

Team Performance: A Review of Research and Future Prospects

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Abstract. With the increasing trend of economic globalization, on the one hand, countries and regions around the world are communicating more frequently than before, and in this mode of frequent interaction, industries, cultures and individual values are becoming more diversified and diverse, and corporate teams are also gradually developing in diversity, and the number of cross-regional and cross-industry teams is increasing. Team performance, as a means and standard of team behavior evaluation and management, is inseparable from the realization of the enterprise goals. On the other hand, the competition between enterprises at home and abroad is becoming more and more intense, and team management plays an increasingly important role in the 21st century. Now that the Internet winter has come, most enterprises are holding each other for warmth, and it is especially important to make the team in the enterprise work more actively, have a better atmosphere and higher performance. From the time American entrepreneurs started to focus on team management until today, there has been a great deal of literature related to teams, which have gradually become the basic work unit for organizations to engage in activities in a dynamic environment, and the factors affecting team performance have been a hot spot for researchers to focus on. This paper reviews the literature related to team performance in management and presents an outlook for future research. Collating the literature reveals that the difference between team performance and individual performance has not been agreed upon in research; the effect of team diversity on team performance is also controversial, suggesting that team performance needs further research.

Keywords: Team performance; individual performance; team diversity.

1. Introduction

In the new economic environment, new organizational forms such as virtual organizations, borderless teams, and project-based teams are becoming more and more common, and the past work mode of relying on individuals to work alone is not keeping pace with the times, while the team-based work mode is gradually highlighting its advantages and has a tendency to replace the former. In addition, as productivity increases, the division of labor becomes more refined, employees become more specialized, and teamwork becomes more common. The term "diversity" was first used in ecology, where everything in any environment is diverse. In the social and management sciences, diversity can be seen as a typical characteristic of the development from a lower to a higher form. Team, as a composition of a high-level form in the process of contemporary organizational development, has received a great deal of attention from academics in the process of management concept development, and after a lot of research and practice by relevant scholars, it is found that organizational innovation ability is directly influenced by the level of team cooperation. If the team atmosphere is better and the goals are clear, it is easier for team members to integrate information and share resources and experiences in the team, thus improving team skills quickly. In the long run, it is more conducive to the sustainable development of the team. Performance is the means and basis for organizations or individuals to evaluate and manage the results of their behavior, and for organizations, especially business-type organizations whose main goal is to achieve economic benefits, the achievement of corporate goals is inextricably linked to the ability of internal departments, teams and individuals to achieve performance. The research on teamwork points out that it can achieve a wider division of labor and increase productivity because it can be more

rewarding for more specialized employees to focus on their expertise [1]. Early academic research on teams focused on whether the performance level of teams could exceed that of individuals, and later on, research on the factors affecting team performance was carried out one after another. In this paper, we review the literature on the differences between team and individual performance and the factors affecting them, as well as the impact of team diversity on performance from a team perspective. The study finds that, on the one hand, teamwork can be effective and efficient in work and learning; on the other hand, there are communication problems and "free-rider" phenomenon, on which there is no consensus in academia. In addition, the impact of team diversity on team performance is also controversial. Therefore, further research on team performance is needed. The paper concludes with an outlook on future research directions.

2. Definition of related concepts and division of dimensions

2.1 Team performance

2.1.1 Definition of the concept of team performance

Team Performance, also known as team effectiveness or team efficacy, refers to the results of team members' joint efforts and the reflection of team members working together effectively to achieve goals and maintain team climate. Due to the different purposes of the study, researchers have classified the dimensions of team performance differently. Team performance is defined as how well the team accomplishes the goals originally set [2]. In management performance is divided into organizational performance and individual performance. Defined at a narrow level, organizational performance refers to the extent to which employees within a team accomplish their own goals or tasks. Defined at a broad level, organizational performance also includes aspects such as team member satisfaction, individual team member professionalism progress and overall team competence improvement. Team performance represents the results of business operations in a certain period of time and can be divided into behaviors, results and capabilities, which are comprehensive indicators that can evaluate a company's ability to sustain, operate and profitability [3].

Many empirical studies have proved that team entrepreneurial performance is much greater than individual entrepreneurial performance. Domestic scholars have studied the impact of entrepreneurial teams on team performance in three dimensions: relationship-oriented, innovation-oriented, and task-oriented [4]; another domestic scholar also confirmed the impact of team diversity on team performance [5].

Related scholars have also conducted empirical and theoretical studies on team performance. One scholar believes that team performance includes three factors such as team functioning, task completion, and growth of members within the team, and team performance is the unification of the results of each member's work within the team and the results of the group's work as a whole, and only by combining common goals and values with team performance and individual performance can we better achieve organizational strategic goals[6]. Another scholar studied team performance from the perspective of heart contract, after team members and the team complete the conclusion of the psychological contract, team members will work for the common goal, thus achieving the improvement of team performance[7]. The definitions of performance by different scholars can be organized as shown in Table 1.

