The Decision-making Path of the Intellectual Capital's Employment under the Impact of Family Network Will:
An Empirical Study

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ABSTRACT
Based on the correlation between the intellectual capital theory and the planned behavior theory in the field of behavioral science, this study established a path model that reflects the impact of the Family Network Will (FNW) on the intellectual capital's employment. The reliability and reasonability of the model were calculated and tested using structural equations. The results of the study indicated that the comprehensive indicator of the FNW on the perceived subjective behavior and experience, behavioral control and norm, and attitude, had a significant impact on the model. Attitude is the primary dependent factor in behavioral decision-making. As the attitude varies, the decision-making path varies accordingly. With the weakening of the FNW, the family's direct or indirect control will gradually change to the natural development mode. The FNW-based employment has negative impact on fair competition, and on employers and the individual's accumulation of high-quality human capital.

Keywords: Family Networks; Intellectual Capital; Family Network Will; Planning Behavior; Decision-making Path

INTRODUCTION
The issue of obtaining jobs available for the children of a family is not new in the academic community, it has already been researched several decades before (Rees & Shultze, 1970; Granovetter, 1974). From a large number of findings, they similarly reveal that Family Network has been presumed to be the most effective way; For example, about half of all jobs are obtained through all kinds of social relationships (Corcoran, et al., 1980), or they retrieve the information on specific jobs from friends and relatives (Holzer, 1987). Moreover, family members are consistently reported to be important members of youths' social networks (Blyth, Hill & Theil, 1982) and parents play a particularly crucial role in the social networks of their own children. And, social networks of young generations have been found to be similar to those of their parents in composition and structure (Tietjen, 1982; Olivera & Reiss, 1987; Holzer, 1991); Granovetter's (1973, 1974) weak tie argument and Lin's (1982, 1990) social resource theory have stimulated fruitful research of how individuals are matched to jobs through networks of social contacts in market economies in North America and western Europe (Bridges & Villetmez, 1986); similarly in China, Family Network, which develops between persons who are strongly rather than weakly tied, is considered a lot to be the most effective way (BianYanjie, 1997). However, although most of the studies discussed it mainly from various external perspectives, there are still no relationships yet to be explored from the viewpoint of the planning behavior of Family Network besides the ethics, social structural theory, and so on. Here, this study, by approaching the empirical case, will explore how the Family Network works based on the behavior of the planning in terms of their children's intellectual capital and the family will.
THEORETICAL UNDERPINNING

Theoretical relevance
This study has two theoretical underpinnings: the theory of intellectual capital and the theory of planned behavior. The former is the theoretical source, while the latter is the approach and tool for analysis. These two theories are associated with each other by behavioral science.

The concept of intellectual capital was first defined by American economist John Kenneth Calbraith in 1969 (Schultz, 1974). In essence, intellectual capital is more than a static intangible asset. Rather, it represents a process of thinking and a means of achieving what one desires. The theory of intellectual capital was derived from the theory of human resources, as a major branch developed from the latter. The value of intellectual capital, as a concept, lies in that it explains the mystery of the rapid growth of Western economies. Intellectual capital is the core content of the human capital investment theory, and it is hailed by scholars as the Declaration of Independence of their field (Schultz, 1960; Schultz, 1974). Thus, it allows the concept of intellectual capital to manifest its enormous explanatory power in the field of behavioral science (Jorgenson, 2002). However, the concept of intellectual capital and the theory of human resources require further exploration. For example, the value of the intellectual capital theory is hard to be precisely described, because its weakness and defects in the constitutive elements, including the experience, perception, cognition and attitude. Therefore, this theory is more likely to be used arbitrarily and intuitively in practice. Numerous relevant studies have already been carried out internationally. Therefore, no quotations from relevant research will be listed here. The theory of planned behavior allows a measurement of the elements in behavioral science and can be used for path analysis. That is, it provides a metric approach for the intellectual capital, and plays a positive role in the simulation of academic research.

Intellectual capital
The individual variation of intellectual capital is significant because of the interactions of genetic and environmental factors during the course of the growth of individuals. As a result, the individuals are different from each other in the mental and physical characteristics, such as age, sex, appearance, capacity, interest, attitude, character and motive. All these directly result in the difference of competence. The difference of competence refers to the difference of the actual ability in a specific field. Given the difference in the path of competence acquisition (either through natural gift or learning), it is also interpreted as accomplishment or potential (aptitude), and is further divided into general competence and special competence. General competence means the intelligence in common sense. It differs in the level of intelligence (high or low) and structure of intelligence (language, numbers, reasoning, and space) from individual to individual. Special competence refers to the ability in undertaking one specific task or profession. A family's choice of the intellectual capital development mode is determined by the mainstream of the country. Then the expectation represents the full use of the relevant signals or information of one competence dimension, such as competence, personality, attitude, perception, behavior and will. Or all these dimensions will be comprehensively considered and nurtured at the same time. The former mode emphasizes the use of intellectual capital in a single field, while the latter emphasizes the application of multi-capital and multi-ability in multiple fields.

