



When leaders are marketers: a duality perspective on the effect of openness to experience on marketing behaviors and the moderating role of bottom-line mentality

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Accepted: 8 August 2021

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Abstract

While research has considered the effects of CEO and top-management team members' characteristics on strategic initiatives (e.g. marketing), less research has examined when non-executive leaders directly contribute to these initiatives. In this research, drawing from the duality framework on leader characteristics, we examine how leader openness to experience is associated with their increased engagement in marketing behaviors (e.g. recruiting new customers). Across two field studies, including an exploratory sample of small business owners and a sample of non-executive leaders in the outpatient physical therapy industry, we find that openness to experience was related to leaders' likelihood of executing marketing functions. Additionally, this relationship was weakened when leaders had a primary focus on short-term financial outcomes (i.e., high bottom-line mentality). We further link marketing to unit-level performance in a subsample of Study 2, suggesting that non-executive leaders' marketing behaviors can impact objective organizational performance.

Keywords Leadership · Openness to experience · Duality framework · Bottom-line mentality · Marketing

When considering factors that influence organizational performance, researchers have recognized the important role of top management teams' personalities and other leader characteristics in enacting long-term organizational strategies. For example, CEO characteristics have been found to influence organizations' engagement in strategic initiatives (Chatterjee & Hambrick, 2007; Gamache et al., 2015; Gerstner et al., 2013; Gupta et al., 2019; Hermann & Nadkarni, 2014; Hiller & Hambrick, 2005; Nadkarni & Chen, 2013). In particular, leader personality traits, such as CEOs' openness to experience (i.e. high curiosity, imagination, and a desire for novelty; McCrae & Costa Jr, 1997), can lead to higher organizational performance (Araujo-Cabrera et al., 2017) and willingness to take greater strategic risks (Benischke et al., 2019). In addition

to CEO influences, top-management teams also play a key role in enacting innovative strategic initiatives, including marketing functions (Harmancioglu et al., 2010).

Despite the attention given to the influence of CEO and top-management team characteristics on strategic initiatives, research in the broader leadership literature rarely considers how other leaders in the organization directly contribute to strategic initiatives. In other words, little is known concerning how non-executive leaders engage in behaviors that directly involve long-term strategic initiatives, such as organizational marketing objectives (Alqahtani & Usley, 2020). Marketing plays a key role in organizations' strategic initiatives due to its focus on "creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (American Marketing Association, 2017), and it enables firms to survive, reach potential consumers, and grow (Doyle, 2008; Kraatz & Zajac, 2001). Understanding non-executive leaders' engagement in strategic initiatives, such as marketing, is important because leaders in lower echelons in the organization are often tasked with a wide range of responsibilities (Kaiser, 2020). The range of leader responsibilities can be particularly broad during times of uncertainty for businesses, such as during the COVID-19 pandemic (Knight, 2020). Thus, examining how leader characteristics can influence externally-focused strategic,

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innovative initiatives such as marketing can also help researchers develop a more comprehensive theoretical understanding of the relationship between leader personality and performance-based outcomes (Judge et al., 2002).

The goal of this research, therefore, is to explore how non-executive leaders can directly influence an organization's long-term strategy of sustaining and growing business through engaging in marketing behaviors. We explore how openness to experience influences the extent to which non-executive leaders engage in marketing actions. In order to develop our model, we draw from Hermann and Nadkarni's (2014) duality framework, which discusses the influence of leader characteristics on strategic initiatives. Using this framework, we examine leaders who contribute to these strategic initiatives by engaging in behaviors such as recruiting new customers and promoting the organization's products and services. In particular, we examine the relationship between leader openness to experience and marketing behaviors, as well as the moderating effect of leaders' bottom-line mentalities (i.e., a primary focus on meeting bottom-line outcomes, such as profits; Greenbaum et al., 2012).

We aim to make three primary contributions to the literature. First, we integrate research on non-executive leader personality with research on CEO characteristics and strategic initiatives. By utilizing a lens typically studied at the CEO level, we can better understand how various leaders in the organization can directly engage in a type of strategic behavior (i.e., marketing). Doing so not only broadens our understanding of antecedents to strategic initiatives, but also provides a more comprehensive understanding of how leader personality influences a range of performance outcomes beyond employee-based outcomes (Hoffman et al., 2011; Judge et al., 2002; Kelemen et al., 2020). Second, we contribute to the research on openness to experience by considering an additional outcome of this well-studied personality trait. Organizational research on openness to experience at the non-executive level has largely focused on creative and innovative performance outcomes within the organization, such as creative task performance (Acar et al., 2019). In this research, we broaden our understanding of how leader openness can lead to higher levels of some innovative, long-term, externally-focused behaviors (i.e., marketing). Third, we contribute to work on bottom-line mentality by examining its deleterious effects on the positive relationship between leader openness to experience and marketing behaviors. We suggest that leaders exhibiting high bottom-line mentalities (i.e., short-term financial outcomes are prioritized) may counterintuitively inhibit the long-term strategic focus for highly open leaders, which could ultimately lead to a negative impact upon the long-term bottom-line. The results of our research add to the growing literature that examines how bottom-line mentality can play an important role as a boundary condition on leader outcomes (e.g. Eissa et al., 2017). Finally, in a supplemental

analysis of a smaller sample, we highlight the positive relationship between leader openness and objective performance (i.e. profit) through the mediating mechanism of leaders' marketing behaviors.

Theoretical Development and Hypotheses

Duality Framework

In their research on how CEO personality influences strategic change, Hermann and Nadkarni (2014) advanced a duality framework whereby certain personality traits can increase strategic initiative behaviors, and others can hinder these positive relationships. Drawing from research on the five-factor model of personality (McCrae & Costa Jr, 1997), they argued and found support for the role of CEO personality traits, such as openness to experience, on increased CEO strategic innovation initiatives. The main effect of openness to experience on strategic initiatives represents the first aspect of their duality model, whereby openness to experience is an enabler of strategic behavior. An additional aspect of their duality framework focused on opposing CEO characteristics that inhibit the main relationship. Taken together, their framework suggests that leader characteristics that capture divergent thinking and an ability to think about distal, externally-focused outcomes should be more likely to enable strategic behaviors, whereas internally-focused, risk-averse leader characteristics should play a moderating role in inhibiting the enabling main effect. They further argue and find support for the connection between engagement in strategic initiatives and firm performance.

