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THE ROLE OF SUPPLY CHAIN AGILITY IN THE RELATIONSHIP BETWEEN SUPPLY CHAIN ANALYTICS CAPABILITY AND FIRM PERFORMANCE

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ABSTRACT

The global integration of supply chains has tremendously increased data generation in operational processes. The data produced is vital in the decisions of supply chain managers. The increasing importance of data management has necessitated the use of big data analytics in supply chain management and thus the concept of supply chain analytics capability has emerged. The effective use of big data by supply chain management is considered as a skill. Supply chain agility is the ability of the supply chain to quickly adapt and respond to changing conditions in a changing market environment. Although the effects of supply chain analytics capability on the performance of companies are becoming more evident, the role of supply chain agility in this relationship has not been examined in the literature. In order to contribute to this gap in the literature, this study investigates the role of supply chain agility in the relationship between supply chain analytics capability and firm performance. The results of the research support that supply chain agility has a mediator role in the relationship between supply chain analytics capability and firm performance.

Keywords: Supply Chain Agility, Supply Chain Analytics Capability, Firm Performance

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Introduction

While the use of big data analytics facilitates the work of both professionals and researchers, in particular in the marketing and finance industries, the benefits of using big data analytics in supply chain management for businesses have begun to emerge (Rozados & Tiahjano, 2014). Decisions taken in supply chain management significantly affect the costs and performance of firms (Shafig et al., 2020). Supply chain managers access various data while making these decisions (Rai et al., 2006). Because complex, multi-layered and geographically widespread global supply chains generate significant amounts of data at all stages. In order to conduct their everyday operations, provide excellent customer service, and buy high-quality products and services, businesses must manage this data (Wilhelm et al., 2016). Increasing importance of data management has necessitated the use of big data analytics in supply chain management and thus the concept of supply chain analytics capability has emerged. Supply chain analytics capability helps companies make better decisions and improve their operations, resulting in enhanced financial performance that results in supply chain efficiency (Wang et al., 2016). Companies are investing more in creating analytics skills to achieve operational improvement as a result of recent breakthroughs in big data analytics (Shafig et al., 2020). Supply chain analytics capability (SCAC) has arisen as a critical business capability with the growing use of big data and business analytics and digital technologies.

Supply chain analytics capability is simply defined as the use of big data analytics in supply chain management (Wang et al., 2016). The capacity to extract considerable value from massive volumes of supply chain data is known as supply chain analytics. At the same time, supply chain analytics capability is a data-based technological analysis technique that offers new development opportunities to businesses. Supply chain analytics capability supports decisions by extracting meaningful data from the large amount of data obtained (Ramanathan et al., 2017). The goal of supply chain analytics is to improve visibility, collaboration, and integration in order to solve problems inside the chain (Barnaghi et al., 2013). However, it is understood that supply chain analytics capabilities are effective in operational improvement, but supply chain analytics capabilities are not as effective in sustainability improvement. Dubey et al. (2021), in their study, revealed that artificial intelligence-assisted supply chain analytics capability improves the operational and financial performance of the organization (Dubey et al., 2021). Several papers have recently been published in the literature for additional investigation into the relationship between sustainable supply chain management and data analytics (Wang et al., 2016; Gunasekaran et al., 2017; Choi et al., 2018; Shafig et al., 2020). As a matter of fact, there are studies stating that the effect of big data on lean, agile, flexible and green (LARG) supply chain has not been investigated much in the literature (Raut et al., 2021). In response to these calls, this study, using a resource-based perspective and dynamic capability theories as a lens, explores whether supply chain agility plays a mediating role in the relationship between supply chain analytics capability and firm performance.

The ability of a supply chain to adapt or respond swiftly to changing conditions in a changing market environment is known as supply chain agility. Supply chain agility allows businesses to respond more quickly to unexpected events. Because they can better balance supply and demand, agile supply chains are more market-oriented (Christopher, 2000; DaSilveira et al., 2001; Van Hoek et al., 2001). Also agile supply chains cope with unexpected challenges, getting rid of unprecedented threats in the business environment, and take advantage of changes as opportunities (Sharifi and Zhang, 1999). Agility, in other words, is a company-wide competency that includes organizational structures, information systems, and mindsets. As a result, it's thought that supply chain agility plays a part in the relationship between supply chain analytics capabilities and firm performance, which has emerged as a result of the widespread use of big data, business analytics, and digital technologies. This research tries to explain how supply chain agility affects the relationship between supply chain analytics competence and company performance.

