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Study on Influence of Farmers' Relational Network on Their Undertaking Process

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Abstract We elaborate relevant theories of farmers' relational network, including the Differential Model of Association, the Strength of Weak Tie, Strength of Strong Tie and Favor and Face. The farmers' relational network in the Differential Model of Association can be divided into three layers: strong tie, weak tie and irrelative relationship according to Granovetter theory. These three layers have deep influence on opportunity selection during the undertaking, financing and enterprise development. With rational knowledge of these layers, farmers may exploit undertaking resources. On the basis of these, we made detailed analysis on farmers' selection of relations in the opportunity selection, financing and enterprise development stages.

Key words Relational network, Farmer's undertaking, Differential Model of Association, Strong tie, Weak tie

Undertaking activity refers to the action of finding and recognizing commercial opportunities that have potential value increase on the basis of the existing economic, social and institutional conditions, and turning the opportunities into practical economic activities through perfect resource allocation system[1]. In the course of farmers' undertaking, their relational network is of the utmost importance, because all types of resources necessary for undertaking are deeply embedded into farmers' relational network. In certain economic, social and institutional conditions, if there are more available and allocable resources for founders, the possibility will be higher for their finding commercial opportunities that have potential value increase and turning them into actual economic activities. Thus, in essence, undertaking is a course of founders mobilizing and integrating all available resources (founders' material capital, human capital and indispensable social capital) to create commercial value on the basis of potential opportunity[2]. Individual capital is internalized into actor' capital and free to arrange and dispose by individual holder; social capital exists in the connection between actors, for example, strong or weak tie, large or small network, *etc.*[3]; and material capital is obtained from conversion of individual capital into social capital. In case of limited individual capital, the social capital embedded into relational network will play an extremely important role in the course of undertaking.

On one hand, as founders, farmers have weak cultural basis and little knowledge necessary for undertaking, including market awareness, competition awareness, financial and operating knowledge, information and ability for making accurate judgment[4]. Their individual capital is highly limited, so they must obtain available resources through social capital embedded in relational network. This is a great challenge for undertaking farmers. Nevertheless, still many farmers have realized their dream of undertaking. It is the further research on how they obtain effective resources through relational network in the course of opportunity selection, financing and enterprise development.

On the other hand, rural areas are relatively closed in geographical location, and the circle of social interaction still keeps the Differential Model of Association with kinship relationship and geological relationship as the center in traditional China. The Differential Model of Association takes self as center, like stone thrown into water. The social relationship formed through connecting with others is not a molecule on a plane, but like ripple pushed in a circle farther and farther, thinner and thinner[5]. Therefore, the closer to circle center, the closer of the connection with "self" it is and the stronger the relationship will-be, otherwise, the relationship is weaker. In Differential Model of Association, it is worth researching how the relational network of farmers influences farmers' obtaining of the effective resources in the course of undertaking, and what role the strong or weak tie plays in the circle.

1 Elaboration on relevant theories of farmers' relational network

1.1 Theory of Differential Model of Association The Differential Model of Association was put forward by Prof. Fei Xiaotong in his book *Rural China* in 1947. He pointed out that traditional Chinese social structure is different from western interpersonal relationships under Group Pattern. "Our model is not line the clearly bundled faggot, but like stone thrown into water, like ripple pushed in a circle farther and farther, thinner and thinner. Every individual is the center of the circle pushed away by his social influence, and the circle for every individual in certain time and certain place is not necessarily the same."[5] The concept of Differential Model of Association reveals that the interpersonal relationship in Chinese society centers on "self" and is gradually pushed outward, showing close or distant relation with others. Prof. Fei clearly expressed that

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the Differential Model of Association is the blood relationship centered on family, while the "projection of blood relationship" forms geographical relationship. The blood relationship is inseparable from geographical relationship. That is to say, traditional Chinese interpersonal relationship is based on blood relationship and geographical relationship, forming the Differential Model of Association[6].

