RESEARCH ARTICLE

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Commercial *guanxi* in the context of Chinese native culture: An exploratory research

Abstract   Recently, *guanxi* has become one of the hottest topics in domestic academia. Although relationship and *guanxi* are the same in Chinese characters, significant differences exist between the "relationship" in the western academic context and what Chinese people are familiar with, the Chinese "*guanxi*". The indiscriminate imitation of the western relationship marketing in China neglecting the Chinese native culture context is detrimental to a true and thorough understanding of the Chinese relationship marketing practice. Therefore, it is of great significance to conduct research on *guanxi* in the Chinese native commercial context. Based on domestic and foreign literature review, this paper uses a qualitative research method including content analysis and focus group to get a thorough understanding of *guanxi* both from the academia and from the practitioners, followed by quantitative analysis methods including questionnaire investigation and factor analysis to develop a native commercial *guanxi* concept scale. After comparison of the qualitative and quantitative research results, an integrated *guanxi* concept system is built, which lays foundation for the future *guanxi* research.

Keywords   *guanxi*, *guanxi* scale, concept system

摘要   近年来，对关系的追踪成为国内学术界的研究重点。然而，西方学术语境中

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的"关系"（relationship）与中国人熟悉的"关系"（*guanxi*）却有很大差别。不考虑中国本土关系主义的文化环境，一味地转述西方式的"关系"，是无从真正理解和把握以及在中国本国实践关系营销的，因此系统研究中国本土商务"关系"概念至关重要。在回顾国内外文献的基础上，通过质化研究——内容分析和专题组访谈来全面了解学术界和实业界对商务"关系"的理解，在此基础上进行量化研究——问卷调查和因子分析，发展出了一个本土商务关系概念量表，建立了一个整合的中国本土营销环境中商务"关系"的概念体系，从而对今后的关系研究奠定良好的基础。

关键词 关系，关系量表，概念体系

1 Literature review

With the rapid development of China's economy, the study on Chinese social behavior draws gradually the attention of international communities of social science. Western academia has found that the Chinese interpersonal relationship (*guanxi*) differs greatly from the western interpersonal relationship with respect to its development pattern and results (Xin and Pearce, 1996). *Guanxi* has become a core concept for westerners to understand Chinese social behavior. At present, the literature on *guanxi* is so overwhelming with various research layers and angels that *guanxi* research seems to have the same scope of broad connotation and prevalent applicability as *guanxi* itself.

This paper aims to analyze systematically the extant literature on commercial *guanxi* in the Chinese context, and develop a *guanxi* scale through literature comparison, content analysis, focus group and questionnaire investigation. Based on the research, we build a concept system of commercial *guanxi* in the Chinese marketing environment to facilitate future studies in the field.

1.1 Definition

Table 1 Summary of *guanxi* definitions

Designation	Definition
Relationship	A special relationship between two persons (Alston, 1989)
Particularisticties	Particularistic tie based on shared attribute i.e. *guanxi* base (Jocobs, 1982)
	Interpersonal relationship based on particular criteria (Jin, 1992)
	Direct and special tie between individuals (Farh et al., 1998)
	Unofficial, personal and special relationship based on mutual obligations (Peng, 1998)
Friendship	With implications of continued exchange of favors (Pye, 1982)

<div align="right">(<i>To be continued</i>)</div>

Designation	Definition
Connection	Actual connections with and frequent contact between people (Bian, 1994)
Exchange	Reciprocal exchange between two people; petitioner and allocator (Hwang, 1987)
Resource	A form of social investment or social capital (Butterfield, 1983)
Process	As single process, refers to personal interactions between two individuals (Fan, 2002)
Network	As multiple process, refers to a network social connections (Fan, 2002)

As indicated in Table 1, the academia has many explanations of *guanxi*, which are interpersonal relationships based on specific criteria instead of general interaction relationship among all people. From the above definitions, we can generalize four aspects of *guanxi*: 1) It happens between interaction, association and interpersonal exchanges; 2) It works under the principle of friendship, affiliation, reciprocity, *mianzi* (i.e. face), *renqing* (i.e. favor) and benefit; 3) It is a way to get resources; 4) It is a special social phenomenon in relation to Chinese local culture.