Table 1. Studies on the definition of performance

Scholars	Definition
Hackman and Sundstorm (1990)	The team's achievement of the originally set goals
Xuehui Cai (2018)	Team performance represents the results of business operation in a certain period of time and can be divided into behavior, results and capabilities, and is a comprehensive indicator that evaluates the ability of the company to develop, operate profitability
Lang(2006)	Team entrepreneurial performance is much greater than individual entrepreneurial performance
Shi lei (2008)	Demonstrated the impact of team diversity on team performance
Huang Cunquan (2004)	Team performance is the result of the work of each member of the team and the result of the group as a whole alignment
Zhang Tieqin (2002)	After the conclusion of the psychological contract between the team members and the team is completed, the team members will work for the common goals, thus achieving improved team performance

(Source: compiled from domestic and international literature)

2.1.2 Team performance dimension classification

Research on team performance has been conducted by scholars to measure its influencing factors and related dimensions from different perspectives. Team success can be measured in three dimensions: task, social relationship, and individual [8]. The performance of a team mainly includes: goal task completion, team members' satisfaction, and the team's ability to sustain collaboration, where goal task completion is easier to measure than the other two dimensions [9]. From a social psychological perspective, team performance was classified into three dimensions: task performance, group development, and group member effectiveness [10]. From a socio-technical perspective, team performance is divided into two dimensions of productivity and satisfaction [11]. From the organizational psychology perspective, team performance is considered as an outcome variable that includes three dimensions: performance outcomes, attitudinal outcomes, and behavioral outcomes [12]. Similarly, from an organizational psychology perspective, team performance is divided into performance output, member satisfaction, and group viability [13]. The results of the above literature analysis reveal that the existing studies mainly classify team performance in terms of three dimensions: outcome, behavior, and competence, which is consistent with the development history of team performance definition. One scholar suggested that the measurement of team performance variables can be done in these three dimensions: the team's work output, the team's ability to grow in the future, and members' satisfaction [14]. In the current study, since the conceptual definition of team performance includes three dimensions: outcome, behavior, and competence, the dimensional division of team performance in this paper will also be consistent with the definition and will be divided into task performance, satisfaction performance, and developmental competence performance in terms of outcome, behavior, and competence, respectively.

Table 2. Team performance dimension division

Delineation of dimensions	Definition
Task Performance	Mainly refers to the team's accomplishment of organizational goals, which can be evaluated by the quality, time, efficiency and expense of accomplishing the goals as indicators, focusing on measuring the effectiveness and efficiency of accomplishing the team's goals and tasks.
Satisfaction Performance	Satisfaction performance mainly refers to the satisfaction of team members, including the interpersonal harmony of members, the sense of belonging of members, etc. It focuses on measuring the subjective feelings of employees in the work process.
Development capability performance	Individual ability refers to the team's work skills, knowledge skills and other abilities; team ability includes the team's ability to deal with unexpected situations, the ability to adapt, the ability to continue to operate, etc., mainly focusing on the team's future sustainable development ability.

(Source: compiled from domestic and international literature)

2.2 Team Diversity

2.2.1 Team diversity concept definition

Team diversity refers to the degree of variability in individual characteristics among team members [15]. Some scholars define diversity as the variance of team members' characteristics [16]. Diversity is a typical characteristic of teams and has received extensive attention from a large number of scholars in the fields of organizational behavior and psychology. Differences in individual characteristics among team members are reflected in various aspects and exhibit a variety of different characteristics [17]. The impact of diversity on team processes and team outcomes varies across attributes, so scholars have selected one or more similar attributes for study.

In order to explore the mechanisms of various types of diversity more comprehensively, some scholars have begun to categorize different diversity attributes from different perspectives and systematically explore the effects of a certain type of diversity attribute on team processes and team outcomes. Based on the analysis of previous literature, diversity was classified into task-oriented diversity and relationship-oriented diversity based on its relevance to the task; and into easily observable and potential diversity based on the observability of diversity attributes. He argued that relational orientation diversity mainly contains age, gender, and race; task orientation diversity contains the knowledge, skills, and abilities required for the job [18]. This classification of his became the main basis for later scholars to classify and study diversity.

Although a large number of scholars have conducted extensive research on various types of diversity from different perspectives, a major limitation is that all have overlooked two crucial diversity attributes: status and special skills [19]. Indeed, status and power have often been used to explain the mechanisms by which diversity works. However, to date, little literature has explored the mechanisms at play and the consequences of status differences among team members due to differences in special skills or power. Although a large number of scholars acknowledge the decisive role of team members' skills and abilities on team and individual performance [20], the current research on the relationship between team diversity and team performance has neglected the study of ability-and skill-related diversity, which is clearly insufficient for understanding the relationship between team diversity and performance [21], the current research on the relationship between team diversity and team performance has neglected the study of ability-and skill-related diversity, which is clearly insufficient for understanding the relationship between team diversity and performance.

