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Does Dialect Diversity Benefit Corporate Performance? The Moderating Effect of "Moralism" and "Utilitarianism"

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Abstract:

This paper studies how dialect diversity affects corporate performance, and the moderating effects of philanthropic giving, marketing expense and marketization on this relationship. We constructed theoretical models and hypotheses and conduct empirical test on them by using 2003 to 2018 Chinese listed firms' data through panel data fixed effect regression. The results show that: (1) dialect diversity has a significant positive impact on firm performance; (2) Both philanthropic giving based on the goal of "doing good" and marketing expense based on the purpose of "utility" can proactively enhance the positive influence of dialect diversity on firm performance, furthermore the latter one is more effective. Based on the theories of "new institutional economics" and "dialectology", this paper explains the interaction relationship between variables. The research finds that: (1) sub-cultural experience transmits among dialects through "penetration effect", thus enable dialect diversity creating values and providing firms with rich opportunities of potential markets and improving their own management capabilities and helping them to improve their performance in dialects' original markets. (2) Through the strategy of philanthropic giving, firms established and strengthen contacts with stakeholders from sub-cultures to gain trust and reputation, to set up legitimacy and voice. Different from donation, firms increase marketing expenses and adopt the "language mixing and innovation" mechanism to design and carry out marketing strategies, actively enhance the identity and trust among organizations and heterogeneous markets, to obtain more opportunities of socially and economically exchange, thus gain more market proportion. Finally, this paper analyzes the managerial implications for practice from research conclusions and summarizes the inadequateness of research and the prospects for future research.

Key Words: Dialect Diversity, Philanthropic Giving, Marketing Expenses, Firm Performance.

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I. INTRODUCTION

More and more scholars pay attention to the influence of informal institutions on corporate performance, especially in the context of China, informal institutional environment represented by culture, language, and so on, plays a critical role in influencing corporate behavior. From the perspective of dialect, an important informal institutional element, this paper studies how dialect diversity affects corporate performance, and how corporate philanthropic give, marketing expanding adjust "dialect diversity-performance" relationship.

Functions of dialect. Dialect is a linguistical tool with the functions of expression, communication, social, learning, production, creation and so on. This definition shows that dialect includes at least three major functions: social, cognition, vector and so on.

Social. First, dialect helps to build trust. As old saying goes, "You are what you can say", "listen to what a person says and watch what he does", understanding a person can start from language at first. The high communicational efficiency of dialect is reflected in: (1), arousing emotional synesthesia through the "native tone", thus enhancing trust and close distance. (2), high-context language contains more information, like native vocabulary and grammar, allowing "sensemaking" and "catch up within no time" during communication. Secondly, dialect transmit information and express feelings. Thirdly, people accomplish socialization and collaborative work through using dialects. Finally, people can capture information through imperceptible difference among unique and localized dialects.

Language competence and business. Since the Chinese economic reform and opening, our country emerged many entrepreneurs to make contributions to economic development. Most of them are come from linguistics major, running business through cross-disciplinary way, and succeeded in their respective fields, although at that time, it is lack of mature and systematic business education, and other earlier entrepreneurs are come from management, economics, and respective industry subjects through competitive professional training. The logic behind this managerial phenomenon is that, firstly, language, as a tool, plays an extremely important role in establishing business relationships in the Chinese context and promote the entrepreneurship: through their own discipline training and personal language talent, they are familiar with language skills and establish guanxi proficiently; secondly, be well know with the cultural background of different places and local network; thirdly, good at telling stories communicate and persuade with clients, customers, staffs, officers and other stakeholders; fourthly, be acquainted with the public opinion and sensitive to business opportunities.

Cognition. Firstly, the usage of language itself is also a process of learning, knowing, and

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changing the environment. Because in the agricultural society, people in a small area have to cooperation with each other to carry out farm production to survive and cope with extreme natural environment [1]. As a communication tool within village, the essential of using dialect during production process is the explicit of tacit knowledge, collective creating new knowledge, and internalizing back into individual tacit knowledge, which is like the function of organizational learning, thus formed the common organizational and individual experience [2]. Sapir-Whorf hypothesis suggests that the conceptual classification provided by language determines the way of human's information encoding and knowledge storage. Secondly, dialect language as a culture and tool helps to shape people's connections, behaviors, as well as minds and norms. The more social connections and exchanges it takes, the more frequent language will be used, thus cognitive ability is enhanced and affect behavior in turn [3-5].

Vector. Firstly, the dialect carries experience, knowledge, information and so on, through its sound, shape and meaning and so on. So that, they can convey information, inherit knowledge and culture, exhibit civilization, accumulate experience in an area and last for a long time. These experiences include life, geography (environment, meteorology), humanities (customs, wisdom, society, culture) and other aspects, which are necessary for human beings to live and practice in a region, have evolved, and accumulated over thousands of years. Secondly, dialect as a major oral language, has a unique pronunciation and intonation, vocabulary and phrase, grammar and so on, therefore convey information more vivid, thereby facilitating the organizational members to accurately and effectively transmit information, express phenomenon, explain thoughts. Thirdly, it reflects the diversity of local sub-culture. An indication of social norms and identity.

Regional cultural phenomena in dialects. There are several localization culture phenomena and insights in dialects. These cultures contain tacit knowledge and information, which unconsciously influence people's social relations and behaviors. Thus, firstly, dialect is culture. Dialect diversity reflects the diversity of local sub-culture. Society is a group of people who share the same culture, and every place may have multiple cultures, forming subcultures. Language is the carrier of culture, while dialect is the carrier of local culture. Secondly, dialect is inherent. Dialect is a kind of spoken language, which is learn and use from birth, determines a person's mind setting and behavioral pattern, and expresses the group culture to which they belong. Therefore, dialects contain a lot of cultural information, and are also one of the best windows and channels to understand local culture. Thirdly, dialect is gesture. Speaking dialects, like building guanxi, must be used and necessary in people's lives, and is a part of the important social and etiquette rules in informal institutions. Fourthly, dialect is constraints. The important information and knowledge implicit in informal institutions (tacit knowledge) reflect in the form of dialects, folk stories, folk songs, customs, etc., reflects the local informal

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institutional constraints.

The influence of the existing research on dialect diversity mainly focuses on the macro level, but not much attention is paid to the influence of the micro level enterprises. Secondly, there is a lack of theoretical explanation for the mechanism of action between philanthropic give, marketing expense, marketization degree and dialect diversity. Therefore, this paper fills in the gaps in the literature. The innovation of this paper is as follows: first, it studies theoretically and empirically how dialect diversity as an informal institutional environment affects the business performance of an enterprise organization. Secondly, the construction theory explains the moderating effect of philanthropic give, marketing expenditure and marketization level on the relationship between dialect diversity and performance and conducts an empirical test.

Research object and question. This paper constructs a comprehensive theoretical framework of sociology, linguistics, and management, and integrates theories such as "new institutionalism", "social exchange", "stakeholders" and "language mixing and innovation" to explain the functional relationship among variables such as dialect diversity, philanthropic give, marketing cost, marketization level and enterprise performance. Thirdly, this paper chooses China as the research context, because there are abundant dialects in China, which provides a good research condition for the diversity of dialects, as well as fully heterogeneous findings. In ancient times, with poor transport and inconvenient migration of population, people are grounded to their land with little mobility, different and distinct accents dialect areas were formed during every certain distance, and regions were guarded and opposite with each other.