Theory of planned behavior
The theory of planned behavior (TPB) was developed from the theory of reasoned action (Fishbein & Ajzen, 1975), proposed by Ajzen in 1986 (Ajzen, 1988; 1991), and constantly supplemented by Coleman (2002) and numerous other scholars. The core part of the theory states that attitude toward behavior, subjective norms, and perceived behavioral control, together shape an individual's behavioral intentions and behaviors. The specific behaviors are
attempt, action, and giving up. A rational person gains confidence and plans an action towards an undertaking by controlling his behavior. On the other hand, the familiarity and perceived control of a work can, in turn, increase a person’s confidence, which transforms into interest in the work, and thus promote the things to develop toward the desired direction. In other words, the outcomes of the behaviors, such as continuing the existing behavior, attempting immediately, repeating the effective behavior, or changing and innovating, will contribute to a person’s self-recognition. Because this theory gives a detailed account of how the individual will facilitate the formation of the desired outcome, it is received extensively.

**Impact of the family network will on the intellectual capital’s planned behavior**

The family’s intervention in their children’s employment is a process, which is guided by the family will, with the family behavioral intention as the goal, and the family network as the control platform. The family's intention and behavior are formed and affected by their children’s intention, attitude and perception. It conforms to the characteristics and the defined process of the theory of planned behavior. Family network initially referred to the family information platform integrating the family control network and multi-media information network. It represents an interconnection and management of information devices, entertainment devices, electrical appliances, automated equipments, security (monitoring) devices, all types of meters, and home alert devices. This system enables the sharing of data and multi-media information. It is the standard configuration for an intelligent and digitalized family that improves the quality of family life, learning, working and entertainment. The family network in this article refers to the network composed of various people related to the family, including relatives, friends, colleagues, business associates and countrymen. The family network is divided into internal and external networks. The former is composed of the core family members, while the latter is composed of friends, relatives, colleagues and townees. The boundary of the family network ends when it is void of personal contact. The individuals in the network also form networks themselves, which overlap with each other to form the network group. The extent of the utilization of information and resources and awareness of such utilization by the internal network determine the scale of the external network. This also determines the social identity and position of a family in its community. The new network, related to but inaccessible by the family network, is regarded as the mediation network that can connect the family networks.

The family network will (FNW) reflects the family’s intention to maximize the family benefits by fully using the control power of the internal, external, and the mediation networks of the family to help their children to obtain decent jobs. It is depends on the family networks for information exchange and uses the intention of the children as the objective. It is a typical planned behavior that aims to achieve the goal by relying on the relationships. Combined with the original Ajzen model (1980; 1988; 1991), the process of FNW in helping a family member to obtain a job has three stages: value recognition, intention formation and decision-making, as shown in Figure 1.

![Figure 1. Employment path diagram with Family Network mode](http://dx.doi.org/10.14738/assrj.16.534)

(1) **Cognitive construction.** This stage is mainly influenced by the subjective perception of the family behavior or the family network behavior; and the family’s control, norm, and attitude
toward the children’s decision-making. Therefore, the influence of each factor and its characteristics are investigated.

First, the subjective perception of behavior. The perceived information control of the family network is dependent on the subjective perception of the main controller and the control group as well as the external force. Since the subjective perception plans the behavioral intention and guides the awareness, the independence of the assisted cognitive construction constitutes the major driving force for the motive to form the behavioral intention (Ajzen, 1980). However, it is not strongly correlated with attitude. This driving force consists of two dimensions: one is the consistency of the perception, awareness, and experience of the family network; the other is the perception and judgment about the matching degree of the external opportunity and the fitness condition. Their existence mainly relies on the perception of family network, thus are considered as the internalized factors.