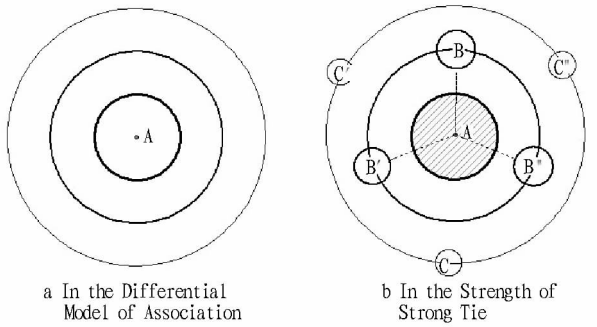
1.2 Theory of Strength of Weak Tie The Theory of Strength of Weak Tie is firstly introduced by Granovetter. For job hunters, weak tie network may be more powerful than strong tie network[7]. Granovetter divides the relation into strong tie, weak tie and irrelative relationship. Strong tie acts on internal of organization and group. Since contacts between people within organization and group are frequent, individuals having higher similarity in the group have similar understanding of things and events, the information acquired through strong tie generally has higher repeatability. For weak relation, a tie is established between organizations and groups, and the coverage is wide. Information dissemination is often achieved through this tie, and there is seldom repeatability of information, so the weak tie functions as a "bridge". Through weak tie, it is possible to bring important information from other groups to some individual that does not belong to that group. People who do not know each other have the irrelative relationship. Granovetter measures the strength of tie through four dimensions (frequency and duration of contact, emotional intensity, intimacy, and reciprocal service). In his opinion, the strong tie is developed among individuals with similar sex, age, education level, professional status, income level and other socio-economic features, while the weak tie is formed among individuals with different socio-economic features[6].

1.3 Strength of strong tie and theory of "Favor and Face" As a major representative of the Theory of Strength of Strong Tie, Bian Yanjie challenged the Theory of Strength of Weak Tie. In his article *Bringing Strong Ties Back In: Indirect Ties, Network Bridges, and Job Searches in China*, Mr. Bian contends that job hunters are not searching job information, but to obtain help of superior leaders through direct or indirect relationship in traditional Chinese job assignment system. In China' cases, he found that it is more possible for weak tie to serve as bridge between help provider and job hunter than the strong tie[8].

On the basis of Social Exchange Theory, Huang Guangguo presented the Theory of Favor and Face. He believes that "favor" and "face" are important methods for individuals to influence others outside of family. This is a set of social mechanism formed under cultural restraint. It is a kind of "game of authority". Through this mechanism, it is able to understand social actions of Chinese people. In China, an individual has three types of interpersonal relationship, emotional relationship, instrumental relationship and mixed relationship, respectively following Law of Demand, Fair Doctrine, and Favor Rule respectively. Emotional relationship includes relations among family members; mixed relationship refers to various relations established outside the family; and instrumental relationship is established by an individual with another person for some purpose, and both do not expect to establish a long-term emotional relationship[9].

2 Analysis on structure of farmers' relational network

Traditional Chinese social relationship pattern is established on kinship and geographical relation. Along with deepening of reform and opening-up, such pattern is gradually transformed towards pattern of professional and emotional relationships, but most rural areas still keep the traditional differential model of association. According to definitions of Prof. Fei Xiaotong, it can vividly show farmers' relational network as following (Fig. 1a). From the figure, it can be seen that farmers' relational network spreads outward from the "Self" (center A). The closer it is to the center A, the stronger the relation with self is; on the contrary, the relation will be weaker. Generally, the size of each circle also depends on strength of the center and the structure of each circle is also changing accordingly. In the course of undertaking, farmers' status and the people they contact change constantly, so farmers' strength changes. Then, it will result in change of structure of farmers' relational network. Nevertheless, it is difficult to see such change from Fig. 1a.



