cai et al. (2017) finds that exploratory learning plays a fully mediating role in the relationship between effectuation and net profit rate, investment return rate and market share rate, sales growth speed, employee growth speed, and market share growth speed. Evidence from a study by Guo (2019) demonstrates that opportunity shaping fully mediates the relationship between effectuation and innovation strategy. The preceding provides a compelling basis to anticipate that absorptive capacity might interfere, in a mediating role, with the relationship between effectuation and small business performance. Therefore, this study hypothesizes that:

**H2:** Absorptive capacity mediates the relationship between effectuation and small business performance.

## III. METHODS

The current study used self-administered questionnaires to obtain data from 685 small businesses in South Africa. An electronic survey was preferred for the data collection to accommodate the dispersed nature of the target population. The questionnaire technique used to obtain data was designed in the form of closed statements related to the research variables. All the items associated with the research variables were accompanied by 5-point Likert-type answer options anchored on 1 (not satisfied = small business performance or strongly disagree = effectuation and absorptive capacity) to 5 (very satisfied = small business performance

or strongly agree = effectuation and absorptive capacity). Data from the study was analyzed using the partial least squares structural equation modeling (PLS-SEM) technique.

#### IV. RESULTS AND DISCUSSION

##### 4.1 Pearson correlations

Table 1 shows the correlations (*r*) between the key variables of the study. The outcome is consistent with the theoretical arguments presented in this study. There is statistical evidence that effectuation and absorptive capacity ( $r = 0.321$ ;  $p < 0.01$ ), effectuation and small business performance ( $r = 0.190$ ;  $p < 0.01$ ), as well as absorptive capacity and small business performance ( $r = 0.269$ ;  $p < 0.01$ ) have statistically significant and positive relationships between them.

Table 1: Descriptive statistics and Pearson correlations <sup>a</sup>

Variables	Mean	S.D.	1	2
1. Effectuation	3.60	1.03		
2. Absorptive Capacity	3.55	0.89	0.321**	
3. Small business performance	3.14	1.18	0.190**	0.269**

<sup>a</sup> N = 685; \* $p < 0.05$ . \*\* $p < 0.01$  (two-tailed)

##### 4.2 Factor analysis

To establish the suitability of the key variables for the study, the measurement model employed in the study was assessed. This enabled the study to determine whether the observed variables loaded effectively about the characteristics that they were intended to measure while also assessing the distinctiveness of these factors. Following suggestions by Hulland (1999), that loadings upside of 0.5 indicate sufficient reliability, the items with such loadings were kept and those that did not satisfy this requirement were eliminated. Tables 2 and 3 represent the values of the item loadings derived from factor analysis. These values are shown to be higher than the advised 0.5 threshold. This outcome confirms that the effectuation, absorptive capacity, and small business performance measures are suitable for estimating the structural models.

##### 4.3 Convergent and discriminant validity

The study assessed the composite reliability (CR), average variance extracted (AVE), and the Fornell-Larcker criterion for discriminant validity values to establish convergent and discriminant validity (construct validity) as well as the internal consistency of the measurement model. As shown in Tables 2 and 3, the CR values for the study’s variables are higher than the cut-off of 0.70, which confirms the internal consistency of the scale items.

Table 2: Factor loadings and construct validity assessment for effectuation and small business performance

	Variable				Fornell-Larcker Criterion Output				
		Item Loadings	AVE	CR	1	2	3	4	5
<b>Effectuation</b>	1. Experimentation	0.868	0.553	0.784	0.744				
		0.729							
		0.612							
	2. Affordable loss	0.866	0.756	0.903	0.008	0.870			
		0.901							
		0.841							
	3. Flexibility	0.813	0.508	0.799	0.177	0.283	0.713		
		0.565							
		0.854							
		0.567							
	4. Pre-commitment	0.884	0.776	0.874	0.241	0.126	0.188	0.881	
		0.878							
	5. Small business performance	0.904	0.702	0.933	-0.053	0.216	0.283	0.062	0.838
		0.913							
		0.858							
		0.882							
0.753									
0.694									

The AVE establishes convergent validity based on a value output  $\geq 0.5$ , which shows the degree to which items measuring a construct are related to one another, by the standards outlined in the study by Fornell and Larcker (1981). The AVE values as shown in Tables 2 and 3 confirm convergent validity on the evidence of all the variables' AVE values being greater than the threshold value of 0.5. The output for the Fornell-Larcker criterion for the assessment of discriminant validity is represented by the diagonal values in the tables. These values are the square root of the AVE of the latent variables and must be the highest values in their respective columns and rows. The square root of the AVE values of the effectuation, small business performance, and absorptive capacity factors are all greater than all other values within their respective columns and rows.

