

Impacts of Resource Alertness and Change Leadership Style on Financial Performance: An Empirical Study

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ABSTRACT

The dynamic competition theory emphasizes that executives must have the ability to discover and identify new resources to deal with the external environment change and implement the leadership style change for improving the financial performance. The authors studied the impacts of resource alertness and change leadership style on enterprise financial performance with the perceived competitive tension as the moderator. Data analysis from 208 valid questionnaires indicated that resource alertness and change leadership style have a direct positive impact on financial performance by changing the leadership style. The positive effect of change leadership style on enterprise performance will be strengthened with high perceived competitive tension. Important theoretical and practical implications are discussed. Limitations and future research are presented as well.

KEYWORDS

Change Leadership Style, Financial Performance, Perceived Competitive Tension, Resource Alertness

1. INTRODUCTION

The different leadership style will affect whether the employees can use resources strategically in the market economy (Covin and Slevin, 1991). A good match between proper leadership style and enterprise resources will lead to the improvement of enterprise financial performance. Although more studies have been conducted about information resource alertness in the field of entrepreneurship research, its research content mainly focuses on the antecedents of information resource alertness, there source identification and utilization, and the relationship between information resource alertness and the enterprise's rapid growth. However, there is a lack of research on the effect of information resource alertness on change leadership style and enterprise growth. We analyzed its influence on the relationship between information resource alertness and organizational change from the adjusting competitive tension perspective. Additionally, we examined how organizational strategic change and traditional enterprise change can be evoked by recognizing and utilizing enterprise resource to improve competitive advantage and organizational performance.

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Researchers argued that an organization should pay attention to the competitive dynamics of the market where all enterprises compete in the same market (Chen et al., 1996 and 2007; Chen and Miller, 2012). An organization is aware of the possible actions and responses of its competitors and the competitive confrontation between competitors. To move towards organizational goals in a changing external environment, the organization is inevitable to achieve the effective leadership style to strengthen the change effect and promote the financial performance improvement by adopting the management mode. One driving factor causing an organization to compete or fight back is awareness-motivation-capability (AMC). Considered as a trigger action against competitors, the competitive tension is defined as a tension between competitors (Chen et al., 2007). If the competitive tension reaches a certain level, it may be detonated, resulting in confrontational competitive actions and responses among enterprises. Furthermore, the competitive state will change from the original equilibrium confrontation to the dynamic competition. The stronger the competitive tension is, the stronger an organization's intention to adopt competitive antagonism is, and the faster its competitive action is (Chen, 1996). Therefore, under the influence of complex factors, the leadership style will be adjusted to achieve contingency for external competition. Thus, the competitive tension has a significant impact on the change of leadership style. Although scholars have shed lights on the role of competitive tension in the relationship between information resource alertness, change leadership style, and enterprise growth, they mainly focused on the qualitative level only due to lack of the relevant empirical study.

The article is organized as follow: Section 2 presents a conceptual model and hypotheses of the relationship between information resource alertness, transformational leadership style, and financial performance. We further explore the boundary conditions that information resource alertness affects the change leadership style. We also discuss the relevant theory of dynamic competition to strengthen the cognition of dynamic competition theory. Section 3 discusses the data and data collection. The next section tests the adjustment of perceived competitive tension between information resource alertness, change leadership style, and financial performance. We further reveal the regulatory role of perceived competitive tension in the process of enterprise growth. Finally, we present contributions, limitations, and future research.

2. LITERATURE REVIEW AND RESEARCH MODEL

2.1 Information Resource Alertness

Considered as the earliest proponent of the alertness concept, Kirzner (1973) pointed out that alertness refers to the behavior of searching, identifying and evaluating information. Furthermore, the core concept of alertness is a tendency to consult objects, events, action, unmet needs and interests, and novel combinations of resources. Entrepreneurs must be highly alert to this information in order to fully allocate resources and maximize their utility. Accordingly, Ray and Cardozo (1996) defined alertness as a special perception ability for the senior management to identify a new resource combination based on the external market environment and internal situation. Chen (1996) proposed market commonness and resource similarity as a common analysis framework to measure the competitive relationship between competitors in the industry. Specifically, resource similarity is defined as the degree to which a particular competitor has a strategic endowment comparing with a competitive firm.

