# EFFECT OF STRATEGIC AGILITY ON THE RELATIONSHIP OF ABSORPTIVE CAPACITY AND FIRM PERFORMANCE

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#### ABSTRACT

The aim of this study is to examine the effect of strategic agility on the relationship between absorptive capacity and firm performance. For this purpose, structured questionnaire was distributed via email and satisfactory respondent rate achieved for analysis. By using exploratory factor analysis (EFA), absorptive capacity was determined to have positive effect on firm performance through strategic agility. The dimensions of absorptive capacity have some positive and indirect effect on firm performance. Data analysis and managerial and practical implications are also discussed in detail.

Keywords: Absorptive capacity Firm performance Strategic agility

#### Introduction

The ability of a company to perceive the value of new knowledge, digest it, and apply it to commercial goals is known as absorptive capacity (Cohen and Levinthal, 1990). Absorptive aptitude, which enables businesses to identify, gather, evaluate, grasp, and creatively utilise external data (Lane et al., 2006), aids management in the building of consumer loyalty and satisfaction (Tzokas et al., 2015). Adsorptive capacity is a dynamic skill that affects the nature and longevity of a firm's competitive advantage, according to several research (Cohen and Levinthal, 1990; Zahra and George, 2002; Jansen et al., 2005; Tu et al., 2006).

Because of the uncertainty created by external factors (political, legal, economic, sociocultural, technological, natural factors, fashion, terror, etc.) that cannot be controlled in the sector, the intense competition in the sector, and changes in customer demand/expectations, external knowledge is important from the perspective of the sector's businesses' sustained performance (Shaw and Williams, 2009; King et al., 2014). Knowledge, knowledge exchange, and knowledge management are all well-documented topics (e.g. Hallin and Marnburg, 2008; Shaw and Williams, 2009; Yang, 2010; Kim and Lee, 2013).

Although there has been some research on absorptive ability (Weidenfeld et al., 2009; Thomas, 2012), just a few studies have been found that go into great detail on it. In these studies, the absorptive capacity is found to be focused on competitive advantage, innovation (Thomas and Wood, 2014, 2015), and value generation (Valentina and Passiante, 2009). There hasn't been a single study that looks into how absorption capacity affects a company's overall success. The purpose of this research is to fill a gap in the literature. Once the impacts

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of absorptive capacity on production, financial, marketing, customer relations, and other parts of the firm's complete success are known, interest in absorptive capacity will be affected (Tzokas et al., 2015).

Another area that has grabbed the interest of scholars in recent years and has a considerable impact on business success is strategic agility (Vickery et al., 2010; Tallon and Pinsonneault, 2011; Inman, 2012).

Management must rely on external information sources to adapt more adequately to the intricacies of a fast changing dynamic environment and to survive (Lane and Lubatkin, 1998; O'Connor, 2008). Several authors, including Adams and Lamont (2003), Darroch (2005), Marqués and Simón (2006), have emphasised the importance of acquiring and managing information to improve overall business performance and create competitive advantage.

Apart from the acquisition of information, organisations must also invest in and address the proper application of that knowledge for the aims of the business (Tzokas et al., 2015). As a result, businesses must improve their ability to absorb information, which is considered as a source of competitive advantage (Cohen and Levinthal, 1990; Jansen et al., 2005; Tu et al., 2006). Agility enables businesses to react fast to changes, be flexible, adapt to changes, and take additional measures to reduce market risk and uncertainty (Sambamurthy et al., 2003; Sherehiy et al., 2007). Strategic agility is the delicate and unbroken preservation of management's flexibility, perception, prediction, and strategic sensitivity in respect to its internal and external settings (Kumkale, 2016). An agile business adapts its organisational culture to market changes, learns about market changes rapidly, capitalises on them, and changes its products to satisfy individual preferences (Desouza, 2007; Braunscheidel and Suresh, 2009). At the same time, these disruptions can be transformed into opportunities by rebuilding the system and its strategy in response to environmental changes (Sharifi and Zhang, 1999; Shin et al., 2015). Despite the fact that various studies (e.g., Irvine and ; Mandal et al., 2017) have emphasised on the importance of agility for this industry, it appears that strategic agility has not been adequately addressed.

The goal of this research, which is based on the aforementioned viewpoints, is to look at the mediating function of strategic agility in the effect of company performance on enterprise absorptive capacity. Previous research hasn't looked at the relationship between absorbtive capacity, firm performance, and strategic agility. This issue is especially relevant for growing countries and countries with a high level of uncertainty, aside from the sector's peculiarities. Due to the region's fragile environment, accommodation establishments have faced the potential of being unable to maintain operations in recent years. The significance of monitoring environmental changes, making appropriate adjustments, and managing risk for hotel companies has intensified in this highly uncertain atmosphere. As a result, future managers and academics will benefit from this assessment of absorptive capability and strategic agility, as well as the relationship between these words and business performance.

## Literature review

## Absorptive capacity

According to Zahra and George, absorption capacity has two subsets and four dimensions (2002). The two subsets are potential absorptive capacity and accomplished absorptive capacity. A firm's potential absorptive capacity is its ability to absorb and assimilate



knowledge; realised absorptive capacity is its ability to adapt and exploit acquired knowledge by incorporating it into its operations. This distinction has been exploited by Jansen et al., 2005; Thérin, 2007; Fosfuri and Tribo', 2008; Camisón and Forés, 2010; Delmas et al., 2011; Flatten et al., 2011; Ali et al., 2016; Ali and Park, 2016).

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The term "absorptive capacity" was coined by Cohen and Levinthal (1989). Cohen and Levinthal (1989) claim that R&D centres improve a company's ability to recognise, assimilate, and utilise new knowledge received from its surrounds. Absorptive capability was coined to describe this scenario. As a result, they used a three-dimensional scale to assess absorption capacity. Zahra and George (2002, p.186) define "as a set of organisational routines and processes by which firms acquire, assimilate, transform, and exploit knowledge to produce a dynamic organisational capability" as "a set of organisational routines and processes by which firms acquire, assimilate, transform, and exploit knowledge to produce a dynamic organisational capability." Absorptive capacity refers to a company's ability to recognise the value of new knowledge, digest it, and apply it to commercial goals (Flatten et al., 2011). Exploratory, transformative, and exploitative learning processes are all instances of absorptive capacity in a firm's exploratory, transformative, and exploitative learning processes (Lane et al., 2006).

