A Study on the Relationship between Top Management Team Characteristics and Firm Performance from a Team Life Cycle Perspective

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Abstract

As the most important human resource of an enterprise, top management has received much attention from many researchers, and the top echelon theory proposed by Hambrick and Mason (1984) has laid a theoretical cornerstone for the study of the relationship between the characteristics of the top management team and the performance of the enterprise. Existing studies have focused on the impact of top management team characteristics on firm performance by using top management team demographic characteristics as a proxy variable for measuring top management team characteristics. However, from empirical studies, the relationship between top management team characteristics and firm performance has yet to achieve consistent conclusions. This paper reviews the research lineage of the relationship between top management team characteristics and corporate performance, analyzes the limitations of the existing research, and proposes future research directions in this field with a new perspective on the team life cycle.

Keywords

Team life cycle; top Management teams; Demographic characteristics; Implicit characteristics; Firm performance.

1. Introduction

In the complex and changing globalized environment, business leaders feel it is difficult to control the enterprise's destiny by personal power. The management mode of leading the development of the enterprise by the Top Management Team (from now on referred to as TMT), which is composed of management elites from different departments and fields of the enterprise, has gradually been valued by private enterprises. Efficiently operated TMT is of high value, high scarcity, and difficult to imitate, and it is the core competitiveness that constructs the sustainable development of enterprises, which is increasingly emphasized and paid attention to by private enterprises and academics.

Before the 1980s, due to the limitations of research methods and conditions, studies on the relationship between top management and corporate performance were generally limited to theoretical descriptions and derivations but not empirically confirmed. However, using the demographic characteristics model in organizational sociology to study the top management

team's stability attracted the academic community's attention(Pfeffer, 1983). The introduction of the "top echelon theory" marked the beginning of the study of top management teams, and the study of the relationship between the characteristics of top management teams and the performance of firms began(Hambrick & Mason, 1984). However, from the empirical findings, the relationship between top management team characteristics and firm performance has not been consistently concluded (West, 2007), and the "black box" inherent in the relationship between top management team and firm performance has not been uncovered.

2. A Review of Research on the Relationship between Top Management Team Characteristics and Firm Performance

2.1. Physical characteristics

Since the "top echelon theory" (Hambrick & Mason, 1984), there has been an influx of academic research on the relationship between top management teams and strategic choices and firm performance. The initial research idea of the researchers is based on the cognition, values, and other difficult-to-measure psychological characteristics variables of the top management team members. In the view of many researchers of the executive team, the different cognitive bases, values, and insights of the senior management team members, as well as the action process of these characteristics, will affect the strategic choice of the organization and the performance of the enterprise. As cognition, values, insight, and other traits are difficult to measure (Pfeffer, 1983), researchers refer to existing studies on demographic characteristics of teams and take demographic characteristics of top management teams, such as age, educational background, and occupational background, as substitute variables for the above trait variables. It is also inferred that these characteristics will affect the stability of the top management team, the implementation of corporate strategy and corporate performance, and even predict the output level of the enterprise (Knight et al., 1999). Based on this mindset, researchers have generally turned to the study of demographic variables such as executives' functional backgrounds, industry and corporate tenure, and educational qualifications and their variability, and on this basis, have explored the impact of these variables and their variability on the relationship between strategic decision making and organizational performance (del Carmen Triana et al., 2019).

Research has confirmed the potential link between TMT demographic characteristics and firm performance(Bantel & Jackson, 1989). However, the relationship between demographic characteristics and their variability and firm performance is not stable or even considered to be non-existent (Carpenter et al., 2004), which some scholars believe to be due to the role of situational variables (Albert A. Cannella et al., 2008; Hambrick, 2007). Therefore, in recent years, some scholars have added a series of situational variables such as culture(Awino, 2013), country(Hooghiemstra et al., 2019), and environmental dynamics(Albert A. Cannella et al., 2008) (Jiménez-Jiménez & Sanz-Valle, 2011) to solve the above research dilemma. Although adding scenario variables improves the predictive validity of TMT demographic characteristics, the relationship between TMT characteristics and firm performance has yet to reach a consistent conclusion (Carpenter et al., 2004) (Yue et al., 2011). The reasons for this phenomenon may be as follows.

First, the underlying reason is that demographic characteristics and their variability do not

serve as a valid proxy for implicit characteristics such as TMT perceptions and values. Due to the objective fact that it is challenging to measure TMT's recessive characteristics, many scholars believe that team demographics can be an adequate substitute for team recessive characteristics. Therefore, the academic research on TMT characteristics and its relationship with firm performance mainly focuses on the demographic characteristics of TMT but neglects the discussion on the recessive characteristics of TMT and its effect on firm performance. The relationship between team demographics and organizational performance is not direct. Alternatively, it is more complex a relationship than scholars previously thought. Homogeneous demographics do not necessarily produce homogeneous attitudes, beliefs, or values (Smith et al., 1994). The use of demographic indicators makes it difficult to discern the actual psychological and social processes that drive executive behavior. This phenomenon is the so far unsolved "black box problem".