In our research, we apply their duality framework to non-executive leaders by similarly examining the relationship between leader openness to experience and marketing behaviors. Consistent with other work that utilizes a duality framework (e.g. Gupta et al., 2019), in addition to exploring the enabling role of leader personality (i.e. openness to experience), we also consider a non-personality leader characteristic that captures a risk-averse, short-term focus (Greenbaum et al., 2020). In particular, we examine the inhibiting role of leader bottom-line mentality on the relationship between openness to experience and leaders' marketing behaviors.

Openness to Experience

Individuals who score highly on openness are considered intellectually curious, imaginative, adaptable, and in desire of novel experiences (McCrae & Costa Jr, 1997). On the other hand, those who are low on openness tend to be more conventional, less likely to want to change the status quo, and less interested in exploring new and different ideas (Costa Jr & McCrae, 1992). Research on creativity in the workplace has found that openness is one of the strongest individual

predictors of creative behavior (Acar et al., 2019), and openness to experience involves a range of cognitive facets, including engaging in imaginative activities and seeking variety (Christensen et al., 2019). In particular, those who report having high openness to experience are more likely to be perceived as transformational leaders who share knowledge with others and have a vision for the future (Zhang et al., 2019), and are considered to be more open to change (Rothman & Melwani, 2017).

Hermann and Nadkarni's (2014) duality framework suggests that personality traits such as openness to experience may positively influence the initiation of strategic change. The authors outline why personality traits, such as openness to experience, should enable externally-focused, strategic behaviors. They argue that leaders with "broad informational processing capabilities, divergent thinking and creativity, high tolerance for ambiguity, and motivation to combat inertial forces" (p. 1321) are more likely to advance an agenda focused on strategic initiatives. Additionally, personality traits that enable leaders to focus on distal outcomes, i.e. long-term versus immediate rewards, will be more successful with enacting strategic initiatives. Conversely, when leaders are reliant "on established norms and tried-and-true strategies" (p. 1322), this can limit their ability to be distally-focused and engage in behaviors that enable an organization to adapt to changes in the broader environment.

In the marketing literature, research has found that when organizations have a focus on innovation, they are more likely to engage in higher levels of marketing activity (Kilenthong et al., 2016). Marketing is characterized by ambiguity and uncertainty (Piercy, 1987). This is especially pronounced in small- and medium-sized firms, where leaders must often make creative judgments regarding their marketing actions without overt access to market intelligence (Fillis, 2002; Jones et al., 2009). We thus expect leaders who possess a tendency to be creative, seek novelty, manage uncertainty, and experiment with various externally-focused behaviors to engage in more externally-focused marketing actions, such as engaging in initiatives to grow the organization and recruit customers.

In summary, we propose that when leaders have high openness to experience, they will be more likely to engage in marketing behaviors (e.g., recruiting new customers through promotional activities) that contribute an organization's distal strategic outcomes. As such, we propose:

Hypothesis 1. Openness to experience will be positively related to leaders' marketing behaviors.

Moderating Role of Bottom-Line Mentality

While personality is an important predictor of leader behaviors, other individual characteristics often interact with

personality to increase or decrease the likelihood of behavioral outcomes (Zaccaro, 2007). Research suggests that boundary conditions are particularly applicable to the effects of openness to experience on workplace outcomes (Javed et al., 2020). As Hermann and Nadkarni (2014) proposed, leader characteristics associated with routine, structure, and traditional ways of thinking are likely to play an inhibiting role on the relationship between more open-minded, creative traits and strategic initiative behaviors. We therefore examine how leaders' bottom-line mentality, which is a rigid, short-term focused leader characteristic (Quade et al., 2020), will inhibit the positive relationship between leader openness to experience and leaders' engagement in marketing behaviors.

Bottom-line mentality is defined as "one-dimensional thinking that revolves around securing bottom-line outcomes to the neglect of competing priorities" (Greenbaum et al., 2012, p. 343). In other words, leaders with high bottom-line mentalities tend to have a primary focus on maximizing profit. Bottom-line mentality often causes individuals in the workplace to "focus on how their decisions impact short-term financial considerations while neglecting how those decisions might affect the organization...in the long-term" (Quade et al., 2020, p. 1161). The more myopic, short-term, and self-centered aspects of bottom-line mentalities suggest that leaders with high bottom-line mentalities may not consider expanding their sights to external, longer-range projects, such as marketing (Wolfe, 1988). Indeed, marketing is often seen as "the last bastion of unaccountable spending" (Clark et al., 2005, p. 241), and those involved in marketing functions often face dilemmas where long-term goals, such as improving branding, can clash with profit-oriented, shorter-term goals (Casenave & Klarmann, 2020; Nikolov, 2018).

Bottom-line mentalities play a moderating role on a number of studied leader behaviors in the workplace (e.g. Bonner et al., 2017; Mawritz et al., 2017). Under a duality framework, we consider its role as a boundary condition on the relationship between openness to experience and leaders' marketing behaviors. We suggest that a high bottom-line mentality will reduce the impact of externally-focused tendencies of those with high openness due to its hyper-focus on short-term business objectives, particularly due to the goal of making money and its focus on standard, proven ways of doing business (Hermann & Nadkarni, 2014). Because bottom-line mentality involves seeking out fewer external resources and reduced novel cultural engagement (Babalola et al., 2020; Martin et al., 2016; Wolfe, 1988), the effects of leaders' openness to experience will be inhibited by this internally-focused lens.

On the other hand, those with low bottom-line mentalities do not see making profits and focusing on the bottom-line as the primary concern in their work (Greenbaum et al., 2012). As such, as leaders' openness to experience increases, they are less likely to be cognitively bound by short-term considerations that involve a primary focus on profits (Babalola

et al., 2020), thus allowing their externally-focused and novelty-seeking tendencies to increase in the uncertain domain of marketing. Therefore, we propose that the effect of openness to experience on leaders' marketing behaviors will be contingent on their bottom-line mentalities. We expect that as openness increases, those with high bottom-line mentalities will be less likely to engage in the externalized strategic initiative of marketing.

Hypothesis 2. Bottom-line mentality will moderate the relationship between openness to experience and leaders' marketing behaviors such that the relationship will be weaker when bottom-line mentality is high.