2.2.2 Classification of team diversity dimensions

Since the concept of team diversity was introduced, the classification of team diversity has been a hot topic of research among scholars. So far, there are various types of dimensional classifications proposed, among which the most representative and generally accepted are the following three: the first classification is based on the relevance of diversity attributes to team work and is divided into task-oriented diversity and relationship-oriented diversity [22]. The second classification is based on whether the diversity attribute can be directly observed, and is divided into actual and perceived diversity. The third classification is to divide team diversity into superficial diversity and deep diversity according to the different levels to which individual team members' attributes belong [23]. Surface diversity includes attributes such as gender, age, tenure, and educational background of individuals; deep attributes refer to the internalized level of individuals, such as attributes of personality, values, attitudes, and preferences. Scholars point out that superficial diversity and deep diversity are progressive relationships, and he believes that superficial diversity such as demographic characteristics play a decisive role in their deep diversity such as just preferences and values[24]; some scholars also point out that there is no necessary connection between superficial diversity based on demographic characteristics and deep diversity, and the two are parallel relationships. This paper argues that regardless of the parallel or progressive relationship, it is the deep attributes such as team members' personality, values, and work meaning that can directly affect team performance. Therefore, this paper selects the dimensional division of deep diversity and classifies team diversity into three dimensions: personality diversity, work meaning diversity and value diversity.

3. Performance Differences Between Teams and Individuals

3.1 Team performance advantage

It has been shown that teams increase individual productivity and that the team advantage is more pronounced in abstract or more complex tasks. Using an experimental approach, it was found that team learning increased student motivation and led to better learning outcomes [25]. Similarly, an experimental approach was used to demonstrate that team decisions are on average due to individual decisions and that there is no significant difference in efficiency between team decisions when they are made by a majority of them and team decisions when they are made unanimously by all members [26]. Examining the performance of the adoption of teamwork within garment factories, they found that teamwork increases the average efficiency of employees by 14% [27]. Further research showed that highly competent employees were willing to join a team in the first place even when their income decreased, suggesting that they gained some of the non-pecuniary benefits of working in a team, such as the satisfaction that comes with decision-making power. A study in a small steel plant found that productivity increased in all lines after teamwork, and this phenomenon was more pronounced in lines with more complex production processes [28]. Similarly, it was found that teams are better at processing information from multiple senses, and that teams are more likely to connect visual, auditory, and tactile information than individuals. This evidence suggests that the team advantage is more pronounced in more complex tasks [29].

Teamwork has the following advantages over individuals: first, because of the larger number of team members, it is possible to have more types of expertise, creating professional complementarities that lead to a higher degree of specialization within the team, which is known to enhance productivity. Research has shown that an important advantage of teamwork lies in diversity, with differences in culture, expertise, and skills that allow team members to gather a wider range of comprehensive information [30]. Employees with higher levels of specialization located at the same level are able to use their expertise to solve the corresponding problems, and therefore specialization increases organizational productivity [31].

Second, team members share each other's work experience, which leads to improved team performance. This improvement comes from so-called "tacit knowledge," which is the result of interaction between team members over time. A review of 50 papers on the developmental stages of groups over time found that as group bonding time increased, group members exchanged ideas more smoothly and were more likely to come up with better solutions to problems. Using data from the NBA, a positive relationship was found between the shared experience of the team and team performance [32]. Similarly, through separate team focused and individual training of undergraduate students across the United States, it was noted that team members trained together performed better than team members trained separately because the process of focused training helped members generate a system of interactive memory, which improved team performance [33].

Third, team members are able to make more correct decisions and improve team performance by working together, making each other's mistakes and correcting each other. It has been suggested that teamwork is very beneficial in reducing decision risk. If team members make decisions independently, the extreme or wrong opinions of individuals may be offset by the robust or correct opinions of other members; if team members make decisions together, individual decision deviations are also corrected by other members [34].

Fourth, the numerical advantage of teamwork makes work segmentation possible and more conducive to productivity. Research has shown that teams are able to solve challenging work faster than individuals, and in particular, high-capacity teams can be more efficient? [35].

3.2 Individual performance advantage

The above literature suggests that teamwork outperforms individual performance and gives possible reasons for this. Yet another part of the research suggests that teamwork may suffer from decision bias and inefficiency, resulting in poorer team performance compared to individual

performance, especially in tasks that involve creativity or multi-task decision making, where teamwork is unhelpful. For example, studies have found that individuals provide more ideas than teams in brainstorming and that the general advantage of individuals over teams is more pronounced when the problem to be solved is real and urgent [36].

First, there is an extensive literature on the moral hazard of "free-riding" in teamwork. When team members' behavior is not observable and the team's common output is the only observable indicator, each team member has an incentive to avoid work because their cheating behavior is not recognized [37]. Even if there is no uncertainty in team output, free-riding problems can still occur (Holmstrom, 1982) [38].

Second, when team members work together for too long, the quality of team output decreases as the frequency or intensity of "constructive disputes" decreases, a result of team members becoming too familiar with each other and reducing friction to avoid arguments. As team members become more stable, the team becomes more isolated from key external sources of information and tends to ignore critical external feedback, negatively affecting team performance [39]. At the same time, if team members try to eliminate disagreements and avoid controversy during discussions, the final decision outcome is poorer because controversy can facilitate team decision making [40].

Third, coordination and communication among members within a team can incur substantial costs, which can lead to biased decisions and decreased efficiency. Research has found that increasing team size leads to an increasing refinement of the division of responsibilities, while also creating structural divisions and coordination problems that increase the cost of administration [41]. Research has shown that team size is positively related to cognitive and affective conflicts within teams, and that the difficulty of resolving interpersonal conflicts increases as the number of team members increases [42].

