

Research Article

The Mediating Role of SMEs' Performance in the Relationship between Entrepreneurial Orientation and Access to Finance


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ABSTRACT

Access to bank credit is one of the major concerns of SMEs in their survival. To reduce their concerns, SMEs' entrepreneurial attitudes that are the dimensions of entrepreneurial orientation (EO) might provide them some opportunities. This is because EO increases financial performance of SMEs, which is positively perceived by banks when making credit decision. In this regard, this paper aims to examine the mediating role of the performance of SMEs in the relationship between EO and access to bank finance. In parallel with this purpose, the paper analyzes 479 SMEs that operate in Turkey. To measure the mediating role of firm performance, Andrew Hayes' process macro for binary dependent variable was employed by the researcher. According to the results, while performance mediates the relationship between innovativeness-access to finance and risk-taking access to bank finance, it does not mediate the relationships between proactiveness, competitive aggressiveness, autonomy, and access to finance.

Keywords: entrepreneurial orientation; bank finance; SMEs; innovation; financial performance

JEL Code: D22, G21, L25, L26

INTRODUCTION

SMEs are significant players in the economies of developing and developed countries since they decrease unemployment rates and increase tax incomes, export, as well as international and innovative activities of countries. In Turkey, for example, 99.8% of businesses are classified as SMEs, and SMEs account for 72.4% of the labor force and for 50.4% of the GDP (Turkish Statistical Institute, 2019). However, most of these enterprises face many obstacles, especially when receiving external finance. Since these businesses have lower revenues, financial resources, and assets compared to their larger rivals, they are less likely to receive bank credit, which is the first option when they look for external financing. However, access to bank finance is critical for their survival, growth, success, and development (Bature, Zakaria, & Sallehuddin, 2020; Munoz, Welsh, Chan, & Raven, 2015) and since SMEs have a lack of assets to collateralize, they need to show their potential to lending officers in different ways to gain credits.

In this regard, SMEs can perform some of their entrepreneurial behaviors that are the dimensions of entrepreneurial orientation. These behaviors are also related to the resource-based view theory, which highlights the importance of firm resources. According to this theory, firms that have valuable, rare, inimitable, and non-substitutable (VRIN) intangible resources can receive competitive advantages against their rivals and perform better in long term (Barney 1991; Hadryś-Nowak, 2018; Ibrahim & Shariff, 2016). Thus, firms that have higher level of dimensions of entrepreneurial orientation (EO) might create products or services that are unique, difficult to imitate, and valuable. EO consists of some abilities such as innovativeness, risk taking, proactiveness, competitive aggressiveness, and autonomy that enable businesses to make efficient decisions and strategies regarding the processes of business operations (Beltrame, Floreani, Grassetti, Mason, & Miani, 2018; Lumpkin & Dess, 1996; Lumpkin & Dess, 2001). These entrepreneurial behaviors enable SMEs to explore new opportunities (Ibrahim & Shariff, 2016), to increase their competitiveness, revenues, sustainability (Dadzie, Agyapong, & Suglo, 2021) and to receive external financing options (Brouthers, Nakos, & Dimitratos, 2015; Wiklund & Shepherd, 2003). Moreover, EO makes SMEs to present their resource-based competencies (Brouthers et al., 2015) that stimulate these businesses' international activities (Hadryś-Nowak, 2018), thus increasing the performance of businesses (Bature et al., 2020). Since the performances of businesses also enable them to accessing bank finance, performance might be a mediator variable in the relationship between EO and access to bank finance.

In this context, having these entrepreneurial attitudes might enable them to increase their sales and income, which makes them to have better financial performance to accessing bank finance. This is because performance is a significant indicator for banks to provide credit for businesses since it provides information about firms' financial and economic potential (Chandrayanti, Nidar, Mulyana, & Anwar, 2020). Thus, firms that have improved financial performance can face reduced obstacles to accessing bank credit (Jabbouri & Farooq, 2021). For instance, firms that have higher sales and revenues can purchase some assets to show them as collateral for their credit applications and might reduce their costs of credits. In this regard, this paper aims to investigate whether performance of SMEs mediates the association between entrepreneurial orientation and access to finance. In this paper, access to bank credit is defined as firms' availabilities to receive credits from banks.

Business performance is evaluated regarding three to five fiscal year profitability of businesses that have been applied by some studies (Coopers & Lybrand, 1994; Laforet, 2013; Slater & Narver, 1994). In this regard, this paper also considers the last five years of profitability of businesses to evaluate their performance. Many studies separately confirm the positive relationship between EO of SMEs and their access to finance (Chandrayanti et al., 2020; Ibrahim & Shariff, 2016; Syahdan, Djaelani, & Mahdi, 2020) and between performance of SMEs and access to finance (Jabbouri & Farooq, 2021; Syahdan et al., 2020). Although mediating role of access to finance (Chandrayanti et al., 2020; Ibrahim & Shariff, 2016; Junoh, Hidthiir, & Basheer, 2019; Shariff, Ahmad, & Shabbir, 2020; Syahdan et al., 2020), network capabilities (Bature et al., 2020), demand growth and competitive intensity (Gupta & Batra, 2016), environmental dynamism (Zhai et al., 2018), and knowledge creation (Junoh et al., 2019) in the relationship between EO and SMEs performance have been analyzed by some studies, this research differs from these studies by extending the knowledge in the area of EO-access to finance relationship by employing performance as a mediating variable in this relationship.

Different from those studies, this paper uses firm performance as a mediating variable and investigates the full or partial mediation role of this variable in EO-access to bank finance relationship by including all dimensions of EO separately in the analyses. This is the research gap that this paper aims to fulfill. Hence, the research question might arise as follows: Does firm performance mediate the relationship between EO and access to finance? Since firm performance is evaluated by the five-year profitability of businesses and access to finance has also had positive impacts on firm financial resources, this research does not only analyze intangible resources such as entrepreneurial abilities and competencies of SMEs (entrepreneurial orientation) that belong to resource-based view theory, but also examines tangible resources (profitability, etc.) of SMEs. For these reasons, this paper is sole in the entrepreneurship literature and highlights the importance of entrepreneurial behaviors and financial performance in credit access of SMEs to prospective readers. This fact makes this paper to create value addition and fulfill the gap in the related literature.