Strategic agility is seen when competing in local, national, and international markets, effectively addressing changing customer needs, offering new products, adapting to negatively progressing political change, forming strategic partnerships, and giving top-level service (Gehani, 1995; Oyedijo, 2012). Providing strategic agility demands continuous monitoring of internal and external environments, rapid data collection and application, and rapid market response (Kumkale, 2016). Agility can help a company operate better by boosting the quality of its competitive activity inventory and its ability to respond to changing conditions (Tallon and Pinsonneault, 2011; Sambamurthy et al., 2003).

Acquisition refers to a firm's ability to recognise and acquire external knowledge about itself from surrounding information (Fosfuri and Tribo', 2008). Assimilation also refers to a company's ability to develop proper processes and routines for analysing, interpreting, and comprehending data from external sources (Flatten et al., 2011). The act of building and refining these routines in order to make it simpler to connect current knowledge with freshly learnt and absorbed information for future use is referred to as "transformation" (Zahra and George, 2002). This also includes the ability to update, adapt, and mix information from external sources with information generated internally (Fosfuri and Tribo',



2008). EXploitation refers to the capacity of a firm to develop, expand, and use existing routines, competencies, and technologies to create something new based on "transformed" knowl- edge (Haro-Domínguez et al., 2007).

## 2.2. Absorptive capacity and firm performance

Many research have found that absorptive capacity has a favourable impact on business and innovation success. The relationship between absorptive capacity and new product development performance was explored by Stock et al. (2001). Absorbtive capacity and new product development success are positively associated, although only to a certain extent, according to the authors' research. Higher absorptive capacity is related with lower levels of new product development performance after this turning point. In a similar vein, Lichtenthaler (2016) discovered an inverted U-shaped association between absorptive capacity improves a firm's financial performance of a company. That is, absorptive capacity improves a firm's financial success to some level, but it has a detrimental effect on financial performance after a certain point. Kotabe et al. (2011) concluded that actual absorptive capacity interacted with the acquisition of information and increased new product market performance.

Potential absorptive capacity, according to Fosfuri and Tribo' (2008), is a source of competitive advantage in innovation, especially when there is an efficient internal information flow that helps to close the gap between potential and realised capacity. Harvey et al. (2010) proposed a model in which both internal and external factors influence absorptive capacity, and that absorptive capacity, in turn, improves a firm's performance. Absorbtive capacity has also been proven to improve the performance of SMEs in some research.

## 2.3. Absorptive capacity and strategic agility

To properly comprehend agility, an integrated approach is required. According to Lu and Ramamurthy (2011), operational adjustment agility is important for the establishment of organisational agility, in addition to market agility. Strategic alliances are also useful for assuring agility. Kidd (1994) stressed the importance of a synthesis that several companies, each with different basic skills and competencies, establish in order to respond to customer needs; he proposed that basic elements that can provide superiority in competition, such as people, organisation, and technology, must be integrated in order to achieve agility. Gehani (1995) underlined certain functions of an agile business: meeting customer expectations quickly, introdu- cing new products in a timely manner, and getting in and out of stra- tegic partnerships quickly.

In 1991, the Iacocca Institute conducted a survey in the United States that focused on capability-based, flexible, and agile production to suit the market's quickly changing needs (Iacocca Institute, 1991). The definition of agility has broadened and differentiated as a result of the Iacocca Institute's definition. Agility is defined as the ability to transform constantly changing customer situations into profitable ability in a competitive environment (Goldman and Nagel, 1993), progressing and surviving in a variable and unforeseen environment (Gunasekeran, 1999; Dove, 2001), acting proactively against change in a turbulent environment, and creating opportunities from change (Sharifi and Zhang, 1999; Bessant et al., 2001).

The ability to dynamically assess or re-discover the company and its strategy in response to changes in the business environment is referred to as strategic agility (Doz and Kosonen, 2008; Lengnick-Hall and Beck, 2009). Strategic agility and long-term strategies have taken their positions, and it is now up to you to choose the best strategy from a variety of options with a strategic orientation. The ability to be agile is intimately tied to the organization's human performance, processes, and technologies (Al-Azzam et al., 2017). Strategic agility, according to Doz and Kosonen (2010), can be enhanced by the existence of three meta-skills (strategic sensitivity, leadership unity, and resource fluidity) that will help an organisation become more agile. Furthermore, strategic agility necessitates more sensitive and rapid management of predictions about the business's internal and external environment, perceptions, flexibility, and strategic sensitivity (Kumkale, 2016). Through inter-company cooperation, strategic agility tries to obtain information about predicted market developments. Strategic agility differs from reactivity in that it is knowledge-based and proactive.

Agility is defined as the use of functions such as high quality, quick delivery, flexibility, responsiveness to innovation, change adaption, and low cost to gain a competitive advantage (Sherehiy et al., 2007; leri and Soylu, 2010; Ustasüleyman, 2008). When competing in local, national, and international markets, effectively addressing changing customer wants, introducing new products, reacting to negatively progressing political change, forming strategic partnerships, and providing top-level service, strategic agility is essential (Gehani, 1995; Oyedijo, 2012).

There are few research on the relationship between absorptive capacity and strategic agility, according to this literature review. However, some research corroborate this link in a roundabout way. Strategic learning dimensions such as knowledge acquisition, interpretation, dissemination, and action (strategic knowledge generation, strategic knowledge interpretation, and strategic knowledge implementation) are all related to strategic agility, according to Idris and Al- Rubaie (2013). For agility, Sambamurthy et al. (2003) stressed the relevance of knowledge reach and richness. According to Mao et al. (2013), information technology and knowledge competencies have a favourable impact on organisational agility.