Market commonness is defined as the degree of overlap between competitors and core firms in market allocation and resources matching to the enterprise's strategic objectives. The stronger the market commonality between competitive enterprises and target enterprises is, the less competitive enterprises would launch competition against target enterprises. The stronger the similarity of resources between competitors and target enterprises, the stronger their ability to respond to competitive enterprises' attacks is (Chen, 1996). Through the competitor analysis framework of market commonality and resource similarity, it is helpful for enterprises to identify who are potential

competitors and main competitors in the industry. Thus, the information resource alertness of enterprise managers is of great value for the enterprises to understand the resource allocation of their main competitors, the dynamic changes of market resources, and the resources matching with the external environment and opportunities. The exploitation and utilization of new resources by managers will bring new opportunities to enterprises who will be able to distinguish themselves from others (Kirzner, 1979). Meanwhile, the successful identification of new resources would bring rich venture capital to enterprises (Alvarez and Barney, 2010).

2.2 Change Leadership Style

Leadership style refers to the overall development direction of the senior managers and the role model for the employees. The success of the leaders largely determines the success of the organizational change. As the initiator of organizational change and the key resource of market competition, senior leaders will influence the strategic behavior of enterprises. Excellent leaders with exemplary role are the primary factors to promote the smooth change (Gardner, 2005). The key to organizational change is leadership rather than management. Executives should timely adjust their leadership style and actively carry out their own ideas of change as the environment changes. Therefore, it is better to classify the management style of executives as an art instead of a scientific theory. However, there is no fixed management model during the enterprise development process. The contingency theory emphasizes that the organization management should be adjusted based on the development and the change of the environment and internal conditions of the organization. The leader with the different leadership style has significant impact on the development theory, the growth model, and management, resulting in the different responses according to the enterprise's external environment. Bass et al. (2003) classified the leadership style into two dimensions: transformational leadership and transactional leadership. Different external environments would lead to the emergence of different leadership styles (Bass, 1985). The change leadership style motivates the employees to convey their short-term goal and self-interest so that the executive ability of the employees exceeds the organization's expectation. On the contrary, managers prefer the transactional leadership style when the organization is facing an orderly and stable stage. Torbert (1989) argued that the organizational change is rooted in the transformational leadership. A combination of transactional and transformational Leadership can transform the salesforce (Jolson et al., 1993). Executives with change leadership styles have the ability to build teams and provide direction for organizational development, thereby supporting the process of organizational learning and change, stimulating the potential for organizational change, and motivating the organization's members (Bass and Riggio, 2006). Haakonsson et al. (2008) found that alignments between organizational climate and leadership style will boost corporate performance. Internal management practice has been also utilized as one of leadership changes for improving corporate performance (Chalhoub, 2009). Shared leadership among team members may be superior to traditional leadership for an e-commerce website development project (White and Smith, 2010).

2.3 Perceived Competitive Tension

Tension reflects the transient equilibrium under the grip of each other. However, the stable relationship between each other ceases to exist when the tension has been enhanced to transform the static relationship into a dynamic interaction (Chen and Miller, 2012). Chen et al. (2007) systematically expounded the composition of competitive tension and defined the competitive tension as the tense relationship between competitors who may cause enterprises to take action against competitors. When the competitive tension reaches a certain level, it may be detonated along with confrontational competition action and response among enterprises. The competitive state also changes from the original equilibrium confrontation to the dynamic competition. The enterprises in the same main strategic group are actually homogeneous or classified them as direct core competitors. For example, Porter (1980) thought that firms in the same industry are actually competitive. It did not distinguish that individual enterprises may feel different degrees of pressure from competitors. Thus, individual