1.2 Constructs of western relationship marketing

Ambler and Styles (2000) pointed out that "some relational components seem to follow fashion". A few years earlier, power was a primary element of concern. However, trust has become a major construct now. Some scholars have proposed a sub-division of trust, including cognitive trust and behavioral trust. Others further divide cognitive trust into competence trust and credibility trust; behavior trust into goodwill trust and benevolence trust. However, Grönroos (1994) regarded commitment and trust as the two critical elements in relationship marketing and these two factors determine how to establish, maintain and strengthen a relationship. Moreover, other scholars have summarized constructs of relationship marketing as bonding, empathy, reciprocity and trust. These connotations of relationship can be divided into three dimensions:

(1) Constructs more relating to economic factors: 1) Attraction refers to factors appealing to both sides of cooperation. Attraction is based on benefit, which can be economical, technological or social interests. Social associations that both sides cherish can be converted into economical cooperation appeals that form the stage of establishment and development of relationship. 2) Bond or constraint refers to high switching cost as obstacles for customer attrition in forms of

technology and information linkage. Compared with attraction, bond is a forcing factor for the establishment of economical relationship.

(2) Constructs more relating to social factors: 1) Interaction refers to the ongoing exchange process during a series of transactions. 2) Trust refers to expectations hold by one party to another under certain conditions. Trust is based partly on past experience, partly on other determinants such as contract, rules and social codes, and also personal factors such as moral character. 3) Commitment refers to the tendency to cooperate, as well as the wish to maintain a long-term relationship that both parties cherish. 4) Reciprocity or pay-back means the reason one party giving favor to another is that the other party has given him the same treatment before, or will give him the same treatment as expected in the future.

(3) Constructs more relating to emotional factors: empathy, which refers to the ability to see from others' point of view, and understand their wishes and objectives.

1.3   Chinese commercial *guanxi* scale

To date, studies focusing on commercial *guanxi* concept are limited. What we can find in literature are as follows:

Lee et al. (2001) developed a *guanxi* scale with 4 items, which is a 7 points scale with 1 for totally disagree and 7 for totally agree. Specifically, the 4 items are: I target the moral principle of brotherhood type of relationship; I try to make of the principles of harmony；To pay back favor is more urgent than debt to save face；I encourage others to owe a favor.

Buttery and Wong (1999) believed *guanxi* has 4 constructs: favor, trust, dependence and adaptation. The survey conducted by Wong et al. (2000) in Hong Kong has proved that the Chinese are willing to invest time and efforts in *guanxi*, which is believed to be the most important attribute.

Yau et al. (2000) compared the difference of relationship marketing between china and the west in respect of constraint, reciprocity, trust and empathy (See Table 2).

Leung and Wong (2001) developed a *guanxi* perception scale and summarized the items of the scale into 4 constructs: opportunism, business interaction, dynamism and protectionism. All the items are in forms of Chinese adages and idioms, such as: Even brothers keep careful accounts, try peaceful means before resorting to force, harmony brings wealth, courtesy demands reciprocity, smart guys know the ins and outs, money can bring miracles, to make convenience for others is to make convenience for oneself, nine out of ten businessmen are sly, a drop of water shall be returned with a burst of spring, tit for tat is a fair play, business is off while friendship is on, etc.

Table 2   Differences in the four dimensions of relationship between Westerners and Chinese

Construct	The West	China
Bonding	Between consumer and supplier	Blood bases and social bases
	For desired goal	For social control and business behavior
Reciprocity	Expect value to be returned in short-term	Value returned at time both giver and recipients will benefit
	With specific intention	No specific intention
	Converged value	Increased value
Trust	People with promised integrity	Kinship or in-group members
	Build transaction first, relationship may follow	Build trust first, transaction may follow
	Based more on the system	Based more on personal contact
Empathy	Sender-centered communication	Receiver-centered communication

Source: Yau, Lee and Chow (2000). Relationship marketing in the Chinese way. Business Horizons, 43(1): 20.

Wong and Tam (2000) proposed a SPACE model, in which *guanxi* was divided into country, society and individual levels. They interpreted country level as a system to protect personal economic capital in absence of property law, society level as personal economic capital, denotation asset deposited in *guanxi* and connections in the *guanxi* network, and individual level as empathy, including constraint, reciprocity to acquire flexibility and adaptation, as well as fast respond in the network.

1.4   Problems with *guanxi* studies

We can divide the existing literature into two categories. The majority of extant literature is based on constructs from relationship marketing originated from western academia. Others describe *guanxi* in original Chinese language. Though very small in number, the latter has become increasingly important in the research on real Chinese business relationship.

The first category is helpful for us to understand the gap of relationship marketing between China and the West due to cultural differences. But constrained in the existing constructs and western thinking pattern, we may not arrive at a thorough and true conclusion in the comparison. Such research hardly borrows concepts from other disciplines to study *guanxi*, such as transaction cost and relationship exchange theory.

The second category is a favorable attempt to define *guanxi* in native language. But it is questionable to totally abandon the western relationship marketing constructs, because as shown in the literature analysis, there is an overlap

between them. What is more, some Chinese adages relating to Chinese business culture are actually not indications of *guanxi* (e.g., "Money can buy the devil himself"), thus are not suitable to describe *guanxi*.