Conceptual Background

Stakeholder theory and resource-based approach are the focus of the research. Stakeholder theory and the resource-based approach are theoretical concepts used in operations management research to increase sustainability and financial performance through the application and adaption of capabilities (Sodhi, 2015). While Freeman (1984) defines stakeholders as individuals or groups who have lawful interests in the procedural and/or consistent aspects of corporate operations, Donaldson and Preston (2011) define stakeholders as individuals or groups who have lawful interests in the procedural and/or consistent aspects of corporate operations. In the literature on strategic management and corporate social responsibility, it is widely agreed that businesses seek approval from a variety of internal and external stakeholders. Generally, prominent stakeholder groups include internal stakeholders, suppliers, customers and the local community in which a firm operates (Clarkson, 1995; Jones, 1995; Donaldson and Preston, 2011; Surroca et al., 2013). Customers are one of the most important stakeholder groups that firms seek permission from (Jamali, 2008; Laplume et al., 2008). Firms understand that addressing their customers' worries and expectations as a key stakeholder group will strengthen the focus firm's legitimacy, which will lead to increased profitability. A firm's dominance of resources, according to the resource-based approach, provides capabilities that enable it to generate above-normal returns and build a sustainable competitive advantage. Human resources, information technology, capital, equipment, and expertise are examples of capabilities. Consistent with the resource-based approach in the literature, some studies argue that a firm's competitive advantage can only depend on the development and application of technology-based capabilities. It also emphasizes that these capabilities must be adopted earlier than competitors in order to gain a long-term advantage (Reuter et al., 2010; Barney, 2012). This study explores the role of supply chain agility in the relationship of supply chain analytics capability and firm performance.

Supply Chain Analytics Capability

The complexity of supply chain management is increasing in excessive competitive environment (Wilhelm et al., 2016). However, the diminishing cost of data collection creates an opportunity for companies to improve their analytical capabilities to be more competitive (Trkman et al., 2010). According to the resource-based approach, the antecedents of a firm's ability to compete are the firm's capabilities. Firms attempt to obtain and control resources that can be used to gain a competitive advantage (Barney, 1991). The development of the analytics capabilities of companies has reached a very important level in the last few years (Kache and Seuring, 2017; Matthias et al., 2017). While research on analytical capability in the context of supply chain is still growing, some studies have attempted to conceive supply chain as supply chain analytics capability. For example, Souza (2014) defines supply chain analytics capability as the application of prescriptive, definitive and estimated techniques to the planning, sourcing, implementation and delivery processes of a supply chain (Fawcett & Waller, 2011; Kache & Seuring, 2017). Trkman et al. (2010) defines supply chain analytics capability as the application of analytics to supply chain problems. Practitioner-oriented research argues that using some analytics will be beneficial for businesses. For example, using data to understand operations or generating insights for effective decisions based on data mining. Other examples include analytics like optimization modeling and simulations to determine the optimal course of action, as well as risk analysis utilizing simulations (Davenport, 2013; Wang et al., 2016). Supply chain analytics capability is defined as a company's ability to process structured and unstructured data from internal and external sources, understand the supply chain, and improve decision-making using simulations and statistical tools, according to current academic and practical literature. Structured data, according to Davenport (2013), is numerical or coded data with a known and established format. Unstructured data, by the same concept, refers to unstructured text and multimedia information such as business news, social media sentiment, and economic forecasts.

Supply Chain Agility

Researches explain that there is evidence that the agility of an organization is related to the agility of the supply chain. Agility has been defined as coping with unexpected challenges, getting rid of unprecedented threats in the business environment, and taking advantage of changes as opportunities (Sharifi and Zhang, 1999). In a more detailed definition, agility is defined as the successful discovery of reconfigurable resources and best practices in a knowledge-intensive environment to provide customer-focused products and services in a rapidly changing business environment. This investigation includes competitive factors that include speed, innovation, proactivity, quality and efficiency (Yusef et al., 1999). Agility means using market knowledge and virtual company to take advantage of profitable opportunities in a volatile marketplace (Mason-Jones and Towill, 1999). From the perspective that considers agile as a mindset, it is a business capability that encompasses organizational structures, information systems and especially mindsets (Christopher, 2000). From a marketing perspective, agility is all about customer responsiveness and mastering market turbulence (Van Hoek et al., 2001).