II. LITERATURE REVIEW

2.1 Concept of dialect

From the perspective of dialectology, dialect is a kind of language that is different from standard language and only used in a specific region according to Modern Chinese Dictionary, which is the branch and variation of standard language [6]. It is also a communication tool for internal members among the ethnic groups in a region [7]. All languages around the world, including dialects, are full of wisdom, and have been created, used, screened, selected, accumulated, inherited by different ethnic groups during a long period of common life practice, which are conventions, necessary for communication, and tools for transmitting information, exchanging ideas, and expressing emotions. Like culture, dialects had only difference, and no good or bad [8].

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2.2 Dialect diversity and performance

In the field of strategic management, the relationship between environment and strategy [9] is always the key to research topics and has a long history, which are called "environment school", some of the scholars theoretically and empirically study the influence of institutional environment on enterprises. This school of thought summarized that: the organization is either constrained by its environment or taking active actions to manage the dependent relationship.

Management scholars mainly explain the relationship between environment and strategy through economic and sociological theories, such as new institutional theory, resource dependance theory and so on, formed neo-institutionalism school. North [10] in his book "institutions, institutional change and economic performance", defined institutions as a rule of game in society, which is designed to norms to limit the various behaviors, can be divided into formal and informal-two types of institutions, he focuses on the influence of the institutional environment on economic growth, and believed that institution is the predominant to economic growth. DiMaggio and Powell [11] argued that in the field of organization, the environment is like an iron cage, organization tends to imitate and be consistent, and has fewer options. Oliver [12] believed that organizations carrying out strategic behaviors, from active to passive, to respond to the pressure from institutional environment. Scott [13] builds the theoretical system of institutions, to describe the institutional environment, the author argues that the institutional environment is consists of law, norms, cognition three dimensions, among them norms and cognition are associated with culture which belong to the informal institution, the sustainable development of an organization within the institutional environment cannot without the social recognition, acceptance and trust, namely to obtain legitimacy, thus further acquire power and authority. Institutional and cultural environments influence corporate strategic behaviors [14]. According to institutional theory, corporate strategy is considered as a response to institutional environment to gain legitimacy, while philanthropic give belongs to a non-market strategy to enhance corporate competitiveness.

Background. Currently economics and strategic management scholars have gradually shifted their attention from formal institutions to informal institutions. Scholars have conducted a lot of studies on formal institutions, but they pay insufficient attention to informal institutions. The reason may be that informal institutions belong to tacit knowledge, and their mechanism of action is relatively ambiguous, which is easier to be ignored, and their research feasibility and difficulty are also higher than formal institutions.

However, the research of analyzing dialect's influence on economy and firms, and the research combining dialect theory with informal institution theory as well as culture theory is

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still in its initial stage.

The earliest empirical studies on dialect diversity concentrate on economics, however most of the theories used came from linguistics, culturology, sociology, economics, management, and other social science subjects. Economists first focus on the relationship between dialect diversity and economic growth. As an efficient communication tool, dialect has a great impact on the economy performance. Xu, Liu, and Xiao [15] taking cities as units, built a database of dialect diversity in China, and theoretically and empirically studied the influence of dialect diversity on regional economic growth. Their study found that dialect diversity significantly hindered economic growth.

Some scholars began to pay attention to the influence of dialect on the firm level, such as firm performance, innovation, strategy, etc. Although dialect difference may increase the communication cost, dialect diversity may promote innovation: that is, dialect diversity is in favor of the generation of innovative ideas [16], but adverse to the promotion effect of innovation on firm performance [17]. Dai et al. [18] found that the same dialect between board chairman and CEO can reduce agency costs.

2.3 Dialect diversity and philanthropic giving

In recent years, the phenomenon and research of philanthropic give have been arising gradually. Existing research believed that the purpose of philanthropic give is to improve the firm-government relationship to obtain resources, favorable policies, and protection, etc. [19-20], in addition, it helps to establish and improve close social relations between enterprises and other stakeholders, to promote mutual trust and commitment, such as customers, suppliers, investors, employees, communities and various interest groups [21], to set up its access to key resources controlled by these stakeholders [22], thus improving the long-term development prospects [23].

There is much discussion on the influence of formal institutions and philanthropic give, but pay little attention to informal institutions, especially dialect and philanthropic give. Firstly, norms or cultural institutions in a certain place may increase the possibility of corporate social behavior [24]. Gao [25] argues that different psychological structure formed by cultural difference, values, ethical standards, which affects the charitable behavior, such as philanthropic give is an important composing part of Buddhism, kindheartedness and justice are the Confucian values. Secondly, the subculture groups represented by dialect diversity, have different attitudes and acceptance toward charitable giving, the higher the acceptance the influence results of charitable giving will better [21]. Thirdly, firms can build up a reliable and

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responsible image to consumers through philanthropic giving, thus improving customer loyalty, promoting sales growth [21] and reducing information asymmetry among them [26].

2.4 Dialect diversity and marketing expense

Liu [27] found that language types have different effect on different consumers' attitudes towards advertisement. local consumers prefer dialect ads, while non-local consumers prefer standard language ads. Dialect ads can better highlight the regional characteristics of a brand and gain more recognition and affection from local consumers. Wang [28] found that marketing activities carried out on the internet in the form of internet dialect vocabulary promoted the spread of dialects and were continuously absorbed by common languages, forming a hotspot on the internet, and thus promoting the marketing effect. Traditional culture and modern instruments can always collide and sparkle, and media such as radio, music, film, television, mobile phone provide platform for transmitting dialects [29]. Lu [30] pointed out that dialect advertising has potential value in regional economy and culture.

2.5 Commentary

In recent years, research on dialect in economy and management has gradually increased, and there has been a trend of interdisciplinary research. Because it is gradually realized that language is a key to social science and organizational actions, and it is also a reflect of China's cultural confidence, which plays a significant role on stimulating domestic demand and market.

However, the existing studies have the following shortcomings: first, the significance of language on social science and business are overlooked, especially on market demand and transaction cost. Second, current research mainly focuses on the impact of dialect diversity on the macro level economy, and there is insufficient research on the micro level antecedents, such as firms, industries, etc. the influence of dialect on firm-level factors is more complex, and its theoretical mechanism still needs further explore. Third, the theoretical and practical analysis of how companies respond to the dialect diversity is still inadequate, although these is a plenty of practices in this area (such as dialect advertising), they have not yet formed a theoretical framework. Fourth, the innovation on compound theory still needs to be strengthened. The internal correlation among theories such as institutions, language, management and so on, should be further analyzed, and construct integrated theoretical framework to explain the strategic issues of firms.

III. HYPOTHESIS

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3.1 The effect of dialect diversity on performance

3.1.1 The language system of China

The language system includes standardized and dialect languages which are complementary with each other, so as English has official tongue and local accent. The integration of language has low-cost effect, dialect diversity is generating cultural diversity effect, to some extent, dialect reflects cultural characteristics and economic development in a geographical area, like Cantonese which are more open and business orientation.

