

# Review and Prospect of Research on Executive Team Fault Zone

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## Abstract

**In recent years, the TMT fault zone has become an important perspective to study the heterogeneity of TMT composition, and scholars at home and abroad have begun to pay attention to the TMT fault zone from the perspective of organizational behavior. Based on the existing research at home and abroad, this paper summarizes the classification and theoretical basis of TMT fault zone, and combs the effect of TMT fault zone from three perspectives: Decision-making conflict, enterprise performance and enterprise strategy. Based on the existing research, this paper also puts forward some assumptions and prospects for the future research direction.**

## Keywords

**TMT Fault Zone; Team Diversity; Team Heterogeneity; Team Performance.**

## 1. Introduction

With the application and popularization of the team work model, the research related to team behavior has been widely concerned by scholars at home and abroad. Many scholars have studied the factors affecting team performance from the aspects of team size, team diversity and heterogeneity, team member composition and so on. TMT has typical team characteristics. Especially since the high-ladder team theory was put forward, how to make full use of team advantages, improve team performance and finally realize the vision and mission of the organization by adjusting the structural characteristics such as the diversity of the TMT has gradually become the focus of research in the field of organizational behavior.

Heterogeneity of top management team composition refers to the diversity of team members in a single dimension, such as age, gender, work experience, education level, etc. However, the heterogeneity studies ignore the multi-dimensional differences in characteristics of top management team. The practical work shows that under the joint action of multiple demographic characteristics, the top management team will be differentiated within the team due to the similarity of one or more characteristics among the members, and the top management team will be divided into multiple subgroups invisibly. Lau and Murnighan (1998) defined this hypothetical dividing line and proposed the concept of "team Faultline" to indicate the intensity of differentiation within the team, that is, the degree of clarity and independence between different subgroups. They believe that there can be multiple fault zones in a team, and each potential fault zone can only be activated into an actual fault zone at a specific time or in a specific situation[1]. Therefore, more and more scholars have explored the impact of different fault zones on team performance according to different acting principles and mechanisms. In the field of corporate governance, although more and more studies have been conducted in recent years to interpret the composition of senior management teams and their performance from the perspective of team fault zone, the number is relatively small, especially in the context of China. Therefore, this paper summarized the research status of TMT fault zone from the perspectives of classification, theoretical basis and effectiveness, and proposed the prospect of future research direction.

## 2. Classification of the Executive Team Fault Zone

Since the formation of team fault zone requires activation of related attributes in different situations, the characteristic attributes of the activated fault zone are different with different task situations of the team. The classification of executive team fault zone can be divided according to this attribute, and related research has also experienced a process from the surface to the inside, from the shallow to the deep. At the early stage of the study, Bezrukova et al. (2009) divided fault zones into social classification fault zones and task-related fault zones, and these two types of fault zones can be basically distinguished by whether the related attributes are controllable. Social classification fault lines (also known as demographic fault lines, physiological fault lines, relational fault lines) are mainly defined as fault lines formed by uncontrollable attributes, such as age, gender, nationality, ethnicity, etc., that are difficult to change; Task-related fault zone mainly refers to the formation of the team fault zone based on the personal experience and educational background of senior management team members. As the formation of the team fault zone requires activation of related attributes in different situations, the characteristic attributes of the activated fault zone are different with different task situations of the team [2]. The classification of executive team fault zone can be divided according to this attribute, and related research has also experienced a process from the surface to the inside, from the shallow to the deep.

With the deepening of the research, some deeper research will also fault zone, such as interpersonal fault zone (Li Nanbo, 2019) was put forward by the combination of Chinese traditional culture and the specific situation, the types of fault zone is based on "culture", like "relatives", "hometown", "comrade", "alumni", and "mentoring" interpersonal contact; Social capital fault zone (Liu Haibing, 2018) divides the top management team based on its members' concurrent status, academic background, government association and other attributes.

## 3. Theoretical Basis of Research on Fault Zone of Senior Management Team

By combing and summarizing relevant literature on fault zones, this paper summarizes the theoretical basis of research on executive team fault zones, as shown in the following table, which mainly includes: social classification theory, self-classification theory, similar attraction paradigm, information decision theory, optimal trait theory, etc.

## 4. Research on the Effect of Fault Zone of Top Management Team

Since the fault zone theory was put forward, scholars have done a lot of research on the effect of fault zones. However, due to the factors such as whether the fault zone is activated, the type of fault zone, and the strength of fault zone, the related research results of the senior management team's fault zone have great inconsistency and uncertainty. However, on the whole, most scholars' studies have shown that the social classification fault zone is negatively correlated with team effectiveness, that is, similar demographic characteristics lead to the formation of subgroups and intensify the competition within and outside the subgroups, which reduces team effectiveness. Task-related fault zone is positively correlated with team effectiveness. At the same time, this influence is generally not linear, and scholars generally agree that there is an inverted "U" shaped relationship between fault zone strength and action effect. Specifically, the effect of TMT fault zone is mainly reflected in three aspects: influencing team Decision-making conflict, corporate performance and corporate strategy.

