

RESEARCH ARTICLE

Leadership and Small Firm performance: The moderating effects of demographic characteristics

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Abstract. The present study builds on extant leadership literature by examining the role demographic variables (including age, tenure as a leader at the current company, experience in the industry, and level of education) play as moderating effects on the relationship between leadership style and small business financial performance in the national distribution wholesale industry. Financial data, leadership data, and demographic data were collected from 100 small, industrial distribution organizations. Statistical regression models were used to examine the relationship between the independent variables (transformational and transactional leadership styles) and dependent variables (year-over-year sales and profit margin performance), as well as the potential moderating effect of demographic variables (age, tenure, education, experience). The findings showed that transformational leadership was positively associated with the financial performance of an industrial distribution firm. It was also shown that the demographic characteristics examined did not moderate the relationship between leadership and firm performance.

Keywords: Leadership, Small Firm Performance, Wholesale Distribution, Supply Chain Management

Introduction

Practitioners and academic researchers continue to invest financial resources in strategies, research, and novel models which may provide a competitive advantage for an organization. This competitive advantage can be derived from several sources, including products, personnel, quality, service, and any number of other organizational strengths. As firms look inward for developing competitive strategies, intangible resources within the organization often play a key role in the process. Leadership at all levels of the organization often plays an integral role in the development of competitive advantage strategies (Tichy, 1989). These strategies in turn can affect the day-to-day operations of the firm, the activities of employees, and the overall profitability of the company. The relationship between firm performance and organizational leadership has received substantial attention in the literature (Collins, 2001; Edmondson, Roberto, & Watkins, 2003; Jennings & Beaver, 1997). Leadership continues to be an important topic - for both researchers and practitioners - continuing a decades-long trend of performance-based inquiry. Along the way, important leadership insight has been discovered which contributes to the understanding of the relationship between leadership and organizational performance.

The branch level operations of national wholesale industrial distributors are a microcosm of small business in the American economy; they are the lifeblood for the survival of the industrial distribution industry as a whole (Corey, Cespedes, & Rangan, 1989; Toppen, Flanigan, Lear, & Stewardson, 2012). The National Association of Wholesalers (NAW, 2011) reports the industrial wholesale industry generates over \$5.1 trillion in annual sales, employing over 5.8 million people in over 300,000 companies. Most of the industrial wholesale distributors in North America have branch locations located in strategic markets throughout the entire country. Each branch location has a unique product mix and service offerings created and developed to assist customers in the local market. Because of the autonomous nature of each branch location, the branch manager provides leadership which is critical to the overall success of the branch, and in collective, the corporation as a whole.

Although the leader of each branch has a title of “Branch Manager,” or in some cases may have the title of “Branch President,” these individuals certainly serve in leadership roles for their branch. Because these branch locations are distant from headquarters and because each branch has substantial autonomy, these unit heads function as the leaders of their regional branch unit. The unit heads for each branch provide significant functional leadership that is needed in a decentralized setting. For example, Branch Managers surveyed in this study had the authority to deviate from corporate purchasing policy to establish their own supplier relationships; these Branch Managers had both the responsibility and the authority to establish the vision and marketing direction of their branch; and they were ultimately responsible for all hiring, firing, and supplier relations in their branch. In this way branch “managers” are considered leaders of their branch and provide the leadership necessary for much of the success of each branch. It is possible, therefore, that poor leadership at the branch level may translate into substantial lost revenue, not only for the branch location, but also for the entire corporation.

While much of the existing research is focused on organizational leadership with regard to upper-level executives of organizations (Colbert, Barrick, & Bradley, 2014; Evans & Butler, 2011; Peterson, Smith, Martorana, & Owens, 2003), there is little research focused on the branch-level leadership of larger corporations with remote offices and/or locations. Because of the structure of most industrial wholesale distributors, the local branch-level leadership enjoys a level of autonomy not seen in other industries. These local-level leaders have both the freedom and responsibility to drive profitability on a local level, servicing customers that are unique from location to location. Because of this autonomous nature, the authors ask: is there a relationship between the leadership style of branch leaders and the financial performance of their local organization.

Few studies regarding branch-level leadership and corporate performance have been conducted on wholesale industrial supply organizations with remote locations where managers are required to lead autonomously, with little organizational support from the corporate office. While recent leadership research has explored the complexity of context sensitivity (Conger, 1998; Hunter, Bedell-Avers, & Mumford, 2007), empirical data examining the role of demographic characteristics on the relationship between leadership style and organizational performance of wholesale industrial business-to-business companies where local leaders manage multi-million dollar branch locations is absent from the literature.

As the heterogeneity of the small business work force continues to evolve, so, too, does the demographic makeup of leadership in many small firm organizations. Historically, small industries have been dominated by a diverse work force, and heterogeneous leadership teams. This study examined the relationship that demographic characteristics may have between transformational and transactional leadership and the financial performance at the local level of a national business-to-business wholesale industrial supply company. The moderating variables used in this study included age, tenure (at the company), experience (in the industry), and level of education.