enterprises may also cause different competition pressure to different competitor. The key factor for an enterprise to engage in competition with a particular competitor depends on whether the enterprise's senior management, the industry stakeholders as business advisers, and financial analysts are aware of the existence of competitive tension (Chen et al., 2007). Argyris and Ransbotham (2016) investigated inherent tensions underlying wiki-based knowledge sharing and management in competitive and hierarchical organizations. To a certain extent, researchers have also discussed the relative variables affecting the competitive tension, such as the relative scale of the enterprise, the amount of attack of the competitors, and the prediction of the competitors' competitive ability based on the AMC theory. The perceived motivation ability is helpful for enterprises to perceive competitive tension and enhance the possibility of enterprises attacking target competitive enterprises.

2.4 Hypotheses

The theory of resource-based view proposes that resources and ability are the source of sustainable competitive advantage of enterprises. Compared with competitors, sustainable competitive advantage of enterprises is derived from the control of scarce and irreplaceable resources. The enterprise's resource is also the basis of the enterprise growth (Gove et al., 2003; Wang et al., 2002). Many enterprises with high technology have failed to start a business due to their resource constraints (Bhide, 1994). Brush et al. (2001) found that the financial performance is closely related with resource by examining different financial performance caused by difference resources among enterprises. An enterprise links existing resources within its organization to new resources acquired externally. Therefore, the process of resource integration is the process of transforming an enterprise's resources into its performance by linking existing resources to new resources. Since the relationship between resources and enterprise performance is inextricable, it is very important for executives to explore and utilize "sleeping resources". In order to further explore the inner mechanism of information resource alertness and financial performance, researchers have shed lights on the impact of resource on enterprise performance from the entrepreneurial network embedding perspective. Several studies have also verified the relationship between resource acquisition and enterprise development from the empirical research perspective (e.g., Wang and Bao, 2007; Zhang, 2008). Executives must be alert to the resources discovery for achieving high performance and healthy and stable growth of enterprises in the fierce competitive environment. Thus, the resource integration process within the organization will have an impact on the performance of new enterprises. Additionally, the resources acquisition can also promote the enterprise performance (Eckhardt and Shane, 2003). Hence, we proposed Hypothesis 1 as following:

Hypothesis 1: Information Resource Alertness Has a Positive Effect on Corporate Performance

The leadership style will lead to the employee innovation ability, create a good working atmosphere, and achieve excellent performance. Advocating new and effective leadership style is not only the key factor to achieve the success of organizational change but also the ideological support for innovation at the organizational level. Consequently, it will enable the organization to make corresponding strategic decisions due to the internal and external environment changes. Thus, enterprises can maintain a long-term and stable competitive advantage compared with their competitors. Weiner and Mahoney (1981) argued that leadership style has a more significant impact on corporate financial performance than other variables. Smith et al. (1984) demonstrated that the effective leadership style has a positive impact on financial performance through a long period of empirical research. Executives play a vital role in setting the organizational atmosphere. Effective leadership styles directly or indirectly promote employee creativity and improve corporate performance (Mumford and Gustafson, 1988; Amabile, 1998; Jung, 2001; Xiao and Miao, 2009; Wang et al., 2012).