3.1.2 Informal institutions and dialects

Informal institutions. North [10] believed that informal institutions are extension and supplement for formal institutions to meet the needs of institutional regulation, which were generally difficult to observe directly. Informal institution is unwritten and conventional, which includes customs, norms, code of conduct that everyone comply with. It constrains the conduct through social restraint and allows individuals to obey and implement the criterion spontaneously. The characteristics of informal institutions are subtle, difficult to acquisition, resilient, last for a long time, slow changing, etc. In western countries, informal institutions exist widely, while formal institutions only accounts for a small but important part. Informal institutions come from a part of culture inherited from generation to generation. Informal institutions are an important part of culture and the most used in people's daily life. They come from the cultural transmission of values, and culture provide a set of language-based cognitive framework. Thus, language is a foundation of culture and informal institutions. Dialect is a foundation of a regional sub-culture and informal institutions. This shows that dialect is also the way of process information by people's mindset, and partially shapes the informal institutions to influence people's behavior, such as increasing trust, identity, limiting option, resolving exchange problems, etc.

As an emerging market country, China has a weak formal institution and relies more on informal institutional governance [31-32]. Under social context in our country, it tends to be using interpersonal relationship instead of formal institutions [33], and to maintain and improve the relationship relies heavily on frequent communication and interaction, dialect, as a kind of communication tools and identity used by the internal members in subculture, helps to build trust. Nevertheless, the regional dialect diversity decreased the trust threshold, also enriched the other verbal and nonverbal communication methods, such as using more standard language.

3.1.3 Dialect diversity and firms

Firms are embedded in the informal institutional dialect environment [34], that is, they

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integrate into the local language network. Therefore, firms adjust their behaviors and the way they treat stakeholders according to the institutional norms formed in the dialect environment [24]. Familiarity with dialects is also contribute to firm's better development in local areas.

First, dialect diversity provides heterogeneity and richness. Multiple culture promotes market activities such as productivity, demand, innovation and so on, thus creating value. At the same time, different sub-cultures collide and merge with each other, creating more advanced cultures and thus continuously evolving themselves. The nature of dialect and culture is similar, different cultures will be interpenetrating with each other, from one local to another place, improving the information exchanging. This flow has a certain law, that is, the culture of the developed economy flows to the culture of the relatively under development economy: dialects in developed regions have certain advantages or features, which influence other dialects, such as the Cantonese and Hong Kong dialect in the period of reform and opening, or the foreign language [8]. In addition, the diversity of dialects is in favor of expanding the scale of the market. The state encourages the use of dialects and spreads dialects through patterns of films, popular culture, cyberspace and so on, which promotes the prosperity of different subcultures and thus drives the development of the overall market and economy [35].

Secondly, the heterogeneous cultural environment has a great and different impact on the firms' economic activities. For example, Confucianism ethic encouraged thrifty and hardworking, therefore promoting entrepreneurship, labor efficiency, market integrity, and so on. When the culture of macro and external environment is match up with the individual or group culture, individual or group showed higher performance, otherwise conflicts reflect lower performance, values within field switched frequently (e.g., organizational culture) is adverse to business performance, groups usually perceived changes in the environment, produce expectation toward their sense of work value, which affects the work motivation, culture environment also leave a cultural imprint on group. Culture is a fragile and delicate balance, once broken, it takes more time to restore and rebalance, hence influence productivity. With strong cultural influence ability, culture can subtly infiltrate between different cultures through various ways, lead not only to conflicts and cooperation between different subcultures, but also to complementary of advantages and synergies.

Thirdly, among diversity of dialects, dialects are divided into primary and secondary ones. There is always an authoritative dialect in a region as a common language, which determines the prosperity degree of political, economic, culture and so on in the region [36].

Of course, dialect diversity may also have inhibition effect. For example, dialect difference brings two major kinds of costs, first communication cost and second cultural cost [37].

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Cultural differences, differences in Chinese dialects also lead to subculture-level conflicts [38]. While cultural difference provides the possibility of idea collision which generate sparks of innovation, through some measurements, such as standard language, common norms, etc., to reduce communication costs and mitigate risks.

Based on above analysis, we propose the following hypothesis, see Fig 1.

Hypothesis 1: Dialect diversity has a positive impact on corporate performance

3.2 The moderating effect of philanthropic giving on "Dialect diversity-performance"

Firstly, firms conduct social exchanges with different stakeholders through philanthropic give to gain legitimacy, political channels, and resources [34], build a better image in the minds of consumers, and enhance its competitiveness [21], which is crucial to the survival and sustainable development of firms.

Secondly, according to the theory of social norms [39], in a social environment, individuals who comply with norms will get more praise and positive images, such as helping each other, while those who don't comply will be criticized and evaluated negatively. For organizations, philanthropic give is a kind of generally accepted normative behavior, because such behavior has higher moral standards and economic requirements, and less necessary. Active observation will be rewarded, and non-compliance will not be criticized too much in general occasion. Corporate social responsibility is generally regarded as the bottom line to distinguish business ethics. The higher the dialect diversity is, the more different the stakeholders' demands are.

Thirdly, at this time, Philanthropic give, as a kind of higher moral behavior, can help to ease the supervision and doubt of the public toward corporate behaviors, and establish the legitimacy and right of speech, and thus ensure the sustainability of corporate growth.

The correction mechanism of dialect for firms mainly includes moral advice and normative pressure [24], which is also due to the realization mechanism of informal institutions is through moral constraint. Dialect diversity increased uncertainty and misunderstanding between the stakeholders (such as customers, employees, government, etc.), exacerbated local organizations' pressure toward firms under the certain formal and informal institutions, also need more charitable giving from firms to establish good relationship with them, especially for the organizations related to informal institutions, such as media, industrial associations, non-governmental organizations, environmental groups, labor unions, etc., moreover the requirement of relational connection is higher under informal institutions as well.

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Based on the above analysis, we propose the following hypothesis

Hypothesis 2: Philanthropic giving positively moderates the relationship between dialect diversity and corporate performance

3.3 The moderating effect of marketing expense on "Dialect diversity-performance"

Firstly, differentiate marketing expense creating values and develop various markets. The transitional China's economy is regarded as a large and diversified market vary greatly among different areas. Only those companies that operate in China as multiple markets and adopt different market strategies can achieve success [40]. From the perspective of institutional economics, dialect is a sub-cultural phenomenon, which enables firms to have a deeper understanding of the market, further segment the market, and carry out marketing activities with targets [41].

Secondly, dialects based on marketing activities, in essence can be regarded as a kind of language phenomenon, which through a well-designed marketing plan to establish an eclectic intermediate language and expression form between dialects and standard language, and thus more likely to be accepted by consumers, as well as make them understand the information and value convey by the brand and product.

In fact, there are also many foreign vocabularies in Chinese, which form and shape new languages and cultures. According to the theory of dialect contact and variation, in the actual process of using a language, if some languages are used at the same time, there will be borrowing, substitution, inter-using, mixing, intersection, misplacement and grafting, and even produce new varieties by blending language elements from the two languages [42]. The coexistence phenomenon of dialect and standard language is also known as "Diglossia" [43]. Thus, artificially creating the mutual integration of dialects can create opportunity to leverage new language's rich and novel functions rather than passively waiting, observing, adapting the phenomenon.

Thirdly, it is also a kind of public relationship strategy to change and shape the consumer's cognitive toward product, such as a tea drinking brand "Wang Lao Ji" 's dialect advertisement and marketing.