Furthermore, as pointed out by Ambler and Styles (2000), some problems also exist in current *guanxi* study. Some of these problems can be resolved by certain research methods, but others remain problematic due to the complex and obscure nature of *guanxi* itself.

(1) Excessively focused on certain sub-constructs before clarifying all the major constructs of *guanxi*. We tend to pay particular attention to popular constructs such as commitment and trust, and then divide them into even narrower sub-constructs (emotional commitment vs. calculating commitment, credibility trust vs. benevolence trust), rather than focus on a more macro level. The in-depth research is meaningful but maybe too narrow to be applicable in practice. We thus need more comprehensive and full-scale constructs research now before any further sub-constructs study.

(2) Another problem is whether certain concepts are constructs or sub-constructs. For example, whether are benevolence and honesty the sub-constructs of trust, or two independent factors other than trust? Another example is that some academicians divide commitment into instrumental commitment and emotional commitment, which can be two aspects of commitment, or two independent factors, or sub-constructs of commitment. If no structural significance of these concepts is defined, or measurement of these constructs is evaluated, the conclusions drawn from these concepts are doubtful.

(3) When we decompose *guanxi* into several constructs, we do not know whether they are *guanxi* itself or merely antecedent or outcome variables of *guanxi*. For example, is trust the precondition of *guanxi* or the outcome of *guanxi*, or actually the sub-construct of *guanxi* itself? In the measurement of *guanxi*, trust between business partners is undoubtedly a criterion of *guanxi*, thus it is contained in *guanxi*. But when it comes to the correlations of trust and *guanxi*, there is inevitably an overlapping. In addition, we can hardly tell whether trust is an antecedent or outcome variable: "We trust each other, so we build *guanxi*" or "We have good *guanxi*, so we trust each other"?

(4) *Guanxi* literature has discussed dimensions of *guanxi* and the interactions between these dimensions, but no research has been done about the relation between these dimensions and short-term & long-term performance, therefore the possible effects of *guanxi* on value creation remain unknown. People are doubtful about *guanxi* value, or hold conflicting opinions. What's more, the quantification of *guanxi* value is very difficult.

(5) No differentiation is made about dyadic relationship itself and the perception of this relationship by business partners. For example, the construct of

reliance, can be interpreted as "business partners rely on each other in their operations" or "the business partners relies on us to be successful in business" or "our business relies on the other party". These are related but different expressions. What is more, business partners may hold different perceptions about their relationship: The business partners may think that we depend on them, but we actually do not think so, and the actual situation may be something else. Such problems exist in many aspects. It is believed that dyadic research method is a useful way to understand such a relationship, but so far little research has adopted it in the *guanxi* domain.

With limitations on survey conditions and time, this paper cannot solve all the above problems. In a sense, however, these existing problems provide us with a direction of future research.

2 Qualitative study–content analysis and focus group

2.1 Content analysis

2.1.1 Methods

(1) Research tool: Use internet search engines to search literature on *guanxi* and then analyze the results. Search engines include: www.google.com, www.yisou.com, and www.baidu.com.

(2) Analysis method: First, we entered "*guanxi*" and got the total number of literature referring to this subject; then, based on the constructs analyzed from literature review, we entered "*guanxi*" and these constructs respectively and got the number of literature; at last, we summarized in a table the number of literature on each constructs relating to *guanxi*. With the above three search engines, we repeated these processes to collect data needed.

(3) Search language: We intentionally use English to search for results because the Chinese character "*guanxi*" is so widely used in various situations that we cannot confine it in the context of academia. But in English language, "*guanxi*" is a proper noun, which can improve the validity of results. On the other hand, academic interests for *guanxi* mainly originated from the west and China's studies on this issue are mainly from scholars of Hong Kong and Taiwan.

2.1.2 Results

The number of paper on the constructs of *guanxi* obtained from internet surfing are listed in Table 3. These constructs are acquired from the previous literature review.