Burke and Litwin (1992) proposed an organizational performance and organizational change model which can effectively predict the relationship between individual and organizational

performance within an organization. Additionally, they also identified two key factors in successful organizational change in terms of transformational and transactional. As one of the key factors of transition, the leadership style can effectively guide employees to make correct responses due to internal and external environmental pressure. The change leadership style can promote corporate financial performance more than other types of leadership styles (Kane and Tremble, 2000; Eatwell, 2006; Jung et al., 2008; Meng, 2004). Given the close relationship between the senior managers' leadership style and the enterprises' financial performance, the transformational managers can acquire more market share than the transactional managers (Steyrer and Mende, 1994; Yang et al., 2009). Transformational leaders make subordinates aware of the organizational goals and the important value of their individual mission by instilling organizational vision and corporate culture into subordinates. Doing so, subordinates will be able to produce higher job performance (Bass, 1985). Such leadership style emphasizes the establishment of a long-term incentive process and the creation of a cultural environment for innovative organizations, thereby fostering creative employees and promoting organizational innovation (Bass and Avolio, 1997). Both innovations of organizational technology and business model will construct the core competitiveness for enterprises, resulting in a positive impact on organizational performance. Hence, we proposed the following hypothesis.

Hypothesis 2: Change Leadership Style Positively Affects Corporate Performance

Enterprise should identify the renewable, scalable, and vital core resources on the premise of clarifying its own status quo and material basis to maintain its core competitiveness (Chen and Xie 2018; Feng and Xu 2000; Lei et al 2016; Li 2012, 2013, 2018; Xu, Liu, Wang, Wang 2009; Xu, Viriyasitavat, Ruchikachorn, Martin 2012). The difference in leadership styles also affect the employees' ability to use resources strategically (Colvin and Slevin, 1991). These intangibles contribute to the uniqueness of an organization's culture and directly influence the formation of organizational change strategies. Top managers should be highly aware of these corporate resources to fully deploy and maximize their utility.

Teece et al. (1997) pointed out that the sticky resources superiority would limit the strategic choice of enterprises. Thus, the strategic choice of enterprises is limited by the current level of resources. The change leadership style tends to encourage subordinates to take a risk for an experimentation which has a positive impact on the mobilization of subordinates and the exploration of new approaches and knowledge. The exploratory innovation strategic option is in favor of the change leadership style over the transactional leadership style. Clearly, senior managers with different leadership styles involve the process of effective integration of internal and external resources of the enterprise. It is also a process to form a rational allocation as well as effective use of resources. The rational choice of leadership style will enhance the top managers' ability to use internal and external resources rationally. Hence, we proposed the following hypothesis.

Hypothesis 3: Information Resource Alertness Positively Affects Change Leadership Style

As the core element of corporate performance, resources are the basis of all enterprise activities (Barney, 1996). However, information resources alone could not directly explain the different financial performance between enterprises. Effective and strategic use of these heterogeneous information resources can bring sustainable competitive advantage to enterprises (Sirmon et al., 2008). Therefore, how to use the existing information resources to choose the appropriate leadership style and make effective strategic choices is very important to the organizational behavior, performance, strategy, and design (OBPSD) (Boudreau, 2004).

The leadership style has certain adaptability and plasticity. Environmental factors restrict the shaping of leadership style. The resources difference brings the enterprise natural environment

difference affecting and restricting the enterprise survival and the development. Based on the leader's full understanding of the resources difference, choosing the appropriate leadership style will bring environmental differences. The leadership style formed by top managers will improve the leadership effectiveness and promote the enterprises' financial performance. Previous studies have proved that the change leadership style plays an important mediating role in the relationship between top management information resource alertness and enterprise financial performance. Accordingly, the change leadership style is considered as an intermediary variable between top management information resource alertness and enterprise financial performance. Hence, we proposed the following hypothesis.

Hypothesis 4: Change Leadership Style Mediates the Relationship Between Top Managers Information Resource Alertness and Corporate Performance