Based on the above analysis, the following hypotheses are proposed:

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Hypothesis 3: Marketing expenses positively moderates the relationship between "dialect diversity-performance"

3.4 The moderating effect of marketization on "Dialect diversity-performance"

First, with the improvement of the marketization, the efficiency of political, legal, market and other formal institutions is improved, the contract can be protected, and the market mechanism reduces the risk of default and the cost of trust building. Therefore, it makes two parties with different dialects easier to trust with each other.

Secondly, as a formal institution, the higher level of marketization is, the more explicit and effective the rules will be, which complements and improves the constraints of dialect diversity and reduces its complexity.

Thirdly, the formal institutions change more frequently, while dialects are relatively stable, therefore the change of formal institutional is difficult to affect the dialect, even so when subculture and formal institutional are conflict, formal institutions provides explicit explanation and implementation measures, such as modern legal judgment based on evidence system, gradually replace the moral restraint mechanism of informal institution, the market also weakened the traditional "difference sequence mode" society pattern of interpersonal relationships, because with the improvement of the formal institutions, the substitution function of interpersonal relationships also gradually weaken.

Finally, the level of marketization has been improved, which has activated the economic activities and promoted the use of dialects and the prosperity of subcultures. With the gradual opening of the market, the government intervention and local protectionism are reduced, dialects can flow between different regions, promote the exchange between dialects, and enrich the value of dialects diversity. In addition, people's subjective cognition is not only from the culture, but also continuously influenced by the economy, therefore with the development of economy followed by marketization process, people become mutual driven, not only have culture-driven, but also includes interest-driven.

Marketization and dialect diversity. The informal institutions will not change immediately with the change of the formal institutions, thus form path dependence, that is, the changing formal institutions and the relatively stable informal institutions are easy to produce conflict and friction, thus affecting the change of economic structure. The change of formal institutions will change the transaction cost of behavior, and further promote the formation of new informal institutions [10].

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Based on the above analysis, the following hypotheses are proposed:

Hypothesis 4: The marketization level positively moderates the relationship between "dialect diversity-performance"

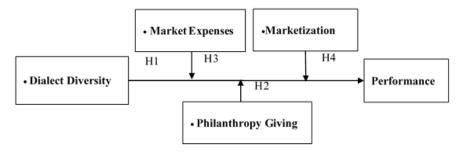


Fig 1: Empirical Model

Source: Compiled by the author

IV. DATA AND METHODS

4.1 Data and econometric methods

In this paper, we selected publicly listed companies in Shanghai and Shenzhen stock exchange market as the research objects. We collected the data from 2003 to 2018 in total 16 years and obtained 11,221 samples. We apply the fixed effect balanced panel data regression model to test the data according to the result of Hausman test, and the year and industry deviation effect are controlled.

4.2 Model selection

The research model is as follows:

Model 1: $Sales_t = \alpha + \beta_3 MKT_{t-1} + \beta_4 NERI_t + \beta_5 SLACK_t + \beta_6 SOE_t + \beta_7 INS_t + \beta_8 ROA_t + \varepsilon$

(1)

(2)

 $\begin{aligned} &\text{Model} & 2: & Sales_t = \alpha + \beta_1 dialect \ diversity + \beta_2 give_{t-1} + \beta_3 MKT_{t-1} + \beta_4 NERI_t + \\ &\beta_5 SLACK_t + \beta_6 SOE_t + \beta_7 INS_t + \beta_8 ROA_t + \varepsilon \end{aligned}$

Model 7: $Sales_t = \alpha + \beta_1 dialect\ diversity + \beta_2 give_{t-1} + \beta_3 MKT_{t-1} + \beta_4 NERI_t + \beta_5 SLACK_t + \beta_6 SOE_t + \beta_7 INS_t + \beta_8 ROA_t + \beta_9 dialect\ diversity \times give_{t-1} +$

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$$\beta_{10}$$
 dialect diversity \times MKT_{t-1} + β_{11} dialect diversity \times NERI_t + ε (3)

In the formula, α is the constant term, β is the variable coefficient, ε is the error term.

4.3 Variable measurements

4.3.1 Dependent variable

Performance. Performance represents the financial outcomes and status of firm, which is measured by the logarithm of sales revenue. Sales revenue reflects the profitability and growth capacity, see TABLE 1.

4.3.2Independent variables

Dialect diversity is measured by the number of dialect area in the region where the listed companies are located in, our database is based on the work of Xu, Liu, Xiao [15], Liu, Xu, Xiao [44] which collect and building datasets of "dialect diversity index of more than 278 prefecture-level city and above", "1986 the dialect belonging of China's counties", and full reference to the "Atlas of Chinese language", as well as "Chinese dialect dictionary" edited by Xu and Ichiro [45], published by Zhong Hua press in 1999. The database is based on official administrative divisions in 1986, total obtained 278 prefecture-level cities and above, acquired 17 kinds of Chinese dialects and 105 kinds of sub-dialects.

The author compared the database with the current administrative divisions. A few counties and districts have been upgraded to cities, and some areas have been merged, but most areas are still the same, so the original area division is still adopted. The Dictionary of Chinese Dialects covers most administrative divisions, accounting for about 92.2% [44].

4.3.3 Moderating variables

Philanthropic giving. It is derived from the corporate donations data in non-operating expenses in the footnotes of financial statements. We adopt the values in t-1 period, to reduce endogeneity.

Marketing expenses. Take the logarithmic of the sum of the sales expenses and administrative expenses in the previous period (t-1 period), with 5% bilateral tails winsorize.

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Marketization. We acquired market index of each province during 2009-2019 from "Report of marketization index by province in China 2018" [46].

4.3.4 Control variables

Organizational redundancy. Organizational redundancy is a potential available resource to exploit for a firm and a key factor in its strategic decision-making. It takes as a control variable to prevent the impact bias of different scale of organizational redundancy on the results.

State-owned enterprises. Different types of firms have different strategies and behavior patterns. State-owned enterprises are one of the important economic organization forms in our country. To control this variable can distinguish the different influence of business types.

Institutional investors. As an important mechanism of corporate governance, institutional investors have an increasingly significant influence on companies, gradually changing from voting with their feet to voting with their hands, and from short-term investment to long-term holding. This variable to prevent the influence of different shareholding levels of institutional investors.

Net profit ratio on total assets. The ROA reflects the profitability of firms and prevents the deviation influence of different profit levels on enterprise behavior and performance.