If identification of leader demographic data is antecedent to organizational success, then it is incumbent upon organizations to hire and/or train individuals with the requisite experience, age, and education to lead the organization. In today's highly competitive and ever-changing market, there is constant price versus value pressure at all levels of the supply chain. At the wholesale business-to-business level, ongoing challenges of retaining competent personnel, improving product innovation and quality, and increased competition present a constant threat of decreasing returns, and possible destruction and/or erosion of organizational core competencies. This threat, as some scholars and practitioners suggest, only serves to highlight the importance of securing strong leadership within the organization (Collins, 2001; Santora, Seaton, & Sarros, 1999). What is not clear, however, is the potential influence of such moderating effects as age, experience, tenure, and educational background.

While leadership research has been conducted on many organizational levels, and in many types of organizations, this research adds to the literature by examining the moderating effect of the mid-level, or local leaders' demographic characteristics on transformational and transactional leadership styles, and actual financial performance of business-to-business wholesale industrial sales organizations with remote locations throughout the United States. Few leadership research studies have used actual, real-world financial data to examine the effect leadership style has on organizational performance. This study not only collected real-world financial data on 100 branch locations, but also collected leadership perception information and demographic information from local level branch leaders. The results from this research may provide upper level management of industrial distribution companies with the empirical data needed to staff local level branch locations with leaders that will be effective in guiding and directing the branch to long-term, sustainable success and profitability.

Leadership

The value of leadership and the effect of leadership style on organizational performance has been a topic of substantial interest among both research academics and business professionals for many years. Rowe et al., (2005) suggested that one of the primary reasons for this widespread interest in leadership research is the commonly held belief that leadership can, and does, influence the overall performance of most organizations. But leadership is not something that is reserved only for those at the top of the organization (Bass & Riggio, 2006). Leadership occurs at all levels of organizations, and can be employed by many types of individuals, thus it is important to understand the effect of leadership at the local level of large national companies.

In the 1960's and 1970's, the focus of leadership scholars shifted from the study of leadership behaviors and traits to the exchanges or transactions between leaders and followers (Pierce & Newstrom, 2011). Although different forms of exchanges and transactions were noted as early as 1947 with Max Weber's descriptions of charismatic leadership (Weber, 1947), the notion of a leader being transformational in nature was first examined and introduced by Burns in 1978. Burns (1978) described transformational leaders as those who build strong teams by empowering their followers and inspiring these followers to achieve their own personal goals, and in doing so help the entire organization achieve overall success. Bass (1985) further defined a transformational leader as a person who motivates others to do more than was originally expected. Bass and Riggio (2006) further explained that transformational leaders are the types of leaders who can motivate and inspire their followers to pursue and achieve extraordinary organizational outcomes and, in so doing, develop their own leadership abilities. Despite some beliefs that transformational leadership is only effective at the upper levels of management, research has found that transformational leadership is actually more prevalent and functional at lower levels within an organization (Lowe & Kroeck, 1996). Koene, Vogelarr, and Soeters (2002) opined that these findings may

be due to the fact that many subordinates experience more direct communication and influence from their lower-level leaders than from higher-level leaders.

Bass (1985) and others have compared and contrasted a transformational leader to a transactional leader. A transactional leader generally accepts organizational status quo, and provides followers with recognition and contingent reward for meeting specific objectives (Burns, 1978). The transactional leader may also pay attention to the small mistakes and/or deviations made by people or systems, and take the necessary corrective action (Shriberg, Shriberg, & Lloyd, 2002). Bass (1985) characterized transactional leaders as those who prefer to avoid risk taking, and were very conscious of time and efficiency. Burns (1978), speaking on transactional leadership, suggested that the relationship between most leaders and their followers is transactional in nature, that leaders look to exchange one thing for another. For example, a transactional leader may offer a subordinate a promotion for working overtime, or financial incentives for achieving a particular task.

The difference between transactional and transformational leadership is the process, or processes, used by the leader to motivate followers; which may also include the types of goals set and how they are to be achieved (Lowe & Kroeck, 1996). While clear differences exist between these two styles of leadership, it does not mean that a leader is either transformational or transactional. Effective leaders may display both styles of leadership in different settings and at different times. An important component of both styles of leadership is the leader-follower relationship.

Many theoretical models have proposed that leadership is a key driving force for organizational success, including operational and business performance results (Winn & Cameron, 1998). Some have found significant correlations between the transformational leadership of bank managers and the extent to which their respective bank branch offices increased in market share, as well as other areas of customer service (Steyrer, & Mende, 1994). Moreover, in a study of Canadian financial services firms, Howell and Avolio (1993) found that the transformational leadership of unit managers predicted financial performance data for those units over a one-year period.