Supply chain agility allows companies to respond more quickly to unexpected situations. Also, agile supply chains are more market-oriented in nature because they can better synchronize supply with demand. In a supply chain, the need for agility is channeled into agility with the ability to deliver personalized products to customers and costs close to mass production costs (DaSilveira et al., 2001). Saputra et al. (2022) stated in their study that Supply chain agility is more effective on firm performance than business or marketing agility (Saputra et al., 2022).

Firm Performance

Firm performance refers to the success of a business in both financial and non-financial terms, such as internal business processes or learning for growth (Saputra et al., 2022). Firms may make their decision-making processes more data-driven by being able to analyse data quickly and effectively (Rai et al., 2006). Data-driven businesses are more productive and profitable than their competitors, according to studies in the literature (McAfee & Brynjolfsson, 2012). Supply chain analytics capability can facilitate managers' decision-making in several ways. To begin with, supply chain analytics allows companies to gather, absorb, and use huge amounts of structured and unstructured data throughout the supply chain (Wamba et al., 2015). Second, supply chain analytics capability, according to the resource-based approach, permits the use of a number of ways to learn from data and build models that can produce optimal strategies (Trkman et al., 2010; Kache and Seuring, 2017). Finally, it enables businesses to better manage environmental uncertainty by analysing various risk management solutions under various future scenarios (Davenport, 2006; Choi et al., 2018). In short, the benefits of supply chain analytical capability also help develop enhanced decision-making capabilities that increase over time and can translate into firm performance.

Research Model and Development of Hypotheses

As illustrated in Figure 1, according to the proposed research model, supply chain agility plays a mediator role in the association between supply chain analytics capability and business performance.

The Relationship between Supply Chain Analytics Capability and Supply Chain Agility

Ashrafi et al. (2019) investigated how business analytics capabilities affect firms' agility through information quality and innovative talent and tested using statistical data from 154 firms with two participants from each firm. The results of the research show that business analytics capabilities strongly affect a firm's agility through an improvement in information quality and innovative capability. It is also argued that both market and technological turbulence soften the impact of firms' agility on firms' performance (Ashrafi et al., 2019). Wamba et al. (2020) suggest that big data analytics has positive effects on improving supply chain agility, supply chain adaptability and performance measures (Wamba et al., 2020). In the light of the above-mentioned studies, the following hypothesis has been put forward:

H_1: Supply Chain Analytics Capability has a positive effect on Supply Chain Agility.

The Relationship between Supply Chain Agility and Firm Performance

DeGroote and Marx (2013) conducted a study on 193 American manufacturing companies and revealed that supply chain agility has positive effects on the firm's sales, market share, profitability, speed to market, and customer satisfaction (DeGroote & Marx, 2013). Yusuf et al. (2014) investigated the relationship between the dimensions of agile supply chain, competitive targets and business performance in their study in the UK oil and gas industry and collected data from 880 supply chain managers. The results of the research indicated that supply chain agility positively affects firm performance (Yusuf et al., 2014).

Alan et al. (2017) revealed in their study on 141 garment manufacturers that supply chain agility affects firm performance (Alan et al., 2017). Saputra et al. (2022) stated in their study that Supply chain agility is more effective on firm performance than business or marketing agility (Saputra et al., 2022). Based on these studies in the literature, the following hypothesis has been developed:

H_2: Supply Chain Agility has a positive effect on Firm Performance.

The Relationship between Supply Chain Analytics Capability and Firm Performance

Stakeholders in the supply chain can cooperate and work as if they are part of a single business (Lambert and Christopher, 2000). There are many studies that experimentally test the relationship between supply chain analytics capability and firm performance (Frohlich and Westbrook, 2001). A successful supply chain management practice improves the relationship between suppliers and customers and increases customer satisfaction and firm performance. Previous research has shown supply chain management as a key driver of firm performance (Kannan and Tan, 2005). There are some studies proving the effects of supply chain management practices on operational performance and firm performance that will provide competitive advantage (Li et al., 2006). Firm performance refers to how far a firm has achieved its financial goals compared to its primary competitors (Li et al., 2006). Firm performance expresses how strong a firm is in the market (Li et al., 2006). Studies in the literature have generally supported a positive relationship between supply chain performance and firm performance. For example, supply chain integration, dissemination of information in the supply chain increases efficiency (Rai et al., 2006). Thus, it improves firm performance by reducing stock levels and costs and increasing on-time delivery (Vonderembse and Tracey, 1999).