Table 3   Content Analysis of *guanxi* Constructs based on internet surfing

Rank	Constructs of *guanxi*	Number of Papers		
		Google	Yisou	Baidu
1	Process	21 200	659	534
2	Relationship	20 800	908	608
3	Network	19 600	1 042	622
4	*Mianzi*	17 800	8 115	400
5	Exchange	15 300	630	311
6	Association	15 200	2 657	370
7	Trust	12 100	2558	341
8	Resource	11 200	271	237
9	Benefit	10 100	1 743	177
10	Commitment	8 730	1 311	155
11	Connection	8 250	1 570	223
12	Interlink	8 200	259	238
13	Interaction	8 190	175	190
14	Favor	4 990	992	143
15	Friendship	4 480	987	84
16	Harmony	981	762	97
17	Dependence	894	460	50
18	Adaptation	892	449	61
19	Honesty	819	273	19
20	Reciprocity	607	381	45
21	Emotion	504	374	53
22	Bonding	383	125	14
23	Empathy	257	104	12
24	Particularistic ties	87	6	11
25	*Renqing*	3	3	3
	Total number of papers on *guanxi*	69 800	42 502	8 790

2.1.3   Results analysis

As above, a majority of the constructs of *guanxi* are from the context of western world, such as connection, process, trust and commitment. Except for "face", other constructs with Chinese local culture uniqueness such as "*renqing*" are small in number. In addition, the emotional dimensions of *guanxi* constructs, e.g., emotion, empathy, *renqing*, are comparatively less favored by researchers. A possible explanation is that these dimensions are not significant parts in commercial *guanxi*.

We divide the above list of construct into four categories: 1) Economic dimension: benefit, bonding, dependence and adaptation; 2) Social dimension:

connection, association, trust, commitment and honest; 3) Emotional dimension: empathy, friendship and emotion; 4) Cultural dimension: reciprocity, *renqing*, favor, face and harmony.

2.2 Focus group

2.2.1 Research process

Focus group is a very good way to design questionnaire. We invited 10 MBA students of Wuhan University to join in a one-hour focus group. These part-time students work as sales managers, regional managers or general manager assistants, who not only grasp classic theories of marketing from the west, but also have insights and practical experiences in local business activities. They can thus offer valuable opinions about commercial *guanxi* in the context of Chinese culture.

The talk consisted of three steps: First, we invited respondents to think independently the concept of local commercial *guanxi*, and then give their own definitions of *guanxi*. Second, according to the results from content analysis, the host proposed different questions about commercial *guanxi* from various aspects and dimensions to help respondents work together on a better definition of commercial *guanxi*. Last, the host encouraged respondents to discuss with each other freely (in much the same way like brainstorming) to find more descriptions of commercial *guanxi*.

Specifically in the process, we put forward three questions to promote gradually the discussion on commercial *guanxi*: 1) When it comes to *guanxi* in the Chinese business activities, whether or not there are two types of *guanxi*—one is *guanxi* built on business interactions, which equals the relationship described in the western relationship marketing theories; the other is an "old" *guanxi*, namely a pre-existing social relationship (such as old collogues or classmates), on which the business relationship is built. The purpose of this question is to confirm the differentiations of *guanxi* and relationship. To this question, all the 10 members agreed there was a difference. 2) When it comes to *guanxi* in the Chinese business activities, what is the first word you think about? The answers were, respectively, *renqing* (2 votes), acquaintances (2 votes), how to be a sophisticated person, person, emotion, exchange, profit and usefulness. An analysis of these answers showed that 70% of the respondents regarded *guanxi* as an equivalent of *renqing*, others considered *guanxi* as an exchange, not an exchange of goods, but an exchange of various recourses in possession, and still others interpreted *guanxi* from the perspective of functionalism, laying special emphasis on the profitability and usefulness of *guanxi*. 3) We asked

the respondents to give as many as possible definitions of *guanxi* according to their own understandings.

During the discussion, we encouraged the respondents to jump out of the academic context and describe *guanxi* with their own language from a multiple of dimensions and angels. We believe this orientation might cover up the deficiency of the present more theory-building-oriented literature content analysis of *guanxi* and arrive at a more practical understanding of *guanxi* in the real Chinese business world.

2.2.2   Results

The results obtained from the focus group are pretty diversified in nature, as shown below.

Table 4   Focus group results

Dimensions	Constructs	Respondents holding this view
Similar to relationship in relationship marketing	Connection, long-term association	1
	Dependence	1
	Cooperation	1
	Trust, reliance	4
	Mutual benefit	5
Emotional	Affection	5
	Friendship	2
	Understanding of business partners, acknowledgement	2
	Sense of belonging	1
	Social satisfaction	1
	Hang out individually	1
Utility/Exchange	Bring about profit and gain	8
	Exchange of interest	8
	Relating to power	5
	Using each other	1
Institutional dimension	Non-official system	3
	Institute of law and contract	2
	Efficient operations in a abnormal market	2
	Operations under the table	1

(*To be continued*)

Dimensions	Constructs	Respondents holding this view
Social dimension: social capital	*Quanzi* (social circles), social rank	2
	Special tie	4
	Acquaintances	2
Cultural dimension	*Mianzi*	3
	Renqing	3
Individual dimension: *Guanxi*-oriented individual	Knowledge of how to be a sophisticated person	2
	Value of a person	1
	Influential power	1
	Constraint of your behavior	1

2.2.3 Results analysis

(1) Dimensions of *guanxi*: institutional, social, cultural, and individual dimension. Institutional dimension of *guanxi* refers to non-official systems or hidden rules, which cover up the vacuums of official systems such as law and contracts, and even, under certain circumstances, substitute these official systems to restrict interactions of business partners. Focus group members describe these aspects of *guanxi* as: "*guanxi* often outstrips laws in china", or "*guanxi* often outgoes contracts in china".