a In the Differential Model of Association b In the Strength of Strong Tie

Fig. 1 Farmers' relational network in different theories

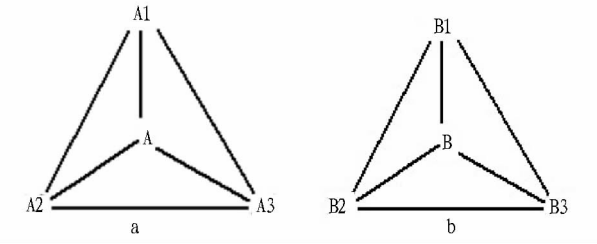


Fig. 2 Schematic drawing for individual connection in Strong Tie network

Granovetter divides the relationship into strong tie, weak tie and irrelative relation. According to his theory, we can subdivide farmers' relational network into several circles, as shown in Fig. 1b. The circle closest to A is called inner circle, belonging to strong tie and representing people who have most frequent contact with A. This circle takes kinship relation as center associated with geographic relation, such as family member, lineal consanguinity or intimate neighbor. The relation in this circle is generally established on emotion. Corresponding to theory of Huang Guangguo, we can include it in emotional relationship, following the Law of Demand. The middle circle belongs to weak tie. People in this circle get little contact with A and generally are casual acquaintances. This type of relation follows Fair Rule and belongs to the mixed relationship. The

circle farthest from A is called outer circle. People in this circle are strangers of A, so they have no relation. In some situations, some factors (for instance, the mutual benefit in the process of undertaking) may turn the irrelative into the weak tie. Therefore, such irrelative relation is a type of potential undertaking resource. The exchange of this relationship follows the Fair Doctrine and such relationship is instrumental. Strong tie circle also has its network structure. As shown in Fig. 2a, there is always a connection between every two of A, A1, A2 and A3. The full line represents strong tie between two of them. It is true that difference exists in structure of strong tie circle in different conditions. Middle circle and outer circle also consist of two individuals, for example, B, B′, and B″, C, C′, and C″, all of which have respective strong tie network (see Fig. 2b Connection of B, B1, B2 and B3 in strong tie). In Fig. 1, there is a weak tie between A and B, B′ and B″ (shown with dotted line in Fig. 1b). Of course, there is probably weak tie between B, B′ and B″, but this is not shown in Fig. 2b.

3 Selection of relations in the course of undertaking

The undertaking course includes opportunity selection, financing, and enterprise development phases, each of which needs founders integrating different undertaking resources to maximize profits. According to the above analysis, it can be found that the relational network surrounding farmers is a complex system, any part of which has different functions in different phases of undertaking. Now, we have a look at phases of farmers' undertaking.

3.1 Opportunity selection phase Opportunity selection is the first and most important step of undertaking, because undertaking is a series of selection and development by founders focusing on opportunities. Opportunity selection includes information acquisition and opportunity selection.

Granovetter surveyed 300 white-collar job hunters in Newton Town in suburb of Boston. 57% job hunters find new jobs through social network. It shows that the weak tie established through acquaintance relationship is generally more useful than the strong tie formed by relatives and friends, and it is easier to get higher position and more liberal treatment[10]. From this survey, Granovetter introduced the Theory of Weak Tie, but whether Chinese farmers' undertaking information can be acquired through such weak tie in the traditional differential model of association or not?

The strong tie acts on system and organization inside, so the information interchange generally has higher repeatability; the weak tie acts between organizations or groups, so the coverage is wide and information dissemination is in single direction. Thus, we can suppose the effective information interchange within strong tie is 1. From Fig. 3a (the full line represents strong tie acted on two parties), it can be seen that for farmer A, the connection between A and A1, A2 and A3 is a relational network formed on the basis of kinship and geographical relation, and this relation exists in the same strong tie system, so the effective information interchange between them is 1. From Fig. 3b (the dotted line indicates weak tie acted on two parties), since A, B, B′ and B″ have respective strong tie network, and there is weak tie connection between A and B, B′ and B″, so B, B′ and B″ can transmit information to A through weak tie "bridge", thus the effective information obtained by A through the weak tie is 3. These indicate that the information quantity obtained by farmers through weak tie is larger than that from strong tie, and the wider the weak tie, the more information it will take.