The above are studies in the fields of psychology and management regarding the differences in performance between teams and individuals and their causes. In the field of finance, there are also many studies comparing the performance differences between teams and individuals. Among them, the field of fund management models has received the most attention from scholars, but the results of the available studies are not entirely consistent. Some studies suggest that funds managed by teams of fund managers do not differ significantly from funds managed by individual managers in terms of performance, and may even perform worse due to problems such as high internal coordination costs [43]; however, some studies also suggest that teams of fund managers can make more rational decisions and their funds perform better than those of individual managers [44]. Research on team versus individual performance in the analyst field is limited and findings are inconsistent. The first article was written to directly examine the differences between team and individual performance within the analyst industry. Their study showed that analyst teams have lower accuracy in their surplus forecasts than individual analysts, but the timeliness of research reports published by analyst teams is better [45]. Conversely, studies with hand-collected samples found that analysis showed and teams made more accurate surplus forecasts than individual analysts [46].

4. Evaluation Criteria and Influencing Factors of Team Performance

4.1 Evaluation Criteria of Team Performance

Team performance is defined as the team's output meeting or satisfying the established performance criteria. He emphasized that effective teams must maintain or improve the ability of team members to work together [47]. The evaluation criteria for team performance are divided into subjective and objective criteria, internal and external criteria, as needed for the purpose of the study. Among them, subjective evaluation criteria contain the evaluation of the feeling or perception of team members and team leaders [48]. Objective criteria use financial, production, or human resource data to evaluate the performance of the team. Previous studies have shown that researchers have used more subjective criteria to evaluate team performance.

The initial use of subjective criteria to evaluate team performance was evaluated by questionnaires measuring team members' perceptions of various aspects of team management and job support, as

well as team members' satisfaction with earnings and relationships with supervisors. The study also measured the impact of team projects on team members' knowledge, skills, and overall team performance. Both subjective and objective criteria were used to evaluate team performance. The subjective evaluation criteria contained communication, rules, roles, work team support, trust, goal commitment, and team work confidence; the objective criteria contained response time, damage percentage, and maintenance time. Internal evaluation criteria for team performance focus on team members' perceptions of team performance; external evaluation criteria rely on the analysis of team performance by individuals such as customers, organizational leaders, and managers, and the method is distinguished from team members' self-stated evaluations. There are also existing studies that use other measurement criteria to evaluate team performance. For example, team performance is evaluated in three categories: performance, attitude, and behavior [49]. A glance at past studies reveals that team task performance is a widely adopted evaluation criterion in the organizational behavior and human resource management literature. Based on the summary of a large number of studies, team performance was classified into organizational-level performance, team behaviors and outputs, and individual role-based performance based on the level of research [50].

In summary, the optimal way to evaluate team performance is the integration of multiple criteria, internal and external, subjective and objective, and individual and team, and this evaluation method will provide the most balanced and complete system for team performance evaluation.

4.2 Influencing factors of team performance

Team performance behavior and performance output are mainly influenced by three types of variables: team input, team process, and team status. Team processes are divided into two categories: task work and team work. In essence, task work portrays the functions that individuals must accomplish to reach team goals, while team work refers to the interactions among team members. Team processes are divided into three main categories: transition, action, and interpersonal relationships [51]. In the transition phase, team members focus on actions such as task analysis, planning, goal specification, and strategy formation; in the action phase, team members work on goal accomplishment, process and system management, coordination of team members, and management and support of peers; and the interpersonal phase contains conflict management, motivation and confidence building, and management influence. Team state refers to the cognitive, motivational, and affective changes that are dynamic with the team environment, inputs, processes, and outputs. Past research confirms that team confidence, team empowerment, team climate, team trust, and team consensus are all antecedent variables that have significant effects on team performance. Team input variables, on the other hand, include team composition inputs (containing the value of average attributes, diversity fault lines, location and status, and network characteristics), team-level inputs (containing dependencies, technology/virtual, team training, team leadership, and team structure), and organizational or environmental inputs (containing both organizational and environmental context components).

Individual role-based performance refers to the competencies that team members must demonstrate in order to get the job done. A great deal of research has been done to explore the ability of teams to accomplish the tasks given by the team and the organization Chen and his colleagues [52]. The biggest drawback of this type of research, however, is that team members' grasp of their roles is time-dynamic and there is a relative lack of research with time-series characteristics, making the conclusions drawn from this line of research not highly reliable.

According to the existing literature we can find that a large number of scholars have followed the research model of team input, process, and output or team input, intermediary, and output to carry out research on team issues, with more attention to specific performance in the selection of outcome variables and less attention to affective responses; in the selection of predictor variables, the majority of scholars have carried out extensive research from various aspects. However, so far, studies focusing on input variables from the perspective of relative position and status of team members are relatively lacking, and there are relatively few studies on input variables of interpersonal interaction

process of team members. In addition, a large number of studies have focused on the outcome variables at the organizational level, team level, and individual level, and there are few studies that focus on multiple levels and analyze them across levels. This thesis selects the input variables based on the perspective of status difference among team members and the outcome variables at both team and individual levels, and selects the characteristics variables of team goal structure and team leadership as moderating variables, in an attempt to reveal the construction of a team IPO model with the diversity of status difference perspective.