This paper follows a positivist approach since it evaluates variables that are characterized by previous studies. Moreover, this paper follows other studies to create research hypotheses. This paper is also an empirical quantitative research since research data is converted to numbers that might be measured by statistical methods. Moreover, this study is a kind of exploratory and descriptive research since it tries to create relationships between research variables by characterizing the current conditions of SMEs from the perspective of firms' executives.

The sample of this research consists of SMEs that have applied bank credit in the last three years and the data of this paper is collected by a self-administered and internet-mediated questionnaire survey. Since data collection process by questionnaires is completed within a limited time, this paper is a cross-sectional study. For sample collection, the researcher has gained the lists of e-mail addresses of SMEs from chambers of commerce that are located in different geographical regions of Turkey. Therefore, the researcher's sample selection is based on the e-mail lists that are received from the chambers of commerce. To select this research sample, the researcher performed stratified random sampling method and strata are based on seven geographical regions of Turkey. Then, the researcher has sent the link of the online questionnaires to the randomly selected

businesses. After that, the researcher has applied purposive sampling by specifying the characteristics of prospective respondents in the sent e-mails. The respondents of the questionnaires are firms' executives such as owners and managers of SMEs who are more informed about current financial conditions and operational details of firms. After excluding some of the fulfilled surveys that have missing values, a quantitative survey of 479 Turkish SMEs was conducted for the analyses.

In this regard, this research examines 479 SMEs that are located in Turkey and employs Andrew Hayes' process macro for the mediating role of performance in the relationship between EO and access to bank finance and direct impacts of other research variables, namely, EO and performance on access to bank finance and EO on performance. According to the results, performance and risk taking have significant impacts on access to finance. Other results show that firm performance mediates the relationship between innovativeness, and risk taking and access to finance. On the other hand, performance does not mediate between proactiveness, competitive aggressiveness, autonomy, and credit access. These significant results might draw attentions of SMEs, governments, non-governmental organizations, academicians, and financing institutions. By realizing the impacts of innovation and risk-taking behaviors in the performance and credit access, these players can collaborate to stimulate these entrepreneurial attitudes of SMEs by providing some trainings and incentives. Financing institutions might also consider these entrepreneurial behaviors in their hybrid credit evaluation methods. Since SMEs are one of the locomotive engines of economies, their entrepreneurial behaviors and performance might also stimulate the global economy.

The rest of the paper is structured as follows: the Literature Review section clearly explains the theoretical background of the research and indicates how the research hypotheses are set based on previous studies. The next section not only expresses the details about research data, data collection, and sample selection methods but also declares information about sample profile, approaches that the researcher follows for data analyses. The Results and Discussion section briefly describes the results of this paper and discusses possible reasons of those results. Some policy implementations are also presented in this section. Lastly, the author summarizes the main points and the results of the paper by mentioning some limitations of the study and recommendations for further researches.

LITERATURE REVIEW

EO and firm performance

As already mentioned, one of the main focuses of resource-based view theory is firms' valuable, rare, inimitable, and non-substitutable (VRIN) intangible resources. Those intangible resources include some competencies of businesses such as entrepreneurial orientation (Ferreira, Azevedo, & Ortiz, 2011). Therefore, entrepreneurial orientation is a significant component of resource-based view theory and it consists of some skills of firms (Covin & Slevin, 1989) that include valuable, rare, inimitable, and non-substitutable intangible resources (Anderson & Eshima, 2013; Wiklund & Shepherd, 2003). Moreover, EO has positive impacts on profitability (Ibrahim &

Shariff, 2016), sales (Anderson & Eshima, 2013), market share (Dadzie et al., 2021), organizational (Bature et al., 2020), international (Brouthers et al., 2015), and innovation performance (Zhai et al., 2018) of SMEs. Therefore, enterprises that have higher EO are less likely to face business failures (Junoh et al., 2019).

Innovativeness improves creative posture of enterprises by stimulating their attitudes to develop their existing products or services and to invent novel goods (Lumpkin & Dess, 1996; Rauch, Wiklund, Lumpkin, & Frese, 2009). Moreover, innovativeness makes SMEs more productive and to seek more opportunities in various markets (Dadzie et al., 2021). By increasing their productivity and range of their products, innovative firms can generate more revenues, thus, their performance increases. Many researchers also declare the positive relationship between innovativeness and performance of SMEs (Aidoo, Agyapong, & Mensah, 2020; Belás & Sopková, 2016; Dadzie et al., 2021; Rauch et al., 2009).

Corresponding to risk taking, SMEs that make risky decisions and take risky actions under uncertain conditions (Chandrayanti et al., 2020; Khan, Majid, Yasir, & Javed, 2021) might make them to face costly failures or high returns (Bature et al., 2020; Covin & Slevin, 1989). Therefore, this posture might determine success (Chandrayanti et al., 2020) and competitiveness of SMEs (Aidoo et al., 2020). Since SMEs that are risk takers can make risky investments and can receive higher returns compared to their less risk-taking rivals, they can have better performance levels. Hence, the positive relationship between risk taking and performance of SMEs has been confirmed by many studies (Aidoo et al., 2020; Dadzie et al., 2021).

Proactiveness provides first-mover advantages for SMEs (Aidoo et al., 2020; Khan et al., 2021). This is because proactive firms are able to seize opportunities earlier than their rivals (Aidoo et al., 2020; Lumpkin & Dess, 1996) and this feature also makes them to predict prospective changes in the market (Bature et al., 2020; Ibrahim & Shariff, 2016). By having such abilities, proactive enterprises become more competitive and create new products and services ahead of their rivals (Khan et al., 2021; Lumpkin & Dess, 1996), thus, they can play a leading role in the markets where they operate (Bature et al., 2020) and perform better than their competitors (Aidoo et al., 2020). This fact is a strong argument to indicate positive association between proactiveness and performance that is confirmed by many studies in entrepreneurship literature (Lumpkin & Dess, 2001; Aidoo et al., 2020).