Second, control power and norm. Ajzen(1988;1991) defined “subjective norm” as the pressure exerted by the society on the individuals in performing a specific action. It is the social pressure generated from the inconsistency between the subjective feeling of the individual and the reference groups in terms of behavior. The reference group refers to the group establishing norms and values to influence the behavior of others. It differs in the extent of influence on the individuals. Thus, the reference group is divided into the primary group and the secondary group. The former has a larger influence because it is the group directly interacting with the individuals. The latter refers to other subjects that may potentially influence the individual behavior by providing norm. In this article, the primary group means the internal family network and where the internal and external family networks overlap, including the main controller within the family and the related mediator. The secondary group is made up of the job seekers who have similar age, background, expertise, and skills. The influence of the family network's control power over the resource distribution is manifested in two aspects, first, the intensity of influence, second, whether it can directly and effectively influence their children. These two aspects’ correlation and strength of influence determine the outcome. The meaning of norm is two-fold: one is the institutional norm of the users of the intellectual capital (related institutions and agencies); the other is the behavioral norm of the family network entering into the related institutions and agencies.

Third, attitude. It refers to the stable mental state that one holds towards a specific phenomenon. It makes the people in the prepared state and shapes people’s behavioral intentions. Because the influence factors are very extensive, the attitude can be broken down to the attitude of the family network and the attitude of the children, which are the most important and direct factor responsible for generating the family network effect.

(2) **Intention identification.** In light of the unfavorable expectation that the family network may generate, the following two aspects should be paid attention to: one is that the behavioral intention of the family directly determines whether the family network is exploited, the mode and extent of exploitation; the other is the actual control power that the family network is able to exert.

(3) **Decision-making.** The decision-making path varies with the FNW. If the children and their family have matching expectations, then the family-network-arranged employment mode will be realized successfully. On the other hand, if the children succumb to or refuse their family's arrangements, the family intension will be diverted, and then the mediation control or the natural development will take over.
EMPLOYMENT DECISION-MAKING PATH UNDER THE INTERVENTION OF FAMILY NETWORK

Model expansion
The above model only describes the basic process. In fact, the evolution into the family-network-based employment is mostly result from the checks and balances, and conversion of control among the FNW, family control power, and the children’s willingness because of the change of objective and subjective factors. All these factors are considered in the model.

(1) **FNW.** It means that a family use its resource allocation power associated with its social status and position to exert an influence on the process and structure of the objective, thus to realize a family member's personal wishes. For example, exerting influence on cognition and norm, career decision-making intention, occupational control, attitude and implementation reflects that the behavioral intention has achieved the first stage of the decision-making path. It is completed on the layer of cognitive construction, serves the formation of different wills, and therefore promotes the formation of diverse decision-making behaviors.

(2) **Objective and subjective environmental factors.** Family, family network, mediator and the children of the family are all important factors constituting the objective and subjective environment. These factors are all constrained by the actual subjective and objective conditions, and exert checks and balances. For example, the measurement indicators include the width and scale of family network, the actual control force of the family network, and the control force of the mediation.

(3) **Children’s personal wishes.** As a behavioral subject, children’s personal wishes should be considered. However, it is often determined by the will of the family and the power of the family network.

As shown in Figure 2, the above factors are incorporated into the model.

Model indicators and test

**Indicators.** The expanded model, as shown in Figure 2, illustrates the three processes of the decision-making path: cognitive construction of the family network with respective to job arrangement; objective and subjective conditions under the control of the FNW, the process
by which the mediation and will is expressed; the process by which diverse wills are converted into different behavioral decision-making. The behavioral intention in the first stage of the initial model is decomposed into the will of the family and the will of the children in the expanded model. In the second stage, information integration is added, together with the family network control and the mediation control. The information is the core of network control and is the major force that drives and shapes the behavior of the main controller and the mediation. It also prompts the variation of the objective and subjective conditions and provides basis for decision orientation. All these processes can be measured by establishing proper indicators.