Second, the dynamic variation of TMT characteristics is ignored. With the evolution of the team system, TMT features will change, and this change is not limited to the change of explicit characteristics such as age and education but also changes of recessive characteristics such as cognition and values. For example, with the strengthening of the internal interaction of TMT, the cognitive level of TMT members may be improved, and the values of TMT members may also converge. However, this point is precisely what the existing TMT characteristics studies have neglected because when exploring the impact of TMT characteristics on firm performance, existing studies have set the TMT characteristics as static, i.e., regardless of the stage of development of the TMT, the characteristics pattern is regarded as unchanged. However, the TMT samples often selected for the study may originate from different stages of the team's life cycle, and the TMT characteristics patterns are different, so the indiscriminate treatment will inevitably result in the reality of unstable research on the relationship between TMT characteristics and firm performance.

Third, the intermediate variable "team process" is understudied. Given the unstable relationship between TMT demographic characteristics and organizational performance, some scholars have realized that TMT characteristics not only directly affect organizational performance but also are more likely to be regulated by decision-making process variables such as team conflict, team communication, and team cohesion, which may have a more direct impact on strategic output and organizational performance than demographic characteristics variables. Most of the research results of the top management team stay on the characteristics of the top management team and organizational output but ignore the research of the team process. However, more and more team practice has proved that the effective operation process of the team is the key to the team's success. Due to the neglect of the mediating variable "team process," many existing studies have caused the absence of the intermediate link of "process" in the feature-process-performance relationship of TMT. Of course, some scholars are also aware of the existence of this theoretical dilemma and begin to shift the focus of research from demographic characteristics and their differences to team processes and gradually incorporate team interaction process variables such as team conflict, team trust, team communication, and team cohesion into the characteristics analysis research framework of top management teams(Carmeli, 2008; Ferguson et al., 2019; Parayitam & Dooley, 2009; Prasad & Junni, 2017; Wang et al., 2019), trying to uncover the "black box" of TMT research. The research on TMT characteristics and enterprise relationships based on team process has initially formed a thinking framework. However, the research on team processes needs to be

further in-depth.

Fourth, most analyses in TMT research are based on static analytical methods of cross-sectional data, and the investigation of dynamic time evolution is lacking. In fact, like an organic organism, TMT has a process from birth to death and goes through different stages of development in its life cycle. With the evolution of the life course of TMT, the characteristic form of TMT will change, and this change is not limited to the change of explicit characteristics such as age and education background but also changes in the recessive characteristics of TMT. Previous studies have set TMT as a static state; that is, no matter which stage of the life cycle TMT is in, its regarded characteristic steady state is unchanged, and often, the team samples selected for research may come from different development stages of the team life cycle. Such indiscriminate treatment is bound to lead to the unstable reality of the above research results.

3. Basic contents of intelligent bathroom facilities in aging society

With the evolution of TMT's life course, TMT will present different life cycle stage characteristics, and revealing TMT's life cycle stage characteristics can portray the evolutionary trend of TMT's characteristics, which can explore the performance process mechanism of TMT's characteristics. The evolution of TMT characteristics from the perspective of the team life cycle will become a new focus. The research on the relationship between TMT characteristics and enterprise performance based on the perspective of the team life cycle is not a denial of existing research but an expansion and supplement of existing research, so to try to uncover the "black box" of the research on the relationship between TMT characteristics and enterprise performance and guide enterprise practice better and effectively. Existing research focuses on the direct relationship between TMT characteristics and firm performance, and this study constructs a research framework of TMT characteristics and firm performance by taking the team life cycle as a perspective and combining it with the IPO model, as shown in Figure 1.

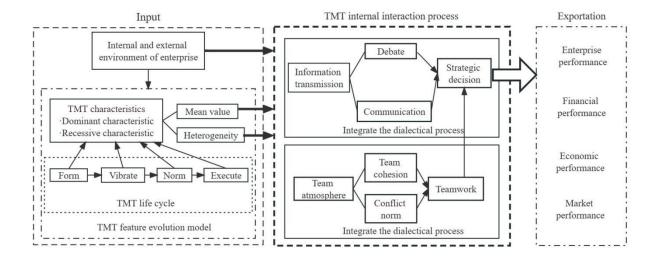


Figure 1: Dynamic research thinking on the relationship between TMT characteristics and enterprise performance based on team life cycle