Overview of Studies

We first conducted an exploratory study in a non-traditional sample with 111 small business owners (Study 1). In Study 2, we conducted a constructive replication (e.g. Dreher et al., 2019; Fisher & Robie, 2019; Hamstra et al., 2018; Köhler & Cortina, 2021) among 96 non-executive leaders. Following the typology of Köhler and Cortina (2021), we have identified this procedure as an incremental, dependent constructive replication due to the utilization of a more representative sample while “retaining the virtues of previous efforts” (p. 494). In particular, given that the primary focus of our research was to examine non-executive leaders, we aimed to replicate the results of Study 1 with leaders in a traditional organizational sample. The sample consisted of clinic directors of outpatient physical therapy clinics in the U.S. who were responsible for marketing their individual clinics. Utilizing a subsample of 28 clinics from Study 2, we also examined the link between leaders' marketing behaviors and objective unit performance. As a note, data in Study 2 were also used for a prior published manuscript (Graham et al., 2018).

Study 1: Method

Sample and Procedure

For our exploratory study, we sampled small business owners with 1000 or fewer employees in the U.S. utilizing Qualtrics' panel data service. Respondents were paid by Qualtrics upon completion of the online survey. We collected data from 210 respondents. Due to the online assessment modality, it was necessary to consider the potential for careless, partially random, and insufficient effort responders (Meade & Craig, 2012). We excluded two participants for failing an attention check. Upon reviewing the individual responses and reliability measures, the data still clearly consisted of a large

proportion of careless responders. For example, utilizing the recommendation from Meade and Craig (2012) to examine an antonym index, a significant number of respondents entered the same score (before reverse coding) for multiple antonyms within the Big Five measures (e.g. “intellectual” and “unintellectual”; “envious” and “unenvious”; “sympathetic” and “unsympathetic”; etc.). Recent research suggests that as some respondents become savvier with the data collection processes of paid online survey panels, some participants in online survey panels may circumvent typical careless responding detection techniques (e.g. attention checks, open-ended questions, and survey completion time), requiring additional screening to ensure low-quality data is removed (Chandler et al., 2019; DeSimone & Harms, 2018; Thomas & Clifford, 2017).

We therefore sought a rigorous yet parsimonious statistical approach for excluding careless responders. Goldammer et al. (2020) contrasted several screening methods (i.e., personal reliability, Mahalanobis distance, psychometric synonyms, psychometric antonyms, longstring, response time, and intra-individual response variability) and empirically established personal reliability (PR) as the most robust criterion for filtering out careless responders while preserving meaningful data. The authors identified a PR cutoff of 0.26 as the point at which sensitivity (i.e., rate of careless responses correctly detected) was maximized while holding specificity (i.e., rate of effortful responses correctly detected) at 99%. This cutoff is similar to, but slightly more conservative than, the widely used criterion of 0.30 (Jackson, 1976; Johnson, 2005). PR is measured by dividing the data into equivalent halves and creating parallel vectors for each factor (Cuneo et al., 2018; Jackson, 1976). The correlation between these vectors represents a participant's PR. Using the $PR > 0.26$ criterion, we screened out 47% of our sample due to careless responding, resulting in a sample size of 111.

Of the 111 participants, 72 (65%) were male and 39 (35%) were female. The average age of the participants was 43.83 (SD = 10.95). The small business owners worked in a variety of industries, with the most common being the technology/IT (16.2%), automotive (10%), healthcare (7.2%), and retail (5.4%) industries. The average age of the respondents' small businesses was 8.93 years (SD = 7.07). On average, the businesses employed 91 individuals (SD = 187).

Measures

Unless otherwise specified, all item measures were rated on 1-to-7 point Likert scales.

Big Five

We collected measures of all Big Five personality variables, including our independent variable of openness to experience, using Saucier's (1994) 40-item measure. Each personality

variable consisted of eight one-word items. On a 7-point scale, participants indicated the accuracy of the items in describing their personalities (1 = “very inaccurate”; 7 = “very accurate”). Example items for openness to experience were “imaginative” and “unintellectual” (reverse scored). The alpha reliability for openness was .69. Although the reliability for this variable was marginally below the conventional 0.70 cutoff, we opted to refrain from item deletion for a variety of reasons. First, the five-factor model of personality, which includes openness to experience, is a well-established and validated model of personality (Christensen et al., 2019). We believe that a modest gain in internal consistency does not justify the content validity lost by the deletion of a well-supported item. Second, more contemporary research has indicated that reliabilities below 0.70 may be acceptable (George & Mallery, 2003; Hair et al., 2010) and that a universal criterion is not appropriate (Cho & Kim, 2015; Cortina, 1993). Finally, openness to experience has been found to feature reliabilities at approximately 0.70 in past research (e.g., Burke & Witt, 2002; Javed et al., 2020; Saucier, 1992), which may be due to the multi-dimensionality of the construct, which captures a range of cognitive features (Christensen et al., 2019).

Leaders’ Marketing Behaviors

In order to measure leaders’ marketing behaviors, we first explored whether an appropriate measure existed in the organizational psychology or marketing literatures. While the former yielded no results, the closest measure in the marketing literature we considered was market orientation (Narver & Slater, 1990). Market orientation is a 15-item measure of organizational culture that assesses a variety of business-wide practices, such as “after-sales service” and engaging in “interfunctional coordination.” However, we deemed the organizational scope of this scale as inappropriate for the assessment of individual marketing behaviors. We determined that the market orientation measure would fail to capture the activities of non-executive leaders who were engaged in marketing. We therefore turned to the organizational psychology literature in order to adapt a measure that would capture the typical marketing behaviors of non-executive leaders.

Common marketing approaches for non-executive leaders often deviate from the traditional marketing paradigm, which is rooted in a holistic and philosophical approach to meeting consumer needs learned through top-down market intelligence (Jones et al., 2009). These leaders tend to rely upon bottom-up processes, such as leveraging informal networks and growth strategies based on niche marketing efforts (Stokes, 2000). This highly flexible and fluid approach to marketing is oriented in the process of engaging in strategies to grow the organization by attracting new customers through informal promotion and word-of-mouth initiatives (Alqahtani & Uslay, 2020; Bettiol et al., 2012). The creative behavior

measure, developed by Scott and Bruce (1994), provided us with a six-item scale that we adapted to include common marketing behaviors that could apply to non-executive leaders. We adapted this measure due to its key action words such as “search,” “generate,” and “promote.” However, in order to ensure we were not capturing solely a different measure of creative behavior, we removed specific creativity-focused words from the measure, such as “creative” and “innovative.” The six adapted items we used to measure leaders’ marketing behaviors were “I search out new customers,” “I generate ideas to grow the organization,” “I feel comfortable promoting the organization,” “I frequently look for opportunities to grow the organization,” “I develop adequate plans for promoting the organization,” and “I am able to attract new customers to the business.” The alpha reliability for the marketing behavior measure was .96.