TABLE I. List of variables

| NUM | VARIABLE | CODE | MEASURES | SOURCE |
|-----|---|---------------------|--|---|
| 1. | Sales revenue | SALES | Take the logarithm of sales revenue, 5% bilateral tail winsorsize. | CSMAR-Income Statement |
| 2. | Dialect diversity | DIV | Take logarithmic of dialects number in a region. | Data of Chinese Dialects from Lingnan College, Sun Yat-sen University, The Great Dictionary of Chinese Dialects |
| 3. | Previous period of donation amount | GIVE _{t-1} | The amount of corporate Philanthropic gives in the previous period shall be taken as the logarithm, with 5% bilateral reduction | CSMAR- Footnotes of the financial Statements -Non-operating expenses-corporate donations |
| 4. | The previous period of marketing expenses | MKT _{t-1} | The logarithmic of sum of the sales expenses and administrative expenses in the previous period, with 5% bilateral tails winsorsize. | CSMAR- Footnotes of the financial Statements -Sales expenses, administrative expenses |

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| 5. | Marketization | NERI | The marketization index of the | Marketization Index Report | | |
|----|----------------------------------|-------|--|---|--|--|
| 3. | index | NEKI | province | of China's Provinces (2018) | | |
| 6. | Organization redundancy | SLACK | Take the logarithm of the sum of the net cash flow generated by financing activities, the net cash flow generated by operating activities, the sum of the net cash flow generated by investment activities | CSMAR- Statement of cash flow | | |
| 7. | State-owned enterprises | SOE | The ultimate controller is state- owned enterprise equals to 1, otherwise is 0 | Sinofin Economic and Financial Research Database-listed company governance structure database | | |
| 8. | Institutional investor | INS | The proportion of institutional investors holding shares | CSMAR-institutional investors database | | |
| 9. | Net profit ratio on total assets | ROA | Take the logarithmic of net profit ratio on total assets, with 5% bilateral tails winsorsize. | CSMAR-Profitability Table | | |

Source: Compiled by the author

V. RESULTS

5.1 Descriptive statistics

The average sales revenue of sample was 21.15, about 8.299 billion yuan, the standard deviation is 1.46, shows the difference between most values and the mean value are small.

The mean diversity of dialects was 0.48, about 1.77 dialects in a region, the standard deviation is 0.43, and there is a large degree of dispersion between data and mean value. The Chinese dialects Database collected from the Dictionary of Chinese Dialects by Lingnan College, Sun Yat-sen University, obtained a total of 277 cities' effective dialects diversity samples, among which 123 cities had 1 dialect, accounting for 44.4%, 112 cities had 2 dialects, accounting for 40.43%, 33 cities have 3 dialects, accounting for 11.91%, 8 cities have 4 dialects, accounting for 2.89%, one city have five dialects, accounting for 0.36%. The most frequent number of dialects is 1, followed by 2, then 3, and the least is 5. In the overall sample, one dialect accounts for 40.98%, two dialects account for 42.4%, and two or more dialects account for 59.02%, which are also basically consistent with the distribution. This indicates that most cities in China have multiple dialects, which shows the diversity of dialects, and the rich subcultures varies in cities in China, which also reflects the diversification and complexity of market segmentation and subcultures across cities in China, see TABLE 2.

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TABLE II. Statistical distribution of dialect number

| NUMBER OF DIALECT AREA | FREQ. | PERCENT | CUM. |
|------------------------|-------|---------|-------|
| 1 | 123 | 44.40 | 44.40 |
| 2 | 112 | 40.43 | 84.84 |
| 3 | 33 | 11.91 | 96.75 |
| 4 | 8 | 2.89 | 99.64 |
| 5 | 1 | 0.36 | 100.0 |
| | | | 0 |
| TOTAL | 277 | 100.00 | |

The average amount of donation in the previous period was 12.21, about 2.4108-million-yuan, accounting for about 0.029% of the total sales revenue. The standard deviation is 2.28, shows a small difference within samples, but larger than the difference within samples in marketing expenses, see TABLE III.

The average marketing expense in the last one period was 19.03, about 680-million-yuan, accounting for 8.19% of the sales revenue. The standard deviation was 1.23, with a small difference within samples.

The average value of marketization index is 7.77, which indicates that China's marketization level is at a relative high level and the marketization reform is became more deep going. The standard deviation is 1.62, and the marketization level of different regions varies greatly.

The average organizational redundancy was 1.97, about 214-million-yuan, accounting for about 2.5% of the total sales revenue. The standard deviation was 18.46, indicating a large gap in organizational redundancy among different companies.

The average value of state-owned enterprises is 0.48, it shows 48% of the samples are state-owned enterprises. The reform of state-owned enterprises in China has achieved remarkable effects, state-owned enterprises occupy a large part of securities market and realize the flow of state assets. The standard deviation is 0.5, and the difference between samples is large.

The average value of institutional investors ownership is 32.61%, indicating that the average shareholding ratio of institutional investors in Chinese listed companies is close to 1/3, and the corporate governance structure is well-formed, but it is still far from the corporate governance level of developed countries (above 50%). The standard deviation is 24.38%,

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indicating that there is a big difference in the shareholding ratio of institutional investors between firms in the sample.

The average net interest rate of total assets is 0.04. The Chinese listed companies are profitable in total, but the profit degree is still a certain gap with companies in developed countries. The standard deviation is 0.04, and the net interest rate of total assets varies greatly within samples.

5.2 Pearson correlation coefficient matrix

According to the correlation coefficient matrix of the table, correlation coefficients between independent variables are all less than 0.5, indicating that there is no obvious multicollinearity problem between independent variables. The correlation coefficient between the independent variable and the dependent variable is 0.8, which is significant at the level of 1‰, and there is a significant correlation between them. There are significant relationships between other independent variables and dependent variables and indicates that the hypothesis needs to be further tested.