Competitive tension reflects the enterprises' competition asymmetry among enterprises which explains perceptual difference and behavioral change during the competition process and information exchange among enterprises. Chen et al. (2007) suggested that more perceived competitive tension of target enterprises would increase their attack on competitors. The large-scale counterattack would further deepen the existence of competitive pressure among enterprises, resulting in the choice of enterprise organization scale. The organizational scale of enterprises must have higher factor utilization efficiency than their competitors. Property and other factors can improve the efficiency of enterprise production and organizational effectiveness by the rational optimized allocation of human resources. Chen (2007) further pointed out that the competitive tension from asymmetric competition facilitates the speed and the market adaptability of organizational change. Additionally, an enterprise's innovation behavior will bear more obstruction, threat, attack, and pressure. Meanwhile, senior leaders with strong vigilance would adjust their organizational change strategies to achieve the leadership style change and respond to the challenge caused by competitive enterprises (Granstrand, 2000). The earliest respondents can improve financial performance by acquiring higher market share. The leadership style suitable for the organization development formed by senior managers is under the external pressure from the intense competitive environment. Improvements in organizational creativity and enterprise financial performance are even more pronounced (Dess and Picken, 2000). Hence, we proposed the following hypothesis.

Hypothesis 5: Competitive tension has a significant moderating effect on the relationship between change leadership style and corporate performance.

The conceptual model is shown in Figure 1.

3. DATA COLLECTION SUBJECT AND METHOD

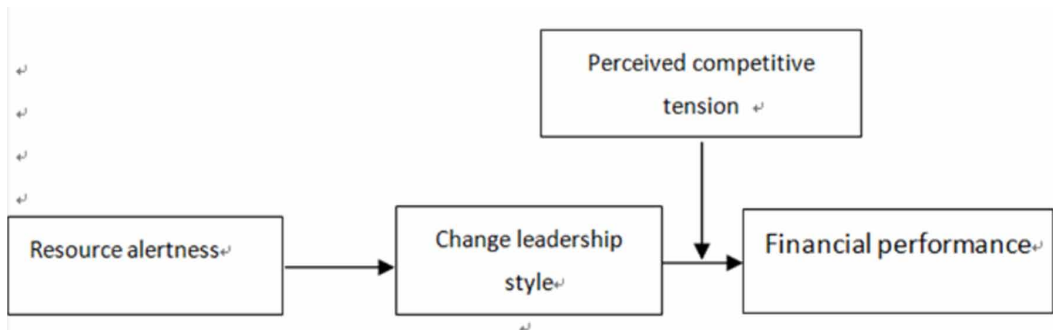
3.1 Subject

We adopted high-tech enterprises and traditional enterprises for our study. The senior management (the president, the chairman, the general manager, the chief financial officer, the chief operating officer, etc.) is our respondents. This study used face-to-face methods to collect data. We contacted and interviewed the senior managers through the government business administration office(e.g., the Municipal Development Zone's Administrative Committee). Our researcher explained the questionnaire to ensure the quality during the interview process.

3.2 Data Collection

We pretested the questionnaire by preliminary studies. Specifically, we gave the questionnaire to three doctoral candidates to record the completion time for the questionnaire and ensure the readability of

Figure 1. The conceptual model



each statement. With the assistance of the Changchun Economic and Technological Development Zone's Management Committee, we randomly distributed 106 questionnaires and received 74 valid questionnaires for the preliminary study. The preliminary results showed that some questions are ambiguous and need to be revised. Accordingly, we revised these questions and finalized our questionnaire with help of three professors. The survey was conducted in Changchun, Harbin, Shenyang, and Dalian from September to November 2015. We distributed 331 questionnaires and received 212 responses. 4 incomplete and invalid questionnaires were eliminated. Thus, the response rate is 62.84%. The below Table 1 summarized the basic characteristics of sample.

4. DATA ANALYSIS AND RESULTS

4.1 Correlation Matrix Between Variables

We presented descriptive statistics, correlation coefficient matrices, and square root of average refinement variance (AVE) for each variable in Table 2.

The square root of the AVE values for each dimension is between 0.723 and 0.758. The absolute value correlation Coefficient for each dimension is between 0.177 and 0.445. The square root of AVE value of each dimension is greater than the correlation coefficient between this dimension and other dimensions. Therefore, four scales have good discriminatory validity among the six dimensions.