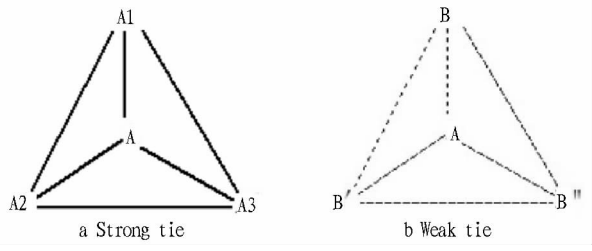


Fig. 3 Relational network based on kinship and geographical relations

The Differential Model of Association is established on traditional Chinese morality and ethics. Generally, it is based on mutual trust, which is more prominent in the strong tie formed by kinship and geographical relations. Therefore, the information interchange inside strong tie network is usually based on emotion, while the weak tie also shows the instrument feature. After acquiring undertaking information, farmers will have to select opportunities, and the trust brought by strong tie will make farmers have preference in the acquired information. However, undertaking information is not ubiquitous, such information is transient and usually "opportunity knocks but once". In this situation, in order to catch opportunity first, farmers should get rid of idea of distrusting strangers and bring into full play advantage of large quantity of undertaking information brought by weak tie through sensitive insight and information catching ability.

3.2 Financing phase There are many effective financing channels. On one hand, farmers can utilize their savings, but their savings are limited. On the other hand, they can obtain funds through their relational network, but the financing effect will be different under the influence of different levels of network. Now, we analyze influence of different levels of network on financing.

According to Huang Guangguo' *Theory of Favor and Face*, relationships with different strength conduct exchange on different principles, and it can be divided into emotional, mixed and instrument types. The exchange rules for farmers' undertaking financing correspond to three financing types as shown in Table 1.

Table 1 Three financing types under different exchange rules

Strength of relationship	Emotional	Mixed	Instrumental
Strong tie	I (Law of demand)		
Weak tie		II (Favor rule)	
Irrelative relation			III (Fair doctrine)

Type I acts on strong tie of farmers. The strong tie is established on kinship and emotion. In this tie, there is no reciprocal exchange, but the law of demand. "Work according to the ability and taking what one needs" is mandatory in ethics, so it is a relationship based on internal norms of families and mutual

monitoring. Besides, containing of benefits exists in such relationship, so every party is bound together for good or ill. As mainstay of farmers' financing, this type of group will try their best to help founders to obtain funds necessary for undertaking. If their undertaking becomes successful, this group will also be benefited.

Type II is established on weak tie. Among this group, exchange of people is mixed type. On one hand, they have basis of trust, because they are acquaintances or friends or subsidiary strong tie and have certain emotional foundation. On the other hand, under the emotional relationship, they disguise as instrumental type to exchange. Therefore, such relationship is a kind of emotional investment, with the purpose of obtaining more benefits. It is also feasible for farmers to finance through weak tie, but they have to win enough trust of investors, because investors will consider risks.

Type III is instrumental. People in this type have no emotional foundation to others and generally not interfere with each other's affairs. Even if there is any connection, it is established on benefit. Therefore, farmers hardly get any help from this relation during financing. Assistance farmers obtained is often in the form of usurious loan. Considering the huge risks, farmers will not adopt this type unless there is no other way.

Through the above analysis, it can be found that during farmers' financing, type I is the most reliable and effective financing way, because the strong tie is mainstay in financing phase, the stronger the strong tie, the more smooth the financing will be. Type II and type III are mostly established on the basis of instrumental exchange, especially, type III lacks necessary trust foundation, so farmers should be careful when selecting this financing type.

3.3 Enterprise development phase In this phase, social network can assist entrepreneurial farmers in obtaining relevant resources and integrating entrepreneurial team, to carry out team management, seek business partners and obtain market orders. Only by maximizing enterprise operating efficiency and raising core competitive power, may they have long-term survival and development. Farmers' relational network in the Differential Model of Association is intricate, so farmer enterprises must get rid of restraint of traditional morality and ethics, break convention and make rational selection.