The social dimension of *guanxi* refers to network of personal associations, which is made up of acquaintances and thus form *quanzi* (social circles) based on special ties. The treatment of person inside and outside *quanzi* is quite different. For an individual, to have more social network means to have more *guanxi*, and thus to have greater ability to acquire resources and obtain greater influence and control power.

The cultural dimension of *guanxi* involves connotations and characteristics of *guanxi*, which is a unique cultural phenomenon in the Chinese society, such as *renqing*, face and payback, etc.

The individual dimension of *guanxi* identifies the significance of *guanxi* to individuals. It is both the embodiment of individual's value and constraint of individual's behavior. *Guanxi* is the wisdom of how to be a popular and sophisticated person.

(2) Nature of *guanxi*: emotional *guanxi* vs. utility *guanxi*. Huang (1988) proposed the interaction rules of *guanxi* in the "*renqing* and *mianzi*" mode and divided *guanxi* into expressive tie, instrumental tie and mixed tie. Expressive tie depends on "demand rule" to satisfy needs of affections, safety and ascription; Instrumental tie complies with "fair rule" to acquire resources through calculating benefit and cost; mixed tie accords to "*renqing* rule" to maintain and operate

guanxi through accepting favor and paying back. Statistics show that instrumental tie prevails in the business world, while expressive tie has niches of its own.

(3) Different understanding of *guanxi* exchange: In the economic dimension, the Western relationship marketing stresses on business reliance and profit basis for the possibility to develop relationship. The relationship mainly exists at the corporation level, which is institutional and transparent. However, the nature of Chinese *guanxi* is benefits exchange, and such benefits involve nearly all aspects such as power, resources and opportunities. *Guanxi* exists between individuals of corporation, which is an un-institutionalized grey area on most occasions.

3   Quantitative research—To develop a commercial *guanxi* scale in the context of Chinese culture

3.1   Pre-research: Formation of innitial questionnaire

(1) The initial 5-point Likert questionnaire was made based on a series of dimensions and constructs of *guanxi* obtained from literature review, content analysis and focus group. The questionnaire integrates together institutional, social, cultural and individual dimensions, economical factors and emotional factors, taking into consideration both the western and Chinese local constructs, as shown in Table 5.

Table 5   Constructs of *guanxi* in the initial questionnaire

Dimensions	Constructs	Construct Description	Items
Economical *guanxi*	Profit base	Economic profit is the basis and preposition of *guanxi*	1, 2
	Independence	Interdependence of business	3
	Bonding	High cost of terminating *guanxi*, difficulty in finding substitutes	4, 5
Utility *guanxi*	Benefit exchange	Mobilize resources, exchange for each other to attain their expected goals	6, 8
	Using each other	Establish *guanxi* and use it as a tool to attain one's own objectives	7, 8
Gregarious *guanxi*	Association	Social connection, communication	24, 25
	Adaptation	Adapt to environment in *guanxi* networks, be flexible to meet changes of business partners	26
	Commitment	Attract customers through commitment and persuade them to behave in the expected way. Be honest and keep one's promise	39, 40
	Trust	Have confidence in one's business partners and believe they will behave as expected	41

(*To be continued*)

Dimensions	Constructs	Construct Description	Items
Emotional *guanxi*	Empathy	Understand one's business partners and consider things from their perspectives	18, 19
	Business friendship	Make friends and build up commercial *guanxi* on the basis of mutual trust	22
	Emotional connection	Emotional connection and communication between business partners	23
Institutional *guanxi*		Informal Substitute of law and contract	9, 10, 11
Social g*uanxi*	*Guanxi* network	*Quanzi, renmai*, acquaintances , establish *guanxi* networks of one's own to obtain benefits which can not be obtained through formalized official networks	12, 13, 14
Cultural *guanxi*	Payback	Payback is a special offer, which implies reciprocity and mutual obligations, especially in a highly hierarchized social network	27–38
	Mianzi	*Mianzi* means high social position and advantages. It is a symbol of personal dignity. *Mianzi* is like a prestigious commodity which can be perused or awarded, lose or deprived. In business activities, *mianzi* is not only of the person himself but of the organization he represents. Keep dignity and harmony is regarded as giving *mianzi*	43
	Favor	In social exchanges, one can give any resources available to the business partners in order to strengthen *guanxi*	42, 45, 46
	Renqing	*Renqing* implies reciprocity, which affects business negotiation by offering help and favor. Refusal of such an offer will make the other party looses face, which in turn hinders *guanxi*	44, 47, 48
	Harmony	The value of "harmony is precious" in *guanxi* network	49, 50
Individual *guanxi*	Wisdom to be a person	*Guanxi* is the manifestation of personal quality and the wisdom of how to be a cultivated person	15
	Behavior constraint	Individuals in *guanxi* network abide to *guanxi* rules	16
	Personal value	*Guanxi* network is the manifestation of personal resources and power	17