Bottom-Line Mentality

We used Greenbaum et al.’s (2012) four-item measure of bottom-line mentality. A sample item was “I treat the bottom line as more important than anything else.” The alpha reliability was .90.

Controls

We expected that as experience in their roles and organizations increased, leaders would be more adept at marketing behaviors. Additionally, as people age, their openness to experience can increase (Specht et al., 2011). In all analyses, we therefore controlled for both the age of the small business and the age of the small business owner. Furthermore, in order to ensure we accounted for all personality effects, we included the other four Big Five traits in our analyses (i.e. conscientiousness, agreeableness, extraversion, and neuroticism).

Study 1: Results

We first utilized Amos software to conduct confirmatory factor analysis (CFA) using maximum-likelihood estimation. In order to improve the parameter estimate-to-sample size ratio (Kline, 2015), we created three parcels for each construct using the partial disaggregation method based on Rogers and Schmitt’s (2004) factorial algorithm and outlined by Williams and O’Boyle Jr (2008). The three-factor model fitted the data well ($\chi^2 [24] = 39.418$, CFI = .98, TLI = .97, SRMR = .07, $p = .03$), and better than a two-factor model with marketing behaviors and openness to experience grouped together ($\chi^2 [26] = 99.252$, CFI = .89, TLI = .85, SRMR = .13; $\Delta\chi^2 [2] = 59.834$, $p < .001$) or a one-factor model ($\chi^2 [27] = 312.350$, CFI = .59, TLI = .45, SRMR = .23; $\Delta\chi^2 [3] = 272.93$, $p < .001$). In all analyses, no cross loadings

were estimated, and all error terms were modeled independently.

The zero-order correlations are presented in Table 1. In three cases, the age of the small business was missing from the respondents, and we therefore imputed these cases using the remaining sample's mean. In order to test our hypotheses, we mean centered our independent variable and moderator variable to calculate the interaction terms (Hofmann & Gavin, 1998) and then utilized hierarchical regression in SPSS (see Table 2). After controlling for the age of the small business and the age of the leaders, as well as the rest of the Big Five, we found that openness to experience was positively related to leaders' marketing behaviors ($b = .30$, $SE = .15$, $p < .05$). This finding supports Hypothesis 1. After including bottom-line mentality, the interaction between openness to experience and bottom-line mentality was significant ($b = -.20$, $SE = .07$, $p < .05$). Thus, Hypothesis 2 was supported. To probe the interaction effects, we plotted the simple slopes (Aiken & West, 1991; see Fig. 1). The pattern of the interaction provides support for the repressive effect of high bottom-line mentalities on the relationship between openness and marketing behaviors, which is consistent with Hypothesis 2. The relationship between openness and marketing behaviors was positive at low levels of bottom-line mentality ($t = 3.36$, $p < .01$), but was non-significant at high levels of bottom-line mentality ($t = 0.45$, ns), which supported the directionality of the hypothesis.

Study 2: Method

Sample and Procedure

In Study 2, we sought to replicate the results of Study 1 in order to test our full model in a sample of non-

executive leaders. In this study, we worked with 15 outpatient physical therapy companies in the U.S. The leaders in the sample were clinic directors who had been promoted from the role of physical therapist. Thus, their background and training were primarily focused on patient care, rather than business functions or marketing. During initial discussions with the CEOs of the physical therapy firms, the CEOs indicated that they desired their clinic directors to engage in marketing functions. In particular, they sought for their clinic directors to engage in promotion and recruitment of new patients. While most of these organizations also had a member of their corporate staff formally assigned to a marketing role, the CEOs expected their clinic directors to market their individual clinics locally.

Of the 191 clinics across the 15 different companies, 97 clinics fully participated in our data collection for a response rate of 50.8%. The average number of clinics per organization was 12.7. The clinic directors were asked to take a one-time online survey, and they were assured that their responses were confidential and the results would only be shared with their organizations in the aggregate. In order to check for careless responders, we used the same criteria as Study 1. All 97 clinic directors passed the survey attention check. We also used the same personal reliability measure and cutoff as Study 1, which resulted in the removal of only one case for a final sample of 96 leaders. We believe that the higher attention to the survey among this sample of leaders was due to the nature of the study wherein the clinic directors were told by their CEOs that the results of the survey could help the organization improve in the future, thus resulting in high levels of engagement in the survey questions.

Of the 96 clinic directors, 56 were male (58.3%) and 40 were female (41.7%). Their average age was 38.22 ($SD = 8.02$), and they had worked in their organization

Table 1 Study 1 Zero Order Correlations

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1) SBO Tenure	8.87	7.15	–								
2) Age	43.83	10.95	.454**	–							
3) Conscientiousness	6.20	0.78	-.171	-.162	(.736)						
4) Agreeableness	6.09	0.69	-.017	-.022	.342**	(.617)					
5) Neuroticism	2.58	0.94	-.029	-.055	-.330**	-.368**	(.608)				
6) Openness	5.96	0.78	-.041	-.061	.357**	.228*	-.186	(.691)			
7) Extraversion	4.84	1.09	-.080	-.125	.489**	.102	-.288**	.195*	(.707)		
8) BLM	3.77	1.75	.031	-.070	-.102	-.237*	.102	-.018	-.204*	(.900)	
9) Mkt Behaviors	6.29	1.23	-.183	-.315**	.287**	.183	-.150	.291**	.219*	.063	(.957)

$N = 111$. All tests are two-tailed. SBO Tenure = Duration of owning a small business in years. BLM = Bottom Line Mentality. Cronbach's alpha reliability coefficient in parentheses