Need for local leadership

The need for strong local leadership, and the challenge of developing these leaders is not a new phenomenon. Several decades ago, Burns (1978) stated that one of the leading problems with leaders in power at the time was that there was a sense of mediocrity and/or irresponsibility on the part of the leaders. In April 1999, the Distribution Research and Education Foundation published a report entitled *Addressing the Leadership Challenges in Wholesale Distribution* (Russell-Reynolds, 1999). Top executives in the wholesale industrial distribution industry were surveyed to identify key human resource needs and challenges. The results of the Russell-Reynolds (1999) survey showed that wholesale distribution industry executives are keenly aware of the exacting human resource requirements to be successful in today's business climate, and the importance of finding top leadership talent. Today, companies in the United States spend nearly \$14 billion a year on leadership development (Loew & O'Leonard, 2012), another indication of the importance industry places on strong, effective leadership.

For an organization to be successful, it must have not just one strong leader at the top, but there must be effective leadership throughout the organization. This idea is corroborated by O'Reilly et al., (2010) when they stated that from a macro perspective, the ability of senior leaders to incorporate strategic policy is highly dependent on the alignment of leaders across the organization at all hierarchical levels. For wholesale distribution companies with multiple branches located throughout the country, this is profoundly important. The Russell-Reynolds (1999) survey found that the wholesale distribution industry has trouble finding good leaders. Over 60% of executives participating in the survey reported difficulty in finding qualified

leaders with the skills necessary in the industry. The industry has also had difficulty in attracting new talent, which forces leaders to look internally for the next generation of leaders.

This research was designed to contribute to the literature by gaining a better understanding of the influence that leadership style has on financial performance, when factoring in demographic characteristics, at the local level of an industrial wholesale distributor. This sort of information may help industry executives fill the pipeline with local leaders who have not only the requisite demographic characteristics, but also the leadership style necessary to influence financial performance within the organization.

Conceptual framework

Demographic characteristics and leadership

Common leadership research focuses on either what leaders “do”, or the outcomes of the leaders’ organization. To further the understanding of leadership, some have controlled for demographic variables such as age, gender, education, tenure, marital status, salary levels, organizational size, as well as others (Bell, et al., 2011; Chen, Beck, & Amos, 2005). Other leadership studies have attempted to gain a better understanding of mediating variables such as self-efficacy (Stajkovic & Luthans, 1998) and alignment of leader and follower values (Krishnan, 2002). While there has been an increase in academic investigation surrounding leadership context (Kearney, 2008; Ng & Sears, 2011), there is need for continued research to gain a greater understanding of how various contextual factors influence the relationship between leadership style and organizational performance (Yukl, 2002). There are a number of mediating variables that may influence leadership effectiveness. Variables that have been examined by others include social values and age (Ng & Sears, 2011), gender (Rohmann & Rowald, 2009), and a work team’s age, gender, and heterogeneity (Rowald, 2011). The current study examined how age, level of education, tenure as leader, and years of experience in the wholesale distribution industry moderates the relationship between leadership and branch-level financial performance of an industrial wholesale supply distributor.

Hypotheses

Education

The level of education for leaders in various organizations has received considerable attention in the literature, with mixed results. For example, Silva (2014) found that higher education is not critical for the success of a business leader, but that it can be helpful. Other studies, while not linked directly to financial performance as the current study did, have shown that higher levels of education for a leader have been associated to greater firm innovation (Becker, 1970; Kimberly & Evanisko, 1981), an increased ability to process information (Wiersma & Bantel, 1992), and that top management with higher education levels make more comprehensive decisions, which then lead to increased innovation (Bantel & Jackson, 1989). The initial hypothesis for the moderating effect of the level of education of the branch manager, on both transformational and transactional leadership, was that this variable is positively associated with both unit sales as well as profit margin performance of the branch.

Hypothesis #1: Branch manager education will moderate the effect of transformational leadership on unit sales such that higher levels of education will increase the strength of the positive association between transformational leadership and unit sales and margin.

Hypothesis #2: Branch manager education will moderate the effect of transactional leadership on unit sales such that higher levels of education will increase the strength of the positive association between transactional leadership and unit sales and margin.

Experience

For purposes of the current research, the moderating effect of experience is meant to capture the number of years the manager had spent in the industry, not necessarily at the particular branch they were managing at the time of the survey. The research conducted by Hambrick and Mason (1984) suggest that experience levels of the leader may have an effect on the actions taken by the leader, but does this experience actually moderate the effect of leadership on organizational performance? Experience can often be situational. For example, if a manager spent over 20 years working in the wholesale power transmission industry, and then transfers to a company that is distributing construction equipment, is the knowledge gained from the power transmission industry transferrable to the construction equipment industry? While most consider both of these industries to be in the wholesale industrial distribution industry, they have very different markets and customers. Therefore, the hypothesis for the moderating variable experience, on both transformational and transactional leadership, was that it was positively associated with both unit sales and profit margin performance of the branch.