(2) Respondents and sampling. MBA students from Wuhan University were invited to participate in the research. Out of the 80 questionnaires handed out, a total of 51 valid ones were collected.

(3) Item analysis. The initial questionnaire contained 53 items. We needed first of all to analyze these items and eliminate those invalid ones.

To improve the face validity of the questionnaire, we refined the 53 items by discussing with scholars in the field based on the explicitness, inner coherence and conciseness of these items.

The item analysis followed the following steps: 1) assortment of the items according to average points; 2) respondents division—the top 25% were divided into high-point group and the bottom 25% into low-point group; 3) calculation of the critical ratio of each items through T-tests. The results showed that there was a significant difference between the high-point group and low-point group on each item. In the end, 3 items were eliminated for failing to pass the T-test and a 50-item questionnaire was obtained.

The pre-research confirmed the multi-dimensional structure of *guanxi*. For more refined study, the procedure of revision–test–results analysis–revision again shall be repeated for several times. Due to limitations of survey conditions, only one revision was made in this study.

3.2   Formal research

The respondents of the formal investigation included MBA, EMBA students, and some financial analysts. 220 copies of questionnaire were delivered and 161 valid copies were obtained. Factor analysis, reliability test and validity test were conducted. Direct judgment method was adopted to eliminate invalid questionnaires, which may have the following features: 1) Lack of basic personal information; 2) Incomplete filling out the questionnaires; 3) Obvious random answers (i.e. many same choices). Moreover, questionnaires were also sifted by data analysis.

3.2.1   Factor analysis

Factor analysis is a generic term for a family of statistical techniques concerned with the reduction of a set of observable variables in terms of a small number of latent factors. The underlying assumption of factor analysis is that there exist a number of unobserved latent variables (or "factors") that account for correlations among observed variables. If the latent variables are partialled out or held constant, the partial correlations among observed variables all become zero. In other words, the latent factors determine the values of the observed variables. For our purpose, the main principle components analysis method was adopted to extract factors.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity were used to test whether the adoption of factor analysis in this research was suitable. The former tests whether the partial correlations among variables are small. It is commonly used for comparing the magnitudes of the

observed correlation coefficients with the magnitudes of the partial correlation coefficients. As a rule, the larger the value of KMO, the more similarities among different variables, the better it is for researchers to adopt factor analysis method. According to Kaiser (1974), a KMO value bigger than 0.5 is a minimum requirement for factor analysis. The latter is used to test the null hypothesis that the variables in the population correlation matrix are uncorrelated. If the observed significance level is smaller than 0.000 1, it is small enough to reject the hypothesis, showing that the strength of the relationship among variables is strong and is thus suitable for factor analysis.

(1) Analysis of questionnaire items. Principle components extraction was used in an initial run to estimate the number of factors with forced eigen values that exceed one. The KMO is 0.523, indicating that the sampling adequacy was greater than 0.5 and was satisfactory. Bartlett's test shows a Chi-square of 327.865 (*d.f.*=25) with a significance level of 0.000, thus satisfies the requirements of factor analysis.

The determination of the optimal number of factors to be extracted is not an easy job due to the ultimate subjectivity of the decision. Some of the most commonly used guidelines are the Kaiser-Guttman rule, percentage of variance, the screen test, size of the residuals, and interpretability. The "eigenvalues greater than one" rule has been most commonly used due to its simplicity and availability in various computer packages. It states that the number of factors to be extracted should be equal to the number of factors having an eigenvalue (variance) greater than 1.0. Following the Kaiser-Guttman rule, we extracted from all the 50 items 16 factors, which account for 80.912 4 percent of the total variance. However, the last 7 factors account for only less than 2 percent of the total variance and these scattered factors are hard to explain. Consistent with our original hypothesis that the constructs of *guanxi* including economical, emotional, gregarious, institutional, social, cultural, individual dimensions, we extracted a total of seven factors. Rotated Component Matrix showed that together these factors explained 54.135 percent of the total variance.