4.2 Reliability and Validity Test

In this study, Cronbach's values were used to measure reliability and structural equations were used to test validity. The exploratory factor analysis of the data showed that the reliability of the questionnaire was good. Meanwhile, we found that the overall fit and validity of each factor are acceptable by using the confirmatory factor analysis (shown in Table 3).

4.3 Test of Direct Effect and Intermediary Effect

As shown in Table 4, the standardized path coefficient of information resource alertness to change leadership style is 0.390. The corresponding p value is significant at the level of 0.05. Thus, Hypothesis 3 is supported that information resource alertness has a significant positive effect on change leadership style. The standardized path coefficients of information resource alertness and change leadership style to financial performance are 0.201 and 0.217. Both corresponding p values are significant at the 0.05 level. Hypothesis 1 and Hypothesis 2 are supported that information resource alertness and change leadership style have significant positive effects on financial performance.

Based on the mediation effect principle, Hypothesis 4 is supported that change leadership style plays a mediating role in the relationship between information resource alertness and financial performance.

Table 1. Basic characteristics of sample

| Subject | Option | Sample size | Percentage |
|-----------------------|--|-------------|------------|
| Age | 20~30years old | 5 | 2.4% |
| | 30~40years old | 22 | 10.6% |
| | 40~50years old | 91 | 43.8% |
| | Over 50 years old | 90 | 43.3% |
| Educational level | Graduate or above | 8 | 3.8% |
| | Undergraduate | 39 | 18.8% |
| | Junior college | 59 | 28.4% |
| | High school/technical secondary school | 51 | 24.5% |
| | Junior high school and below | 51 | 24.5% |
| Position | President | 9 | 4.3% |
| | Chairman | 12 | 5.8% |
| | General manager | 84 | 40.4% |
| | Chief financial officer | 52 | 25.0% |
| | Chief operating officer | 51 | 24.5% |
| Enterprise category | High-tech enterprises | 118 | 56.7% |
| | Traditional enterprise | 90 | 43.3% |
| Establishment time | Less than 6 years | 80 | 38.5% |
| | 6~8years | 69 | 33.2% |
| | 8~10years | 28 | 13.5% |
| | More than 10 years | 31 | 14.9% |
| Equity nature | Sole proprietorship | 7 | 3.4% |
| | Private business | 57 | 27.4% |
| | Private enterprise | 100 | 48.1% |
| | Traumatic sole proprietorship | 44 | 21.2% |
| Family business | Yes | 62 | 29.8% |
| | No | 146 | 70.2% |
| Number of enterprises | Less than 51 people | 135 | 64.9% |
| | 51-100 people | 53 | 25.5% |
| | More than 100 people | 20 | 9.6% |

4.4 Test of Regulation Effect

The hierarchical regression analysis technique was further used and the results are shown in Table 5.

The empirical results indicated there is a significant correlation between change leadership style and financial performance ($\beta=0.398, p<0.01$) in Model 2 with change leadership style. Moreover, R^2 and Adjust R^2 of Model 2 are superior to Model 1 ($p<0.01$). In Model 3, we added the interaction item of change leadership style and competitive tension. The results demonstrated that competitive tension significantly regulates the relationship between change leadership style and financial performance.

Table 2. Correlation matrix between variables

| | Average value | Standard deviation | Information resource alertness | Transformational leadership style | Competitive tension | Financial performance |
|--------------------------------|---------------|--------------------|--------------------------------|-----------------------------------|---------------------|-----------------------|
| Information resource alertness | 3.625 | 0.813 | 0.723 | | | |
| Change leadership style | 3.709 | 0.812 | 0.386*** | 0.738 | | |
| Competitive tension | 3.688 | 0.833 | 0.177* | 0.338*** | 0.758 | |
| Financial performance | 3.632 | 0.842 | 0.407*** | 0.445*** | 0.252*** | 0.742 |
| AVE | | | 0.523 | 0.545 | 0.575 | 0.551 |