#### 4.1. Executive Team Fault Zone and Decision-making Conflict

When the senior management team is responsible for the daily production and operation activities of the company, it often needs to make many decisions related to the development of the company. Due to the incompatibility of members' characteristics and attributes, a fault zone is formed between top management teams, which are divided into different subgroups, which will produce differences and conflicts in the Decision-making process. Most studies divide conflict into relationship conflict and task conflict. Relational conflicts mainly come from the differences between individuals of subgroups. These differences have nothing to do with work content, but mainly include interpersonal conflicts, such as social activities, interests, values, beliefs, etc. This type of conflict often contains hostility or negative emotions. Task conflict refers to the differences between individuals of subgroups in the process of performing organizational or team tasks, such as the conflict caused by differences in corporate strategy, work content, etc. When the intensity of fault zone is large, senior management team members identify with their subgroups more than the whole team, which enhances the feelings of members within the same subgroup and improves the work efficiency and collaboration ability of members within the subgroup. But on the other hand, it also causes individual contradictions among different subgroups, resulting in tension and prejudice between subgroups, highlighting the boundary between each subgroup, leading to increased relationship conflicts, and then resulting in Decision-making conflicts of the whole team. Relationship conflict often creates a hostile atmosphere within the team, which in turn affects the attention of the individual team members and is not conducive to team Decision-making. The research of Choi (2007) confirmed that the social classification fault zone would aggravate the conflict between teams due to the increase of gender and age, while the task-related fault zone would lead to the conflict of team Decision-making due to knowledge background and personal experience, and thus had a negative impact on performance [3]. Li and Hambrick (2005) found that the higher the intensity of the social classification fault zone, the higher the possibility of conflict between subgroups. Jehn and Bezrukova (2010) reached similar conclusions[4]. Thatcher and Patel (2012) used meta-analysis method to analyze the empirical articles published in top international journals in related fields from 1995 to 2011, and found that the higher the intensity of fault zone within a team, the higher the probability of team relationship conflict and task conflict. Zhang Hong (2014) took entrepreneurial teams as the research object and found that relationship conflicts in entrepreneurial teams were not conducive to forming an atmosphere of team cohesion. Zhou Mingjian et al. (2014) believe that task conflict is positively correlated with team creativity, while relationship conflict is negatively correlated with team creativity.

#### 4.2. Top Management Team Fault Zone and Corporate Performance

Most studies generally believe that TMT fault zone is negatively correlated with corporate performance. Based on the theory of social classification or the paradigm of same-sex attraction, they believe that the formation of fault zone will lead to the differentiation of individuals and the contradictions and antagonism between subgroups, which will further affect the efficiency of team cooperation and have a negative impact on team performance. Kaczmarek et al. (2012), in the context of listed companies in the UK, proved that the fault zone related to board tasks would have an impact on corporate performance[5]. Li (2005) empirically in sino-foreign joint ventures, the managers of different nationalities is easy to produce "congenital" clique, which formed by the demographic characteristics of social classification of fault zone, will lead to different task conflict and emotional conflicts between subgroups, and further affecting the behavior of members of the team atmosphere and cultural fusion integration, affect the enterprise performance. Zhou Jian et al. (2015) conducted a study on fault zone in the context of China, and calculated the intensity of fault zone with the origin, education level, professional background and tenure of board members as the dividing attributes. The conclusion showed

that the task-related fault zone was damaging to enterprise value. Moreover, some studies have come to the opposite conclusion. The empirical research of Thatcher et al. (2003) shows that the appropriate intensity of the team fault zone helps the team to integrate resources and share relevant information, thus improving corporate performance. Another part of the research focuses on the impact of the top management team fault zone on the firm's R&D and innovation capability. Zhao Bingyan et al. (2016) adopted the method of questionnaire survey and found that the greater the intensity of the top management team fault zone, the lower the enterprise innovation performance[6]. Li Xiaoqing and Lu Liangxin (2017) took the board of directors of private enterprises listed on the Growth Enterprise Market as the research object and found that the board fracture zone would weaken the positive correlation between the formal association of the board of directors and the R&D efficiency of enterprises. Liu Haibing et al. (2018) took the educational background, professional background and part-time position of top management teams of private enterprises in China as the attribute basis for dividing the fault zone, and found that the intensity of social capital fault zone of top management teams showed an inverted "U" shaped relationship with the level of technological innovation of enterprises, rather than a simple linear relationship[7].