Specifically, Item 4, 5, 6, 7, and 8 loaded heavily on Factor 1, which stands for economical dimension; Item 19, 20, 21, 22, 23, and 26 on Factor 2, which stands for emotional dimension—brotherhood, affection, commercial friendship, empathy; Item 27–38, 44–47, 49, and 50 on Factor 3, which stands for cultural dimension—reciprocity, harmony, favor and *renqing*; Item 12, 13, and 14 on Factor 4, which stands for social dimension—interpersonal network, acquaintances; Item 18, 24, 25, 39, 40 and 41 on Factor 5, which stands for gregarious dimension—trust, integrity and commitment; Item 15, 16 and 17 on Factor 6, which stands for individual dimension—how to be a good person, personal values, constraints; and Item 9, 10 and 11 on factor 7, which stands for institutional dimension. As a whole, the results of factor analysis are basically

consistent with that of the qualitative results, though not exactly occur in the way as we had anticipated. For example, we regarded the gregarious dimension as a part of the social dimension rather than as an independent factor. This happened maybe because that the concepts in gregarious dimension—trust, integrity and commitment are borrowed from western literature, and these concepts show the inner nature of *guanxi* and they all have a positive meaning (which in the following analysis falls into the category of emotional dimension). However, the social dimension—interpersonal network, acquaintances are basic Chinese expressions. These concepts are the outside form of *guanxi* and they are words of neutral meanings. To clarify the inner structure of each dimension, factor analyses were repeated on every dimension to extract sub-constructs from them.

(2) Economical dimension. The KMO is 0.641 and the Bartlett's test shows a Chi-square of 203.449 (*d.f.* = 28) with a significance level of 0.000, all meeting the requirements of factor analysis. Three factors are extracted from orthogonal rotation (as shown in Table 6). Rotated Component Matrix shows that these 3 factors count for 68.488 percent of the total variance. Specifically, Item 4, 6, 7, and 8 loaded heavily on Factor 1, which can be interpreted as utility *guanxi*, including benefits exchange, using each other. Item 1 and 2 loaded on Factor 2, which can be interpreted as economical benefits. Item 3 and 5 loaded on Factor 3, which can be interpreted as dependence. These results supported our hypothesis. Factors extracted from factor analysis are listed in the order of importance. As we shall see, utility *guanxi* is the most important aspect, the best manifestation of local understanding of *guanxi*, with economical benefits being the next and dependence being the last. All of the three constructs have been documented in the western marketing literature.

Table 6   Rotated component matrix: Items of economical dimensions

	Component		
	1	2	3
F8	0.777		
F6	0.700		
F7	0.693		
F4	0.595		
F1		0.825	
F2		0.769	
F3			0.827
F5			0.552

(3) Gregarious and emotional dimensions. The KMO is 0.664 and the Bartlett's test shows a Chi-square of 125.170 (*d.f.*=66) with a significance level

of 0.000, all meeting the requirements of factor analysis. 4 factors are extracted from orthogonal rotation (as shown in Table 7). Rotated Component Matrix shows that these 4 factors count for 60.523 percent of the total variance. Specifically, Item 20, 21, 22, 23, and 26 loaded heavily on Factor 1, which stands for renyi (mercy and justice), brotherhood, affection and business friendship. Item 39, 40 and 41 loaded on Factor 2, which stands for trust, integrity and commitment in gregarious *guanxi*. Item 18, 24 and 25 loaded on Factor 3, which stands for connection, cooperation and communication in gregarious *guanxi*. Item 19 loaded on Factor 4, which stands for empathy in emotional *guanxi*.

Table 7   Rotated factor matrix: Items of social and emotional dimensions

	Component			
	1	2	3	4
F26	0.769			
F22	0.751			
F21	0.604			
F23	0.603			
F20	0.550			
F41		0.816		
F40		0.720		
F39		0.629		
F24			0.718	
F18			0.667	
F25			0.551	
F19				0.751

Item 18 (i.e. understanding each other) and Item 26 (i.e. adaptations were quite contrary to our expectations. Originally, we supposed "understanding each other" as a measurement for emotional dimension. However, it turned out to relate more closely with the gregarious dimension. One possible explanation is that frequent communication and connection in gregarious activities between business partners may lead to an increase in mutual understanding. Item 26 is a construct stems from western literature, which we supposed as more related to the gregarious dimension. However, for some reasons, it turned out to belong to the emotional dimension. In a sense, these results show that gregarious and emotional factors are so much interweaved that we can hardly separate them as independent factors.

In addition, the rank of *guanxi* constructs in the order of importance shows that imported concept "empathy" has the least importance in our understanding of *guanxi*, while the local expressions of renyi and brotherhood have the highest importance.