Hypothesis #3: Branch manager experience will moderate the effect of transformational leadership on unit sales and margin such that higher levels of experience will increase the strength of the positive association between transformational leadership and unit sales and margin.

Hypothesis #4: Branch manager experience will moderate the effect of transactional leadership on unit sales and margin such that higher levels of experience will increase the strength of the positive association between transactional leadership and unit sales and margin.

Age

Age of the leader is another demographic variable that has received considerable attention in the literature, often with varying results. Grimm and Smith (1991) provide research that shows managers who are younger tend to be more innovative in developing growth strategies and are more tolerant of risk. On the other hand, Zacher, Rosing, Henning, and Freese (2011) demonstrate that the age of the leader was positively associated to leader generativity, and according to generativity theory (McAdams & de St. Aubin, 1992) older leaders demonstrate more transformational leadership skills than their younger counterparts. Further, research suggests that memory, reasoning skill, and ability to learn diminish with age (Burke & Light, 1981) and other studies indicate that younger managers have superior technical competence due to more recent educational training (Bantel & Jackson, 1989). Thus, for the current study the hypothesis for the moderating effect of age was that this variable would, on both transformational and transactional leadership, be negatively associated with unit sales and profit margin performance.

Hypothesis #5: Branch manager age will moderate the effect of transformational leadership on unit sales and margin such that higher levels of age will increase the strength of the positive association between transformational leadership and unit sales and margin.

Hypothesis #6: Branch manager age will moderate the effect of transactional leadership on unit sales and margin such that higher levels of age will increase the strength of the positive association between transactional leadership and unit sales and margin.

Tenure

The current study defines tenure as the duration of time the leader has worked with the company, in a leadership capacity, for which they were surveyed. Tenure, and its relationship to organizational performance, has been researched in different organizational settings. Schwenk (1993) suggests that it is possible for leaders with long tenure at an organization to develop policy and/or strategy based upon old, or dated information, leading to poor performance. Other research has found a strong relationship between a leaders' long organizational tenure and organizational performance that meets and/or exceeds industry norms (Barlow, 1996; Finkelstein & Hambrick, 1990). In all, there is research to support the argument that long tenure at one organization has a tendency to have a negative effect on organizational performance. The hypothesis for the moderating effect of tenure within the organization was that this variable would, for both transformational and transactional leadership, be negatively associated with unit sales and profit margin performance.

Hypothesis #7: Branch manager tenure will moderate the effect of transformational leadership on unit sales and margin such that higher levels of tenure will increase the strength of the positive association between transformational leadership and unit sales and margin.

Hypothesis #8: Branch manager tenure will moderate the effect of transactional leadership on unit sales and margin such that higher levels of tenure will increase the strength of the positive association between transactional leadership and unit sales and margin.

Method

Sample

In an attempt to control for variability between companies (for example, how different companies report data, training for both branch level leaders and employees, market segment, size of typical branch operations, corporate-level support, day-to-day responsibilities of a branch manager, etc.) the scope of this study was limited to one corporation with multiple locations. The company is a wholesale industrial distributor with corporate offices in Ohio, and over 600 branch locations throughout North America. The company is unique in the industry in that it allows the local-level leader (known within the company as a branch President) to earn up to 40% ownership in the branch that he/she operates.

Of the 600 North American independent operating locations, company officials provided a list of over 220 branch locations, in four western regions in the United States, along with the name and email address of each branch President in each of these four regions.

The Multilevel Leadership Questionnaire (MLQ) was used to gather the leadership data because it is the most validated and efficient means of accurately measuring both transformational and transactional leadership. Of the 220 MLQ surveys that were emailed to all branch Presidents, 100 of these leaders participated in the survey, for a 45% response rate. Of the 100 remaining leaders, six of the leaders were removed from the analysis due to incomplete information. In 1990, Bass and Avolio created the MLQ to measure leadership styles ranging from passive leaders, to transactional leaders, to transformational leaders (Fleener, 2007). It has been widely cited and is the most common instrument used to assess transformational leadership (Harms & Crede, 2010; Hartog, Muijen & Koopman, 1997;

Muenjohn & Armstrong, 2008; Tejeda, Scandura & Pillai, 2001). In their meta-analysis on emotional intelligence and transformational leadership, Harms and Crede (2010) found the MLQ to be the “most frequently used measure of transformational leadership” (p. 8). Reliability evidence for the measure can be found in the first edition of the assessment. The alpha reliability coefficients for the MLQ’s self-rating form range from .60 to .92 (Bessai, 1995) and the measure’s rater forms for supervisees or coworkers range from .77 to .95 (Kirnan & Snyder, 2011). Further studies were done with the test-retest reliabilities over a 6-month period and found the self-rating form ranged from .44 to .74 (Kirnan & Snyder, 2011).