Another dimension of EO, namely, competitive aggressiveness, includes some activities of SMEs to give quick and powerful reactions against their competitors' strategies (Khan et al., 2021). Thus, SMEs become motivated to create new ideas and apply competitive strategies that increase their performance (Belás & Sopková, 2016). Since firms that have competitive aggressiveness perform better compared to their rivals, they can have market leadership positions and might limit their competitors' counterattacks by predicting the rivals' next reactions (Hughes-Morgan, Kolev, & Mcnamara, 2018).

Regarding autonomy, it plays a crucial role in decision-making processes of enterprises since it enables entrepreneurs to be decisive and take actions under uncertain conditions (Lumpkin & Dess, 1996). Moreover, autonomous behavior makes both owner or founder and workers of

businesses to behave more independently when making strategic decisions. This attitude is also a motivating factor that stimulates entrepreneurs to start and operate a business (Van Gelderen, Shirokova, Shchegolev, & Beliaeva, 2020). Thus, it carries high importance for the development of new firms and makes value addition for enterprises (Yu, Lumpkin, Parboteeah, & Stambaugh, 2019). Many researchers also prove the significant and positive relationship between all EO dimensions, including innovativeness, risk taking, proactiveness, competitive aggressiveness, autonomy, and performance of SMEs (Bature et al., 2020; Dadzie et al., 2021; Ibrahim & Shariff, 2016; Junoh et al., 2019).

H1: EO is positively related to SME performance.

EO and access to finance

Regarding EO of SMEs and their access to finance, many studies confirm the significant and positive association between these variables (Chandrayanti et al., 2020; Ibrahim & Shariff, 2016; Junoh et al., 2019; Sidek, Mohamad, & Nasir, 2016; Syahdan et al., 2020). For instance, some researchers substantiate the positive influences of innovativeness, risk taking, proactiveness, competitive aggressiveness, and autonomy of SMEs on access to finance (Chandrayanti et al., 2020). Similarly, the positive relationship between innovativeness and access to finance (Beltrame et al., 2018; Fatoki, 2012; Zampetakis, Vekini, & Moustakis, 2011), risk taking and access to finance (Fatoki, 2012; Sidek et al., 2016; Zampetakis et al., 2011), proactiveness and access to finance (Fatoki, 2012; Zampetakis et al., 2011), competitive aggressiveness and access to finance (Beltrame et al., 2018; Sidek et al., 2016), and autonomy and access to finance (Chandrayanti et al., 2020) have been corroborated by aforementioned studies that focus on SMEs segment.

H2: EO of SMEs is positively related to their access to bank finance.

Performance and access to finance

The positive relationship between performance of SMEs and access to finance has been validated by many studies (Chandrayanti et al., 2020; Jabbouri & Farooq, 2021; Syahdan et al., 2020). This is because performance is a significant indicator for credit officers when evaluating creditworthiness and ability of businesses to pay back their credits (Chandrayanti et al., 2020). Hence, SMEs that have better financial performance including better cash flows, sales, and profits become more likely to receive credits and less likely to face credit obstacles compared to businesses that have poor performance (Adzido, Sedzro, & Dorkpah, 2016; Wasiuzzaman & Nurdin, 2019). Similarly, many studies elucidate that financial performance of SMEs is the major determinant factor that makes enterprises to gain credit (Chandrayanti et al., 2020; Jabbouri & Farooq, 2021; Wasiuzzaman & Nurdin, 2019).

H3: There is a positive relationship between performance of SMEs and access to bank finance.

Performance as a mediator between EO and access to finance

Since entrepreneurial abilities, such as innovativeness, risk taking, proactiveness, competitive aggressiveness, and autonomy increase the performance of enterprises, these increases in the performance provide easier credit access for business when applying bank credit (Kiboki, Sakwa, & Kiriago, 2014). This is because entrepreneurial skills such as seizing opportunities and creating new ideas enable firms to have better performance levels. SMEs with better performance and with those aforementioned skilled entrepreneurs make better financial decisions and find easier credit access conditions (Abor, 2007). Moreover, as a mediating variable, performance also mediates the relationship between innovative posture of firms and their values (Chen & Chen, 2011; Soedjatmiko, Tjahjadi, & Soewarno, 2021), which is a quality signal from the perspective of lenders when providing credits for SMEs (Arthurs, Busenitz, Hoskisson, & Johnson, 2009; Minard, 2015). Similar to aforementioned arguments, some scholars categorize EO as a unique construct and analyze the effects of entrepreneurial orientation on credit access of SMEs via performance rises and performance mediates the relationship between entrepreneurial orientation and access to finance (Chandrayanti et al., 2020). Entrepreneurial orientation has a positive impact on SMEs' performance, which in turn has a positive impact on SMEs' credit access. This fact indicates the significant partial mediating role of performance in the relationship between EO and access to finance (Chandrayanti et al., 2020). By following aforementioned empirical results of studies, the last research hypothesis might set as follows:

H4: SMEs performance mediates the relationship between EO and access to bank finance.

By considering all those hypotheses and relationships between the research variables, the theoretical research model might be depicted as follows.

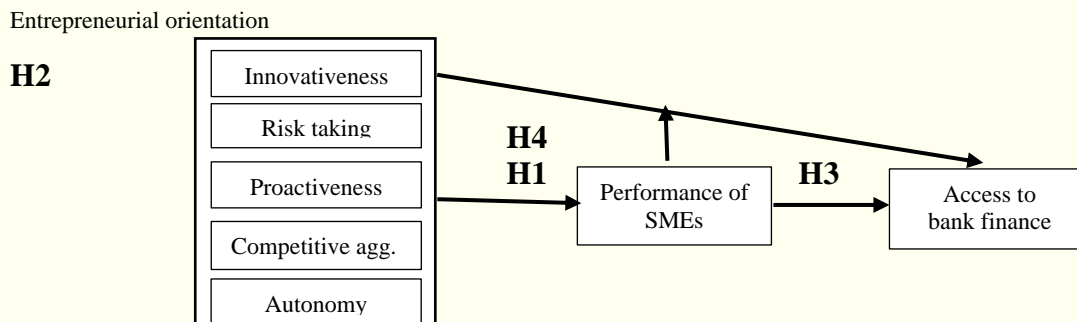


Figure 1. Test model

Source: Prepared by the author.