# 2.4. Strategic agility and firm performance

Studies on the effects of agility and strategic agility on firm performance are mainly undertaken in the fields of production and information technology, as seen by the preceding literature review. Value chain agility, according to Swafford et al. (2006), influences corporate performance. Ojha (2008) discovered that market perception is a key predictor of strategic agility, that strategic agility has no direct impact on financial performance, and that strategic agility is beneficial in somewhat confusing contexts. Vickery et al. (2010) found that agility has a beneficial impact on firm performance in their study of manufacturing firms. Tallon and Pinsonneault (2011) discovered a strong and favourable correlation between firm performance and agility. According to Inman et al. (2011), there is a favourable relationship between agile manufacturing and financial, marketing, and operational performance. Roberts and Grover (2012) investigated the link between agility (the ability to sense and respond to customers) and firm performance. Customer sensing capability has a beneficial impact on firm performance. Shin et al. (2015) discovered that



strategic agility improves operational performance and customer retention but not financial performance. Strategic agility, according to Teoh et al. (2017), is a key mediator between corporate risk management strategies and firm performance.

According to several studies, strategic agility improves firm performance by providing a competitive edge. Kumkale (2016) looked at strategic agility as a way to get a competitive edge. She also argued that, in order to maintain strategic agility, the internal and external environments should be assessed on a regular basis, information should be obtained and used fast, and market changes should be addressed promptly. She claims that by becoming strategic agility, according to Ofoegbu and Akanbi (2012) and Yang and Liu (2012), has a significant impact on corporate performance and is a vital resource for organisations seeking a competitive advantage. The following hypothesis is derived from various research in the literature.

# 2.5. The mediating role of strategic agility

Strategic agility can mediate the impact of absorptive capacity on firm performance, in addition to the direct effects of absorptive capacity on strategic agility and strategic agility on firm performance (Fig. 1). There are only a few studies in the literature that look at the mediating role of strategic agility. Cegarra-Navarro et al. (2016) discovered a mediating effect of organisational agility in the influence of knowledge application on organisational performance in their study of 112 large Spanish enterprises. Tallon and Pinsonneault (2011) found a mediating role of firm agility in the impact of strategic information

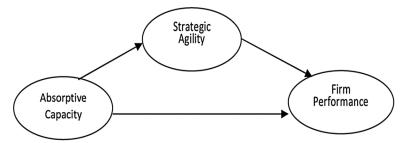


Fig. 1. The proposed research model.

technology alignment on firm performance. Another study found that supply chain agility plays a mediating role in the link between absorptive agility and firm performance (Martinez-Sanchez and Lahoz-Leo, 2018). Based on prior research, strategic agility may have a role in the impact of absorptive ability on firm performance, leading to the following hypothesis.

H4. Strategic agility mediates the relationship between absorptive capacity and firm performance.

## 3. Research methodology

# 3.1. Sampling and data collection

Accommodation establishments make up the study's sample. Data was gathered using a survey method. Approximately 1600 e-mail addresses were acquired from a website that offers contact information, and a link to the web-based survey was delivered to them. In the correspondence, the goal of the study was outlined, and top management was asked to complete the survey found at the attached link. When the ratio of delivery-to-read status was



investigated, it was discovered to be very minimal (about 30 percent). The mail reading rate was assumed to be low due to a variety of factors, including incorrect mail addresses, full mail boxes, and mail that was destroyed without being read. A total of 210 questionnaires were gathered at the conclusion of the study. Questionnaires that were incomplete and not filled out by managers, as well as those supplied from the same IP addresses, were discarded, leaving 190 questionnaires to be used at the conclusion of the study.

# 3.2. Scales

Three different scales were utilised to measure demographic data and management knowledge, as well as absorptive capacity, strategic agility, and management performance, in the study survey.

The absorptive capacity was measured using a 14-item scale created by Flatten et al. (2011) and adapted by Ylmaz (2013). Both the original and the adaptation were taken into account when creating the scale. A five-point Likert scale was utilised in the survey (1: never, 5: always). 1. Finding relevant information about our industry is an everyday affair at our firm; 2. our management stresses cross-departmental support to address challenges; and 3. our management encourages employees to use industry-specific information sources. The scale confidence was determined to be Cronbach's alpha = 0.94 after the pretest.

Tallon and Pinsonneault's (2011) findings were used in the assessment of strategic agility. Eight items relating to the basic question "How simply and rapidly can your firm accomplish the following actions?" were used to assess strategic agility. (For example, 1. respond to changes in aggregate consumer demand; 2. personalise a product or service to meet the needs of an individual client), and a five-point Likert scale was employed (1: do not agree; 5: agree completely). The scale confidence was determined to be Cronbach's alpha = 0.77 after the pretest. The scale has been adjusted.

The 7-item scale established by Zerenler (2005) was used to assess firm performance. Questions about firm success were developed by comparing each firm to its competitors (in the last three years, your establishment's 1. market share was compared to your competitors). 2. service/product quality, etc.) on a 5-point Likert scale (1: extremely poor, 5: very high). The scale confidence was determined to be Cronbach's alpha = 0.90 after the pretest.

Four academics who were experts in the field evaluated the scale questions, and the scales that were chosen were formed. In addition, in face-to-face interviews with ten managers, statements were checked to see if they were comprehended, and any points that were not understood were corrected. The questionnaire was finalised, and pretests were administered to 50 businesses in the Cappadocia region. The scales were determined to have appropriate confidence levels based on the pretest, and the research was continued.

# 3.3. Analysis of the data

The information for participants and establishments was analysed using frequency analysis. The dimensions of the scale were created using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA), and the entire measurement model was created using CFA. The associations between the variables were investigated using structural equation modelling.

## 4. Results



#### 4.1. Sample characteristics

75 percent of the participants are males, and 25% are females; 44 percent are between the ages of 31 and 40, and 23 percent are between the ages of 41 and 50; 48 percent are general managers, 9% are assistant general managers, and the remainder are department managers; 61 percent are graduates; and 55 percent have worked in the industry for 13 years or more. The participants had been employed in their current roles for an average of 1–3 years and 22 percent for 4–6 years. According to the establishments' ages, 38 percent are 5 years old or under, 20 percent are 6–10 years old, and 19 percent are 21 years old or more.

## 4.2. Individual measurement model

The scales employed in the study were subjected to exploratory and confirmatory factor analysis. EFA with Varimax rotation was used for 14 variables using principal components analysis to establish the dimensions of the absorptive capacity scale. Unlike the original scale, factor analysis revealed two dimensions. The two variables are responsible for 66.76 percent of the total variation. The KMO test for sampling adequacy yielded a result of 92 percent, while Bartlett's test yielded a significant result (2 = 2058,951, s.d.: 91, p 0.0001). The study yielded the first factor, which consisted of 11 statements. According to Thomas and Wood, this element is connected with the analysis, transformation, and creative use of knowledge (2014). The eigenvalue of this factor is 8.04, and it accounts for 57.42 percent of the overall variance. According to the literature, the second element, which includes the three statements relating to the acquisition of external knowledge, is called 'acquisition.' The eigenvalue of this factor is 1.30, and it accounts for 9.33% of the overall variance. Cronbach's alpha for the use factor is 0.94, whereas Cronbach's alpha for the acquisition factor is 0.81.