Procedures

Prior to the MLQ survey being sent out to all leaders, an email was sent out by the four respective regional managers in support of the research, explaining the value of the investigation, and encouraging all company leaders to participate. Leadership surveys were administered by a third party, Mind Garden, Inc., host of the MLQ survey instrument. As the host of this instrument, Mind Garden Inc., requires researchers to collect leadership data through its survey administration services. This allows for greater anonymity and confidentiality of data. Furthermore, it assures that all research using the MLQ instrument is administered in a similar manner, thus providing some level of consistency in using the instrument.

After the initial surveys were sent out, several follow-up attempts were made to increase participation in the research. These included personal phone calls to branch leaders, as well as sending follow-up emails to the leaders of each branch asking for participation.

After all data was collected, organized, and codified, it was analyzed using SPSS, version 21. The MLQ survey instrument consists of 45 questions (not including the demographic characteristic questions); which are purposeful by design, and related to the leadership characteristics identified in transactional and transformational leadership theory.

Measures

Independent variables

The independent variable for the study was leadership style. Data for the independent variable were collected via the MLQ survey instrument from voluntary participants within company branch offices. Transactional and transformational leadership styles were measured by 45 questions in the survey using the nine-factor leadership model analysis in the MLQ (Bass & Avolio, 2004). As recommended by the MLQ, the five scales were used to calculate the transformational leadership score for each individual. These included the scales identified as Idealized Attributes (IA), Idealized Behaviors (IB), Inspirational Motivation (IM), Intellectual Stimulation (IS), and Individual Consideration (IC). Cronbach’s Alpha for transformational leadership was .910, well within the limits of acceptable reliability. Responses were collapsed by first averaging all items within each scale (four items each), then by averaging the resulting scores across all five scales to yield a single number representative of the level of transformational leadership for each respondent.

For transactional leadership two factors were used; Contingent Reward (CR) and Management-by-Exception (active). The result was a lower Cronbach’s Alpha of .731, still within the limits of reasonable reliability. Responses were again collapsed into a single number by first averaging the items within each scale, and then averaging across the two scale scores.

Dependent variables

In this study, the dependent variable was organizational performance as measured by the year-over-year change in both annual sales and gross margin for each participating branch

location. Dependent variable data were provided by the corporate offices of the wholesale industrial distributor. Sales and margin data, for up to five years, were reported. Due to the sensitive nature of the financial data collected, the authors were not granted permission to disclose this information. Thus, descriptive statistics for the financial indicators used in this analysis are not reported.

The dependent variable data were closely tied to specific leaders to ensure that the data was stable. For example, if a leader had only been the branch President at that particular location for three years, but five years of sales and margin data was reported, only the effective three years' of data was used for data analysis.

The original dependent variable data did not meet the normally accepted assumptions for regression analysis because it was highly skewed. This feature, which is typical of financial data, was collected in the usual way, which is to use a logarithmic transformation. After transforming the data using a log base 10 function, both skewness and kurtosis fell within normally acceptable limits.

Moderating variables

As host of the MLQ instrument, Mind Garden allowed the authors of this study to modify the survey to include the demographic characteristics of the leaders. This demographic data was collected and each of the variables were used as moderating variables in the regression analysis. Each leader was asked his or her age, level of education, tenure as the branch leader, and the number of years of experience in the wholesale distribution industry.

During the data collection stage, demographic variables age, experience, and education were all coded, or scaled, so that the numbers shown do not reflect actual numbers. The scales used to code each of these variables is shown in Table 1. Tenure was not coded, but was a reflection of actual number of years the respondent had been a leader in their respective branch location at the time the survey was administered.

Table 1: *Demographic variable measurements*

Value	Demographic Variable		
	Age (years)	Experience (years)	Education
0	Less than or equal to 24	0 to 4	High School Education
1	25 to 30	5 to 9	Trade School or Associate Degree
2	31 to 35	10 to 14	Bachelor's Degree
3	36 to 40	15 to 19	Master's Degree
4	41 to 45	20 to 24	Other*
5	46 to 50	25 to 29	
6	51 to 55	30 or more	
7	56 to 60		
8	61 to 65		
9	Over 65		

Note. Six participants entered 4 (other). All six identified what they meant by 'other' and were subsequently assigned to 0, 1, or 2 by the authors, as appropriate.

Figure 1 illustrates how the moderating variables in this study may influence the performance of a wholesale distribution branch office. In other words, the demographic characteristics were analyzed to evaluate if any of them changed the relationship between participants' leadership style and their branch's financial performance over time.