TABLE III. Descriptive statistics and Pearson correlation coefficient matrix

| | MEAN | STD | SALES | DIV | $GIVE_{t-1}$ | MKT_{t-1} | NERI | SLACK | SOE | INS | ROA |
|-----------|--|--|---|--|---|--|---|--|--|---|-------------------------|
| 3480 0 | 21.15 | 1.46 | 1.00 | | | | | | | | |
| 31145 | 0.48 | 0.43 | 0.05*** | 1.00 | | | | | | | |
| 2102 6 | 12.21 | 2.28 | 0.44*** | 0.02* | 1.00 | | | | | | |
| 3077 1 | 19.03 | 1.23 | 0.80*** | 0.06*** | 0.42*** | 1.00 | | | | | |
| 2015 4 | 7.77 | 1.62 | 0.06*** | 0.09*** | 0.06*** | 0.07*** | 1.00 | | | | |
| 3467 8 | 1.97 | 18.46 | 0.08*** | 0.00 | 0.05*** | 0.08*** | 0.01 | 1.00 | | | |
| 31153 | 0.48 | 0.50 | 0.27*** | 0.06*** | 0.03*** | 0.20*** | 0.23*** | 0.02** | 1.00 | | |
| 3282 4 | 32.61 | 24.38 | 0.43*** | 0.05*** | 0.22*** | 0.39*** | 0.02** | 0.03*** | 0.18*** | 1.00 | |
| 3469 9 | 0.04 | 0.04 | 0.09*** | 0.01 | 0.15*** | 0.11*** | 0.09*** | 0.14*** | 0.15*** | 0.13*** | 1.00 |
| | 0 31145 2102 6 3077 1 2015 4 3467 8 31153 3282 4 3469 | 0 21.15 31145 0.48 2102 12.21 3077 19.03 2015 7.77 4 7.77 3467 8 1.97 31153 0.48 3282 32.61 3469 9 0.04 | 0 21.15 1.46 31145 0.48 0.43 2102 12.21 2.28 3077 19.03 1.23 2015 7.77 1.62 3467 1.97 18.46 31153 0.48 0.50 3282 32.61 24.38 3469 0.04 0.04 | 0 21.15 1.46 1.00 31145 0.48 0.43 0.05*** 2102 12.21 2.28 0.44*** 6 19.03 1.23 0.80*** 2015 7.77 1.62 0.06*** 4 1.97 18.46 0.08*** 31153 0.48 0.50 0.27*** 3282 32.61 24.38 0.43*** 4 3469 0.04 0.04 0.09*** | 0 21.15 1.46 1.00 31145 0.48 0.43 0.05*** 1.00 2102 12.21 2.28 0.44*** 0.02* 3077 19.03 1.23 0.80*** 0.06*** 2015 7.77 1.62 0.06*** 0.09*** 3467 1.97 18.46 0.08*** 0.00 31153 0.48 0.50 0.27*** 0.06*** 3282 32.61 24.38 0.43*** 0.05*** 4 3469 0.04 0.04 0.09*** 0.01 | 0 21.15 1.46 1.00 31145 0.48 0.43 0.05*** 1.00 2102 12.21 2.28 0.44*** 0.02* 1.00 3077 19.03 1.23 0.80*** 0.06*** 0.42*** 2015 7.77 1.62 0.06*** 0.09*** 0.06*** 3467 1.97 18.46 0.08*** 0.00 0.05*** 31153 0.48 0.50 0.27*** 0.06*** 0.03*** 3282 32.61 24.38 0.43*** 0.05*** 0.22*** 4 3469 0.04 0.04 0.09*** 0.01 0.15*** | 0 21.15 1.46 1.00 31145 0.48 0.43 0.05*** 1.00 2102 12.21 2.28 0.44*** 0.02* 1.00 3077 19.03 1.23 0.80*** 0.06*** 0.42*** 1.00 2015 7.77 1.62 0.06*** 0.09*** 0.06*** 0.07*** 3467 1.97 18.46 0.08*** 0.00 0.05*** 0.08*** 31153 0.48 0.50 0.27*** 0.06*** 0.03*** 0.20*** 3282 32.61 24.38 0.43*** 0.05*** 0.22*** 0.39*** 4 3469 0.04 0.04 0.09*** 0.01 0.15*** 0.11*** | 0 21.15 1.46 1.00 31145 0.48 0.43 0.05*** 1.00 2102 12.21 2.28 0.44*** 0.02* 1.00 3077 19.03 1.23 0.80*** 0.06*** 0.42*** 1.00 2015 7.77 1.62 0.06*** 0.09*** 0.06*** 0.07*** 1.00 3467 1.97 18.46 0.08*** 0.00 0.05*** 0.08*** 0.01 31153 0.48 0.50 0.27*** 0.06*** 0.03*** 0.20*** 0.23*** 3282 32.61 24.38 0.43*** 0.05*** 0.22*** 0.39*** 0.02** 3469 0.04 0.04 0.09*** 0.01 0.15*** 0.11*** 0.09*** | 0 21.15 1.46 1.00 31145 0.48 0.43 0.05*** 1.00 2102 12.21 2.28 0.44*** 0.02* 1.00 3077 19.03 1.23 0.80*** 0.06*** 0.42*** 1.00 2015 7.77 1.62 0.06*** 0.09*** 0.06*** 0.07*** 1.00 3467 1.97 18.46 0.08*** 0.00 0.05*** 0.08*** 0.01 1.00 31153 0.48 0.50 0.27*** 0.06*** 0.03*** 0.20*** 0.23*** 0.02** 3282 32.61 24.38 0.43*** 0.05*** 0.22*** 0.39*** 0.02** 0.03*** 3469 0.04 0.04 0.09*** 0.01 0.15*** 0.11*** 0.09*** 0.14*** | 0 21.15 1.46 1.00 31145 0.48 0.43 0.05*** 1.00 2102 12.21 2.28 0.44*** 0.02* 1.00 3077 19.03 1.23 0.80*** 0.06*** 0.42*** 1.00 2015 7.77 1.62 0.06*** 0.09*** 0.06*** 0.07*** 1.00 3467 1.97 18.46 0.08*** 0.00 0.05*** 0.08*** 0.01 1.00 31153 0.48 0.50 0.27*** 0.06*** 0.03*** 0.20*** 0.23*** 0.02** 1.00 3282 32.61 24.38 0.43*** 0.05*** 0.22*** 0.39*** 0.02** 0.03*** 0.18*** 3469 0.04 0.04 0.09*** 0.01 0.15*** 0.11*** 0.09*** 0.14*** 0.15*** | 0 21.15 1.46 1.00 |

*P<0.05, **P<0.01, ***P<0.001

5.3Regression results

Dialect diversity was significant in most models, but not in model 3, possibly because the interactive term of "DIV×Give_{t-1}" interfered the main effect. The coefficient of dialect diversity in model 1 and 2 is 0.332, 0.140 respectively and significant level P<0.01, that is, for

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per unit increase of dialect diversity in model 1, the performance increases by 0.332 units. In model 4-7, the coefficients range from -0.196 to -1.245. In model 5, the significance level is P<0.1, and in the other, P<0.01. When the interaction terms were added in model 4-7, the coefficients of main effect, dialect diversity, are reversed, indicating that the positive effect of dialect diversity on performance may weaken or even became negative under the exists of interactive terms, like dialect diversity with philanthropic give, marketing expense, marketization level and so on. Based on the above analysis, we believe that hypothesis 1 is supported, see TABLE 4.

In model 2 and model 4-7, philanthropic gives in one previous period were significantly positive correlated, coefficients and significant levels are 0.011 (P<0.01), 0.01 (P<0.01), 0.011 (P<0.01), 0.006 (P<0.1), and 0.006 (P<0.1), respectively. Everyone unit increase of philanthropic gives in previous year, would increase current performance by at least 0.006 units. The interaction terms between give_{t-1} and dialect diversity are significant in model 3, 6 and 7, with coefficients and significant level are 0.012 (P<0.05), 0.008 (P<0.1) and 0.009 (P<0.1), respectively. In other words, the interaction terms between one-year forward philanthropic give and dialect diversity in model 3 increased by 1 unit, and the performance increased by 0.012 units. Hypothesis 2 is supported.

In model 2-7, the marketing expenses in last year are significantly positive on performance, the coefficient and significant level ranging from 0.593 to 0.628 (P<0.01). The last year marketing expenses increase one unit, the current period performance will increase at least 0.593 units. The interaction terms of marketing expenses and dialect diversity are significant in model 4, 6 and 7, coefficients and significant levels are 0.072 (P<0.01), 0.068 (P<0.01) and 0.049 (P<0.05) respectively. That is, the interactive terms of marketing expenses and dialect diversity in model 4 increase by 1 unit, and the performance increases by 0.072 units. Hypothesis 3 is established.

The marketization level is significantly positive in model 1-4 and model 6, coefficients and significant levels are from 0.025 to 0.054 (P<0.01). The marketization level increased by one unit, and the performance is improved by at least 0.025 units. The interaction terms between marketization level and dialect diversity are significant in model 5 and 7, with coefficients and significant level of 0.043 (P<0.01) and 0.024 (P<0.1) respectively, that is, the interaction terms between marketization level and dialect diversity in model 5 increase by 1 unit, and the performance increases by 0.043 units. Hypothesis 4 is established.

Control variables. Organizational redundancy was significantly positive in all models with a coefficient and significant level of 0.001 (P<0.01). State-owned enterprises are only significant in model 1, 0.18 (P<0.01). Institutional investors were significant in all models, with a

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coefficient and significance of 0.001 (P<0.01, P<0.05). The net return rate on total assets were significant in all models, with coefficients and significances between 2.932 and 3.148 (P<0.01).