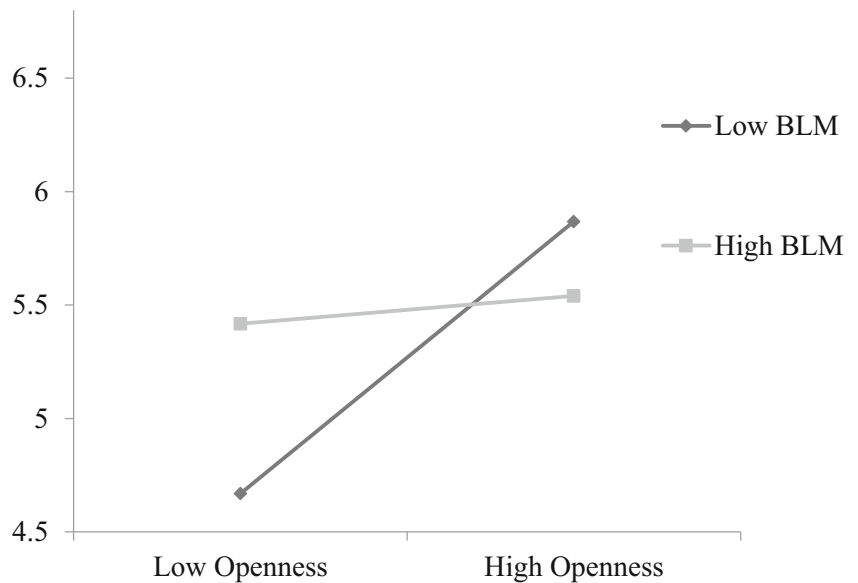
* $p < .05$. ** $p < .01$

Table 2 Ordinary least squares (OLS) hierarchical regression analysis predicting leaders' marketing behaviors

Step	Predictor	Unstandardized Coefficients		Standardized Coefficients		R ²	ΔR ²	F	p
		B	SE	β	p				
1	SBO Tenure	-.012	.017	-.070	.481	.103	.103	6.233	.003
	Leader Age	-.032	.011	-.288	.004				
2	SBO Tenure	-.007	.017	-.042	.662	.212	.109	3.959	.001
	Leader Age	-.030	.011	-.264	.008				
	Conscientiousness	.139	.175	.089	.429				
	Agreeableness	.130	.176	.073	.462				
	Neuroticism	-.062	.130	-.047	.635				
	Openness	.312	.148	.199	.038				
	Extraversion	.091	.116	.081	.435				
3	SBO Tenure	-.007	.017	-.042	.661	.222	.010	3.639	.001
	Leader Age	-.028	.011	-.253	.010				
	Conscientiousness	.130	.175	.083	.460				
	Agreeableness	.179	.181	.100	.324				
	Neuroticism	-.057	.130	-.043	.665				
	Openness	.303	.148	.193	.044				
	Extraversion	.119	.118	.106	.315				
4	BLM	.074	.065	.106	.254	.272	.050	4.200	.000
	SBO Tenure	-.011	.016	-.066	.480				
	Leader Age	-.025	.011	-.220	.023				
	Conscientiousness	.222	.174	.142	.203				
	Agreeableness	.140	.176	.079	.427				
	Neuroticism	-.056	.126	-.043	.660				
	Openness	.422	.151	.269	.006				
	Extraversion	.071	.116	.063	.543				
BLM	.060	.063	.086	.342					
Open x BLM	-.196	.074	-.247	.010					

N = 111. SE = standard error of B. SBO Tenure = Duration as small business owner. BLM = Bottom Line Mentality. Dependent Variable: Leader marketing behaviors

Fig. 1 Study 1 Plot of the Conditional Effect of Openness to Experience on Leader Marketing Behaviors. Notes. Y axis represents leader marketing behaviors. BLM = bottom-line mentality



for approximately 6.12 years ($SD = 4.38$). On average, excluding the clinic directors, their clinics employed 6.61 individuals ($SD = 5.02$). Employees of the clinics primarily consisted of physical therapists, but they also included administrative support staff and sometimes other patient care specializations, such as occupational therapists.

Measures

We used the same measures as Study 1, with two adjustments. For the Big Five, instead of participants rating the accuracy of the descriptions on a scale of 1 to 7, they instead rated themselves on a scale of 1 to 9 (1 = “extremely inaccurate” and 9 = “extremely accurate”). The alpha reliability for openness to experience was .78. For the marketing behavior measure, due to survey length restrictions, we included three of the six original marketing behavior items in the survey. We also adjusted the word “customers” to “patients” to account for the physical therapy context. The alpha reliability for the marketing behaviors measure was .76, and the reliability of the bottom-line mentality measure was .74.

Controls

We used similar control variables as Study 1 to account for the leaders’ experience. Rather than the age of the small business, we controlled for the number of years the clinic directors had worked at their organization. Consistent with Study 1, we also controlled for leader age and the other Big Five personality characteristics.

Study 2: Results

We first utilized Amos software to conduct confirmatory factor analysis (CFA) using maximum-likelihood estimation. Consistent with Study 1, in order to improve the parameter estimate-to-sample size ratio (Kline, 2015), we again used the partial disaggregation method outlined by Williams and O’Boyle Jr (2008) to create three parcels for each construct. The three-factor model fitted the data well ($\chi^2 [24] = 25.069$, $CFI = .99$, $TLI = .99$, $SRMR = .07$, $p = .40$), and better than a two-factor model with marketing behaviors and openness to experience grouped together ($\chi^2 [26] = 111.723$, $CFI = .63$, $TLI = .49$, $SRMR = .14$; $\Delta\chi^2 [2] = 86.654$, $p < .001$) or a one-factor model ($\chi^2 [27] = 166.099$, $CFI = .40$, $TLI = .20$, $SRMR = .18$; $\Delta\chi^2 [3] = 141.03$, $p < .001$). In all analyses, no cross loadings were estimated, and all error terms were modeled independently.

The zero-order correlations for Study 2 are presented in Table 3. In order to conduct our analyses, we utilized hierarchical regression in SPSS (see Table 4).¹ We mean-centered our independent variable and moderator variable and calculated the interaction term using the mean-centered variables. After accounting for leader age, years of experience at their organizations, and the other Big Five personality variables, openness to experience was positively related to leaders’ marketing behaviors ($b = .14$, $SE = .05$, $p < .05$). Therefore, Hypothesis 1 was supported. Additionally, bottom-line mentality significantly moderated the relationship between openness and marketing behaviors ($b = -.21$, $SE = .07$, $p < .05$). Therefore, Hypothesis 2 was supported. A simple slope analysis revealed the pattern of the interaction between openness and bottom-line mentality on marketing behaviors (see Fig. 2). The results indicated that the relationship between openness and marketing behaviors was significantly positive at low levels of bottom-line mentality ($t = 3.61$, $p < .01$) and non-significant at high levels of bottom-line mentality ($t = -0.40$, ns), supporting Hypothesis 2’s proposed direction of the relationship.

Supplemental Analysis

While the main focus of Study 2 was a constructive replication of Study 1 with non-executive leaders, we also had an opportunity to explore the effects of leaders’ marketing behaviors on objective performance outcomes. We were able to obtain patient visit data for the first month of the study and one month after the completion of our data collection from a total of 28 clinics across four companies.