3.1. Study on life cycle characteristics of TMT

First, the effects of TMT characteristic variables on firms' strategic decisions and firm performance are not the result of individual characteristic variables but rather the result of collective action (Kor, 2003; Simsek et al., 2005). In the future, TMT research should change the mode of focusing only on the explicit characteristics of TMT and strengthen the research on the recessive characteristics of TMT because the recessive characteristic variables of TMT may more directly reflect the decision-making process of TMT when making strategic decisions. Secondly, the existing TMT studies regard the characteristics of TMT as static. However, TMT is a dynamically changing system, and its life cycle generally goes through four stages: formation, shock, specification, and execution. With the evolution of TMT from immature to mature, the characteristics of TMT will show different evolutionary forms. Future research on TMT characteristics can combine with the new perspective of the team life cycle and use the rooted theory. TMT's dominant and recessive characteristics at each stage of the team life cycle are summarized, and, on this basis, analyzed the influence of TMT characteristics in different life cycle stages on enterprise performance.

3.2. Research on the TMT internal interaction process

The internal interaction process of TMT is not only a collaborative process to solve problems in management practice but also a process of multi-party and multi-motive negotiation and decision-making. The process variables of TMT operation include two types: those related to information transfer and those related to team atmosphere. Information transfer variables refer to variables that affect the channel and efficiency of information transfer within TMT, including communication and debate(N & J, 1981; Salas et al., 1992). Messaging variables such as communication and debate affect interpersonal interaction behavior within the TMT. Information asymmetry exists among TMT members, and team members tend to discuss the information they share, ignore some alternatives with a low information-sharing degree, and underestimate the risks of implementing some solutions, thus affecting team members' commitment to fulfilling team decisions. However, through communication, debate, and other forms of interaction, TMT can share the experience or views of each member, reduce the information asymmetry within TMT, and help to improve the quality of TMT decision-making, thereby improving corporate performance. Team climate is the product of effective team interactions and results from interpersonal interactions within the team. Team atmosphere variables include team cohesion, conflict norms, and other variables. Team atmosphere variables such as team cohesion and conflict norms that emerge in the team process will significantly affect team cooperation and promote team performance (Ilgen et al., 2005) and help improve the quality of TMT decision-making, thus improving enterprise performance. Of course, the information transfer variables and the team atmosphere variables within TMT are not independent but influence each other and work together. For example, improving TMT internal cohesion and establishing conflict norms can promote the smooth progress of TMT internal debate. However, excessive debate may affect the internal cohesion of TMT.

3.3. Research on the dynamic mechanism of the influence of TMT charact eristics on firm performance based on the TMT internal interaction process

The study of the impact of TMT characteristics on firm performance considers both the mediating role of the interaction process within TMT and the time variable. In the four-team life cycle stages of TMT, namely, the formation stage, the shock stage, the normative stage, and the implementation stage, TMT shows different stage characteristics, and the depth and breadth of the interaction among TMT members are also different, which will undoubtedly have different impacts on enterprise performance. The research on the mechanism of the impact of TMT characteristics on enterprise performance in the future can be conducted in two stages: (1) The influence of the characteristics of each stage of the TMT life cycle on the interaction process within the team. Through longitudinal analysis, the influence of TMT characteristics in the four stages of the team life cycle on the internal interaction process is clarified. For example, exactly which TMT characteristics impact the TMT internal operational processes, in what form this impact manifests itself, and whether the TMT characteristics have the same impact on the TMT internal interaction process variables at the four stages of the team life cycle. (2) Analysis of the influence of the TMT internal interaction process on enterprise performance. The NK model can be introduced into TMT research (Kauffman, 1993), drawing on the research idea of introducing various modes of interaction between elements into the NK model (Rivkin & Siggelkow, 2005) to construct an NK simulation model of multi-subject interaction. The changes in financial, economic, and market performance in the short and long term are analyzed according to the adaptive landscape (Wright, 1932) and the evolutionary rules of the NK model and, at the same time, are validated using empirical analysis.

4. Conclusion

As the main body of enterprise strategic decisions, TMT plays an irreplaceable role in the choice of organization development strategy and enterprise performance. In the past 40 years, scholars have studied enterprise performance mainly from the demographic characteristics of TMT, but the research results often lack stability. In order to open the internal "black box" of the relationship between TMT characteristics and firm performance, the existing research model must be changed. Find A research perspective that genuinely represents the relationship between TMT characteristics and firm performance so that the research on the relationship between TMT characteristics and firm performance is closer to reality to guide the enterprise's practical activities more effectively. The perspective of the team life cycle is a breakthrough. Taking the four stages of the TMT life cycle as time nodes, the relationship between TMT characteristics and enterprise performance is further clarified by exploring the evolution process of TMT characteristics, the influence of TMT characteristics on the TMT internal interaction process, and the dynamic mechanism of TMT characteristics, internal interaction process, and enterprise performance. This research is for the efficient operation of corporate TMT and to address the reality of the relationship instability of the relationship between TMT characteristics and firm performance, and to integrate and build an efficient corporate senior management team and encourage it to provide new ideas and guidance for improving enterprise performance, more so, it is a significant problem that needs to be solved and faced by enterprises and academics at present.