DATA AND METHOD

The main aim of this research is to examine whether performance plays a mediating role between entrepreneurial orientation (EO) and access to bank finance or not. In line with this selected purpose, the researcher employs a self-administered and internet-mediated questionnaire survey

to collect the data. The researcher has received the e-mail lists from the chambers of commerce to choose research sample. Moreover, stratified random sampling and purposive sampling methods are applied by the researcher for sample selection. Executives of firms that are aware of conditions of firms are the respondents of these surveys. This research analyzes 479 SMEs that are located in Turkey. Andrew Hayes' process macro is employed by the researcher to investigate direct and indirect effects of independent variables on the dependent variable. While the dependent variable is access to finance for all created research models, EO and performance are independent variables. In the last model, performance of firms is included as a mediating variable between EO and access to bank finance.

The author has directed 11 survey questions to the survey respondents to evaluate EO of SMEs. Although the validity and reliability analyses of these questions have been already made by some quality studies in entrepreneurship literature (Belás & Sopková, 2016; Pett & Wolf, 2016), this research performs Cronbach's alpha to test the reliability of the dimensions of EO. As indicated in Table 1, the values from Cronbach's alpha for those dimensions differ between 0.702 and 0.828. Generally accepted reliability volume is 0.70 (Cronbach, 1951). Therefore, the reliability of all dimensions of EO is acceptable.

Table 1

Reliability of scales

Entrepreneurial orientation	Items	Cronbach's alpha
Innovativeness	2	0.828
Risk taking	2	0.779
Proactiveness	2	0.760
Competitive aggressiveness	2	0.702
Autonomy	3	0.714

Note. Source: Author-compiled data.

The author includes the following survey questions to measure innovativeness of SMEs: "The company has a reputation as an innovator," "We regularly develop new products and services in my company," "We invest a lot of money in the development of new methods and technologies." To measure another construct of EO, namely, risk taking, following questions were directed to the respondents: "The firm follows a strategy that I perceive considerably risky" and "The firm carries out risky projects to increase the performance." On the other hand, there were some survey questions such as "The firm has often tried to initiate actions to competitors, to which competitors respond" and "We seek to exploit predicted changes in our target market ahead of our competitors in order to evaluate proactiveness of SMEs." Regarding competitive aggressiveness, some questions such as "Our activities in relation to competition are often aggressive" and "We often do activities that are directed against competitors" were added to the questionnaire survey. Moreover, "The owners of company act independently," "The staff in my company is reasonably autonomous with the implementation of specific business operations," and "The firm supports the initiatives of employees in terms of identifying and implementing of business opportunities" are the survey questions to examine autonomy of SMEs. Furthermore, the researcher employs a five-points Likert scale to measure the replies of survey respondents

regarding the above-mentioned EO statements in the questionnaire as follows: 1 – Completely disagree, 2 – Disagree, 3 – Neither agree nor disagree, 4 – Agree, and 5 – Completely agree.

To evaluate performance of SMEs, the researcher has asked to the respondents to rank their net profit during the past five years as follows: “Please evaluate the net profit of your business over the last five years.” The responses from this question are scaled as follows: 1 – Declined significantly, 2 – Declined somewhat, 3 – Remained the same, 4 – Improved somewhat, 5 – Improved significantly. Access to finance is measured by a dichotomous (yes, no) question. Therefore, the researcher questioned the respondents whether their firm received credit from their last credit application or not.

Since the research hypotheses are already set in Literature Review, the researcher does not mention them in this section. The author has applied Andrew Hayes’ process macro (version 3.2) for binary dependent variable to measure the mediating role of firm performance in the relationship between EO and access to finance and direct effects of other independent variables on access to finance (dependent variable) such as EO and performance. Regarding testing of hypotheses, 5% significance level is selected to support or fail to support the research hypotheses. P-values that are higher than this level of significance make this paper to fail to support the research hypotheses. Moreover, “process is an observed variable OLS and logistic regression path analysis modeling tool for estimating direct and indirect effects in single mediator models” (Processmacro.org, 2021, online).

Andrew Hayes’ process macro has also been widely used by many studies when analyzing entrepreneurial intentions of businesses that are measured by questionnaire surveys (Raheja & Dhiman, 2019; Ullah, Ullah, & Jan, 2021). The Hayes’ test has also been a very convenient way to analyze the mediation effect of research variables (Chiu, Bool, & Chiu, 2017; Okwo, Ezenwakwelu, Igwe, & Imhanrenialena, 2019). Moreover, Hayes’ process macro offers the usage of Model 4 that is compatible with the conceptual framework of this paper. For these reasons, this paper employs Hayes’ process macro to analyze indirect and direct effects of independent variables on the dependent variable and hypotheses testing. All the analyses that the researcher runs are performed via a statistical program, namely, IBM SPSS Statistics, version 23.

The details regarding sample profile are depicted below in Table 2.

Table 2

Sample profile

		<i>n</i>	Share
Region	Marmara	185	38.62%
	Aegean	81	16.91%
	Central Anatolia	47	9.81%
	Mediterranean	51	10.65%
	Black Sea	41	8.56%
	Eastern Anatolia	35	7.31%
	South Eastern Anatolia	39	8.14%
		479	100%
Sector	Trade	121	25.3%
	Service	65	13.6%
	Manufacturing	246	51.4%
	Textile	54	11.3%
	Other	94	19.62%
Note: Asked by a multiple answer question, thus, these percentages do not up to 100%.			
Firm size	Micro	143	29.85%
	Small	204	42.59%
	Medium	132	27.56%
		479	100%
Firm age	< 5 years	52	10.86%
	5 to 10 years	90	18.79%
	> 10 years	337	70.35%
		479	100%

Note. Source: Author-compiled data.

RESULTS AND DISCUSSION

Results

Table 3 depicts mean and standard deviations of the research variables and correlations between dimensions of EO and other variables, performance and access to finance. According to this table, risk taking is negatively correlated with access to finance (risk taking Pearson value: -0.131). There is not significant correlation between other dimensions of EO (Person value of innovativeness: 0.041, proactiveness: -0.047, competitive aggressiveness: 0.008, autonomy: -0.030) and access to finance. On the other hand, performance and access to finance (Pearson value: 0.246) and EO and performance (Pearson values for innovativeness, risk taking, proactiveness, competitive aggressiveness, and autonomy are 0.112, 0.167, 0.274, 0.368, and 0.259, respectively) have positive significant correlations.