Prior to the launch of our study, the CEOs indicated to the primary investigator that they typically considered patient visits an important indicator of objective clinic performance since patient visits ultimately determined their profits. While revenues were also used by CEOs as an objective performance outcome, comparing revenues both across and within organizations was difficult due to disparities in patient visit fees and health insurance plans (e.g., clinics in New York City charged higher rates than clinics in rural Pennsylvania). We therefore chose patient visits per staff member as a more comparable objective performance outcome. All clinic directors in our

¹ Due to the nested structure of our data, with clinic directors nested within organizations, we considered whether multilevel modeling was appropriate. Clustering across clinics explained an insignificant percentage of the variance in the marketing behaviors of clinic directors ($\tau_{00} = .016$, $p = .385$). The $ICC(1) = .077$ and $ICC(2) = .349$ were both below the medians reported by James (1982; .12 and .60, respectively). ICC statistics were calculated using the formulae provided by Bliese (2000) and Chen and Bliese (2002). A one-way analysis of variance was conducted in which the organizations were the independent variable and the focal variable (i.e., marketing behaviors) was the dependent variable. The differences between the average marketing behaviors of clinic directors within organizations, compared across organizations, was insignificant ($F(14) = 1.534$, $p = .118$).

Table 3 Study 2 Zero Order Correlations

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1) SBO Tenure	6.12	4.36	–										
2) Age	38.35	8.08	.448**	–									
3) Feb Visits ^a	123.79	69.80	-.166	.054	–								
4) April Visits ^a	111.74	45.76	-.108	.069	.914**	–							
5) Consc.	7.31	1.03	-.018	-.180	.117	.027	(.848)						
6) Agreeableness	7.70	0.87	-.035	-.045	-.038	-.139	.198	(.785)					
7) Neuroticism	3.64	1.26	-.010	.066	-.071	.049	-.196	-.380**	(.794)				
8) Openness	6.68	1.04	-.001	.081	-.123	-.187	.014	.106	-.106	(.794)			
9) Extraversion	6.61	1.28	-.216*	-.102	-.006	-.102	.175	.155	-.306**	.024	(.868)		
10) BLM	1.94	0.79	.008	.113	-.080	-.007	-.033	-.221*	.058	-.021	-.068	(.793)	
11) Mkt Beh.	6.55	0.55	.058	.000	-.040	.047	.018	.177	-.054	.260*	.160	-.071	(.753)

N = 96. All tests are two-tailed. SBO Tenure = Duration of owning a small business in years. Feb Visits = February patient visits per employee. April Visits = April patient visits per employee. BLM = Bottom Line Mentality. Cronbach's alpha reliability coefficient in parentheses

p* < .05. *p* < .01

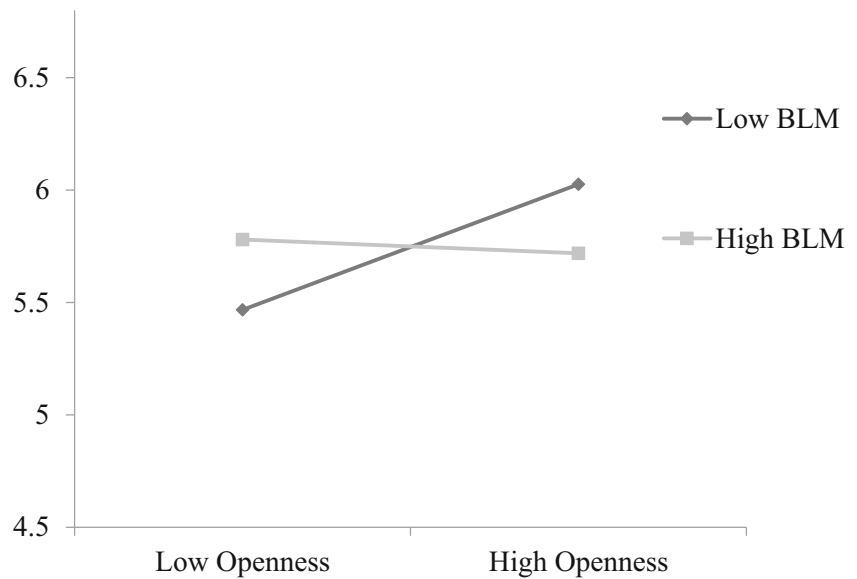
^aRepresents subsample of 28 clinics

Table 4 Study 1 ordinary least squares (OLS) hierarchical regression analysis predicting leaders' marketing behaviors

<i>Step</i>	<i>Predictor</i>	Unstandardized Coefficients		Standardized Coefficients		<i>R</i> ²	ΔR^2	<i>F</i>	<i>p</i>
		<i>B</i>	<i>SE</i>	β	<i>p</i>				
1	Tenure	.009	.015	.070	.545	.004	.004	.187	.830
	Leader Age	-.002	.008	-.025	.829				
2	Tenure	.017	.015	.135	.243	.126	.122	1.809	.095
	Leader Age	-.005	.008	-.068	.552				
	Conscientiousness	-.023	.057	-.043	.681				
	Agreeableness	.106	.070	.163	.134				
	Neuroticism	.039	.050	.088	.436				
	Openness	.135	.054	.254	.014				
	Extraversion	.080	.047	.185	.091				
3	Tenure	.017	.015	.134	.250	.126	.000	1.571	.145
	Leader Age	-.005	.008	-.067	.563				
	Conscientiousness	-.023	.057	-.043	.685				
	Agreeableness	.104	.072	.159	.152				
	Neuroticism	.038	.051	.085	.454				
	Openness	.135	.054	.254	.014				
	Extraversion	.079	.047	.184	.095				
	BLM	-.017	.080	-.021	.836				
4	Tenure	.010	.014	.081	.473	.216	.090	2.341	.017
	Leader Age	-.001	.008	-.020	.859				
	Conscientiousness	.007	.055	.013	.901				
	Agreeableness	.083	.069	.128	.231				
	Neuroticism	.027	.048	.061	.575				
	Openness	.119	.052	.223	.025				
	Extraversion	.051	.046	.118	.268				
	Open x BLM	-.210	.069	-.308	.003				

N = 96. *SE* = standard error of *B*. Tenure = Duration of employment at the clinic. BLM = Bottom Line Mentality. Dependent Variable: Leader marketing behaviors

Fig. 2 Study 2 Plot of the Conditional Effect of Openness to Experience on Leader Marketing Behaviors. *Notes.* Y axis represents leader marketing behaviors. BLM = bottom-line mentality



study completed their surveys in February and March, and the corporate offices for each of the four companies provided us with the number of patient visits for each of the 28 clinics in both February and April of the same year. Using the number of staff members for each clinic (excluding the clinic director), we calculated the number of patient visits per employee in order to account for differences in clinic size (mean number of employees = 5.64, $SD = 4.37$). We then used these ratios for February and April for our supplemental analysis. The mean number of patient visits in February was 124.79 patients per employee ($SD = 69.80$) and the mean number of patient visits in April was 111.74 patients per staff member ($SD = 45.77$).