The absorptive capacity scale was submitted to two-dimensional confirmatory factor analysis after exploratory factor analysis. The CFA goodness of fit scores are adequate (2 = 149.961, df = 70, CFI = 0.96, GFI = 0.90, RMSEA = 0.07).

EFA and CFA were applied to the strategic agility scale. In EFA, the scale's eight variables are grouped into one factor. However, due to the small amount of explained variance, the three variables with the lowest factor loadings (S4, S2, and S5) were removed from the scale. Total variance increased to 52 percent as a result of the most recent factor analysis. The KMO test for sampling sufficiency is 78 percent accurate, and Bartlett's test is significant (2 = 189,924, s.d.: 10, p 0.0001). Following CFA, it was shown that the scale with 5 variables had superior goodness of fit values than the scale with 8 variables (2 = 7,936, df = 5, CFI = 0.98, GFI = 0.98, RMSEA = 0.05).

For the firm performance scale, EFA and CFA were also used. Seven scale variables are grouped into one factor in EFA. The total variation explained is 63 percent. The KMO test for sampling sufficiency is 87 percent accurate, and Bartlett's test is significant (2 = 855,484, s.d.: 21, p 0.0001). CFA has been confirmed to have a single-factor structure (2 = 29,595, df = 12, CFI = 0.98, GFI = 0.96, RMSEA = 0.8).

## 4.3. Overall measurement model

The absorptive capacity, strategic agility, and firm performance were all examined using CFA. The model's fit indices (2 = 458,270, df = 284, CFI = 0.95, GFI = 0.85, RMSEA = 0.6) are satisfactory to excellent. The standardised regression coefficients of each of the observed variables were likewise more than 0.50 (Bagozzi and Yi, 1988:82), and the t values ranged

from 6.395 to 18.046 (p 0.001; t > 1.96) (Bagozzi and Yi, 1988:82). (Schumacker and Lomax, 2004).

The values of composite reliability (CR), average variance extracted (AVE), and maximum shared variance (MSV) were determined using the data from EFA and CFA, as shown in Table 1. Cronbach's alpha values, correlation analysis results, and the mean and standard deviation of each variable were also discovered. The study's reliability and validity were tested, according to the results. According to studies, the dependability coefficient should not be less than 0.70. (Nunnally, 1978; Iacobucci and Duhachek, 2003). Cronbach's alpha values were generated to assess the internal consistency of the structures. The variables have Cronbach's alpha values of 0.77-0.94 > 0.70. CR values should be 0.70 or above, according to Hair et al. (2010). The CR values were found to range between 0.75-0.93 > 0.70 in the study. The square root of each structure's AVE values is more than its correlation with other structures, and AVE values are greater than 0.50. Aside from that, AVE values are higher than MSV values. Convergent and discriminant validity are guaranteed by these findings (Fornell and Larcker, 1981; Hair et al., 2010).

The two aspects of absorptive ability, acquisition (r = .47, p.01) and use (r = .46, p.01), are positively associated to firm performance, according to correlations among the variables. Strategic agility was found to be positively associated to firm performance (r = .55, p.01). Similarly, there is a positive association between strategic agility and acquisition (r = .64, p.01) and use (r = .68, p.01).

Correlations, Means a	nd Values o	of Reliability ar	nd Validity.							
	М	Std	а	AVE	CR	MS	1	2	3	4
	ea	. D.				V				
	n									
1-Acquisition	3.7 7	0.86	0.94	0.505	0.752	0.4 38	0.710			
2-Use	3.9 4	0.79	0.81	0.611	0.823	0.4 65	0.662*	0.782		
3-Strategic Agility	3.7 9	0.83	0.77	0.581	0.938	0.4 65	0.635* *	0.682* *	0.762	
4-Firm	3.7	0.68	0.91	0.577	0.903	0.3	0.467*	0.463*	0.549*	0.75
Performance	2					01	*	*	*	9

#### Table 1

Notes: Square roots of AVE values are indicated diagonally and in bold. \*\*p < .01.

## Table 2

Structural Equation Model Comparisons.

Criteria	x <sup>2</sup> sd		x²/sd GFI	NFI	IFI	CFI	RMSE	A
Direct Model	281.080	177	1.588	.88	.91	.96	.97	.05
Indirect Model	466.822	286	1.632	.85	.88	.95	.95	.06
Hypothesized Model	458.270	284	1.614	.85	.88	.95	.95	.06

# 4.4. Hypothesis testing

To assess the mediating role of strategic agility in the effect of absorptive capacity on firm performance, three different path models were developed (Table 2). The direct effect of

absorptive capacity on firm performance was determined using a direct model. The goodness of fit scores for this model are between good and acceptable fit limits (2 = 281.080 df = 177, 2/df = 1.588; CFI =.97, GFI =.88; RMSEA =.05). According to this model, the absorptive capacity utilisation component has a positive and significant effect on firm performance (=.30, p.01). However, there was no evidence of a positive and significant effect of acquisition dimension on firm performance (=.11, p >.01). As a result, H1 is only partially accepted.

The second model (absorptive capacity-strategic agility-firm performance) was utilised to show indirect links. The quality of fit values for this model are between acceptable and good (2 = 466.822 df = 286, 2/df = 1.632; CFI = .95, GFI = .85; RMSEA = .06). Both the acquisition dimension (=.19, p.01) and the usage dimension (=.33, p.01) have favourable effects on strategic agility, according to this model. Strategic agility has a beneficial impact on firm performance (=.68, p.01). As a result, H2 and H3 are accepted.