In the literature, there are studies investigating the direct or indirect relationships between supply chain management practices and strategies and firm performance. For example, in a study by Stank et al. (2001) among North American manufacturers, distributors, and retailers, they revealed that supply chain management practices have a positive effect on logistics service performance. Supply chain analytics enable companies to make better decisions and increase financial performance by increasing their operations and supply chain efficiency. (Wang et al., 2006; Shafig et al., 2020). Wamba et al., (2020) suggest that big data analytics has positive effects on improving supply chain agility, supply chain adaptability and performance measures (cost performance and operational performance) (Wamba et al., 2020). The following is how the theory was developed in light of the current literature:

H_3: Supply Chain Analytics Capability has a positive effect on Firm Performance.

The Role of Supply Chain Agility in the Relationship between Supply Chain Analytics Capability and Firm Performance

Supply chain agility can be defined as the ability of the supply chain to adapt or respond quickly to changing conditions in a changing market environment. Organizations with supply chain agility are better able to respond to unexpected and unforeseen events. In addition, agile supply chains are market-oriented, as they can better balance supply and demand (Christopher, 2000; DaSilveira et al., 2001; Van Hoek et al., 2001). Also, agility is a business-wide capability that encompasses organizational structures, information systems, and mindsets in particular. Therefore, it is estimated that agility in the supply chain has a role in the relationship between supply chain analytics capability, which has emerged with the widespread use of big data and business analytics and digital technologies, and firm performance. Inspired by these studies in the literature, the following hypothesis was put forward:

H_4: Supply Chain Agility plays mediator role in the effect of Supply Chain Analytics Capability on Firm Performance

Research Methodology

In this quantitative cross-sectional research, five-point ordinal Likert scale (ranging from strongly disagree to strongly agree) has been utilized. Fields, data purified by means of principle component analysis in SPSS. For finding out the validity of the scales confirmatory factor analysis in AMOS has been performed. In covariance-based structural equation modelling, confirmatory factor analysis was performed (Byrne, 2010). Confirmatory factor analysis confirms each construct's convergent validity (Civelek, 2018a). Following that, composite reliability and Cronbach's alpha values were discovered to represent the structures' reliability. The mediator variable analysis was carried out according to Baron and Kenny's methodology (Baron & Kenny, 1986).

Measures and Sampling

Some scales from the literature were adapted to measure the topics in the research model. To measure firm performance, the scale adopted from Akgün et al. (2007) developed in Turkey by adapting it from Ellinger et al. (2002), was used. The scale taken from Swafford et al. (2006) was used to measure supply chain agility. For SCAC, the scale adapted from research studies such as Shafig et al. (2020), Trkman et al. (2010) and practitioner sources such as McAfee and Brynjolfsson (2012) and Davenport (2006) was used. A total of 250 surveys were distributed, with 201 genuine questionnaires collected from Turkey's top corporations. The convenience sampling method was utilized with a voluntary response.

Construct Validity and Reliability

Initially, principal component analysis has been used to purify the items. 13 purified items remained after this process. Consequently, the confirmatory factor analysis (CFA) has been conducted on remaining items. CFA indicates the convergent validity of the constructs of research model (Anderson & Gerbing, 1988). CFA fit indices has been found as follows: $\chi 2/DF = 1.414$, CFI=0.960, IFI=0.961, RMSEA= 0.045. $\chi 2/DF$ ratio is under the threshold level of 3 (Civelek, 2018). All other fit indices are near the acceptable threshold levels.

Table 1. Confirmatory Factor Analysis Results

Variables	Items	Standardized Factor Loads	Unstandardized Factor Loads
Supply Chain Agility (SAG)	SAG07	0.627	1
	SAG05	0.633	1.106
	SAG01	0.628	1.008
	SAG04	0.700	1.123
	SAG02	0.589	0.949
Firm Performance (FRP)	FRP09	0.717	1
	FRP13	0.552	0.710
	FRP11	0.592	0.727
	FRP05	0.557	0.751
	FRP06	0.542	0.727
Supply Chain Analytics Capability (SCAC)	SCAC05	0.549	1
	SCAC06	0.670	1.257
	SCAC04	0.612	1.098

$p<0.05$ for all items

As a result, the scales' convergent validity has been confirmed. As shown in Table 1, each item's standardized factor loads were greater than 0.5 and significant. The square roots of average variance extracted values (AVE) were calculated to confirm the constructs' discriminant validity (indicated in the brackets in Table 2). Composite reliability and Cronbach's values were calculated to determine the dimensions' reliability. These values were discovered to be higher than the required value (0.7). (Fornell & Larcker, 1981). The correlation values of the dimensions in the same column were also compared to the AVE values. Table 2 shows that the values in the bracket were found to be higher than the correlation values in the same column. These findings support the discriminant validity hypothesis (Civelek, 2018). The composite reliabilities, Pearson correlation coefficients of the constructs, average variance extracted values, Cronbach's values, and descriptive statistics are all listed in Table 2.