5. Current Status of Research on Team Diversity and Research Perspectives

5.1 Current Status of Research on Team Diversity

Team diversity refers to the distribution of individual characteristics of members in an interdependent team, and team diversity is both a composition and a distribution. Team diversity elicits team members' perceptions of their own and others' differences, bringing about effects on their work motivation and effectiveness [53]. The impact of different categories of team diversity on team processes and team outcomes varies widely. Scholars have conducted research on the mechanisms and conditions of the effects of team diversity on team performance from different perspectives. However, a review of the literature reveals that as of 2015, most of the research on team diversity is limited to studies on superficial diversity such as age, education, and nationality. Since scholars pointed out the novel view that the longer the time team members work together, the stronger the effect of deep diversity on interaction, and the shorter the time team members work together, the stronger the effect of shallow diversity on interaction, using time as a moderating variable [54], the study of deep diversity has become the dominant research question in the study of team diversity. Based on these studies, scholars have proposed two perspectives for empirically studying team diversity: the social categorization perspective and the informational decision-making perspective. The more consistent conclusion is that diversity in the social categorization perspective triggers more conflict, less identification and commitment, and less performance; diversity in the information decision-making perspective leads to more task-related competencies, knowledge, and skills, more creativity, and thus higher team performance. Some scholars have also integrated the two types of analytical perspectives on diversity and developed a categorical elaboration model to explore the mechanisms and boundaries of the role of team diversity [55]. However, these studies have mostly been conducted from one perspective and have reached very inconsistent conclusions.

5.2 Research Perspectives on Team Diversity

In response to the inconsistent findings of team diversity on team processes and team outcomes in previous studies, a large number of scholars have attempted to explain them from different research perspectives. For example, although one aspect of team diversity has an impact on team members' attitudes and behaviors as well as team performance, the impact of diversity on performance in teams is the result of a combination of different diversities, and the conclusions drawn from studying one diversity alone are inevitably biased; some scholars point out that shallow diversity affects team members' psychological behaviors through influencing deep diversity, which in turn has an impact on team performance. It has been suggested that superficial diversity affects team members' psychological behavior by influencing deep diversity, which in turn affects team performance [56]. The social categorization perspective on superficial team diversity ignores its impact on deep team diversity and its consequences, and this perspective also ignores the role of team member relationships on individual psychology. Similarly, research on deep team diversity from the informational decision-making perspective ignores the role of shallow diversity and thus draws incomplete conclusions. Some scholars have concluded that the diversity of information perspectives has a negative effect on team effectiveness only when the level of diversity of social categorization perspectives is high; when the level of diversity of social categorization perspectives is low, the diversity of information perspectives does not affect team effectiveness [57]. Scholars have proposed

moderating variables for the relationship from different perspectives based on the inconsistency of current findings on team diversity, which they believe stems from the variability in the organizational context or task type of the team and the team. A large number of scholars have attempted to explain the findings that team diversity has both positive and negative effects on team processes and team performance from different perspectives.

Based on a comprehensive analysis of previous research findings, he proposes that to accurately answer the effect of team diversity on team processes and team outcomes the construct of diversity must be explored and redefined in greater depth. He argues that although a large number of scholars use the term "diversity" and its synonyms "heterogeneity" and "dispersion", the precise definition of diversity is not clear. Based on the inconsistent findings of the impact of social categorization (similarity attraction) and informational decision-making perspectives on team diversity on team processes and team outcomes, they propose a third theoretical perspective: the social comparison perspective. This perspective builds on distributive justice theory, tournament theory, and status stratification (status characteristics) theory, emphasizes relative comparisons and status differences among team members, and argues that diversity in wages or other valuable resources (assets) that symbolize prestige or status among team members leads to internal competition, suppresses constructive behavior, reduces communication quality, and undermines interpersonal relationships. They argue that diversity in teams manifests itself in three different forms: separation, diversity, and difference, which have different effects on team performance [58]. Separate diversity refers to the differences in views and positions among team members and reflects the horizontal distance between different team members with respect to a particular attitude or value. Diverse diversity refers to differences in categories or kinds of knowledge, information, or experience among team members. Differential diversity reflects the degree of concentration or vertical differences in resources or social assets among team members. The three types of diversity have different meanings, operational definitions, and different measures, and thus vary widely in their effects on outcome variables. They identified this as the main reason for the inconsistent and difficult to integrate findings in diversity research. Table 3 shows in detail the meaning of the three types of diversity, the specific attributes included, the theoretical basis, and the outcome variables.