Utilizing hierarchical regression in SPSS (see Table 5), we included our control and study variables (i.e. organizational tenure, leader age, Big Five personality traits, and bottom-line mentality)² to examine whether leaders' marketing behaviors predicted April's patient visit ratio. Additionally, in order to account for past performance and ensure that we were investigating the relationship between leaders' self-reported marketing behaviors and future performance, we used the February patient-visits-to-clinic-size ratio as an additional control variable. The results indicated that leaders' self-reported marketing behaviors were indeed positively associated with future clinic performance in terms of patient visits per employee ($b = 25.10$, $SE = 10.97$, $p < .05$), which suggests that in our subsample of clinics, leaders' marketing behaviors had a positive impact on patient visits and thus revenue.

² When entering the interaction term (openness x bottom-line mentality) as an additional control variable, the pattern and significance of the results remained the same.

Discussion

Taken together, the results indicated that leaders' openness to experience was associated with greater levels of leader marketing behaviors, and this relationship was weakened as leaders' bottom-line mentalities increased. Our results were consistent across two studies, and a supplemental analysis in a subset of Study 2 revealed that non-executive leaders' marketing behaviors can ultimately impact organizational financial performance. Taken together, our results support the duality framework (Hermann & Nadkarni, 2014), which posited that enabling traits, such as openness to experience, impact strategic initiatives and successful implementation, whereas leader characteristics associated with traditional, rigid ways of thinking (i.e., bottom-line mentality) can inhibit the engagement of strategic behaviors.

Theoretical Contributions

The results make multiple contributions to the research on openness in the workplace. First, we demonstrate that openness can have positive effects for non-executive leader behavior beyond typical measures of creative behavior and innovation within the organization and extend to organizational initiatives and long-term planning goals. Previous research has demonstrated, out of the five-factor model of personality, openness to experience is the least predictive of on-the-job performance (Burke & Witt, 2002; Griffin & Hesketh, 2004). However, our findings suggest that there may be additional performance indicators, such as marketing behaviors, that have been overlooked in relation to openness. Additionally, our results provide evidence of the ways in which openness can enable leaders to contribute to strategic initiatives. While our first exploratory study of small business owners did not capture non-executive leaders, the consistency

Table 5 Study 2 ordinary least squares (OLS) hierarchical regression analysis predicting leaders' marketing behaviors

Step	Predictor	Unstandardized Coefficients		Standardized Coefficients		R ²	ΔR ²	F	p
		B	SE	β	p				
1	Tenure	.341	.703	.044	.632	.837	.837	41.076	.000
	Leader Age	.020	.530	.003	.970				
	Feb visits per Emp.	.604	.055	.921	.000				
2	Tenure	.667	.771	.086	.399	.878	.041	14.413	.000
	Leader Age	-.634	.669	-.107	.356				
	Feb visits per Emp.	.620	.058	.946	.000				
	BLM	8.960	6.404	.132	.179				
	Conscientiousness	-2.191	3.634	-.059	.554				
	Agreeableness	-2.208	5.290	-.037	.681				
	Neuroticism	2.973	3.825	.078	.447				
	Openness	-3.054	4.109	-.068	.467				
	Extraversion	-3.859	3.772	-.107	.320				
	Marketing Behaviors	25.097	10.967	.197	.035				
3	Tenure	.699	.694	.090	.328	.902	.024	16.549	.000
	Leader Age	-.652	.602	-.110	.294				
	Feb visits per Emp.	.628	.052	.957	.000				
	BLM	11.499	5.868	.170	.067				
	Conscientiousness	-4.049	3.369	-.108	.246				
	Agreeableness	-4.519	4.865	-.076	.366				
	Neuroticism	.917	3.556	.024	.800				
	Openness	-3.402	3.700	-.075	.371				
	Extraversion	-6.551	3.591	-.182	.086				
	Marketing Behaviors	25.097	10.967	.197	.035				

N = 28. *SE* = standard error of *B*. Tenure = Duration of employment at the clinic. Feb visits per Emp. = February patient visits per employee. BLM = Bottom Line Mentality. Dependent Variable: April patient visits per employee

of our findings across two samples, including a sample of non-executive leaders, suggests that openness has a robust effect on leaders' strategic engagement in marketing. This positive effect, however, was weakened when leaders possessed high bottom-line mentalities. This finding contributes to research concerning the complexities of the cognitive functions captured by openness to experience and the important role of boundary conditions in enabling or disinhibiting the positive effects of openness (Christensen et al., 2019; Javed et al., 2020). The findings therefore provide a more holistic view of how openness operates in the workplace, particularly when considering novel and externally-focused leader strategic behaviors.

Second, our results contribute to the nascent literature on bottom-line mentality. Like many other studies on bottom-line mentality, we find that its impact in the workplace can be considered a mindset that interacts with other personal or contextual factors to predict leader behavior (e.g. Eissa et al., 2017). Rather than expressing a direct effect on leader behaviors, our results suggest that bottom-line mentality, in conjunction with other characteristics, can be detrimental to leaders' engagement in externally-focused strategic initiative

behaviors, such as marketing. The results regarding bottom-line mentality also expand the duality framework's consideration of leader characteristics that inhibit the relationship between enabling traits (i.e., openness to experience) and strategic behavior. The results ultimately contribute to the growing body of literature on the duality framework that considers a range of moderating leader characteristics (e.g., political orientation; Gupta et al., 2019), and broadens our understanding of how leader characteristics interact to predict innovative strategic outcomes.

Third, we contribute to the marketing literature by examining how non-executive leaders can contribute to strategic marketing initiatives. When considering psychological influences on marketing functions, the marketing literature has largely focused on consumer behavior (Jones et al., 2009) rather than the individual leader influences on marketing within organizations (Ozuem et al., 2016). Our research can therefore complement the existing marketing literature and its examination of innovative firm-level marketing strategies (e.g., Kilenthong et al., 2016) by considering how a range of individuals can

contribute to marketing functions, as well as important leader characteristics that can impact marketing initiatives.