TABLE IV. Panel data regression results

| | M1 | M2 | M3 | M4 | M5 | M6 | M7 |
|-------------------------|-----------|----------|----------|-----------|----------|----------|----------|
| | | | | SALES | | | |
| DIV | 0.332*** | 0.140*** | 0.001 | 1.235*** | 0.196* | 1.245*** | 1.093*** |
| | (0.000) | (0.002) | (0.984) | (0.000) | (0.056) | (0.000) | (0.001) |
| $GIVE_{t-1}$ | | 0.011*** | 0.005 | 0.010*** | 0.011*** | 0.006* | 0.006* |
| | | (0.000) | (0.169) | (0.000) | (0.000) | (0.066) | (0.083) |
| MKT_{t-1} | | 0.628*** | 0.628*** | 0.593*** | 0.628*** | 0.595*** | 0.603*** |
| | | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| NERI | 0.054*** | 0.025*** | 0.025*** | 0.026*** | 0.006 | 0.026*** | 0.015 |
| | (0.000) | (0.005) | (0.004) | (0.003) | (0.525) | (0.003) | (0.153) |
| SLACK | 0.001*** | 0.001*** | 0.001*** | 0.001*** | 0.001*** | 0.001*** | 0.001*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| SOE | 0.180*** | 0.027 | 0.027 | 0.028 | 0.026 | 0.028 | 0.027 |
| | (0.000) | (0.359) | (0.362) | (0.330) | (0.378) | (0.334) | (0.352) |
| INS | 0.001*** | 0.001** | 0.001** | 0.001** | 0.001** | 0.001** | 0.001** |
| | (0.000) | (0.018) | (0.017) | (0.012) | (0.017) | (0.012) | (0.012) |
| ROA | 2.932*** | 3.135*** | 3.139*** | 3.146*** | 3.137*** | 3.148*** | 3.147*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| $DIV \times GIVE_{t-1}$ | | | 0.012** | | | 0.008* | 0.009* |
| | | | (0.016) | | | (0.092) | (0.064) |
| $DIV \times MKT_{t-1}$ | | | . , | 0.072*** | | 0.068*** | 0.049** |
| ţ-1 | | | | (0.000) | | (0.000) | (0.014) |
| DIV×NERI | | | | (0.000) | 0.043*** | (0.000) | 0.024* |
| DIVIVILLE | | | | | (0.000) | | (0.084) |
| Constant | 20.469*** | 9.029*** | 9.104*** | 9.696*** | 9.197*** | 9.706*** | 9.636*** |
| Constant | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| \mathbb{R}^2 | 0.321 | 0.532 | 0.533 | 0.533 | 0.533 | 0.533 | 0.534 |
| Control Year & | 0.521 | 0.552 | 0.555 | 0.555 | 0.555 | 0.555 | 0.554 |
| Industry | | | | Yes | | | |
| Fixed Effects | | | | Yes | | | |
| Observations N | 16973 | 11221 | 11221 | 11221 | 11221 | 11221 | 11221 |
| 11 (1) *** ** | 10,75 | 11221 | 11221 | 70/ 1100/ | 11221 | 11221 | 11221 |

Note:(1) ***, ** and * respectively represent significant level of 1%,5% and 10%.

5.4 Discussion

Dialect diversity. The result of dialect diversity's impact on corporate performance is conform to the hypothesis, but is contrary to Xu, Liu, Xiao's [15] finding, the dialect diversity not only decrease the communicational cost of firms as which the main body of economy, but also help to promote performance. The possible reason is that the organizational culture,

⁽²⁾ Standard errors are in parentheses.

⁽³⁾ Controlled year and industry dummy variables.

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effective organizational learning can effectively weaken the external and internal influence of dialect diversity, firm business mainly based on contract and economic exchange, compare to the individual, dialect diversity has smaller influence on firm-level activities, firms can reduce the uncertainty by ways like hiring external agencies or recruiting local employees and so on. Currently, dialect diversity is more likely to promote firm innovation as an advantage. Refer to recruitment process, firm tends to choose employees with similar values and tongue, which also makes the language within the organization tend to be more consistency and improves the communication efficiency.

Philanthropic giving. Philanthropic giving promotes corporate performance. Philanthropic contribution as a spending itself will not bring direct benefits to the company, but philanthropic giving has provided important resources for companies, such as legitimacy, reputation, important relations and so on, companies pay more attention on philanthropic giving are easier to obtain long-term and stable development, as a kind of social exchange behaviors with high ethical standards, are more likely to gain consumers' trust and loyalty. Compared with marketing expenses, although the short-term return ability is low, it is beneficial to the long-term development of companies, consolidating their social status and accumulating social capital.

Marketing expenses. Marketing expense can directly enhance the operating performance, nowadays the marketing methods and channels are increasing, such as the popular live streaming, marketing spending is essentially to promote the core competitiveness of the companies and win the consumers by adopt effective measures, therefore, to promote sales, competing for the market ratio, the company must invest more marketing expenses. Compared with philanthropic giving, it has the expected return in the short term, but has limited impact in the long term, because it is essential market behaviors.

The moderation of philanthropic give on dialect diversity and performance. The results support the existing literature conclusions, namely, the way of philanthropic give can consolidate the relationship among diverse dialects and subcultural groups, and the behavior with high moral standards under the constraint of informal system will receive more social rewards and recognition, which is more suitable for companies with certain resources or budget-saving orientated. China's philanthropic give is still in its initial stage compared to developed countries, public have less awareness on philanthropy behavior, and few companies have realized the value of philanthropic give and can undertake the responsibility. Currently, companies carrying out philanthropic give are easier to improve their competitiveness than other methods and competitors in a dialect diversity environment, through which to achieve the consistency more effectively among large differentiation of dialect and culture diversity.

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The moderation of marketing expenses on dialect diversity and performance. Marketing costs can also give full play to the advantages of dialect diversity, consistent with the conclusion of the current literature. During the transformation stage in China, the decentralize of market become dramatically, at the same time, technology development and iteration became more frequently, and the market is inefficient, businesses lack of legal and norms restrictions, consumers lack of privacy protection, as a result businessmen can access to consumer's information, time, attention and so on at a low cost and advertisement expense, for example, the so-called digital dividend are mainly grab by firms, while consumer devote valuable time on internet, and is difficult to obtain high quality information, and benefit less from digital technology. Therefore, the companies have the advantageous position, can raise the sale level substantially by expanding the marketing expenditure.

Marketization level. The higher marketization level, the lower the transaction cost of firms, government has less interference to the firms, regulation is more transparent, production resources can flow freely, reduce the production cost, and business environment is fairer and more convenient, at the same time, legal environment for the company development is also better, and to stimulate entrepreneurship.

Organizational redundancy. When an enterprise has organizational redundancy, it can discretionary and flexible devote more resources to improving investment toward opportunities, to improve management capability, upgrade production equipment, train staff skills, and provide employee benefits, to indirectly improve enterprise performance.

State-owned enterprises. Along with the reform of state-owned enterprises, the ownership advantage of the state-owned enterprises became less significant, state-owned enterprises has more room to improve in organizational efficiency, culture, innovation and other aspects, and state-owned enterprises gradually quit from the competitive, profitable industries, turned into national security and national economy related important industries and key areas, to achieve social functions and take responsibility as a priority. By using the dummy variable of SOE, we can compare the differentiation between state-owned and private-owned enterprises.