All inter-variable paths were included in the last model (hypothesised model). The quality of fit values for this model are between acceptable and good (2 = 458.270 df = 284, 2/df = 1.614; CFI =.95, GFI =.85; RMSEA =.06). According to this model (Fig. 2), whereas the absorptive capacity usage dimension has a positive and significant effect on firm performance (=.21, p.01), the acquisition dimension has no positive and significant effect on firm performance (=.06, p >.01). Strategic agility is positively influenced by the acquisition (=.19, p.01) and use (=.29, p.01) dimensions of absorptive capacity. The effect of strategic agility on firm performance is positive (=.33, p.05).

According to the direct model, the relationship between the use dimension and firm performance in mediating strategic agility is less. The relationship between the usage dimension and firm performance is mediated by strategic agility. A Sobel test was used to measure the significance of this partial mediation. The partial mediation is statistically significant at the p 0.001 level, and the Z score is Z = 3.860, according to the Sobel test. Although the acquisition dimension has little direct impact on firm performance, it does play a role in mediating strategic agility. As a result, H4 is acceptable.

# 5. Discussion and conclusion

Absorptive capacity is crucial to the success of hotel establishments in the industry, which is affected by environmental uncertainty

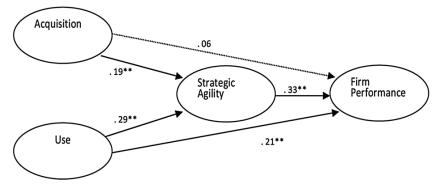


Fig. 2. Structural path estimates model. Note: All path estimates are standar- dized; \*p < .05., \*\*p < .01.



and rapid changes. This study examined the influence of absorptive capacity establishments' firm performance and the mediating role of strategic agility in this influence.

In contrast to the original scale (Flatten et al., 2011), exploratory factor analysis revealed that the aspects of absorptive capacity are only two (acquisition, assimilation, transformation, and use). While the acquisition dimension remained untouched, the assimilation, transformation, and use dimensions were merged into a single dimension known as use. The earlier investigations (Camisón and Forés, 2010; Delmas et al., 2011; Flatten et al., 2011; Jimenez-Barrionuevo et al., 2011) were conducted outside of the service industry. In a study of hotel establishments in England, Thomas and Wood (2014) found that a two-factored model of absorptive capacity was the best fit. The authors proposed a two-dimensional model. It's noteworthy that identical results were obtained using a different scale on lodging places in a different country and culture. These findings suggest that absorptive capacity in lodging places, and possibly even in the service business, should be reviewed using a different scale and model. This disparity could be related to the industry's unique peculiarities. Enterprises have simultaneous production and consumption, a limited scope of R&D activities, and a high operational dimension of tasks, all of which need the quick use of external information in change scenarios. As a result, the processes of adopting and converting information occur in tandem with the usage of information in lodging establishments, and they are grouped together under one dimension.

In terms of the impact of the two dimensions of absorptive ability (acquisition and usage) on firm performance, it was determined that the acquisition dimension had no direct impact. Previous research has yielded both comparable and dissimilar results. Thérin (2007) found no link between acquisition dimensions and financial or innovation performance. Flatten et al. (2011) discovered that the acquisition dimension has an impact on small and medium-sized businesses' success. Obtaining external information may not have an impact on firm performance on its own, but it is required as a first stage in the absorptive capacity process. This is an important factor for attaining absorptive capacity since it is a dimension of prospective absorptive capacity.

Following the collection of information, the use dimension, which includes information assimilation, transformation, and exploitation, was discovered to have an impact on firm performance. To put it another way, it is beneficial to the overall performance of hotel businesses when external data is coupled with internal data, translated into valuable data for the business, and used.

The favourable effects of absorptive capacity characteristics on strategic agility were investigated in this study. Although no research has been done on this topic, some studies have looked at the impact of knowledge reach and richness, knowledge skills, strategic learning, and other factors on strategic agility (Sambamurthy et al., 2003; Idris and Al-Rubaie, 2013; Mao et al., 2013). It is vital for hotel establishments to assimilate and use environmental information appropriately in order to detect and respond rapidly to environmental dangers and opportunities, as well as to adjust consumer, supplier, and operational strategies.



Strategic agility has an impact on firm performance, according to our findings. Firm performance improves when businesses respond promptly to environmental and technological changes, adapting and changing tactics in response to customer expectations and rival actions. Strategic agility has been shown to improve firm performance in earlier studies (Vickery et al., 2010; Tallon and Pinsonneault, 2011; Ofoegbu and Akanbi, 2012; Yang and Liu, 2012). Jacobs et al. (2011), on the other hand, found no link between manufacturing agility and firm performance.

Through strategic agility, the acquisition component of absorptive capacity has an indirect effect on firm performance. Firms that apply external knowledge by adapting external strategies to their own plans experience rapid improvements in performance. The use dimension appears to have a direct impact on firm performance as well as an indirect impact through strategic agility. Strategic agility plays a significant and partly moderating role in this influence.

# 5.1. Theoretical and practical implications

The findings of this study add to the body of knowledge. Aside from a few studies (Valentina and Passiante, 2009; Thomas and Wood, 2014, 2015) in the literature, absorption capacity is a poorly explored topic. The impact of new product development and innovation performance in high-tech sectors has been the focus of absorptive capacity research. However, because environmental variables, changes in customer preferences, intense competition, and other factors affect businesses swiftly, it's critical to look at the effects of obtaining, transforming, exploiting, and utilising external data on firm performance.

The literature has yet to define the function of strategic agility in the relationship between absorptive capacity and firm success. The findings of this study on the mediating role of strategic agility in the effect of absorptive capacity on firm performance add to a better understanding of the effects of strategically and swiftly utilising absorbed and replenished knowledge. Given the paucity of studies on strategic agility in the literature, the findings of this study may add to the body of knowledge and serve as a foundation for future research.

The findings of this study may serve as a guidance for managers in the real world. Studies on absorptive ability and strategic agility can help managers improve their management performance, particularly in nations where environmental changes are quick and reflected in the sector. For a variety of reasons, including fierce competition among firms in terms of destination and changing consumer and stakeholder expectations, enterprises must evaluate both absorptive capacity and strategic agility in terms of protecting and growing existing market shares and firm performance. As the findings of this study show, it is critical for company success to make decisions based on the acquisition and use of information and plans that are constantly updated.