Table 3

Means and standard deviations of variables and correlations between them

Variables	Innovativ.	Risk T.	Proactiv.	Comp. Agg	Autonomy	Perform.	Access	Mean	Std. Dev.
Innovativ.	1							3.3612	1.12458
Risk T.	0.184**	1						2.6103	1.02154
Proactiv.	0.656**	0.234**	1					3.4440	0.97245
Comp. Agg.	0.225**	0.386**	0.295**	1				2.6131	0.96530
Autonomy	0.424**	0.184**	0.519**	0.162**	1			3.5338	0.86204
Perform.	0.112*	-0.167**	0.074	0.068	0.059	1		0.7975	0.40229
Access	0.041	-0.131**	-0.047	0.008	-0.030	0.246**	1	3.8518	1.28108

Note. **Correlation is significant at the 0.01 level. *Correlation is significant at the 0.05 level.

Before explaining the research results, it is also important to clarify the parameters that are presented in the tables in Results section. β indicates the regression coefficient, while SE means standard error. T and Z are the volumes from T and Z scores. Moreover, LLCI expresses lower level of confidence interval while ULCI means upper level of confidence interval. Furthermore, p-values (indicated as p in the tables) are considered to reach presented results and used for hypotheses testing regarding direct effects of independent variables on dependent variables. Thus, p-values that are lower than 5% significance level confirm the positive impacts of independent variables on dependent variables, and enable to support research hypotheses. Regarding mediation effect of performance, p-values are also taken into consideration with LLCI and ULCI. When zero falls between the lower (LLCI) and upper (ULCI) bound of the confidence interval, the population indirect effect is 0, then the paper maintains the fact that the indirect effect of performance (mediating variable) is zero. Therefore, when p-values are lower than 5% significance level and when zero does not fall between LLCI and ULCI, the mediation role of performance between EO and access would be proved and the related hypothesis would be supported. Hayes' process macro version 3.2 is downloaded from processmacro.org website and the researcher runs this macro via SPSS Statistics to make analyses.

As indicated in Table 4, innovativeness and risk taking are significant predictors of performance in the first (simple) regression (innovativeness: $\beta = 0.1273$, $SE = 0.0518$, $p < 0.05$; risk taking: $\beta = -0.2098$, $SE = 0.0566$, $p < 0.05$). This is because they are both significant at 5% significance level. β coefficients reflect the direct effect of innovativeness and risk taking on performance within the path model. However, while the direct effect from innovativeness to performance is positive and statistically significant ($\beta = 0.1273$, $p < 0.05$), there is a negative (β coefficient is negative = -0.2098), predictive relationship between risk taking and performance ($\beta = -0.2098$, $p < 0.05$). In other words, while SMEs scoring higher on innovativeness are more likely to perform better than those scoring lower on the measure, SMEs scoring lower on risk taking are more likely to perform better than those scoring higher on the measure.

Table 4

The results regarding the relationship between EO and firm performance

Variable	β	SE	t	p	LLCI	ULCI
Constant	3.4238	0.1837	18.6391	0.0000	3.0628	3.7847
Innovativ.	0.1273	0.0518	2.4567	0.0144	0.0255	0.0297
Model-1: $Y_1 = (\beta_0 + \beta_1 X_1)$ Performance = 3.4238 + 0.1273 * innovativeness						
Constant	4.3995	0.1587	27.7290	0.0000	4.0877	4.7113
Risk T.	-0.2098	0.0566	-3.7067	0.0002	-0.3211	-0.0986
Model: Performance = 4.3995 – 0.2098 * risk taking						
Constant	3.5176	0.2153	16.3417	0.0000	3.0947	3.9406
Proactiv.	0.0970	0.0602	1.6129	0.1074	-0.0212	0.2152
Model: Performance = 3.5176 + 0.0970 * proactiveness						
Constant	3.9738	0.1691	23.4935	0.0000	3.6415	4.3062
Comp. Agg.	-0.0467	0.0607	-0.7692	0.4422	-0.1660	0.0726
Model: Performance = 3.9738 – 0.0467 * competitive aggressiveness						
Constant	3.5278	0.2470	14.2817	0.0000	3.0424	4.0132
Autonomy	0.0917	0.0679	1.3498	0.1777	-0.0418	0.2251
Model: Performance = 3.5278 + 0.0917 * autonomy						

Note. Source: Author-compiled data.

When it comes to other components of EO, namely, proactiveness, competitive aggressiveness, and autonomy, this paper finds the fact that these variables are not significant predictors of performance (proactiveness: $\beta = 0.0970$, $SE = 0.0602$, $p > 0.05$; competitive aggressiveness: $\beta = -0.0467$, $SE = 0.0607$, $p > 0.05$; autonomy: $\beta = 0.0917$, $SE = 0.0679$, $p > 0.05$), since p-values for those variables are higher than 5% significance level. Therefore, β coefficients do not reflect the direct effect of proactiveness, competitive aggressiveness, and autonomy on performance and those variables are not positively related with access to finance. Thus, this paper fails to support H1 hypothesis. Due to the nonexistence of relationships between these variables, performance cannot play a mediating role between proactiveness, competitive aggressiveness, autonomy, and access to finance. In this regard, this research also fails to support H4 hypothesis. Since innovativeness and risk taking are significant variables, this research will be more focused on the mediating role of performance between other dimensions of EO (innovativeness and risk taking) and access to finance.