Table 2. Descriptive Statistics, Correlations and Reliability

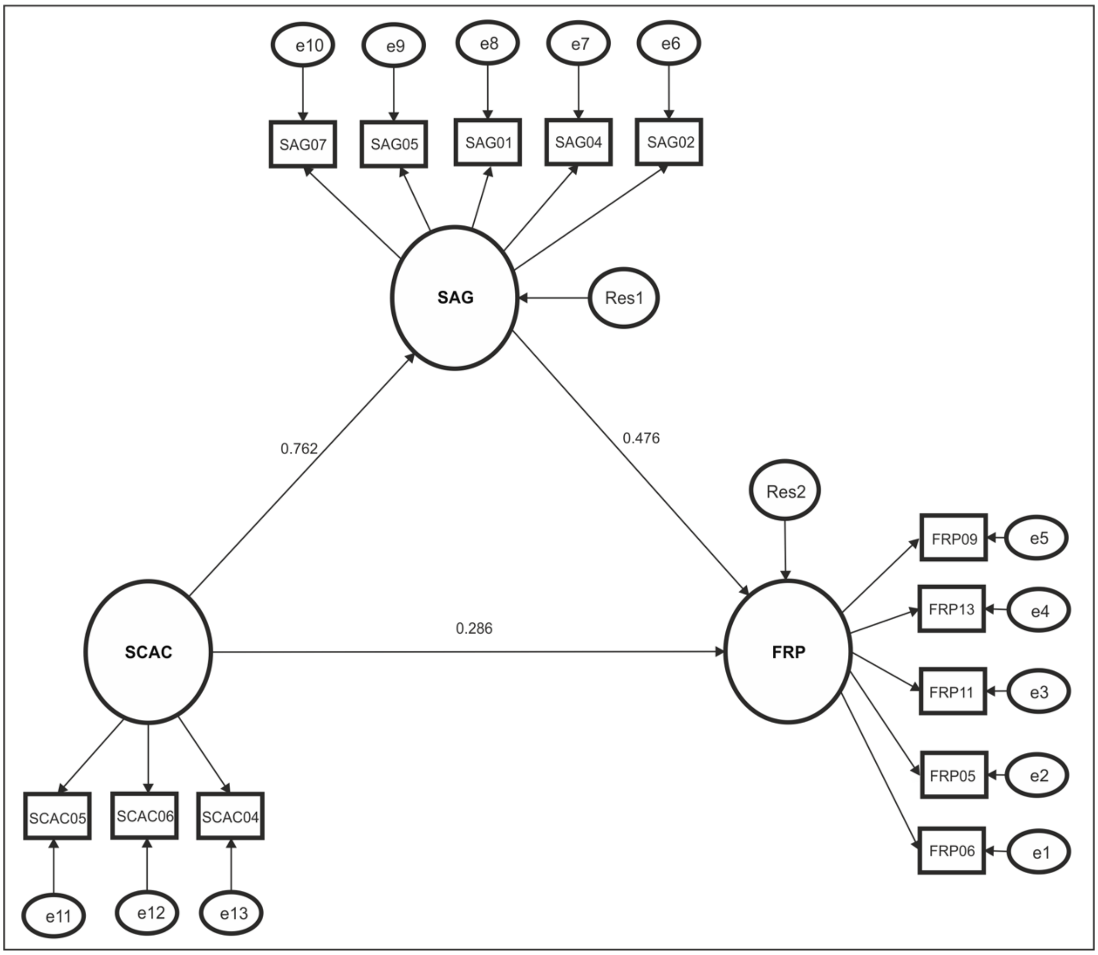
Variables	1	2	3
1. Supply Chain Agility	(.636)		
2 Firm Performance	.525*	(.595)	
3. Supply Chain Analytics Capability	.531*	.455*	(.612)
Composite reliability	.772	.731	.641
Average variance ext.	.405	.355	.375
Cronbach α	.772	.734	.636
Mean	3.37	3.27	3.34
Standard Deviation	0.85	0.81	0.88

*$p < 0.01$
Note: Values in the bracket indicate the square root of AVEs.