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References

- [1] Albert A. Cannella J, Park J-H, Lee H-U. Top Management Team Functional Background Diversity and Firm Performance: Examining The Roles of Team Member Colocation and Environmental Uncertainty, Academy of Management Journal, vol.51 (2008), 768-784.
- [2] Awino ZB. Top Management Team Diversity, Quality Decisions and Organizational Performance in the Service Industry, Journal of Management and Strategy, vol.4 (2013), 113-123.
- [3] Bantel KA, Jackson SE. Top management and innovations in banking: Does the composition of the top team make a difference?, Strategic management journal, vol.10 (1989), 107-124.
- [4] Carmeli A. Top management team behavioral integration and the performance of service organizations, Group & Organization Management, vol.33 (2008), 712-735.
- [5] Carpenter MA, Geletkanycz MA, Sanders WG. Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition, Journal of management, vol.30 (2004), 749-778.
- [6] del Carmen Triana M, Richard OC, Su W. Gender diversity in senior management, strategic change, and firm performance: Examining the mediating nature of strategic change in high tech firms, Research Policy, vol.48 (2019), 1681-1693.
- [7] Ferguson AJ, Ormiston ME, Wong EM. The effects of cohesion and structural position on the top management team boundary spanning–firm performance relationship, Group & Organization Management, vol.44 (2019), 1099-1135.
- [8] Hambrick DC. Upper echelons theory: An update. vol 32. Academy of Management Review, (2007), 334-343
- [9] Hambrick DC, Mason PA. Upper echelons: The organization as a reflection of its top managers, Academy of management review, vol.9 (1984), 193-206.
- [10] Hooghiemstra R, Hermes N, Oxelheim L, Randy T. Strangers on the board: The impact of board internationalization on earnings management of Nordic firms, International Business Review, vol.28 (2019), 119-134.
- [11] Ilgen DR, Hollenbeck JR, Johnson M, Jundt D. Teams in organizations: From input-process-output models to IMOI models, Annual Review of Psychology, vol.56 (2005), 517-543.
- [12] Jiménez-Jiménez D, Sanz-Valle R. Innovation, organizational learning, and performance, Journal of Business Research, vol.64 (2011), 408-417.
- [13] Kauffman SA, The origins of order: Self-organization and selection in evolution, Oxford University Press, USA, (1993).
- [14] Knight D, et al. Top management team diversity, group process, and strategic consensus, Strategic management journal, vol.20 (1999), 445-465.
- [15] Kor YT. Experience-based top management team competence and sustained growth, Organization science, vol.14 (2003), 707-719.
- [16] N JL, J RH, Group effectiveness in organizations, Foreman and Company, Linois, (1981).

- [17] Parayitam S, Dooley RS. The interplay between cognitive-and affective conflict and cognition-and affect-based trust in influencing decision outcomes, Journal of Business Research, vol.62 (2009), 789-796.
- [18] Pfeffer J. Organizational Demography, Research in Organizational Behavior, vol.5 (1983), 299-357.
- [19] Prasad B, Junni P. Understanding top management team conflict, environmental uncertainty and firm innovativeness: Empirical evidence from India, International Journal of Conflict Management, vol.28 (2017), 122-143.
- [20] Rivkin JW, Siggelkow N. Patterned interactions in complex systems: Implications for exploration, Management science, vol.53 (2005), 1068-1085.
- [21] Salas E, Dickinson TL, Converse SA, Tannenbaum SI. Toward an understanding of team performance and training, (1992), 3-29.
- [22] Simsek Z, Lubatkin MH, Dino RN. Modeling the multilevel determinants of top management team behavioral integration, Academy of Management Journal, vol.48 (2005), 69-84.
- [23] Smith KG, Smith KA, Olian JD, Sims Jr HP, O'Bannon DP, Scully JA. Top management team demography and process: The role of social integration and communication, Administrative science quarterly, (1994), 412-438.
- [24] Wang D, Su Z, Guo H. Top management team conflict and exploratory innovation: The mediating impact of market orientation, Industrial Marketing Management, vol.82 (2019), 87-95.
- [25] West GP. Collective Cognition: When Entrepreneurial Teams, Not Individuals, Make Decisions, Entrepreneurship Theory and Practice, vol.31 (2007), 77-102.
- [26] Wright S (1932) The roles of mutation, inbreeding, crossbreeding, and selection in evolution. Paper presented at the proceedings of the sixth international congress on genetics,
- [27] Yue H, Naiding Y, Chenlu Z. Influence of the Top Management Team Heterogeneity and the Firm Performance——To Focus on Ownership Concentration, Management Review, vol.23 (2011), 120-125+168.