To ensure the neutrality and reliability of this empirical study, the indicators were designed after the preliminary survey. The survey was carried out in 14 cities of China in 2012, including the cities in eastern, western and middle China: NanTong, Shenyang, ZHUhai, Dongguan, Zhengzhou, Nanjing, Changsha, Guiyang, Chengdu, Xi’an and so on. The survey was conducted on a random basis. The age of the interviewees ranged from 21 to 45 years old, with the males accounting for 58% and the females accounting for 42%. A total of 2100 questionnaires were distributed. The respondents with the age in the range of 21-29 answered 735 questionnaires, accounting for 35%; those with the age in the range of 30-39 answered 630, accounting for 30%. The respondents of other age groups (25%) answered the remaining 525 questionnaires. The questionnaire was designed according to Likert scales (7-point). All questions were structural questions. Each indicator was graded or options were selected. The 5-point scale was used. The higher the score, the higher the extent was indicated. All the indicators were positive, namely, the score increased with the extent. To control the result of survey at the ideal level and reduce the error related to the misunderstanding of the concept by the respondents, the directionality and consistency of the questions should be ensured and the questions were described in detail, easy to understand, with no ambiguity and good matching ability. Second, the implementation quality of the survey was controlled from two aspects: first the survey was undertaken by trained and fixed personnel, so the interpretation of the questions and options and the way of asking would be consistent. Second, the repeated asking of the questions and the confirmation degree were measured by the same scale. In case of large deviation in meaning and understanding, the investigator would do the survey again, and submitted the questionnaire to the research group for review. After comprehensive evaluation, weight was assigned to the resubmitted questionnaire and the mean value was taken. The respondents were awarded with a small gift after answering the questionnaire validly. Invalid questionnaires containing inappropriate answers or unmatched answers totaled 212. The valid questionnaires totaled 2788. The recovery rate of valid questionnaires was 92.93%. The indicators set by the questionnaire and the scoring standard are listed in Table 1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
<th>Degree 1~5 Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective perception and experience of behavior</td>
<td>Extent of family's cognition on the social development status</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>family's social cognition of employment</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>family's respect to children's personal wishes</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>family support</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>family cohesion</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>attention to the family from the society</td>
<td></td>
</tr>
<tr>
<td></td>
<td>family network's awareness of social identity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>importance of employment to the family</td>
<td></td>
</tr>
</tbody>
</table>
Test and verification
According to the advice proposed by Coleman (2002), the simultaneous equations were established for the testing purpose. First, combining with the model and the indicator system, the decision-making path was extracted, as shown in Figure 3.

The test process of the decision-making path is as follows:

(1). Principles and methods. Subjective perception and experience of behavioral control, subjective norm and attitude are the key variables in the model, reflecting the intentional tendency of the decision makers. The test was performed by establishing the structural equations, that is, establishing simultaneous equations for the mathematical processing of the variables. This approach has been widely applied in the fields of management science, behavioral science and psychology (SmyrniosK X,1998; Romano CA,2000); therefore the relevant details will not be discussed in this paper. For the analysis indicators, see Table 1; Lisrel 9.1 software was used; the test was carried out according to the default options in Lisrel software.

(2). Test results. Since the factor loads of some indicators were too small (smaller than 0.4), these indicators had low explanatory power for the model. Thus, they were excluded from the model, including family’s cognition on the social development status, family network's awareness of social identity, attention to the family from the society, family network's mastery of key information, family network's control over the employment, the number of core family members having influence on the employment, attitude influencing children's occupational expectation, and importance of the family mediation network. Validation test centered on the relatively important variables, and the schematic of the calculation path is shown in Fig. 4.
Figure 4. Decision-making path of an intellectual capital’s employment under the impact of family network

(3) Goodness of fit: The goodness of fit of the model calculated using the software is shown in the table below.

<table>
<thead>
<tr>
<th>Statistic optimization</th>
<th>X2</th>
<th>df</th>
<th>RMSEA</th>
<th>GFI</th>
<th>AGFI</th>
<th>CFI</th>
<th>NFI</th>
<th>IFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Estimated</td>
<td>92</td>
<td>48</td>
<td>0.042</td>
<td>0.92</td>
<td>0.91</td>
<td>0.93</td>
<td>0.92</td>
<td>0.93</td>
</tr>
</tbody>
</table>

Table 2 clearly indicates that the optimization of fit falls within the reasonable interval, indicating the high reliability of the model.

RESULTS

The factors when its variable load was lower than 0.4 were excluded from the model. As shown in Figure 4, except the variables, such as family's social cognition of employment, children’s consideration of the family advise, and children’s dependence from the support of the family network, the factor loads of the rest indicators were larger than 0.65. It indicated that the model had a good validity. The path coefficients of perception and experience of subjective behavior, behavioral control and norm, and attitude to the decision-making of intellectual capital were 0.47, 0.61 and 0.75, respectively. The impact of these variables varied to different extents.

First, the path coefficient of attitude was the highest (0.75). Being employed was not only important to the children, but also a great concern of their family. Therefore, attitude is the most important variable that affected the decision-making path, as it shapes the behavioral intention. The attitude indicators of this model included the children’s expectation of the family network, the family network’s attitude towards employment, and the children's acceptance of the family network control. When the children's expectation for employment was consistent with the family's expectation, and when the employment had no great significance for the family, then the behavioral intention would be taken over by the internal decision-making or the natural development. But when the expectations were not consistent, the behavioral intention would turn to indirect control or natural development. Therefore, when the children did not seek for job opportunities by themselves, had an actual demand for the support from the family network (explanatory power for attitude was 1.00), and generally accepted the FNW, then the FNW would play its role. The children's employment would be controlled by the decision-making of the family network or by the mediation. This is especially the case when the job opportunities are characterized by high-income, fierce competition, nonstandardized and non-transparent employment institution. The control power that the family network had on the accessible job opportunities would successfully...
shape the behavioral path and help form the mechanism that impairs fair competition. If the children tend to be dependent from the FNW, and the family network cannot actually contribute to employment, then the FNW disappears. The behavioral intention is represented as natural development.