Table 3: Factor loadings and construct validity assessment for absorptive capacity

	Variable	Item Loadings	AVE	CR	Fornell-Larcker Criterion Output			
					1	2	3	4
Absorptive Capacity	1. Acquisition	0.786 0.844	0.665	0.799	0.815			
	2. Assimilation	0.904 0.925	0.837	0.911	0.377	0.915		
	3. Transformation	0.693 0.776 0.805 0.586	0.519	0.810	0.388	0.512	0.842	
	4. Exploitation	0.825 0.858	0.708	0.829	0.469	0.659	0.619	0.720

This outcome confirms that the latent variables of the effectuation, small business performance, and absorptive capacity scales are discriminant of each other. Further, the correlations between the constructs and the multicollinearity assessment of the data based on variance inflation factor (VIF) values showed that the data do not have multicollinearity issues. The correlations (which ranged between 0.008 and 0.328) between the constructs were significantly below the 0.90 cut-off point established by Hair et al. (2019), indicating that the data was free of multicollinearity. The outer and inner VIF values were within the thresholds of 5.0 with ranges between 1.087 and 2.505.

#### 4.4 Assessing Hypothesized Relationships

To evaluate the proposed hypotheses, the study examined two structural models. The first model focused on the direct relationship between effectuation and small business performance and the second model examined the mediation effects of absorptive capacity. In model one, the PLS algorithm was used to confirm the path coefficients of the direct relationship, and the bootstrapping process was performed to assess the significance of the relationships. Further, the  $R^2$  and the predictive relevance ( $Q^2$ ) values were calculated as measures of the predictive power and predictive relevance of the models (goodness of fit of the models), respectively.

As shown in Table 4, the path coefficients of the proposed relationships between small business performance and effectuation have sufficient values. The table further presents the results of the evaluation of the structural model related to the significance levels of the hypothesized direct relationship. On this score, the outcome confirms that effectuation ( $\beta = 0.250$ ,  $t = 6.435$ ,  $p < 0.01$ ) has a statistically significant positive relationship with small business performance. This result confirms that  $H_1$  is statistically supported. The  $R^2$  coefficient is 0.062, which means that effectuation accounts for approximately 6 % of the variance in the endogenous variable. The  $Q^2$  value was greater than zero ( $Q^2 = 0.078$ ), which confirms that the model has predictive relevance.

Table 4: Results of the test of the hypothesized relationship between effectuation and small business performance

Hypothesis	Relationship	Std Beta	Std Error	t-value  $\wedge$	p-value	Decision	Q <sup>2</sup>	R <sup>2</sup>
H1	Effectuation → Small business performance	0.250	0.039	6.435	0.000	Supported	0.078	0.062

In model two, the mediation effect of absorptive capacity was evaluated according to the three-step procedure proposed by Baron and Kenny (1986) for the estimation of mediation effects, and this is required for certain conditions to be met. Using the PLS-SEM technique, the study assessed for mediation effects by calculating the weights and t-statistics for the indirect, direct, and total effects as well as confidence intervals (C.I.) using the bias-corrected bootstrapping technique (Carrión et al., 2017; MacKinnon et al., 2002).

As presented in Table 5, the results of the evaluation of the mediation effects show a significant indirect relationship from effectuation to small business performance through absorptive capacity ( $\beta = 0.088$ ,  $t = 5.075$ ,

$p < 0.01$ ). Nonetheless, the total effect between effectuation and small business performance ( $\beta = 0.161$ ,  $t = 4.200$ ,  $p < 0.01$ ) is much stronger. This result confirms that the relationship between effectuation and small business performance is complementary and partially mediated by absorptive capacity, considering that all the relationship paths are significant.

Table 5: Total and indirect effects output for hypothesized mediation effects

Effects	Hypotheses	Std Beta	Std Error	t-value  <sup>^</sup>	p-value	Bias corrected 95 % C.I.	F <sup>2</sup>	R <sup>2</sup>
Total Effect	Absorptive capacity → Small business performance	0.277	0.041	6.822	0.000	0.204, 0.342	0.079	
	Effectuation → Absorptive capacity	0.320	0.046	6.916	0.000	0.243, 0.398	0.115	0.103
	Effectuation → Small business performance	0.161	0.038	4.200	0.000	0.095, 0.221	0.027	0.131
Indirect Effect	H <sub>2</sub> : Effectuation → Absorptive capacity → Small business performance	0.088	0.018	5.075	0.000	0.061, 0.118	Supported	

This outcome implies that the absorptive capacity capabilities of small businesses mediate the relationship between their use of effectuation and the resultant business performance. As depicted in Figure 1, the  $R^2$  value of the paths from effectuation and absorptive capacity to small business performance was 0.131 while the  $R^2$  value of the path from effectuation to absorptive capacity was 0.103. These values show that effectuation and absorptive capacity contribute 13% of the changes in small business performance, while effectuation explains 10% of the variance in absorptive capacity.