### 4.3. Senior Management Team Fault Zone and Corporate Strategy

Corporate strategy is the core of corporate governance mechanism and the source of competitive advantage. The main work of the senior management team, including the board of directors, includes how to formulate corporate strategy and solve and respond to the problems encountered in the process of strategy implementation. Senior team fault zone can produce different subgroups mission team, the boundaries between subgroups and competition can lead to competition for the company's resources and group decision efficiency drops, destroyed the team collaboration of the whole atmosphere, intensifies the interpersonal conflicts and contradictions, is not conducive to team members to reach consensus, then affect the enterprise strategy formulation and implementation. The impact of TMT fault zone on Decision-making quality can be reflected in the success rate of some major corporate decisions, such as cross-border mergers and acquisitions, strategic choices, etc. Barkema and Shvyrkov (2007) empirically tested the TMT fault zone of 25 Dutch enterprises, and found that when the TMT fault zone intensity was small, the innovation in choosing transnational investment locations was weak, mainly because of the higher degree of information intercommunication between TMT subgroups[8]. Li Wei 'an (2014) measured the board fault zone with samples of Chinese enterprises and found that the board fault zone would inhibit the success rate of cross-border M&A. The stronger the fault zone, the lower the success rate of cross-border M&A. Ndofor et al. (2014) found that the task-related fault zone would weaken the positive effect brought by the heterogeneity of top management team, thus reducing the success rate of M&A. Davich et al. (2018) studied the board fault zone of high-tech enterprises and found that it was negatively correlated with the entrepreneurial orientation of the company. Tuggle et al. (2010) studied the group fault zone of the board of directors in the United States from 1994 to 2000, and the results showed that when the group fault zone was weak, the board discussed entrepreneurship more. The research of Zhou Jian et al. (2012) found that team fault zone strength has a positive impact on enterprise innovation strategy. Hutzschenreute et al. (2013) found that the social classification fault zone of top management team negatively affected the formulation of corporate diversification strategy, while the task-related fault zone promoted the formulation of corporate diversification strategy. However, Pan Qingquan et al. (2015) took 83 companies in the CSI 300 Index from 2009 to 2013 as research samples, and found that the task-related fault zone of top management team had a negative impact on the implementation of internationalization strategy, while the physiological characteristic fault zone had a positive impact on the implementation of internationalization strategy.

## 5. Prospects of Research on the Fault Zone of Senior Management Team

### 5.1. Activation of the Group Fault Zone

Previous studies have shown that team fault zones are activated only under certain task situations and specific attributes, and team fault zones are most likely to be formed when task characteristics are related to a team attribute. The proper design of the mission scenario can activate the team fault zone. However, there is no obvious correlation between the potential fault zone and the activated fault zone, so it is difficult to observe. Most of the current studies are actually about the potential fault zone. However, the fault zone is not really functional until it is activated. Therefore, in the future research, we should focus on the activation and dormancy modes of potential fault zones, including effective identification methods of potential fault zones and active fault zones, which will help our team to better guide the study of fault zones in reality.

### 5.2. Dynamic Attributes of Fault Zones

Another key factor affecting the formation of fault zones is time. The formation of fault zone is related to the attributes of team members, and the attributes and characteristics of team members will change over time, including the attributes of social classification and task-related attributes. Therefore, fault zone is not a static concept, but also has strong dynamic characteristics. According to the research of Harrison et al. (2002), with the accumulation and increase of team cooperation time, the increase of interaction frequency of team members and the deepening of cognition of individuals, the negative emotions or prejudices against individuals within the team will be weakened, but the differences of some deep attributes will become more obvious. Therefore, the determinants of the group fault zone have changed from the surface and relatively static social classification attributes to the deep and dynamic attributes. According to Li and Hambrick (2005), the fault zone is relatively stable and persistent, and will not be affected by time factors. Therefore, the dynamic properties of the team fault zone deserve further attention and further study.

### 5.3. Interaction of Fault Zones

In existing fault zone studies, a basic assumption is that each fault zone in the team is independent of each other. However, in actual work, there are multiple fault zones within the senior management team, and the type, activation time, intensity and effect of each fault zone are different. It is of great significance to study the joint action of multiple fault zones.

### 5.4. Mechanisms of Fault Zones

The fault zone of the top management team will eventually affect the organizational level, team level and individual level of the enterprise, and this process is considered by most scholars as a complex black box, which still has a lot of room for research. Existing studies mainly focus on the impact of team fault zone on team performance and other consequences, and lack of systematic studies on the mechanism of action. Some literatures have studied this, but the results have not reached a stable consensus, which leads to the fuzzy causal relationship of the mechanism of action of team fault zone. Therefore, in the following research, attention should be paid to the study of the mechanism of fault zones, the important mediating variables and regulating variables that affect fault zones, so as to reveal the mechanism of fault zones in a deeper and more comprehensive way.

### 5.5. Group Fault Zone Study in the Chinese Context

The research on the team fault zone started early, but the research on the team fault zone from the perspective of the senior management team is still immature, and the current research on the senior management team fault based on the Chinese background is relatively scarce. China's



traditional culture and unique cultural environment have distinctive characteristics, especially in the context of China's "guanxi culture", which provides a good context for the research team's fault zone. The fault zones with Chinese characteristics formed based on alumni relationship, townsman relationship, kinship relationship and military background are of great importance for understanding the formation and activation of fault zones in Chinese context. On the one hand, due to the differences in national conditions, relevant studies in the western cultural context focus more on religious belief and social class, but they are not applicable to the Chinese context. On the other hand, China's profound accumulation of traditional culture and unique background of property rights governance have an important impact on the formation mechanism of the fault zone. Therefore, the future should focus on the impact of TMT fault zone with Chinese characteristics on enterprises, to have a deeper understanding of the operational mechanism of TMT Decision-making and behavior.

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