Table 3. Research Perspectives on Team Diversity

Diversity Research Perspectives and	Meaning	Properties	Expected results	Theoretical foundation
Social classification perspective: Separation	Opinions, positions, beliefs, and inconsistencies and attitudes, etc. differences	Team goals and team processes Team process related perspectives, positions, attitudes and values, beliefs	Decreased cohesion, increased relationship conflict, mistrust, and Reduces job performance	Similarity attraction, social categorization, attraction, selection and attribution
Information Perspectives: Diversity	With the uniqueness of information different kinds of knowledge, skills skills and experience	Skills, professional background, the Non-duplicative networking relationships, experience in the industry	Increased creativity and innovation nature, higher quality of decision making quality of decision making, more task conflict, and increased organizational agility organizational agility	Information processing theory, multiplicity Diversity must be the principle and variation change, selection, and retention theory Theories
Status Difference Perspective: Differences	Assets owned by team members assets, resources, values, etc. unequal or relatively concentrated, non-normal distribution	Salary, income, prestige, the status, decision-making authority, and social power, etc.	More intra-organizational competition, retaliatory behavior, reduced less input from team members	Individual inequality and injustice equality theory, status hierarchy theory, tournament theory and social stratification theory

(Source: compiled from domestic and international literature)

6. Impact of Team Diversity on Team Performance

Team diversity refers to the fact that members of a team differ in a particular attribute[59]. The relationship between team diversity and team performance is a key focus in team research and has currently been studied by scholars in the fields of management and finance in a number of areas such as bank lending, human resource management, venture capital and accounting firms [60].

The results of the studies are divided into two main views. A part of scholars believe that team diversity plays a positive role in team performance. Studies have been conducted to provide support for the above view in terms of heterogeneity of team competencies, gender diversity, and diversity in educational attainment.

In terms of competency heterogeneity, both social network theory and decision theory suggest that diverse groups have broader social networks and a larger knowledge base, characteristics that are conducive to higher levels of team performance. On the one hand, team members with different backgrounds have the opportunity to be exposed to a variety of groups outside the team and receive corresponding support; on the other hand, diverse teams are more willing to focus on different perspectives and are able to share the unique knowledge and insights of team members [61]. In terms of gender diversity, using a business game approach, it was found that the gender composition of the general manager role affects the performance level of the team. The business performance of gender-diverse teams outperformed that of teams with purely female members. In another experiment in which undergraduate students were asked to start a business as a team, the performance of teams with a more balanced gender of members was better than the performance of male-dominated teams.

All of the above studies demonstrate that team diversity can improve team performance; however, it has also been argued that team diversity can trigger discord within teams, which can affect team performance. It has been shown that people are more likely to get along with people from similar backgrounds; in other words, people with similar traits are more likely to work well together. If similar backgrounds contribute to team stability, a homogeneous environment can reduce communication costs and improve relationships among team members. In contrast, heterogeneity among team members may lead to poorer social division of labor, which can impair team functioning.

7. Future Research Outlook

A review of the above literature reveals that the advantages of teamwork, such as diversity, specialization, and segmentation of work, allow them to outperform individuals; however, the moral hazard of "free-riding" and the large communication costs also reduce team performance. In academic research, scholars have not reached a consensus on this issue. Therefore, there are many areas that need to be explored in the future. First, teamwork is only one model, which can be applied to many scenarios, and in this era of increasingly fine division of labor in society, teamwork is commonplace. The current research is only focused on schools, factories and a few economic management fields, and future research can expand the vision to more industries. Second, the research methods in the field of teamwork are still very limited. Most of the previous literature used experimental methods, so the sample size is small and there is a possibility of unrealistic feedback from the subjects. Future research can be conducted using more real and objective data to enhance the credibility of the results. Third, current research on team diversity characteristics is limited. Currently, research on team member diversity is mostly focused on demographic characteristics (e.g., gender, education, origin, etc.) and work experience, etc. Future research can enrich the variables studied in this area and dig deeper into team characteristics.

References

- [1] Becker G S, Murphy K M. The Division of Labor, Coordination Costs, and Knowledge [J]. Quarterly Journal of Economics, 1992, 107 (04): 1137 - 1160.