Construct Validity and Reliability

To test the hypotheses suggested in the research model, structural equation modelling (SEM) has been used. Maximum likelihood has been chosen as estimation method. To begin, the model's goodness-of-fit indices were interpreted using standard threshold values from the literature. The most recommended absolute and relative fit indices have been considered during this process. The RMSEA, 2, the comparative fit index (CFI), and the incremental fit index are the fit indices in question (IFI).

Fit indices have been found to be satisfactory, as shown in Figure 2. In the allowed level, the 2/DF value was found to be 1.205. (i.e., between 0 and 3). CFI and IFI both have a value of 0.981. The RMSEA value is 0.032. The results show that the model is adequate fit. As listed in Table 3, H_1, H_2, H_3 and H_4 were supported. These results of the tests supported a positive and significant relationship between Supply Chain Analytics Capability (SCAC) and Supply Chain Agility (SAG), between Supply Chain Agility (SAG) and Firm Performance (FRP).



Note: $\chi 2$/DF = 1.205, CFI = 0.981, IFI = 0.981, RMSEA= 0.032

Figure 2. Results of SEM Analysis of Model

The mediator analysis was carried out using the method proposed by Baron and Kenny (Baron & Kenny, 1986). The correlation values between the variables must be significant in order for this strategy to work (Baron & Kenny, 1986). The correlations between the variables were found to be substantial. Table 2 shows the correlation coefficients. The following three models have been used to test hypotheses:

Model 1: FRP = β0 +β1.SCAC + € (used for testing H_3)
Model 2: SAG = β0 + β2.SCAC + € (used for testing H_1)
Model 3: FRP = β0 + β1.SCAC + β2.SAG + € (used for testing H_2 and H_4)

Table 3. Hypotheses Test Results

Relationships	Model 1	Model 2	Model 3
Supply Chain Analytics Capability (SCAC)→Firm Performance (FRP)	0.657*		0.286
Supply Chain Analytics Capability (SCAC)→Supply Chain Agility (SAG)		0.757*	0.762*
Supply Chain Agility (SAG)→Firm Performance (FRP)			0.476*
Fit Indices	$\chi 2$/DF= 1.108 CFI=0.994 IFI=0.994 RMSEA=0.023	$\chi 2$/DF=1.488, CFI=0.975 IFI=0.975 RMSEA=0.049	$\chi 2$/DF=1.205 CFI=0.981 IFI=0.981 RMSEA=0.032

Note: Path coefficients are standardized
*$p < 0.01$

H_4 was supported, as seen in Table 3. This is demonstrated by the following: The relation between SCAC and FRP was shown to be insignificant after SAG was included in the model. SAG mediates the relation between SCAC and FRP, according to this finding. Figure 2 depicts the results of SEM analysis after all constructs were included in model 3.

Discussion

The role of supply chain agility in the relationship between supply chain analytics capability and firm performance was investigated in this study. The present studies in the literature validates that supply chain analytics capability is a primary reason for firm performance because, supply chain analytics capability supports decisions by extracting meaningful data from the large amount of data obtained (Ramanathan et al., 2017). Simply put, supply chain analytics capability can help you make better decisions in a variety of ways. it allows companies to collect, absorb, and use large amounts of organized and unstructured data throughout the supply chain (Wamba et al., 2015). Second, according to resource-based review, supply chain analytics capability as a capability allows a variety of techniques to be used to learn from data and construct models that can generate optimal strategies (Trkman et al., 2010; Kache and Seuring, 2017). Finally, it enables firms to better manage environmental uncertainty by evaluating different strategies to manage risks in light of all possible future scenarios (Davenport, 2006; Choi et al., 2018). In short, the benefits of supply chain analytics capability as a capability can help develop other capabilities such as enhanced decision making that can transform into increased firm performance over time.