The behavioral control and norm had the secondary influence, with the path coefficient being 0.61. This means that the family's coordination on the inconsistency between the children's employment preference, expertise and family's goal and the resulting assistance is the major driving force behind the behavioral intention. The children's consideration of the FNW had no great explanatory power for the behavioral control and norm. The core family members with stable and high-earning occupation exert the major control power over the behavior of the children. This result corresponds to the popular saying that good jobs come from the strong social network of the parents. Finding good job opportunities based on relationship was a nonstandardized behavior that controls the distribution of resources. It greatly challenges and harms the fair competition from the perspectives of existence rationality, economic rationality, social rationality and affective rationality.

The path coefficient of perception and experience of subjective behavior was 0.47. The model validation shows that the family generally respect the children's employment intention, and the stronger the family cohesion, the more beneficial the family network would be to the children. As seen from the factor loads of the indicators for the importance of employment to the family and family’s social cognition of the employment, it can be concluded that the family's responses vary significantly with times, family circumstances, and social cognition.

To sum up, although some low-factor indicators were excluded for the model, we cannot say that the information that is conveyed by these indicators is unimportant. The removal of these indicators was due to the difficulty in data collection or the concealment of the respondents. As reflected by the rest indicators of the model, the decision-making path of employment under the FNW, strong or weak, can be described by the model above.

**DISCUSSIONS AND CONCLUSION**

The observation explored how stably and strongly the Chinese Family Network has played an important role in involving in the process of allocating children’s intellectual capital. Family Network indicates that the helpers tend to be connected through intermediaries to help-receivers who are strongly or moderately rather than weakly tied with the former two; and through itself or helper's job positively impacting on youth's job status is common; and so on. Obviously, the results from the analysis have positively showed some important reasons now in China that the flow of social classes is getting static gradually. Because, through over the last three decades, the rich stratum in China has really made some remarkable achievements in the world, but regrettably it has created a huge gap between the social rich and poor classes . Although the identity restrictions and the stagnation of occupational mobility are the most important factors among lots of reasons, Family Will that traditionally focuses on the next generation has now developed as the center of the family development, which cause families to continuously consolidate their own networks and private advantages and “the vertical mobility” of society classes has been continually declining and even become static completely. First of all, the traditional culture approved naturally in China that a successful father or mother becomes more crucial than the children’s Intellectual Capital in access to chances, assistance, wealth, reputation, occupation, life quality, and so on. The word “Pin Die” fully demonstrated popularity in contemporary China, which means Big Daddy always can satisfy children’s wish. Secondly, the one-child policy and new changes have created and strengthened the risk for families, so parents have always involved in the issues about how to

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remove the worries of the children’s unemployment since these years’ unemployment rate stays high under the context of the huge population. These thinking and behavior have pushed and helped the formation of the polarization between the rich and the poor (Zhou Yin, 2012): The more difficulties for the family-poor youth to have intellectual capital building with, the more difficulties for them to secure jobs with; in contrast, the more breezily for those with the Family Network that works. Additionally, it has become a common reality that the mode of parents’ FN behavior has delivered fruitful results to children and strengthened their Family Network or themselves as the center from the thinking to the behavior fixed, and spread widely.

Above all, the change of FN force definitely has brought the far-reaching significance to the social development, especially, it is worth further studying that the relation between FN and the social-flow effect, which is not only the double-edged sword. According to the results of a large number of findings: very few people in sheltered employment progress into competitive employment (Blanck et al. 2003); and the following is an absolute truth: Give a man a fish and you feed him for a day; teach a man the way to fish and you feed him for a lifetime. Therefore, this study is not simply to talk about the case of parents’ settling job chances for their children or providing opportunities, but beyond this, just in the environment of the extremely scarce resources, FN, the "invisible" and the real "touch" of the hand will definitely influence the allocation of the social resources and some public opportunities, to some extent, it means that FN benefits themselves based on hurting the public foundation of a social development, such as equity, social trust, and so on. Although it is hard to measure how and the extent the widespread and popular FNW’s influence has interacted with them, or whether the society employment efficiency has been lost or not, obviously, it’s worthy to discuss from the analysis that what different effects the change has been made on society, enterprises or organizations, or individual.

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