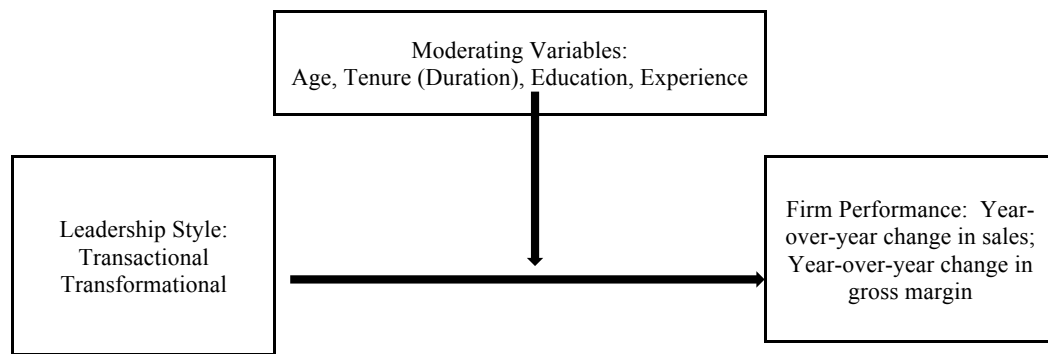


Figure 1. Illustration of moderating variable relationship to independent & dependent variables

Results

In addition to the statistical correlations, Table 2 provides a summary of the descriptive statistics. As stated, there were 100 leaders that participated in the survey. Six of these leaders were removed from the analysis due to incomplete data, for a total sample size (*n*) of 94.

After the variables were mean centered, bivariate correlations were run as a data diagnostic to get a preliminary indication if there were any significant findings. Table 2 includes the correlations between the moderating variables and the independent variables. As expected, moderators were highly correlated with one another, as are leadership styles, but the moderating variables were not significantly correlated to the independent variables. This initial correlational analysis indicates that the data is set up correctly. The correlation also provides an insight into the relationship between the leadership styles and the moderating variables. These correlations are logical, but they also present a possible statistical problem. In multivariate regression, when the independent variables are too highly correlated the estimates become unreliable. Regressions were run with all the variables in the equation and without the highly correlated variables (not shown). The results of this test were similar.

Table 2: Descriptive statistics

Indicator	Tenure	Age	Experience	Education	Transform Leader	Transact Leader
M	10.60	4.82	3.86	0.68	2.99	2.83
SD	9.114	2.048	1.823	0.882	0.540	0.575
Tenure	–	10.625	10.825	.461	-.219	-.924
Age	.569*	–	2.803	.114	-.200	-.144
Experience	.651*	.751*	–	-.023	-.141	-.076
Education	.057	.063	-.014	–	.011	-.059
Transform Leader	-.044	-.181	-.143	.023	–	.211
Transact Leader	-.166	-.115	-.068	-.110	.636*	–

Note: *Correlation is significant at the .001 level. All *P* values are two-tailed

Regression analysis

Main effects model

A main-effects multiple regression analysis was conducted using year-over-year sales performance as the dependent variable. The regression examined the relationship between the

demographic characteristics, transformational and transactional leadership, and year-over-year sales results for the branch. The results are shown in Table 3.

Table 3: *Regression analysis: Main effects on sales*

Model	R^2	Adjusted R^2	Unstandardized coefficients		Standardized coefficients	
			B	Std Error	β	Sig
Summary (constant)	.193	.137	.144	.005		.000
Tenure			-.001	.001	-.117	.384
Age			-.005	.004	-.164	.277
Experience			.000	.005	.014	.932
Education			-.004	.005	-.089	.368
Transformational Leader			.043	.014	.414	.002
Transactional Leader			-.014	.012	-.152	.251

Note: Dependent variable: Sales

The regression revealed a positive relationship between leadership and sales. It explains that 19.3% (R^2) of the variance in sales is explained by the variables used in the regression. The regression model was significant overall: $F(6,87) = 3.466$, $p < .01$.

The regression analysis showed that transformational leadership was positively related to year-over-year sales performance. For every one unit increase in transformational leadership, there is a predicted increase in sales of 4.3%. Interestingly, the main effects model of the demographic characteristics did not predict sales. Another interesting result in the regression is the significant finding for the intercept (or constant). Generally, this is not a part of the regression analysis; however, since it was significant, a mention of the meaning is warranted. The constant reveals that the value of Y is known when X is 0. However, because all the data in this analysis was centered, it means that $Y = .144$ when all X variables are at their mean levels. So when tenure, age, experience, education, transformational leaders, and transactional leaders are all at their mean, sales will be .144.

Next, a regression was run using year-over-year gross margin as the dependent variable, as shown in Table 4. Similar to when sales figures were the dependent variable, the data revealed that there is a significant relationship between the independent variables, the moderating variables, and margin. It shows that 19.1% (R^2) of the variance in margin is explained by the variables used in the regression. The regression also shows that predicting margin from these specific moderating variables and the leadership variables is statistically significant, $F(6,87) = 3.419$, $p < .01$. From the regression table shown in Table 4, it is revealed that transformational leadership is significant and positively related to margin performance. Therefore, for every one unit of increase in transformational leadership, there is a predicted increase in margin of 4.5%. Again, the intercept (Constant) is positively related to margin.