The results of the second regression that includes EO, performance, and access to finance are presented below in Table 5. According to this table, performance ($\beta = 0.4509$, $SE = 0.0849$, $p < 0.05$) together with innovativeness ($\beta = -0.1580$, $SE = 0.1072$, $p < 0.05$) and risk taking ($\beta = -0.2383$, $SE = 0.1158$, $p < 0.05$) are significant predictors of access to finance. This is because both p-values of those variables are less than 5% significance level. β coefficients for those variables reflect the direct effects of performance, innovativeness, and risk taking on access to finance within the path model. The direct effect of performance on access to finance is positive (β coefficient for performance is positive: 0.4509) and significant ($p < 0.05$), indicating firms scoring higher on performance are more likely to access finance than those scoring lower on the

measure. Therefore, this paper supports H3 hypothesis. Regarding risk taking, SMEs scoring lower on risk taking are more likely to access finance than those scoring higher on this measure. On the other hand, innovativeness ($\beta = -0.1580$, $SE = 0.1072$, $p > 0.05$), proactiveness ($\beta = -0.1586$, $SE = 0.1239$, $p > 0.05$), competitive aggressiveness ($\beta = 0.0501$, $SE = 0.1214$, $p > 0.05$), and autonomy ($\beta = -0.1369$, $SE = 0.1391$, $p > 0.05$) are not significant predictors of access to finance, since p-values are not significant at 5% level of significance. Therefore, the coefficients do not reflect the direct effect of innovativeness, proactiveness, competitive aggressiveness, and autonomy on access to finance within the path model. Thus, this paper fails to support H2 hypothesis.

Table 5

The results regarding the relationship between EO, performance, and access to finance

Variable	Direct effect of X on Y				Indirect effect(s) of X on Y		
	β	SE	Z	p	Effect	BootLLCI	BootULCI
Constant	0.2619	0.4542	0.5765	0.5642			
Innovativ.	-0.1580	0.1072	-1.4734	0.0406			
Performance	0.4509	0.0849	5.3088	0.0000	0.0574	0.0104	0.1154
Model-2: $Y_1 = (\beta_0 + \beta_1 X_1 + \beta_2 X_2)$ Access to finance = 0.2619 – 0.1580 * innovativeness + 0.4509 * performance							
Constant	0.5219	0.4793	1.0889	0.2762			
Risk T.	-0.2383	0.1158	-2.0573	0.0397			
Perform.	0.4095	0.0853	4.8010	0.0000	-0.0859	-0.1506	-0.0367
Model: Access to finance = 0.5219 – 0.2383 * risk taking + 0.4095 * performance							
Constant	0.2965	0.5119	0.5792	0.5624			
Proactiv.	-0.1586	0.1239	-1.2799	0.2006			
Performance	0.4455	0.0846	5.2643	0.0000	0.0432	-0.0124	0.1073
Model: Access to finance = 0.2965 – 0.1586 * proactiveness + 0.4455 * performance							
Constant	-0.3580	0.4572	-0.7829	0.4337			
Comp. Agg.	0.0501	0.1214	0.4130	0.6796			
Perform.	0.4383	0.0842	5.2033	0.0000	-0.0205	-0.0779	0.0333
Model: Access to finance = -0.3580 + 0.0501 * competitive aggressiveness + 0.4383 * performance							
Constant	0.2439	0.5668	0.4303	0.6669			
Autonomy	-0.1369	0.1391	-0.9842	0.3250			
Perform.	0.4424	0.0844	5.2410	0.0000	0.0406	-0.0175	0.1128
Model: Access to finance = 0.2439 – 0.1369 * autonomy + 0.4424 * performance							

Note. Source: Author-compiled data.

Concerning indirect effect of EO dimensions, this research considers whether 0 falls between the lower (LLCI) and upper (ULCI) bound of 95% confidence level or not. This is because if zero falls between the lower and upper bound of the confidence interval, the population indirect effect is 0, then the paper maintains that the indirect effect is zero. If zero falls outside the confidence interval, then the indirect effect is inferred to be non-zero and the paper supports H4 hypothesis. Here, the paper rejects the null for innovativeness, since indirect effect of innovativeness is statistically significant – indirect effect (IE) = 0.0574, 95% confidence interval (CI) =

BootLLCI: 0.0104, BootULCI: 0.1154, $p < 0.05$. Therefore, it can be stated that a positive predictive relationship exists between innovativeness and access to finance as mediated through performance and it is statistically significant.

According to Table 6, innovativeness is not a significant predictor ($p = 0.365 > 0.05$) of access to finance. However, by adding performance a mediator, indirect effect of innovativeness on access to finance becomes statistically significant ($p = 0.0406 < 0.05$). Thus, performance plays a full mediator role between innovativeness and access to bank finance.

Table 6

Mediating role of performance between innovativeness and access to finance

Variable	β	SE	t	p			
Constant	0.847	0.058	14.610	0.000			
Innovativ.	-0.015	0.016	-0.906	0.365			
Variable	Direct effect of X on Y				Indirect effect(s) of X on Y		
	β	SE	Z	p	Effect	BootLLCI	BootULCI
Constant	0.2619	0.4542	0.5765	0.5642			
Innovativ.	-0.1580	0.1072	-1.4734	0.0406			
Perform.	0.4509	0.0849	5.3088	0.0000	0.0574	0.0104	0.1154

Note. Source: Author-compiled data.

Regarding risk taking, the results are presented below in Table 7. According to Table 7, risk taking is a statistically significant predictor of access to finance ($p = 0.004 < 0.05$). In this regard, SMEs scoring lower on risk taking are more likely to access finance. Moreover, indirect effect of risk taking on access to finance is also statistically significant because zero (the null) does not fall between the lower (BootLLCI: -0.1506) and upper bound (BootULCI: -0.0367) of the 95% confidence interval and p-values are lower than 5% significance level ($p = 0.0397$). Thus, this paper partially supports H4 hypothesis that assumes the fact that performance of SMEs mediates the relationship between EO and access to bank finance.

Table 7

Mediating role of performance between risk taking and access to finance

Variable	β	SE	t	p			
Constant	0.933	0.050	18.614	0.000			
Risk T.	-0.052	0.018	-2.894	0.004			
Variable	Direct effect of X on Y				Indirect effect(s) of X on Y		
	β	SE	Z	p	Effect	BootLLCI	BootULCI
Constant	0.5219	0.4793	1.0889	0.2762			
Risk T.	-0.2383	0.1158	-2.0573	0.0397			
Perform.	0.4095	0.0853	4.8010	0.0000	-0.0859	-0.1506	-0.0367

Note. Source: Author-compiled data.

However, p-value for risk taking in the first regression model in Table 7 presented above is 0.004. But including performance as a mediator, p-value for risk taking becomes 0.0397, which is closer to 5% significance level. Since p-value for risk taking is lower than 5% significance level, it can be stated that performance plays a partial mediator role in the relationship between risk taking and access to finance.