Table 3. Confirmatory factor analysis for each variable

| Index variable | χ^2 | df | GFI | NFI | AGFI | CFI | IFI | RMSEA | RMR |
|--------------------------------|----------|----|-------|-------|-------|-------|-------|-------|-------|
| Information resource alertness | 33.269 | 20 | 0.963 | 0.961 | 0.934 | 0.984 | 0.984 | 0.057 | 0.038 |
| Change leadership style | 6.587 | 9 | 0.990 | 0.988 | 0.976 | 1.000 | 1.004 | 0.000 | 0.019 |
| Competitive tension | 10.267 | 5 | 0.980 | 0.979 | 0.939 | 0.989 | 0.989 | 0.071 | 0.029 |
| Financial performance | 5.32 | 4 | 0.990 | 0.988 | 0.963 | 0.997 | 0.997 | 0.040 | 0.020 |

Table 4. Structural equation model path analysis

| | | | Estimate | Standardized Estimate | S.E. | C.R. | P |
|-------------------------|------|--------------------------------|----------|-----------------------|------|-------|------|
| Change leadership style | <--- | Information resource alertness | .391 | .390 | .082 | 4.751 | *** |
| Financial performance | <--- | Change leadership style | .236 | .217 | .085 | 2.771 | .006 |
| Financial performance | <--- | Information resource alertness | .220 | .201 | .085 | 2.585 | .010 |

Thus, Hypothesis 5 is supported that competitive tension has a significant moderating effect on the relationship between change leadership style and corporate performance.

Table 5. Test of adjustment

| Dependent variable | Financial performance | | | | | |
|---|-----------------------|-------|-----------|-------|-----------|-------|
| | Model1 | | Model 2 | | Model3 | |
| | Beta | t | Beta | t | Beta | t |
| Education level | -0.085 | 0.221 | -0.069 | 0.272 | -0.062 | 0.267 |
| Enterprise category | 0.123 | 0.077 | 0.111 | 0.074 | 0.098 | 0.081 |
| Establishment time | -0.021 | 0.766 | -0.036 | 0.564 | -0.041 | 0.473 |
| Number of enterprises | -0.096 | 0.169 | -0.020 | 0.750 | -0.027 | 0.639 |
| Change leadership style | | | 0.398*** | 0.000 | 0.350*** | 0.000 |
| Competitive tension | | | 0.113 | 0.091 | 0.171** | 0.005 |
| Change leadership style*competitive tension | | | | | 0.388*** | 0.000 |
| R square | 0.034 | | 0.229 | | 0.375 | |
| Adjust R square | 0.015 | | 0.206 | | 0.353 | |
| R-square variation | 0.034 | | 0.195 | | 0.146 | |
| F | 1.765 | | 9.950*** | | 17.146*** | |
| F variation | 1.765 | | 25.470*** | | 46.737*** | |

Note: *p=0.10; **p=0.05; ***p=0.01

5. DISCUSSION AND CONCLUSION

5.1 Potential Application to IT

With the development of big data analysis and information integration engineering, information resource has become vital to corporate performance (Chen, 2016, 2017; Furtado, et al 2017; Hassani et al 2018; Kim 2017; Lu 2018,2019; Xu et al 2018; Xu, Xu, and Li 2018; Xu and Duan 2019). Lewis et al. (2011) identified a scalable IT service infrastructure as information resource and examined how the resource can affect corporate performance. Teixeira and Borsato (2019) proposed an information model to manage the information resource for improving corporate performance, namely the dynamic formation of supplier networks. Utilizing information resource based on accurate data and disruptive innovations will support environmental reporting effectively and efficiently (Hamalainen and Inkinen, 2019). Additionally, Ghobakhloo and Ching (2019) found that information resource is one of the determinants for smart technology adoption.