Table 4: Regression analysis: Main effects on margin

Model	R^2	Adjusted R^2	Unstandardized coefficients		Standardized coefficients	
			B	Std Error	β	Sig
Summary (constant)	.191	.135	.105	.006		.000
Tenure			-.002	.001	-.242	.075
Age			-.005	.005	-.156	.301
Experience			.003	.006	.102	.533
Education			-.006	.005	-.111	.262
Transformational Leader			.045	.015	.389	.004
Transactional Leader			-.016	.013	-.157	.235

Note: Dependent variable: Margin

Interaction effects model

After analyzing the main effects in the regression model, the interaction effects of the independent variables and moderating variables were tested. The interaction of each moderating variable with both transformational leadership and transactional leadership were run in the regression and analyzed for significance. Table 5 shows the regression for interaction effects on sales.

The interaction effects model shows that 30.2% (R^2) of the variance in sales is explained by the variables used in the interaction regression. The regression also reveals that predicting sales from these specific interaction variables is statistically significant, $F(14,79) = 2.438$, $p < .01$. The original hypotheses was that the moderating variables of age, experience, education, and tenure would all have a significant effect on organizational performance, whether positive or negative. While none of the interactions between transformational and transactional leadership and the moderating variables had a significant effect on sales, it was found, however, there was a significant effect on transformational leadership. The regression shows that for every one unit of increase in transformational leadership, there is a predicted increase in sales of 5.4%.

Collinearity statistics were also included to gauge whether the estimates were being influenced by multiple collinearity. Several variables displayed rather low tolerance. As a result, another regression was run (not shown) removing those variables with low tolerance. This new regression did not reveal any new significant results.

Table 5: *Regression analysis: Interaction effects on sales*

Model	R^2	Adjusted R^2	Unstandardized coefficients		Standardized coefficients		Collinearity statistics	
			B	Std Err	β	Sig	Tol	VIF
Summary	.302	.178						
(constant)			.142	.006		.000		
Tenure			-.001	.001	-.105	.432	.498	2.007
Age			-.003	.004	-.102	.501	.388	2.579
Experience			.001	.005	.044	.787	.330	3.029
Education			-.006	.005	-.130	.192	.911	1.098
Transformational Leader			.054	.015	.516	.001	.429	2.330
Transactional Leader			-.018	.013	-.196	.156	.474	2.110
Tenure×Transformational Leader			-.004	.002	-.318	.105	.235	4.247
Age×Transformational Leader			.000	.011	.009	.968	.192	5.203
Experience×Transformational Leader			-.007	.014	-.106	.628	.186	5.373
Education×Transformational Leader			.003	.012	.034	.782	.604	1.655
Tenure×Transactional Leader			.001	.002	.079	.676	.253	3.958
Age×Transactional Leader			.000	.010	.002	.993	.236	4.231
Experience×Transactional Leader			.002	.011	.042	.827	.240	4.162
Education×Transactional Leader			-.010	.012	-.105	.418	.537	1.863

Note: VIF=Variance Inflation Factor. Dependent variable: Sales

Table 6 represents the data for the regression analysis using the interaction effects on the dependent variable margin. The interaction effects model shows that 29.1% (R^2) of the variance in margin is explained by the variables used in the interaction regression. The regression also shows that predicting margin from these specific interaction variables is statistically significant, $F(14, 79) = 2.313$, $p < .01$. Similar to the regression on sales, this regression shows that for every one unit of increase in transformational leadership, there is a predicted increase in sales of 5.2%.

Table 6: Regression analysis: Interaction effects on margin

Model	R^2	Adjusted R^2	Unstandardized coefficients		Standardized coefficients		Collinearity statistics	
			B	Std Err	β	Sig	Tol	VIF
Summary (constant)	.291	.165	.102	.006		.000		
Tenure			-.001	.001	-.217	.110	.498	2.007
Age			-.004	.005	-.120	.434	.388	2.579
Experience			.004	.006	.127	.445	.330	3.029
Education			-.007	.005	-.131	.191	.911	1.098
Transformational Leader			.052	.017	.457	.002	.429	2.330
Transactional Leader			-.017	.014	-.168	.226	.474	2.110
Tenure×Transformational Leader			.001	.013	.008	.946	.604	1.655
Age×Transformational Leader			-.003	.002	-.202	.304	.235	4.247
Experience×Transformational Leader			-.013	.013	-.216	.321	.192	5.203
Education×Transformational Leader			.006	.016	.081	.713	.186	5.373
Tenure×Transactional Leader			-.014	.014	-.131	.315	.537	1.863
Age×Transactional Leader			.000	.002	-.028	.881	.253	3.958
Experience×Transactional Leader			.001	.011	.013	.947	.236	4.231
Education×Transactional Leader			.004	.012	.069	.721	.240	4.162

Note: VIF=Variance Inflation Factor. Dependent variable: Margin

Discussion

There were eight hypotheses being explored for this study. The first two hypotheses, which considered the possible moderating effect of the education level of the branch manager on sales and margin performance, were not supported. It would be premature to conclude from this, however, that the education level of the branch manager does not matter. The non-significant finding can be explained by the fact that there was little variation among branch managers on their level of education (0.68 was the average value, somewhere between high school and trade school; .88 was the standard deviation, which is less than one unit on the scale). Further study of this could be undertaken, but would require researchers to find an industry or organization in which the level of education of the branch manager exhibits significant variation.