Senior managers should foster a learning culture in their organisations by enhancing the ability of their accomodation staff to acquire, use, and develop agile strategies gained from the outside world. Managers should also develop human resources, not only to improve the quality of service, but also to find internal and external data that is critical to the business, integrate it with current data, and use it to the company's benefit. Furthermore, in order for this information to make a difference across the organisation, a good communication system



must be established and this information must be delivered to all appropriate levels of management at the same time.

#### 5.2. Limitations and suggestions for future study

The study's weakness is that the number of samples was limited due to the data collection method (e-mail). Most company e-mail addresses did not receive the electronic form, and many people did not read it. Another drawback is that the absorptive capacity scale used is a widely used scale in other industries. Furthermore, because there are few studies on strategic agility in the literature, any comparison of findings with those from other studies is difficult. Similarly, there is very little study on the mediating role of strategic agility in the literature, which limits the evaluation of the research findings. Other restrictions include gathering data from one individual from each establishment, measuring all scales with a single form, using a Likert scale for all, using the self-report technique in measurement, and assessing all scales with a single form. To tackle these issues, researchers used scales whose validity and reliability had been established in the literature. The need of maintaining the confidentiality of research findings is underlined. The dependent variable's questions were asked first, followed by questions on the mediating and independent variables; these scales were on different pages in the questionnaire design.

Future research can look at both absorptive capacity and strategic agility in terms of the sector, using different sampling groups. Given the paucity of research on both issues, this issue can be investigated in terms of overall business performance and various types of performance (e.g., financial performance, customer satisfaction, innovation performance), both in hotel establishments and other large and small businesses in the sector. Future studies should strive to use a multi-method multi-measure approach instead of ob- taining data from one source. New research is needed to explain agility-related concepts, to distinguish strategic agility from other types of agility, to help businesses comprehend its value, and to fill gaps in the literature. Examining the impact of firm stakeholders on strategic agility is a suggestion for a specific study topic. In addition, given the industry's features, it is advised that a new scale be developed to quantify absorptive capacity.

#### **References:**

- 1. Adams, G.L., Lamont, B.T., 2003. Knowledge management systems and developing sus- tainable competitive advantage. J. Knowl. Manag. 7 (2), 142–154.
- 2. Al-Azzam, Z.F., Irtaimeh, H.J., Khaddam, A.A.H., 2017. Examining the mediating effect of strategic agility in the relationship between intellectual capital and organizational excellence in Jordan service sector. J. Bus. 6 (1), 7–15.
- 3. Ali, M., Park, K., 2016. The mediating role of an innovative culture in the relationship
- 4. between absorptive capacity and technical and non-technical innovation. J. Bus. Res. 69 (5), 1669–1675.
- 5. Ali, M., Kan, K.A.S., Sarstedt, M., 2016. Direct and configurational paths of absorptive capacity and organizational innovation to successful organizational performance. J. Bus. Res. 69 (11), 5317–5323.
- 6. Bagozzi, R.P., Yi, Y., 1988. On the evaluation of structural equation models. J. Acad.
- 7. Mark. Sci. 16, 74–94.
- 8. Bessant, J., Francis, D., Meredith, S., Kaplinsky, R., Brown, S., 2001. Developing manu- facturing agility in SMEs. Int. J. Technol. Manag. 22 (1/2/3), 28–54.
- 9. Bolívar-Ramos, M.T., García-Morales, V.J., Martín-Rojas, R., 2013. The effects of in-
- 10. formation technology on absorptive capacity and organizational performance. Technol. Anal. Strateg. Manag. 25 (8), 905–922.
- Braunscheidel, M.J., Suresh, N.C., 2009. The organizational antecedents of a firm's supply chain agility for risk mitigation and response. J. Oper. Manag. 27 (2), 119–140.
- 12. Camisón, C., Forés, B., 2010. Knowledge absorptive capacity: new insights for its con- ceptualization and measurement. J. Bus. Res. 63 (7), 707–715.
- Cegarra-Navarro, J.G., Soto-Acosta, P., Wensley, A.K., 2016. Structured knowledge pro- cesses and firm performance: the role of organizational agility. J. Bus. Res. 69 (5), 1544–1549.
- 14. Cohen, W.M., Levinthal, D.A., 1989. Innovation and learning: the two faces of R&D. Econ.
- 15. J. 99 (397), 569–596.
- 16. Cohen, W.M., Levinthal, D.A., 1990. Absorptive capacity: a new perspective on learning and innovation. Adm. Sci. Q. 35, 128–152.
- 17. Darroch, J., 2005. Knowledge management, innovation and firm performance. J. Knowl.
- 18. Manag. 9 (3), 101–115.
- 19. Delmas, M., Hoff man, V.H., Kuss, M., 2011. Under the tip of the iceberg: absorptive ca- pacity, environmental strategy, and competitive advantage. Bus. Soc. 50 (1), 116–154.



20	Descurs K 2007 A sile Information Systems Concentualization Construction
20.	Desouza, K., 2007. Agile Information Systems: Conceptualization, Construction, and
21.	Management. Elsevier, Burlington, MA.
22.	Dove, R., 2001. Response Ability: The Language, Structure, and Culture of the Agile Enterprise. John Wiley & Sons Inc., New York.
23.	Doz, Y.L., Kosonen, M., 2008. The dynamics of strategic agility: nokia's rollercoaster experience. Calif. Manage. Rev. 50 (3), 95–118.
24.	Doz, Y.L., Kosonen, M., 2010. Embedding strategic agility: a leadership agenda for ac- celerating business model renewal. Long Range Plann. 43 (2), 370–382.
25.	Flatten, T.C., Greve, G.I., Brettel, M., 2011. Absorptive capacity and firm performance in SMEs: the mediating influence of strategic alliances. Eur. Manag. Rev. 8 (2), 137–152.
26.	Fornell, C., Larcker, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error. J. Mark. Res. 18 (1), 39–50.
27.	Fosfuri, A., Tribo <sup>'</sup> , J.A., 2008. Exploring the antecedents of potential absorptive capacity and its impact on innovation performance. Omega 36 (2), 173–187.
28.	García-Morales, V.J., Ruiz-Moreno, A., Llorens-Montes, F.J., 2007. Effects of technology
29.	absorptive capacity and technology proactivity on organizational learning, innova- tion and performance: an empirical examination. Technol. Anal. Strateg. Manag. 19 (4), 527–558.
30.	Gehani, R., 1995. Time-based management of technology. Int. J. Oper. Prod. Manag. 15
31.	(2), 19–35.
32.	Goldman, S.L., Nagel, R.N., 1993. Management, technology and agility: the
	emergence of a new era in manufacturing. Int. J. Technol. Manag. 18 (1-2), 18–38.
33.	Gunasekeran, A., 1999. Agile manufacturing: a framework for research and development.
34.	Int. J. Prod. Econ. 62, 87–105.
35.	Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., 2010. Multivariate data analysis.
36.	Upper Saddle River, 7th ed. Pearson Education, NJ.
37.	Hallin, C., Marnburg, E., 2008. Knowledge management in the hospitality
	industry: a review of empirical research. Tour. Manag. 29 (366-), 381.
38.	Haro-Domínguez, M.C., Arias-Aranda, D., Lloréns-Montes, F.J., Moreno, A.R.,
	2007. The impact of absorptive capacity on technological acquisitions engineering consulting companies. Technovation 27 (8), 417–425.
39.	Harvey, G., Skelcher, C., Spencer, E., Jas, P., Walshe, K., 2010. Absorptive capacity in a
40.	non-market environment: a knowledge-based approach to analysing the performance of sector organization. Public Manag. Rev. 12 (1), 77–97.