Information leadership has been defined as the “leadership of information resources and infrastructures in contrast to the leadership of social knowledge processes, knowing and organizational learning” (p.663, Huvila, 2014). As one of leaderships, information leadership could be derived from information resource alertness. Only informed managers will be able to change their leadership style effectively and efficiently according to the competitive environment. Furthermore, information technology can make the leadership style change faster and easier. Therefore, the corporate performance improvement will be initiated from information technologies used for information resource alertness and leadership style change.

Competition is always considered as one of the major drivers for the corporate performance improvement. Although competitions have been becoming more fierce because of information technology usages, managers will have to change their leadership style when they are facing such

competitive tension. Thus, information technology is an important factor for balancing the moderating effect of competitive tension on the relationship between leadership style change and corporate performance.

5.2 Discussion

Both theoretical and practical contributions are discussed as followings:

1. Both top manager's information resource alertness and change leadership style have significant effects on enterprise performance. The change leadership style plays a significant mediating role between information resource alertness and enterprise performance. This conclusion further emphasized the value of senior managers and highlighted their perception of internal resources in the performance improvement process. It not only enriched the theory of financial performance improvement but also emphasized the importance of paying attention to the resources vigilance and the leadership style transformation to senior managers. Additionally, the mediating role of change leadership style further opened the black box of top managers' information resource alertness to performance and excavated the effective path of transforming information resource alertness into performance. Thus, the path from information resource alertness to performance can be guaranteed and the effectiveness of the change leadership style will be reflected. Accordingly, senior managers must be aware of the resources around them and their potential value within resource constraints to ensure the timely discovery and utilization of change leadership style (Baker and Nelson, 2005).
2. The theory of competitive tension pointed out that the competitive behavior of enterprises would accumulate the competitive tension leading to the asymmetry and distortion of competitive information among enterprises (Chen and Miller, 2012; Ferrier and Lyon, 2004). When senior managers think that the competitive tension becomes stronger and stronger, the short-term equilibrium will be broken. It leads to the emergence of competition conflicts between two sides. The emergence of conflict will actively urge the senior managers to re-recognize the opportunities faced by the enterprise to change the relevant strategic decisions. As senior managers perceive the competitive tension to be greater and stronger, enterprises will accelerate internal change including leadership style change in response to interdepartmental conflict and inefficiency. This study further developed the theory from the competitive tension perspective and explored the mechanism of its impact on organizational performance. Our theory of dynamic competition emphasized the predictive factors of competitive response in terms of perception, motivation, and competence. The perceived factor is to measure a firm's psychological pressure brought by competitions in the market. The perception factor affects a firm's correct perception of the counterattack in a competitive environment. As the incentive for the enterprise to take the competitive behavior, the motivation factor measures the threat level of the target enterprise (Chen, 2007). The ability factor reflects the action ability of enterprises to respond to competitors. The stronger the competitive tension reflected in these three aspects, the more effective the senior managers will be in driving the continuous changes in the organization. Especially, they will change the leadership style and strengthen the information exchange between the organization and the external environment (Dorfus, 2008). Consequently, the effectiveness of leadership style change will be enhanced for the performance improvement to mitigate or reduce the adverse impact of external competition.

5.3 Limitations and Future Research

This study has several limitations. First, the data used in this study are all cross-sectional data that can only reflect the situation of enterprises at that time and cannot reflect the long-term changes of enterprises. We may use vertical data and explore the dynamic changes of the relationship between top

managers' opportunity vigilance, organizational change, strategy, and corporate performance. Second, the samples mainly come from the three northeast provinces in China. The economic development level of the northeast region is undeveloped. Enterprise data cannot reflect the overall development of enterprises in the entire country, resulting in a generalizability issue. We may collect data from the entire country and compare the data from different regions. It may lead to more meaningful conclusion. Finally, it takes a certain amount of time for the strategy implementation as well as the internal adjustment of the organization. Thus, there may be a delay of the current organizational change strategy effect on performance.

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