The third and fourth hypotheses in this study focused on the moderating effect of the experience level of the branch manager, with the expectation that experience would be positively associated with both sales and margin performance for both transformational and transactional leadership. Neither of these hypotheses were supported. This is an important result, as it directly contradicts conventional wisdom that more experienced branch managers will tend to be better leaders, and that branches led by more experienced leaders will tend to have more financial success.

The fifth and sixth hypotheses in this study considered the possible moderating effect of the age of the leader on transformational leadership. The results of this were interesting. In the correlation data, there was not a significant positive correlation between age and transactional leadership. Rather, this correlation was slightly negative. This is counter to the expectation predicted by generativity theory (McAdams & de St. Aubin, 1992) that older leaders would tend to be more transformational. Further, the regression analysis did not find any association (positive or negative) between age and financial performance.

The final two hypotheses dealt with the possible moderating effect between the branch manager's tenure and leadership characteristics on the organization's financial performance.

This was an important hypothesis to test because suggestions from prior research are contradictory, with some predicting a negative association and others positive. Since neither the main nor interaction effect of tenure was significant, neither hypothesis was supported. This suggests that any possible benefit of a longer tenure does not translate into better financial performance and is also not positively associated with any particular set of leadership characteristics. Again, this is completely counter to the conventional wisdom that branch managers with a longer tenure will be stronger leaders.

Because of the high correlations between these variables, and the consistency of the results of this study across each, the moderating variables of age, tenure, and experience should be considered together. One way of stating this relationship is that older leaders tended to have more experience in the industry, and longer tenure at a company. The important result is that while each of these variables is related to each other, there was no significant association between either branch performance or leadership characteristics. This finding requires re-thinking the conventional wisdom that older, more experienced individuals with longer tenure within an organization will make better leaders. It does not mean that age, experience, and tenure provide no advantage at all, only that any potential advantage (or disadvantage) is insignificant compared to actual leadership attributes. This conclusion is supported by the fact that the main effect of transformational leadership on both sales and performance was positive.

Limitations

While the results of this study reveal some interesting findings, care should be taken in any attempt to generalize these findings, or to draw causal relationships from the data. This was correlational research, and is therefore not possible to prove causality.

Although the industrial distribution market segment is wide and varied, the present research collected data from only one industrial distributor (with many locations), but all branch locations were involved in the construction supplies industry. The results may not apply to distributors in other industries such as the fluid power, electrical, power transmission, or machine tool industries. Moreover, the business model of this company is somewhat unique in that it allows branch managers to purchase up to 40% ownership of the branch they manage. The uniqueness of this model within the industrial distribution industry presents limitations for generalizing the findings of this study.

Non-response bias was another limiting factor in this study. The results are based on data collected from those leaders who voluntarily participated in the survey. While many leaders were asked to participate, only the information from 94 leaders was gathered and used for analysis. Of these 94 participants, it would be difficult to generalize the results to a wider population because demographic variables may vary widely between industries, institutions and localities.

Furthermore, throughout the course of collecting data, the authors assumed that all participants fully understood each question on the MLQ survey and provided honest, thoughtful responses. Factors other than leadership styles (the independent variables) and demographic variables (the mediating variables) also had significant impacts on branch finances (the dependent variables). Some of these factors include large one-time projects, competitor actions, the general state of the economy, and supply chain fluctuations.

Conclusion

Overall, branches with leaders that exhibited more transformational leadership characteristics had higher margins and higher sales; and no other variables were found that either moderated or predicted this relationship. In order to take advantage of this finding, organizations should train leaders to implement transformational leadership strategies. Promotion of individuals into leadership positions should be based primarily on those who demonstrate successful

leadership abilities and characteristics, such as transformational leadership attributes. Just as Zalesnik and Kets de Vries (1975) explain, people are quite complex and simply gathering demographic information on leaders may not be enough. The results of this study suggest that regardless of age, education, experience, or duration as leader - if the branch manager/leader demonstrates transformational leadership tendencies - there is greater likelihood that sales will increase at a greater rate than if the leader practices transactional leadership skills.

Future research should focus on whether leadership attributes can be positively affected by additional education or leadership training. If training proves successful in impacting leadership attributes, it may lead to increased financial success. Further studies should be conducted to determine whether it does. One way to do this would be to complete a longitudinal study with leadership training interventions, and perhaps a finer scale for education which would account for those (or similar) interventions.

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