Regarding indirect effects of proactiveness, competitive aggressiveness, and autonomy on access to finance, this paper fails to support the hypothesis due to having non-significant indirect effects of these variables on access to finance. This is because zero falls between the upper and the lower level confidence interval for these variables (proactiveness: 95% CI, BootLLCI = -0.0124, BootULCI = 0.1073; competitive aggressiveness: 95% CI, BootLLCI = -0.0779, BootULCI = 0.0333; autonomy: 95% CI, BootLLCI = -0.0175, BootULCI = 0.1128). Hence, performance does not play a mediating role in the relationship between these dimensions of EO and access to finance, as already confirmed in the first regression analyses.

Discussion

As already mentioned in the Results section, innovativeness and risk taking are significant variables that affect performance of firms. While innovativeness has positive influences on performance, risk taking affects performance negatively. Moreover, other dimensions of EO, proactiveness, competitive aggressiveness, and autonomy do not have impacts on performance. The results regarding innovativeness and performance make this paper to find compatible results with some studies (Aidoo et al., 2020; Belás & Sopková, 2016; Dadzie et al., 2021; Rauch et al., 2009). On the other hand, since this paper finds negative or insignificant impacts of other EO dimensions on performance, the results regarding these variables are not consistent with some studies (Aidoo et al., 2020; Belás & Sopková, 2016; Dadzie et al., 2021; Hughes-Morgan et al., 2018; Lumpkin & Dess, 2001; Rauch et al., 2009). However, since some studies confirm the insignificant relationship between EO and performance (Alegre & Chiva, 2013; Pett & Wolf, 2016) and negative relationship between EO and performance (Stenholm, Pukkinen, & Heinonen, 2016), this paper finds similar results with above-mentioned studies.

Concerning performance and access to finance, this paper finds compatible results with other studies (Chandrayanti et al., 2020; Jabbouri & Farooq, 2021; Syahdan et al., 2020). This is because performance positively and significantly affects firms' credit access. Regarding EO and access to finance, this paper does not find similar results with the study of some researchers since these researchers confirm the positive relationship between EO and access to finance (Sidek et al., 2016).

Regarding the mediating role of performance between EO and access to finance, this paper confirms the fact that performance plays a mediating role between both innovativeness-access to finance and risk taking-access to finance. Thus, these results are compatible with the findings of some studies (Chandrayanti et al., 2020; Kiboki et al., 2014). On the other hand, since performance does not mediate the relationship between proactiveness, competitive aggressiveness, autonomy, and access to finance, this paper opposes the findings of above-mentioned studies to some extent.

The result of this paper regarding innovativeness, performance, and access to bank finance might be explained with some credible innovative actions of SMEs, such as patent, trademark, and certification ownerships and applications. This is because patent, trademark, and certification applications and ownerships are visible and difficult to imitate, therefore, customers and lenders can consider these initiatives of SMEs when contacting them. For instance, prospective customers can ask for SMEs whether they have some certifications or not. If SMEs have such certifications, prospective consumers can decide to buy some products and services from such companies. Then, income and revenues of SMEs increase, and they can have better financial indicators. On the other hand, patent ownership increases creditworthiness of SMEs (Pederzoli, Thoma, & Torricelli, 2013). Thus, when lending officers contact SMEs or visit these businesses, they can see the certifications that the businesses have. In this regard, SMEs can become more qualified and credible from the perspective of banks. This is because having certifications (such as ISO 9000), patents, and trademarks are signals of firm quality (Arthurs et al., 2009; Minard, 2015). Then, banks might provide them with some loans with reduced obstacles and SMEs can get easier credit access.

In this regard, governments, patent-trademark offices, and accreditation and certification agencies collaborate and provide some education for SMEs regarding how to apply such certifications. Thus, they can play a guidance role to support SMEs during their patent, trademark, and certification applications. Furthermore, policy makers and other financial institutions can provide some subsidies or incentives for SMEs to produce some products and services that enable them to make patent applications. Additionally, these trainings and seminars can be presented for workers of SMEs and prospective entrepreneurs such as for university students. Thus, development agencies, universities, ministry of education, and other important institutions can work together to stimulate entrepreneurial attitudes of all, entrepreneurs, company executives, workers, and prospective entrepreneurs. Since SMEs make significant contributions for economies, financial and educational support of policy makers and other organizations can increase their value addition to economies of countries.

Although some international and national institutions provide some financial and educational supports for SMEs in Turkey, those supports are not enough compared with the supports of other developed countries. For instance, European Union (EU) supports innovative Turkish SMEs by giving guarantees and providing training and consulting activities via Horizon 2020 program (European Union, 2021). Concerning national institutions, some ministries such as the Ministry of Science, Industry and Technology and the Ministry of Energy and Natural Sources support Turkish SMEs in their certification processes (Türkiye Cumhuriyeti Ekonomi Bakanlığı, 2018). KOSGEB, TÜBİTAK, and KOBİ Venture Capital Investment Trust Inc. are other national institutions of Turkey that encourage SMEs for their R&D activities.

Since innovativeness is a kind of skill and an intangible resource that belongs to resource-based theory, this behavior makes SMEs competitive against their rivals. In this regard, the support of governments to increase innovative posture of SMEs is very beneficial for SMEs in their survival. Moreover, some financing programs via websites might be created by investors and those investors might make investments for some innovative projects by SMEs not only in Turkey but also in

other countries such as Brazil. In addition to that financial support, some industrial zones can be created by policy makers to establish closer relationships between SMEs, financing institutions, patent or other certifications offices, and universities to stimulate and improve innovative abilities and entrepreneurial competencies of businesses.

Concerning the risk-taking behaviors of SMEs, banks are prone to giving credits for their less risky borrowers. However, when considering financial performance of SMEs in their credit evaluations, loan officers can feel safe in giving loans even to their risky SMEs customers. Thus, this fact might be evidence to explain the result regarding the mediating role of performance between risk taking and access to finance. Even though some of SMEs are risk takers, having better performance makes them gain bank credits.