- 41. Iacobucci, D., Duhachek, A., 2003. Advancing alpha: measuring reliability with con-
- 42. fidence. J. Consum. Psychol. 13 (4), 478–487.
- 43. Iacocca Institute, 1991. 21st Century Manufacturing Enterprise Strategy. Lehigh University, USA.
- 44. Idris, W.M., Al-Rubaie, M.T., 2013. Examining the impact of strategic learning on stra-
- 45. tegic agility. J. Manag. Strategy 4 (2), 70–77.
- İleri, Y.Y., Soylu, Y., 2010. The concept of competitive advantage as a tool for the agility and organizational structure. J. Selcuk Univ. Vocat. Sch. Soc. Sci. 13 (1-2), 13–28.
- 47. Inman, R.A., Sale, R.S., Green Jr, K.W., Whitten, D., 2011. Agile manufacturing: relation
- to JIT, operational performance and firm performance. J. Oper. Manag. 29, 343–355. Irvine, W., Anderson, A.R., 2004. Small tourist firms in rural areas: agility, vulnerability and survival in the face of crisis. Int. J. Entrepreneurial Behav. Res. 10 (4), 229–246.
- 49. Jacobs, M., Droge, C., Vickery, S.K., 2011. Product and process modularity's effects on
- 50. manufacturing agility and firm growth performance. J. Prod. Innov. Manage. 28 (1), 123–137.
- 51. Jansen, J.J., Van Den Bosch, F.A., Volberda, H.W., 2005. Managing potential and realized
- absorptive capacity: how do organizational antecedents matter? Acad. Manag. J. 48 (6), 999–1015.
- Jimenez-Barrionuevo, M.M., Garcia-Morales, V.J., Molina, L.M., 2011.
  Validation of an instrument to measure absorptive capacity. Technovation 31 (5–6), 190–202.
- 54. Kidd, P., 1994. Agile Manufacturing Forging New Frontiers. Addison-Wesley,
- 55. Reading, UK.
- 56. Kim, T.T., Lee, G., 2013. Hospitality employee knowledge-sharing behaviors in the re- lationship between goal orientations and service innovative behavior. Int. J. Hosp. Manag. 34 (324-), 337.
- 57. King, B.E., Brren, J., Whitelaw, P.A., 2014. Hungry for growth? Small and medium-sized tourism enterprise (SMTE) business ambitions, knowledge acquisition and industry engagement. Int. J. Tour. Res. 16 (3), 272–281.
- 58. Kotabe, M., Jiang, C.X., Murray, J.Y., 2011. Managerial ties, knowledge acquisition,
- 59. realized absorptive capacity and new product market performance of emerging multinational companies: a case of China. J. World Bus. 46 (2), 166–176.
- 60. Kumkale, İ., 2016. Organization's tool for creating competitive advantage: strategic agi- lity. Balkan Near East. J. Soc. Sci. 2 (3), 118–124.



61.	Lane, P.J., Lubatkin, M., 1998. Relative absorptive capacity and
	interorganizational learning. Strateg. Manag. J. 19, 461-477.
62.	Lane, P.J., Koka, B.R., Pathak, S., 2006. The reification of absorptive capacity: a critical review and rejuvenation of the construct. Acad. Manag. Rev. 31 (4), 833–863.
63.	Lengnick-Hall, C.A., Beck, T.E., 2009. Resilience capacity and strategic agility: pre-
64.	requisites for thriving in a dynamic environment. In: Nemeth, C., Hollnagel, E., Dekker, S. (Eds.), Preparation and Restoration. Ashgate Publishing., Aldershot UK.
65.	Lichtenthaler, U., 2016. Absorptive capacity and firm performance: an integrative fra- mework of benefits and downsides. Technol. Anal. Strateg. Manag. 28 (6), 664–676.
66.	Lu, Y., Ramamurthy, K., 2011. Understanding the link between information technology
67.	capability and organizational agility: an empirical examination. Mis Q. 35 (4), 931–954.
68.	Mandal, S., Korasiga, V.R., Das, P., 2017. Dominance of agility in tourism value chains: evidence from India. Tour. Rev. 72 (2), 133–155.
69.	Mao, H., Liu, S., Zhang, J., 2013. How the effects of IT capability and knowledge cap-
70.	ability on organizational agility are contingent on environmental uncertainty and information intensity. Inf. Dev. 31 (4), 358–382.
71.	Marqués, D., Simón, P.F.J.G., 2006. The effect of knowledge management practices on
72.	firm performance. J. Knowl. Manag. 10 (3), 143–156.
73.	Martinez-Sanchez, A., Lahoz-Leo, F., 2018. Supply chain agility: a mediator for absorptive
74.	capacity. Balt. J. Manag. 13 (2), 264–278.
75.	Nunnally, J.C., 1978. Psychometric Theory, 2nd ed. McGraw Hill, New York.
76.	O'Connor, G.C., 2008. Major innovation as a dynamic capability: a systems approach. J. Prod. Innov. Manag. 25 (4), 313–330.
77.	Ofoegbu, O.E., Akanbi, P.A., 2012. The influence of strategic agility on the perceived performance of manufacturing firms in Nigeria. Int. Bus. Econ. Res. J. 11 (2), 153–160.
78.	Ojha, D., 2008. Impact of strategic agility on competitive capabilities and financial per-
-	

- 79. formance. Unpublished doctoral dissertation. Philosophy Management, Graduate School of Clemson University.
- 80. Oyedijo, A., 2012. Strategic agility and competitive performance in the Nigerian tele- communication industry: an empirical investigation. Am. Int. J. Contemp. Res. 2 (3), 227–237.