Institutional investors. The external governance effect of institutional investors in China is relatively significant, which can significantly improve the performance, play a supervisory and supportive role. We can avoid the interference effect of institutional investors when testing the main relations.

Return on assets. The higher the ROA is, the stronger financial performance are. By control

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the ROA, we can compare our main effects under the same level of firm size and profitability.

VI. CONCLUSION

6.1 Main conclusions

The results show that: (1) dialect diversity has a significant positive impact on performance because dialect diversity transmits the advantage, experience, and essence of sub-cultures through the penetration among different dialects, thus providing companies with rich potential markets and opportunities to improve their management capabilities, competitiveness, etc., and promotes performance in dialects' original markets. (2) Both philanthropic giving based on the goal of "doing good" and marketing expenditure based on the goal of "utility" can proactively enhance the positive influence of dialect diversity and performance, furthermore the latter one having more significant enhancement effect. Based on the theories of "New institution theory" and "Dialectology", this paper explains the mechanism and relationship between variables. Through the strategy of philanthropic give, firms establish and strengthen contacts with stakeholders of different subcultures to gain reputation and trust, to setup legitimacy and discourse right. Different from philanthropic give, firms increase marketing expenses and adopt the "Diglossia" phenomenon and "language mixing and innovation " mechanism to formulate and implement marketing strategies, actively enhance the identity and trust among organizations and heterogeneous markets, to obtain more opportunities for social and economic exchange and thus gain more market share. (3) The marketization level also improves the relationship between "dialect diversity-enterprise performance". As a formal system, marketization level complements the constraints of dialect diversity and reduces its complexity, as well as improve its advantage.

6.2 Research innovations

The existing research of dialect diversity influence mainly focuses on the macro level but pay less attention on micro level: the firm level. Secondly, there is a lack of theoretical explanation for interaction mechanism between philanthropic giving, marketing expense, marketization, etc. and dialect diversity. Therefore, this paper fills in the gaps in current literature. The innovation of this paper main has twofold:

First, the paper studies theoretically and empirically how dialect diversity regard as an informal institutional environment affects the firm performance. We applied socio-economic theories to explain the mechanism of dialect diversity's impact on performance. It enriches the literature and theory of informal institutions and dialect diversity.

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Secondly, this paper shed a light on the moderating effect of philanthropic give, marketing expenditure, marketization on the relationship between dialect diversity and performance, and empirically test them. We construct a comprehensive theoretical framework of sociology, linguistics, and management, and integrates theories such as "new institutionalism", "social exchange", "stakeholders" and "language mixing and innovation" to explain the functional relationship among variables such as dialect diversity, philanthropic give, marketing cost, marketization, and performance. From two entirely different perspectives of "doing good" and "utility", this paper explores their influences on dialect diversity and performance and concludes two types of mechanisms: "long-term" and "short-term" orientation.

6.3 Managerial implications

Firms should be aware of the impact of dialect diversity on their business performance, fully investigate the dialect diversity in their environment and carry out business activities, to leverage the advantages of dialect diversity, give fully play to their complementary effect, and promote the synergy, to be used by business operation.

Philanthropy giving and marketing expenses are two different types of spending, but both have positive effect when interacting with the dialect diversity, as well as can replace with each other, but their effect, mechanism, path and so on are different, firms' strategic choice always fall in a specific mixing percentage of philanthropy giving and marketing expenses, to realize the best effect.

The main mechanism of philanthropic give is word-of-mouth marketing, which is long-term oriented, social responsibility driven, to build corporate reputation and image in the minds of consumers. Although it is not design for profit and cannot certainly achieve high performance, it can earn both "reputation" and "interests". Philanthropic give can solve the basic problem of "survival" for companies. Drucker emphasized that the fundamental reason for the existence of enterprises is to fulfill social responsibilities. For companies with high energy consumption and high pollution, the most important thing is to be recognized by the government. The more diverse dialects are, the more informal pressure they may encounter. Through philanthropic gives, they can gain legitimacy among different dialects, stabilize their business qualifications, overcome the liability of foreignness, and establish a good image in the minds of consumers and other stakeholders, it is especially useful for foreign companies, major event situation and so on. For example, companies operate in large city or in large and diversity area with multiple culture can get broad approval and recognition through philanthropy and cope with negative comments.

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Marketing expenditures can help companies gain profits through dialect diversity in the short term, which is suitable for companies that rapidly expand market demands. Marketing expenses can help companies to "live better", expand profit margin, explore market segments, access to the market, and achieve business goals in a highly competitive business environment. For example, companies operate in mega city or large brand operates in wide-ranged and multiple local cities may design and release different dialect advertisements.

This paper points out the direction of dialect-based marketing methods and channels, such as marketing through network dialect words and designing different dialect-based marketing project for different consumer groups or design a marketing strategy system based on dialect diversity.

6.4 Limitations and future research

6.4.1 Limitations

(1) The dialect diversity index cannot accurately reflect the local cultural diversity

Dialect diversity index can be difficult to reflect the perceived real cultural scene by people, such as Beijing, Shanghai, Guangzhou are typical multicultural metropolises have large floating population, however, there is only one dialect in dialect diversity, people will contact many non-natives in interpersonal relationship and daily life, also encounter with lots of external culture. From the literarily perspective of dialect, the index reflects the concentration of regional dialects and the dominance of authoritative dialects in the region, but it can hardly describe the intension and difference of informal system contained in these regional dialects.

(2) Dialect diversity can partially reflect the usage of local dialect

In the real life of metropolises, there are still many dialects being used. However, the popularity rate of Mandarin in big cities is also relatively higher, which as a supplementary to the dialect diversity in the actual use process. It is better to control the popularity rate of Mandarin to reflect the communication level of local dialects.

(3) There are great differences among different dialects in the same dialect segment, which to be further subdivided.

Shanghai, Suzhou, Wuxi, Changzhou, and Nantong, all of which belong to Taihu area of Wu language, based on commonness there are some differences in pronunciation, culture, vocabulary and other aspects. There are still need more identification and connectedness during actual using.

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Although there is only one dialect in the same place, there are also differences in dialects. For example, in Shanghai Dialect and dialect in Songjiang, Minhang, Jinshan and other districts and counties are different, and dialects in Shanghai urban and suburban counties are also different. Therefore, the index can only partly reflect dialect differences, which also exist in different areas under the same area.

6.4.2 Future research

Corporate social responsibility behavior in a broad sense is not limited to philanthropic give, but also includes other responsible actions such as providing welfare measures for the society and employees within the organization. The influence of dialect diversity on corporate social responsibility behavior is also richer.

Further explore the influence of dialect diversity. Which dialect is more benefit to economic development or innovation? To identify the characteristics of different dialects is help to the realization of complementary advantages, to adopt the good points and avoid the shortcomings, and the development of dialect users and regions. If it is not benefit to the development of the economy, then identify and research the reasons, is it the dialect itself, or the economic system, management, education, etc.? If so, how to improve them.

The types of philanthropic gives and marketing expenses need to be further refined. Although this paper finds that philanthropic gives and marketing expenses can improve the influence of dialect diversification on performance, and analyzes the possible influencing mechanism, the specific direction and improvement effect of these investments still need to be further analyzed and tested.

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