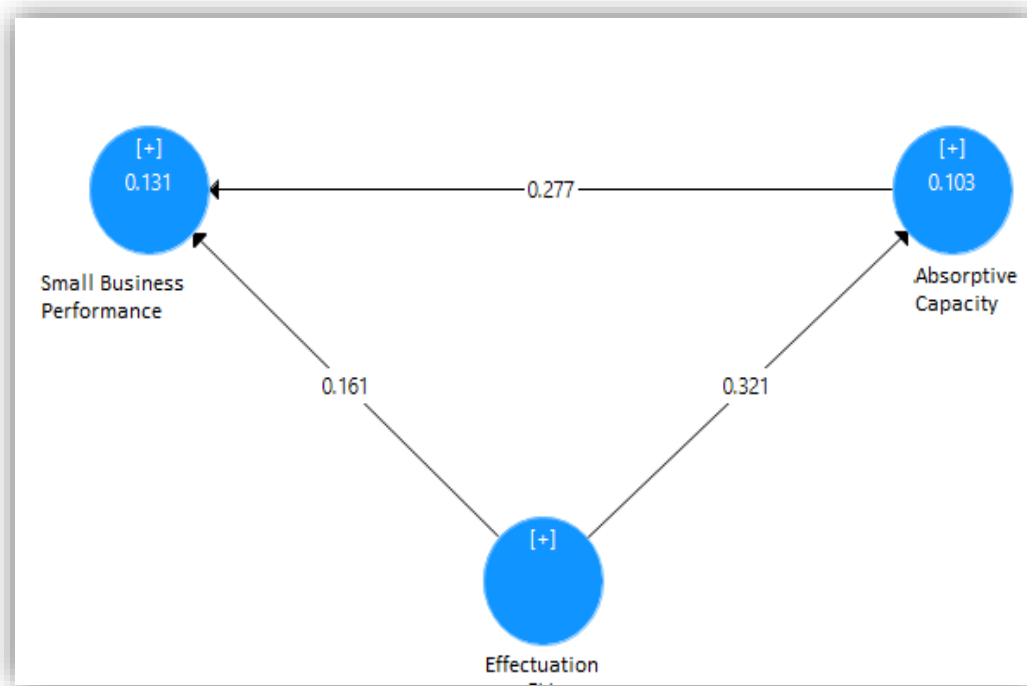


Figure 1: Mediation model for effectuation, absorptive capacity, and small business performance

## V. CONCLUSION

The current study interrogated the intervening role of absorptive capacity in the relationship between effectuation and small business performance. The study’s findings confirm that empirical data supported the hypothesized direct and indirect relationships between effectuation, absorptive capacity, and small business performance. The finding in the current study regarding the statistical significance of the relationship between effectuation and small business performance is congruent with the propositions and findings from existing studies (Peng *et al.*, 2020; Read and Sarasvathy, 2005; Yu *et al.*, 2018). Further, the statistically significant relationship confirmed between absorptive capacity and small business performance is consistent with findings in extant literature (Eresia-Eke and Osuigwe, 2022; Flatten *et al.*, 2011; Mamun *et al.*, 2017).

Based on the empirical evidence provided in the current study, it is established that small businesses utilize their effectuation capabilities to achieve business performance. Further evidence shows that a portion of this relationship between small businesses' effectuation and their performance is explained by their use of absorptive capacity capability. This indicates that small business performance can be enabled by effectuation and absorptive capacity capabilities. This study has significant theoretical implications for the continuous development of the theory of effectuation as well as specific practical implications for small businesses in developing countries considering the source of the data used.

This study responds to the call by Perry *et al.* (2012) on the need to broaden an understanding of the interaction between effectuation and other concepts. The current study contributes to scholarly discourse in the spheres of absorptive capacity and effectuation by providing empirical evidence for the understanding of the relationship between absorptive capacity (an established strategic management theory) and effectuation (an emergent entrepreneurship theory).

Interrogating the mediation effects of absorptivism in this relationship aligns the study to two categories of research interests in extant literature. These include studies interrogating the mediating effects of absorptive capacity between key concepts in management sciences and literature examining the different variables that play mediating roles in effectuation studies. The first category draws impetus from studies (see Ferreras-Méndez *et al.*, 2019; Hernández-Perlines and Xu, 2018; Huang *et al.*, 2018) that confirmed absorptive capacity as an appropriate mediating variable in the relationship between different management constructs. The other highlights the scant but increasing research (see Cai *et al.*, 2017; Guo, 2019; Pacho and Mushi, 2020) assessing the suitable mediator variables in effectuation studies.

The current study has practical implications for practitioners and researchers working towards the advancement of entrepreneurial activities. On the balance of the well-documented resource predicaments and environmental uncertainties within which entrepreneurial activity takes place, this study contributes to the emergence of knowledge that could enable small businesses to effectively navigate the endemic constraints.

Consistent with the assertion by McKelvie *et al.* (2020) that effectuation has grown beyond its traditional understanding, the current study, considering the spread of respondents, provides evidence of its application by expert and non-expert entrepreneurs. Consequently, this study will invigorate relevant effectuation curriculum development meant to enhance the effectual heuristic abilities of entrepreneurs. To advance entrepreneurial activities, these heuristics must be learned and utilized effectively by entrepreneurs to achieve business outcomes.

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