In China, there is usually suspicion of nepotism. Liang Shuming said that China is an "ethic-centered" society[11], so it is indisputably proper for farmers to be partial to those people who have the same clan and blood relationship with them in inner circle of relational network. However, if farmers follow this rule, it is extremely detrimental to development of enterprises. On one hand, the same network circle is homogeneous, and farmers' status and level determine the status and level of homogeneity. Enterprise development needs talent and innovation, so farmer enterprises should introduce heterogeneous talents to rouse vitality of enterprises and realize innovation. On the other hand, the strong tie is supported by Chinese traditional "ethics", which is trivial, lagging in many aspects, and counter to high efficiency and innovation of enterprises. In short, although the strong tie possesses emotion and trust that other relations do not have, the limitation in farmers' strong tie network coverage, status and structure results in farmer enterprises' difficulty in obtaining expected function and influence. If power of strong tie is planted into farmer enterprises too much, it will exert adverse influence on enterprise development.

Opposite to the strong tie, farmers' weak tie and irrelative relation are important relationships for obtaining resources in the development of enterprises, because there is a high heterogeneity between weak tie and irrelative relational network and farmers, and such heterogeneity is just the resource embedded in social network. What farmers exchange with the weak tie and irrelative relation is usually instrumental, especially in for irrelative relation. If there is no emotion mixed in between, every individual will show his rational side, which is favorable to the development of enterprises. In addition, the irrelative relation is potential weak tie to some extent. Facing powerful information interchange system, irrelative people will establish connection through various media to obtain common demands. For example, enterprises obtain orders through network. In the creed of "strangers the first time, acquaintances the second, and good friends the next", it is convenient and normal for conversion of irrelative relation to weak tie. Farmer enterprises should seize this opportunity to expand their network, optimize their network structure, and raise their network status, finally to obtain more opportunities for enterprise development.

4 Conclusions

In the course of farmers' starting an undertaking, their relational network is of the utmost importance, because all types of resources necessary for undertaking are deeply embedded into farmers' relational network. Researches have shown that in the transformation period, the farmers' relational network is a complex system. It not only keeps the Differential Model of Association, but also shows modern social interpersonal relationship. Besides, it is also mixed with traditional "blood relationship", "ethics" and "morality" ties, as well as rational side of modern interpersonal interaction. In this study, we accord with the Differential Model of Association and divide farmers' relational network into three circles, namely strong tie, weak tie and irrelative relation. In different phases of undertaking, functions of these three circles are different. In opportunity recognition phase, weak tie can supply more information than strong tie, because weak tie can function as "bridge"; in financing phase, strong tie plays a more important role, because inside of strong tie belongs to a community inside and has strong acceptance and emotional foundation; in enterprise development phase, weak tie and irrelative relation have superior advantages, and the conversion of irrelative relation to weak tie plays a significant role in optimizing farmers' relational network structure, expanding network scope, lifting network status, and promoting enterprise development.

Since undertaking is a rational economic action, farmers should clearly understand functions of different circles in phases of undertaking, to fully explore resources embedded in relation-

al network and to succeed in undertaking.

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(From page 32)

employment opportunities is a desirable way. Organically combining the transfer of rural labor and the transfer of land use right, is of practical significance to improving the dual social structure in urban and rural areas, and solving the issues of vast population and limited farmland in rural areas. Meanwhile, the state should gradually achieve unification of the rural and urban system, and establish the gradually unified social security system in urban and rural areas including health care, pension, minimum subsistence security and so on, so that the farmers realize that the farmer is only a career, but not a group taking the land as living security. Thus, the farmers can liberalize the land management rights, and engage in free trade as rational economic man in the transfer market, to achieve the Nash equilibrium of farmland transfer market in the true sense.

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