- [2] Lianya Qi. Research on the Relationship between Inclusive Leadership, Team Communication and Team Performance: An Empirical Study Based on Jiangsu High-tech Entrepreneurship Team [J]. *Enterprise Human Resource Management*, 2016, 02: 66 - 73.
- [3] Xuehui Cai. Research on the Mechanism of Government Funding's Influence on Team Performance from the Patent Perspective [D]. Wuhan: Huazhong University of Science and Technology, 2018.
- [4] Lang Tao. Research on Leadership Model in Entrepreneurial Team [D]. Chongqing University, 2006.
- [5] Shi Lei. On the Diversified Choice Model and Standard of Entrepreneurial Team Composition [J]. *Foreign Economy and Management*, 2008, 30 (4): 52 - 59.
- [6] Howard, J., Shaw, E. K., Felsen, C. B. & Crabtree, B. F. Physicians as inclusive leaders: Insights from a participatory quality improvement intervention [J]. *Quality Management in Healthcare*, 2012, 21 (3), 135 – 145.
- [7] Tiqin Zhang. Research on the Mechanism of Knowledge Team Performance Management [D]. Shanghai: Doctoral Dissertation of Tongji University, 2002.
- [8] Hackman JR. A normative model of work team effectiveness [M]. New Haven CT: Yale University, 1983.
- [9] AV Carron, WN Widmeyer, LR Brawley. The Development of an Instrument to Assess Cohesion in Sport Teams: The Group Environment Questionnaire [J]. *Journal of Sport Psychology*, 1985, 7: 244 - 266.
- [10] Turner J. C., Hogg M. A., Turner, PJ. & Smith, P. M. Failure and defeat as determinants of group cohesiveness [J]. *British Journal of Social Psychology*, 1984, 23: 97 - 111.
- [11] Robert T. Keller. Predictors of the Performance of Project Groups in R&D Organizations [J]. *The Academy of Management Journal*, 1986, 66: 715 - 726.
- [12] Richard P., Bagozzi, Youjie Yi. On the evaluation of structural equation models [J]. *Journal of the Academy of Marketing Science*, 1988, 161: 44 - 47.
- [13] Summers I., Coffelt T. & Horton R. E. Work-group cohesion [J]. *Psychological Reports*, 1988, 63: 627 - 636.
- [14] Mudrack. P.E. Group cohesiveness and productivity: A closer look [J]. *Human Relations*, 1989, 9: 771 - 785.
- [15] Knippenberg D, Schippers M C. Work Group Diversity [J]. *The Annual Review of Psychology*, 2007, 58: 515 - 541.
- [16] Hambrick D C, Chen M J. The Influence of Top Management Team Heterogeneity on Firms' Competitive Moves [J]. *Administrative Science Quarterly*, 1996, 41 (4): 659 - 684.
- [17] Milliken F J, Martins L L. Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups [J]. *The Academy of Management Review*, 1996, 21 (2): 402 - 433.
- [18] Jackson S. Recent Research on Team and Organizational Diversity: SWOT Analysis and Implications [J]. *Journal of Management*, 2003, 29 (6): 801 - 830.
- [19] Krishnan H A, Miller A, Judge W Q. Diversification and top management team complementarity: is performance improved by merging similar or dissimilar teams? [J]. *Strategic Management Journal*, 1997, 18 (5): 361 - 74.
- [20] MullenB. & Copper C. The Relation between Group Cohesiveness and Performance: An Integration [J]. *Psychological bulletin*, 1994, 115: 210 - 227.
- [21] Brigitte A. R. The Impact of Emotional Intelligence on work Team Cohesiveness and Performance [J]. *The International Journal of organizational Analysis*, 2002, 10 (4): 363 - 379.
- [22] Johnson D W, Johnson R T, Scott L. The Effects of Cooperative and Individualized Instruction on Student Attitudes and Achievement [J]. *Journal of Social Psychology*, 1978, 104 (02): 207 - 216.
- [23] Blinder A S, Morgan J. Are Two Heads Better Than One: An Experimental Analysis of Group vs. Individual Decisionmaking [J]. NBER: Working Paper, 2000.
- [24] Hamilton B, Nickerson J A, Owan I. Team In-centives and Worker Heterogeneity: An Empirical Analysis of the Impact of Teams on Productivity and Participation [J]. *Journal of Political Economy*, 2003, 111 (03): 465 - 497.
- [25] Boning B, Ichniowski C, Shaw K. Opportunity Counts: Teams and the Effectiveness of Production Incentives [J]. *Journal of Labor Economics*, 2007, 25 (04): 613 - 650.