The results of this study confirmed the theoretical discussion of (Shafig et al., 2020) and indicate that supply chain analytics capability significantly improve the firm performance. This is due to the fact that supply chain analytics capability has emerged as a key business capability with the growing use of big data and business analytics and digital technologies. This study explains how supply chain analytics capabilities affect supply chain agility. The results of the study show that supply chain analytics capabilities affect supply chain agility (Ashrafi et al., 2019; Wamba et al., 2020). Finally, this study discussed the role of supply chain agility in the relationship between supply chain analytics capability and firm performance and highlighted that agile supply chains strengthens the professional ties among the firms in the supply chain. This is particularly important for firms in supply chains, which are investing more and more in developing analytics capabilities to deliver operational improvement (Shafig et al., 2020). Contrary to traditional supply chains, under agile supply chains, the effect of using big data analytics can improve firm performance according to their core expertise.

Implications

With the help of theoretical discussions and empirical support, this study suggests that supply chain analytics capability contributes to firm performance directly and via supply chain agility. Supply chain managers/professionals should discover the important role of supply chain agility in firm performance and should empower supply chain professionals by explaining role of agility. The supply chain manager should understand that agile supply chains cope with unexpected challenges and get rid of unprecedented threats in the business environment. Supply chain agility takes advantage of changes as opportunities in the excessive business landscape (Rozados & Tiahjano, 2014; Wang et al., 2016; Wilhelm et al., 2016).

Organizations should encourage business analytics implications in supply chains because it spreads agility and speed among supply chain, allowing them to use technological advancements. It also allows them to respond quickly to existing information and decision makings. Both of these discussions are supported by the findings of this study. Supply chain managers should be aware of the risks of unexpected challenges and unpredictable threats that awaited supply chain and then develop such skills/strategies to handle difficult situations that might use up agility, while also remaining knowing that too much agility can have a harmful effect on firm performance (Trkman et al., 2010; Wilhelm et al., 2016; Wang et al., 2016; Gunasekaran et al., 2017; Choi et al., 2018; Shafig et al., 2020).

Limitation and Future Research

The results of this study should be taken with caution. The present study analyzed the role of supply chain agility in the relationship between supply chain analytics capability and firm performance. In a cross industrial study data could present greater insight for practitioners and researchers, as well. We only used one mediator (supply chain agility), whereas there may be other important variables (e.g., supply chain transparency) that also contribute to firm performance (Shafig et al., 2020).

Conclusion

Business analytics is ubiquitous in today’s excessive business environment. However, the complex nature of the tasks involved business analytics, using the agile supply chains, places enormous pressure on firm performance to succeed. Despite the agility of firms in supply chain, struggle to meet the clients’ demands, causing big majority of firm performance to fail. It is evident from the present study that supply chain agility develops diverse skills for overall firm performance. Likewise, supply chain analytics capability creates synergy by improving the technological skills in firms that directly contribute to overall firm performance. This study concludes that implementation of agility in supply chains has significant benefits.

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Ulakbilge
Sosyal Bilimler Dergisi

THE ROLE OF SUPPLY CHAIN AGILITY IN THE RELATIONSHIP BETWEEN SUPPLY CHAIN ANALYTICS CAPABILITY AND FIRM PERFORMANCE

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ÖZ

Tedarik zincirlerinin küresel entegrasyonu, operasyonel süreçlerde veri üretimini büyük ölçüde artırdı. Üretilen veriler tedarik zinciri yöneticilerinin kararlarında hayati öneme sahiptir. Veri yönetiminin artan önemi, tedarik zinciri yönetiminde büyük veri analitiğinin kullanımını zorunlu kılmış ve böylece tedarik zinciri analitiği yeteneği kavramı ortaya çıkmıştır. Tedarik zinciri yönetimi tarafından büyük verinin etkin kullanımı bir beceri olarak görülmektedir. Tedarik zinciri çevikliği, tedarik zincirinin değişen pazar ortamında değişen koşullara hızla uyum sağlama ve yanıt verme yeteneğidir. Tedarik zinciri analitiği yeteneğinin şirketlerin performansı üzerindeki etkileri daha belirgin hale gelmesine rağmen, bu ilişkide tedarik zinciri çevikliğinin rolü literatürde incelenmemiştir. Literatürdeki bu boşluğa katkıda bulunmak için bu çalışma, tedarik zinciri analitik yeteneği ile firma performansı arasındaki ilişkide tedarik zinciri çevikliğinin rolünü araştırmaktadır. Araştırma sonuçları, tedarik zinciri çevikliğinin tedarik zinciri analitik yeteneği ile firma performansı arasındaki ilişkide aracı rolü olduğunu desteklemektedir.

Anahtar Kelimeler: Tedarik zinciri çevikliği, tedarik zinciri analitik yeteneği, firma performansı