On the other hand, the reason why proactiveness, autonomy, and competitive aggressiveness do not influence firm performance and access to bank finance might be related to how these entrepreneurial behaviors are perceived by lending officers. Compared to visibility of innovation such as patents, trademarks, and ISO certifications, proactive, autonomous, and aggressive behaviors of SMEs might not be received by lenders and costumers, thus, lenders and customers might not consider these attitudes when making purchasing and credit decisions. Thus, SMEs in the research data might have patents, ISO certifications, and trademarks to draw their prospective customers and lenders regarding the quality of their firms. However, concerning other EO dimensions, it might have not been possible for SMEs to indicate their entrepreneurial behaviors to get better financial performance and credit access.

Another reason why proactive, autonomous, and aggressive behaviors of SMEs regarding competitiveness do not enable them to have better financial performance and to receive credit might be related with firm-entrepreneur characteristics. This is because executives with a lack of experience and firms that lack audited financial statements are some of the main reasons for SMEs to face rejections in their credit applications. For instance, firm executives must have some ability to provide timely, quality, and complete information about their firms to bank officers. Since the quality of financial information carries high importance for credit decisions of banks, owners and executives need to provide quality information to the lenders as much as possible. By doing so, they can decrease information asymmetries in lender-borrower relationship and SMEs can face reduced credit obstacles. This is because well-skilled and well-educated executives are more likely to receive bank credit compared to others (Kumar, 2005). On the other hand, since these executives have also other abilities such as being informed about credit conditions in the market, making accurate predictions regarding market conditions, and being able to seize opportunities, these competencies might also make them to have easier credit access conditions. Similar to the above-mentioned implications, seminars, trainings, and education might be provided for executives who have a lack of entrepreneurial competencies. Then, their entrepreneurial and technical abilities might be increased by the collaborations of governmental and nongovernmental organizations.

CONCLUSION

Theoretical implications

In order to continue their operations, most of SMEs are interested receiving credits from banks that are essential players of SMEs financing. However, getting credit is a difficult period for these businesses because of their creditworthiness. In this regard, their entrepreneurial abilities and financial performance might enable them to have easier credit access, since these factors might be perceived as quality signals by banks. In this respect, the purpose of this paper was to find whether performance of firms mediates the association between EO and access to bank finance.

The results regarding the first hypothesis, related with EO and performance, confirm the fact that while innovativeness has positive influences on access to finance, risk taking has negative impacts on firm performance. Proactiveness, competitive aggressiveness, and autonomy do not have any significant effects on access to finance. Regarding the second hypothesis, of EO and access to bank finance, risk taking is the only EO dimension that is a significant predictor of access to finance, but it has a negative influence on access to finance. By this, the paper means firms that are more risk-averse than their risk-taking rivals are more likely to access finance. When it comes to other dimensions of EO, innovativeness, proactiveness, competitive aggressiveness, and autonomy, they do not have any significant impacts on access to finance.

Regarding the third hypothesis, performance and access to finance, performance of firms positively affects their bank credit access. Concerning the mediating role of performance between EO and access to finance, which belongs to the fourth hypothesis, performance fully mediates between innovativeness and access to bank finance. Moreover, performance plays a mediating role between risk taking and credit access as well. On the other hand, performance does not play a mediating role in the association between proactiveness, competitive aggressiveness, autonomy, and access to finance. Those results make this paper different from other studies and highlight the partial and full mediation role of performance of SMEs in the relationship between various dimensions of EO and access to bank finance. Those unique findings enable this paper to make significant value addition to the related literature.

Managerial implications

Trademark, patent, certification ownership, and applications might be strong arguments to explain the results regarding innovativeness, performance, and access to finance. This is because those certifications increase the financial performance of businesses and they are perceived as credible signals by bank officers when making credit decision. Concerning the results related with risk taking, performance, and access to bank finance, even SMEs are risk takers, their financial performance can be a quality signal for bank officers to provide loans for these businesses. Signals regarding proactive, competitive, and autonomous behaviors of SMEs might not be as visible as other dimensions of EO. Therefore, bank officers cannot perceive them to make credit decisions. Moreover, firm-entrepreneur characteristics might also reduce firms' abilities to send quality

signals regarding financial performance of businesses to credit officers. These facts might be reasons to explain these results.

Governments, patent-trademark offices, accreditation and certification agencies, and financing institutions might cooperate together to provide some financial support and to present some entrepreneurial training and education for SMEs and entrepreneurs. Furthermore, some financing programs that throw investors and SMEs together from all over the world might encourage SMEs' innovative projects to make them more competitive. Policy makers can also create industrial zones to create closer contacts between SMEs, financing institutions, patent or other certifications offices, and universities to increase innovativeness, performance, and credit access of SMEs.

Limitations and further research directions

Although this comprehensive study provides unique results, it has some limitations. Since this paper is survey-based, it is possible that respondents were unwilling to fulfill the surveys. However, by excluding the surveys that have missing values, the research has tried to overcome this problem. Moreover, the respondents work in management positions, thus, the results found may be influenced by the social desirability bias, which is another limitation of this research. Since the research sample consists only of firms in the SMEs segment and firms in Turkey, new studies can also include both SMEs and larger enterprises that operate in various countries and might make comparisons between these businesses depending on analyzed variables in this paper.

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1st author: conceptualization (lead), data curation (lead), formal analysis (lead), funding acquisition (lead), investigation (lead), methodology (lead), project administration (lead), resources (lead), software (lead), supervision (lead), validation (lead), visualization (lead), writing - original draft (lead), writing - review & editing (lead).


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APPENDIX A

Table A1.

Measurements in the questionnaire

Variables	Measurements
Innovativeness	We regularly develop new products and services in our company. We invest a lot of money in the development of new methods and technologies.
Risk taking	The firm follows a strategy that I perceive considerably risky. The firm carries out risky projects to increase the performance.
Proactiveness	The firm has often tried to initiate actions to competitors, to which competitors respond. We seek to exploit predicted changes in our target market ahead of our competitors in order to evaluate proactiveness of SMEs.
Competitive aggressiveness	Our activities in relation to competition are often aggressive. We often do activities that are directed against competitors.
Autonomy	The owners of the company act independently. The staff in my company is reasonably autonomous with the implementation of specific business operations. The firm supports the initiatives of employees in terms of identifying and implementing business opportunities.
Performance	Please evaluate the net profit of your business over the last five years.
Access to finance	Did your firm received credit from its last bank credit application?

Note. Source: Author-compiled data.