- [26] Laughlin P R, Kalowski C A, Metzler M E et al. Concept Identification as a Function of Sensory Modality, Information, and Number of Persons [J]. *Journal of Experimental Psychology*, 1968, 77 (02): 335 - 340.
- [27] Pelled L H, Eisenhardt K M, Xin K R. Exploring the Black Box: An Analysis of Work Group Diversity, Conflict, and Performance [J]. *Administrative Science Quarterly*, 1999, 44 (01) 1 - 28.
- [28] Vzquez X H. Allocating Decision Rights on the Shop Floor; A Perspective from Transaction Cost Economics and Organization Theory [J]. *Organization Science*, 2004, 15 (04): 463 - 480.
- [29] Tuckman B W. Developmental Sequence in Small Groups [J]. *Psychological Bulletin*, 1965, 63 (06): 384 - 399.
- [30] Berman S L, Down J, Hill C W L. Tacit Knowledge as a Source of Competitive Advantage in the National Basketball Association [J]. *The Academy of Management Journal*, 2002, 45 (01): 13 - 31.
- [31] Moreland R L. Transactive Memory: Learning who Knows What in Work Groups and Organizations // Moreland R. L. *Small Groups: Key Readings* [M]. Psychology Press, 2006: 327 - 346.
- [32] Sharpe W F. Decentralized Investment Management [J]. *Journal of Finance*, 1981, 36 (02): 217 - 234.
- [33] Shaw M, Ashton N. Do Assembly Bonus Effects Occur on Disjunctive Tasks? A Test of Steiner's Theory [J]. *Bulletin of the Psychonomic Society*, 1976, 8 (06): 469 - 471.
- [34] Harari O, Graham W K. Tasks and Task Consequences as Factors in Individual and Group Brainstorming [J]. *Journal of Social Psychology*, 1975, 95 (01): 61 - 65.
- [35] Albanese R, Fleet D D V. Rational Behavior in Teams: The Free-riding Tendency [J]. *The Academy of Management Review*, 1985, 10 (02): 244 - 255.
- [36] Holmstrom B. Moral Hazard in Teams [J]. *The Bell Journal of Economics*, 1982, 13 (02): 324 - 340.
- [37] Katz R. The Effects of Group Longevity on Project Communication and Performance [J]. *Administrative Science Quarterly*, 1982, 27 (01): 81 - 104.
- [38] Tjosvold D. Effects of Approach to Controversy on Superiors "Incorporation of Subordinates" Information in Decision Making [J]. *Journal of Applied Psychology*, 1982, 67 (02): 189.
- [39] Blau P M. A Formal Theory of Differentiation in Organizations [J]. *American Sociological Review*, 1970, 35 (02): 201 - 218.
- [40] Amason A C, Sapienza H J. The Effects of Top Management Team Size and Interaction Norms on Cognitive and Affective Conflict [J]. *Journal of Management*, 1997, 23 (04): 495 - 516.
- [41] Bliss R T, Pottner M E, Schwarz C. Performance Characteristics of Individually-Managed Versus Team-Managed Mutual Funds [J]. *Journal of Portfolio Management*, 2008, 34 (03): 110 - 119.
- [42] Brown L D, Hugon A. Team Earnings Forecasting [J]. *Review of Accounting Studies*, 2009, 14 (04): 587 - 607.
- [43] Fang B, Hope O. Analyst Teams [J]. *Social Science Electronic Publishing: Working Paper*, 2018.
- [44] Hackman J R. The design of work teams [J]. *Handbook of organizational behavior*. Prentice-Hall, Englewood Cliffs, NJ, 1987, 35 (11): 299 - 301.
- [45] Bailey D E. Manufacturing improvement team programs in the semiconductor Industry [J]. *Semiconductor Manufacturing, IEEE Transactions on*, 1997, 10 (1): 1 - 10.
- [46] Cohen S G, Bailey D E. What makes teams work: Group effectiveness research from the shop floor to the executive suite [J]. *Journal of Management*, 1997, 23 (3): 239 - 290.
- [47] Mathieu J, Maynard M T, Rapp T, et al. Team Effectiveness 1997 - 2007: A Review of Recent Advancements and a Glimpse into the Future [J]. *Journal of Management*, 2008, 34 (3): 410 - 476.
- [48] Marks M A, Mathieu J E, Zaccaro S J. A temporally based framework and taxonomy of team processes [J]. *Academy of Management Review*, 2001, 26 (3): 356 - 376.
- [49] Chen G, Kirkman B L, Kanfer R, et al. A multilevel study of leadership, empowerment, and performance in teams [J]. *Journal of Applied Psychology*, 2007, 92 (2): 331 - 346.
- [50] Knippenberg D, Schippers M C. Work Group Diversity [J]. *The Annual Review of Psychology*, 2007, 58: 515 - 541.
- [51] Harrison D A, Klein K J. What's the Difference? Diversity Constructs as Separation, Variety, or Disparity in Organizations [J]. *Academy of Management Review*, 2007, 32 (4): 199 - 228.

- [52] Jackson S E, Joshi A. Diversity in social context: a multi attribute, multilevel analysis of team diversity and sales performance [J]. *Journal of Organizational Behavior*, 2004, 25 (6): 675 - 702.
- [53] Jackson S. Recent Research on Team and Organizational Diversity: SWOT Analysis and Implications [J]. *Journal of Management*, 2003, 29 (6): 801 - 830.
- [54] Jehn K A, Northcraft G B, Neale M A. Why Differences Make a Difference: A Field Study of Diversity, Conflict, and Performance in Workgroups [J]. *Administrative Science Quarterly*, 1999, 44 (4): 741 - 763.
- [55] Mansoor H S, Ali H, Ali N, et al. Cognitive Diversity and Team Performance: A Review [J]. *Journal of Basic and Applied Scientific Research*, 2013, 3 (6): 9 - 13.
- [56] Harrison D A, Klein K J. What's the Difference? Diversity Constructs as Separation, Variety, or Disparity in Organizations [J]. *The Academy of Management Review*, 2007, 32 (04): 1199 - 1228.
- [57] Hegde D, Tumlinson J. Does Social Proximity Enhance Business Partnerships? Theory and Evidence from Ethnicity's Role in U. S. Venture Capital [J]. *Management Science*, 2014, 60 (09): 2355 - 2380.
- [58] Schilpzand M C, Martins L L. Cognitive Diversity and Team Performance: The Roles of Team Mental Models and Information Processing [J]. *Academy of Management Proceedings*, 2010, 2010 (01): 1 - 6.
- [59] Apesteguia J, Azmat G, Iriberry N. The Impact of Gender Composition on Team Performance and Decision Making: Evidence from the Field [J]. *Management Science*, 2012, 58 (01): 78 - 93.
- [60] Hoogendoorn S, Oosterbeek H, Van Praag M. The Impact of Gender Diversity on the Performance of Business Teams: Evidence from a Field Experiment [J]. *Management Science*, 2013, 59 (07), 1514 - 1528.
- [61] Williams K Y, O'Reilly C A. Demography and Diversity in Organizations: A Review of 40 Years of Research//Staw B. and Sutton R. I. *Research in Organizational Behavior* [M]. JAI Press, 1998.