- 81. Roberts, N., Grover, V., 2012. Investigating firm's customer agility and firm performance: 82. the importance of aligning sense and respond capabilities. J. Bus. Res. 65 (5), 579-585. 83. Sambamurthy, V., Bharadwaj, A., Grover, V., 2003. Shaping agility through digital op- tions: reconceptualizing the role of it in contemporary firms. Mis Q. 27 (2), 237-263.84. Schumacker, R.E., Lomax, R.G., 2004. A Beginner's Guide to Structural Equation 85. Modelling, 2nd ed. Lawrence Erlbaum Associates, Inc. Sharifi, H., Zhang, Z., 1999. A methodology for achieving agility in 86. manufacturing or- ganisations: an introduction. Int. J. Prod. Econ. 62, 7-22. 87. Shaw, G., Williams, A., 2009. Knowledge transfer and management in tourism organi- sations: an emerging research agenda. Tour. Manag. 30, 325–335. 88. Sherehiy, B., Karwowski, W., Layer, J.K., 2007. A review on enterprise agility: concepts, 89. frameworks, and attributes. Int. J. Ind. Ergon. 37 (5), 445–460. 90. Shin, H., Lee, J.N., Kim, D.S., Rhim, H., 2015. Strategic agility of Korean small and medium enterprises and its influence on operational and firm performance. Int. J. Prod. Econ. 168, 181–196. 91. Stock, G.N., Greis, N.P., Fischer, W.A., 2001. Absorptive capacity and new product de-92. velopment. J. High Technol. Manag. Res. 12, 77-91. 93. Swaff ord, P.M., Ghosh, S., Murthy, N.N., 2006. A framework for assessing value chain agility. Int. J. Oper. Prod. Manag. 26 (2), 118-140. 94. Tallon, P.P., Pinsonneault, A., 2011. Competing perspectives on the link between strategic information technology alignment and organizational agility: insights from a med-iation model. Mis Q. 35 (2), 463-486. 95. Teoh, A.P., Lee, K.Y., Muthuveloo, R., 2017. The impact of enterprise risk management, strategic agility and quality of internal audit function on firm performance. Int. 96. Rev. Manag. Market. 7 (1), 222–229. 97. Thérin, F., 2007. Absorptive capacity: an empirical test of Zahra and George's contribu- tion in small business settings. Gest. 2000 24 (4), 17-30. 98. Thomas, R., 2012. Business elites, universities and knowledge transfer in tourism. Tour. 99. Manag. 33, 553-561. 100. Thomas, R., Wood, E., 2014. Innovation in tourism: Re-conceptualising and measuring the absorptive capacity of the hotel sector. Tour. Manag. 45, 39–48. 101. Thomas, R., Wood, E., 2015. The absorptive capacity of tourism organisations. Ann. Tour. Res. 54, 84-99.
- 102.



- Thrassou, A., Vrontis, D., Bresciani, S., 2014. Strategic reflexivity in the hotel industry a value-based analysis. World Rev. Entrep. Manag. Sustain. Dev. 10 (2/3) 352-271.
- 104. Tsai, W., 2001. Knowledge transfer in intraorganizational networks: effects of network position and absorptive capacity on business unit innovation and performance. Acad. Manag. J. 44 (5), 996–1004.
- 105. Tu, Q., Vonderembse, M.A., Ragu-Nathan, T.S., Sharkey, T.W., 2006. Absorptive capacity:
- 106. enhancing the assimilation of time-based manufacturing practices. J. Oper. Manag. 24 (5), 692–710.
- 107. Tzokas, N., Kim, Y., Akbar, H., Al-Dajani, H., 2015. Absorptive capacity and performance: the role of customer relationship and technological capabilities in high-tech SMEs. Ind. Mark. Manag. 47, 134–142.
- 108. Ustasüleyman, T., 2008. A structural model suggestion about the effect of agility on firm's
- 109. performance, Gazi University. J. Econ. Admin. Sci. Faculty 10 (2), 161–178.
- 110. Valentina, N., Passiante, G., 2009. Impacts of absorptive capacity on value creation.
- 111. Anatolia 20 (2), 269–287.
- 112. Vickery, S.K., Droge, C., Setia, P., Sambamurthy, V., 2010. Supply chain information technologies and organisational initiatives: complementary versus independent ef- fects on agility and firm performance. Int. J. Prod. Res. 48 (23), 7025–7042.
- 113. Volberda, H.W., Foss, N.J., Lyles, M.A., 2010. Absorbing the concept of absorptive ca-
- 114. pacity: how to realize its potential in the organization field. Organ. Sci. 21 (4), 931–951.
- 115. Weidenfeld, A., Williams, A.M., Butler, R.W., 2009. Knowledge transfer and innovation among attractions. Ann. Tour. Res. 37 (3), 604–626.
- 116. Yang, J., 2010. Antecedents and consequences of knowledge sharing in international
- 117. tourist hotels. Int. J. Hosp. Manag. 29, 42–52.
- 118. Yang, C., Liu, H.M., 2012. Boosting firm performance via enterprise agility and network
- 119. structure. Manag. Decis. 50 (6), 1022–1044.
- 120. Yılmaz, A., 2013. Absorptive capacity and firm performance: a research in ESO, un- published doctoral dissertation. Anadolu University Social Sciences Institute.
- 121. Eskisehir.
- 122. Zahra, S.A., George, G., 2002. Absorptive capacity: a review, reconceptualization, and extension. Acad. Manag. Rev. 27 (2), 185–203.



123. Zerenler, M., 2005. The performance measurement system design and a study on per- formance measurement of manufacturing systems. Int. J. Econ. Soc. Res. 1, 1–36