Practical Implications

Our results also have several practical implications. First, the results bolster past work indicating that openness to experience can be an important indicator of innovative outcomes (Acar et al., 2019), suggesting that considering personality traits for promotion and selection decisions can be fruitful for organizations hoping to predict future employee behaviors (Lievens, 2017). Particularly for organizations that desire leaders who are adaptable and able to engage in behaviors outside of their domain of expertise, it may be beneficial to assess potential leaders' openness to experience. Utilizing openness as a promotion metric may be especially beneficial for organizations that expect non-executive leaders to directly engage with strategic initiatives.

Second, our findings around the deleterious effects of leaders' bottom-line mentalities provide further evidence to the detrimental impact of leaders placing profitability as their first priority (Bonner et al., 2017; Greenbaum et al., 2020; Mesdaghinia et al., 2019; Zhang et al., 2020). In our research, bottom-line mentality repressed the likelihood of non-executive leaders engaging in marketing behaviors as their openness increased. Including our research and considering the body of research around bottom-line mentalities, we would advise organizations to avoid promoting and encouraging high bottom-line mentalities among its leaders. Given that top-level leaders in organizations can influence how others in the organization view bottom-line priorities (Babalola et al., 2020; Babalola et al., 2021; Eissa et al., 2019), communication from executives that emphasizes a more holistic view of organizational priorities may reduce the likelihood of harmful bottom-line mentalities from proliferating and reduce the chances that bottom-line mentalities will repress the enabling effect of openness to experience on non-executive leaders' engagement in marketing behaviors.

Finally, in our subsample of 28 clinics, we link marketing behaviors to objective unit performance, which suggests that organizations should consider leaders' marketing behaviors when contemplating initiatives to bolster organizational performance. While the relationship between marketing behaviors (such as promotion campaigns and recruitment of new customers/patients) and organizational performance may seem intuitive, our results provide preliminary support to the proposition that marketing actions by individual leaders can impact organizations' bottom-lines.

Limitations and Future Research

Our research should be considered in light of its limitations. First, all variables were self-reported by the leaders, which

limits assumptions around engagement in marketing behaviors. While leaders indicated their comfort around common marketing actions and reported the extent to which they engaged in activities such as recruiting new customers, we cannot know to what extent this self-perceptual reporting is associated with objective behaviors. Given that the duality framework also considers the extent to which strategic initiatives result in implementation (Hermann & Nadkarni, 2014), research that assesses the quality and effectiveness of non-executive leaders' marketing behaviors could provide greater insight into the extent to which these behaviors are effectively implemented. Furthermore, our adapted measure of marketing behaviors only captured elements of marketing such as promotion and growth, and did not consider the wide range of possible marketing functions (American Marketing Association, 2017). We also did not consider the many nuances and the changing nature of the marketing field, such as inbound marketing strategies, digital campaigns, and relationship marketing (Arora & Sanni, 2019). Our scale therefore limits our ability to draw conclusions around the predictive validity of marketing behaviors; though, in a smaller subsample, we were able to link leaders' self-reported marketing behaviors to objective unit performance.

The nature of our two samples also limits the generalizability of the findings. First, the two studies were both conducted in the U.S. and may not be applicable to leaders in other cultures. Second, we tested our hypotheses in an exploratory study with small business executives, and then non-executive leaders in outpatient physical therapy. We therefore cannot assume that the findings apply to non-executive leaders in other industries. We also cannot assume that the relationships between personality and marketing behaviors will apply to employees working in specialized marketing roles. Additionally, due to the cross-sectional nature of these studies in which self-report data were collected in a single setting, our findings may be susceptible to common method variance (Lindell & Whitney, 2001).

Finally, we cannot rule out the role of self-selection bias (Heckman, 1990). Both small business owners and clinic directors who were willing to participate in our surveys may have certain attributes that contributed to our findings. Our supplemental analysis on a subsample of clinics in Study 2 may also be subject to self-selection bias; it is possible that the four physical therapy organizations who were willing to provide us with patient visit data may have organizational cultures that encourage transparency. For example, organizations with high psychological safety are more likely to communicate openly and can also create environments where leaders feel safe in experimenting with novel behaviors (Frazier et al., 2017), which could encourage both marketing and other leadership behaviors that led to high patient visit ratios.

There are a number of promising directions for future research. While we only examined one of the five-factor traits

(i.e. openness to experience), other personality variables and characteristics may interact with one another to predict leader engagement in strategic outcomes. Characteristics that similarly capture a leader's ability to focus on long-term strategic objectives in an uncertain domain may also enable their engagement in marketing, and additional characteristics that are focused on traditional ways of conducting business may also inhibit these relationships (Hermann & Nadkarni, 2014). For example, CEOs with a liberal political orientation are more likely to engage in corporate responsibility initiatives, and this effect is weakened when leaders are low in narcissism (Gupta et al., 2019). Similar relationships pertaining to the extent to which leaders are likely to engage in strategic marketing may also exist for non-executive leaders.

Additionally, while we utilize a largely micro-behavioral perspective in our research, integrating our findings with existing frameworks around firm-level marketing initiatives in the marketing literature could lead to further insights surrounding the intersection of leadership and marketing (Ozuem et al., 2016) and may also provide insights into the behaviors of individuals employed in the marketing field. Finally, organizational factors, such as the extent to which marketing drives organizational performance, could affect our proposed relationships. For example, our relationships may be less likely to hold in industries where marketing is less relevant to organizational performance, and, in some cases, engaging in marketing may in fact detract from other important leadership functions to the detriment of the organization.

Conclusion

Across two field studies, we found that as leaders' openness to experience increased, they were more likely to engage in marketing behaviors. This relationship was attenuated when leaders simultaneously possessed high bottom-line mentalities. Taken together, our research examines when non-executive leaders engage with the externally-focused strategic task of marketing, and our findings also suggest that marketing tasks improve objective performance.

Availability of Data and Material The datasets analyzed during the current studies are available from the corresponding author on reasonable request.

Declarations

Ethical Statement Both studies were approved by two separate universities' Institutional Review Boards (IRBs). Both IRBs and the institutions are in the U.S. The approved IRB protocol number for Study 1 was 1619292-1 at Suffolk University (Boston, MA). The approved IRB protocol number for Study 2 was 1412003294 at Drexel University (Philadelphia, PA).

Conflict of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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