(4) Cultural dimension. The reason to list cultural dimension separately is that the connotation of cultural dimension is rather complex and sophisticated. The KMO is 0.576 and the Bartlett's test shows a Chi-square of 425.029 ($d.f.$=210) with a significance level of 0.000, all meeting the requirements of factor analysis. 7 factors are extracted from orthogonal rotation. Rotated component matrix shows that together these factors account for 68.875 percent of the total variance.

Eleven items were used to describe the reciprocity construct. Even after factor rotation, there were still 7 factors difficult to explain. Therefore, to see what might happen after deleting these factors, we conducted factor analysis to the remaining items. The KMO is 0.547 and the Bartlett's test shows a Chi-square of 89.982 ($d.f.$=36) with a significance level of 0.000, all meeting the requirements of factor analysis. In the end, 3 factors were extracted from orthogonal rotation (as shown in Table 8). Rotated component matrix shows that Item 49 and 50 loaded heavily on Factor 1, which stands for harmony; Item 44, 45, 46 and 47 on Factor 2, which stands for favor and *renqing*; and Factor 3 (Item 43) stands for *mianzi*.

Table 8　Rotated factor matrix: Items of cultural dimension

	Component		
	1	2	3
F49	0.834		
F50	0.704		
F46		0.675	0.197
F45		0.661	−0.212
F47		0.605	0.355
F44		0.579	0.087
F43			0.648

3.2.2　Reliability

Reliability is the consistency of a set of measurements or measuring instruments. There are four general classes of reliability estimates, each of which estimates reliability in a different way. Inter-rater or inter-observer reliability is used to assess the degree to which different raters/observers give consistent estimates of the same phenomenon. Test-retest reliability is used to assess the consistency of a measure from one time to another. Parallel-forms reliability is used to assess the consistency of the results of two tests constructed in the same way from the same content domain. Internal consistency reliability is used to assess the consistency of results across items within a test. In this research, we are interested in finding out how consistent the results are for different items for the same construct within the measure, i.e. internal consistency reliability.

There are a wide variety of internal consistency measures that can be used—average inter-item correlation, average item-total correlation, split-half reliability and Cronbach's Alpha (α). In this research, the Cronbach's Alpha was selected, which is mathematically equivalent to the average of all possible split-half estimates. The results are listed in Table 9.

Table 9 Reliability of *guanxi* scale ($n =61$)

	Internal consistency reliability (α)
Guanxi scale (total)	0.841 7
Economical dimension	0.701 6
Gregarious dimension	0.826 5
Emotional dimension	0.687 4
Institutional dimension	0.845 2
Social dimension	0.769 6
Cultural dimension	0.820 1
Individual dimension	0.690 2

A commonly-accepted rule of thumb is that a value of 0.6–0.7 indicates acceptable reliability, and 0.8 or higher values indicate good reliability. Note that extremely high reliabilities (e.g., 0.95 or higher) are not necessarily desirable, as this indicates that the items may be not just consistent, but redundant. As shown in Table 9, the commercial *guanxi* scale as a whole has good reliability. Except the emotional dimension, all dimensions have a Cronbach's Alpha above 0.70.

3.2.3 Validity

Validity is even more complicated than reliability. As far as construct validity is concerned, there are translation validity or so-called representation validity, and criterion-related validity. For translation validity, we use face validity and content validity to measure it; and for criterion-related validity, there are predictive validity, concurrent validity, convergent validity and discriminate validity. Specifically for this research, a consensus was reached by the experts on the items of *guanxi*, which strengthens the face validity; and a review of the operationalization against the relevant content domain for the construct shows that all the important content areas are covered adequately, which in turn guarantees the content validity. Criterion-related validity, such as predictive validity and concurrent validity, is far more demanding than what can be covered in one single research design, which we hope will be resolved in future in-depth study.

3.3   Discussion

3.3.1   Structure of *guanxi* constructs

Classification research of *guanxi* can be conducted from both the categorical and dimensional perspectives. The former classifies *guanxi* from the angle of denotation, such as Yang's classification of family/acquaintance/stranger (Yang, 1993); The latter classifies *guanxi* from the angle of connotation, such as expressive tie, instrumental tie and mixed tie. Categorical perspective belongs to the so-called first-degree construct (Schutz, 1962), which is actors' explanations of their own behaviors by answering "what is *guanxi*". Dimensional perspective belongs to the so-called second-degree construct, which is basically scholars' theoretical explanation of "how to establish and realize *guanxi*".

(1) What is *guanxi*—categorical perspective of *guanxi*: institutional level, social level, cultural level, individual level (Fig. 1).
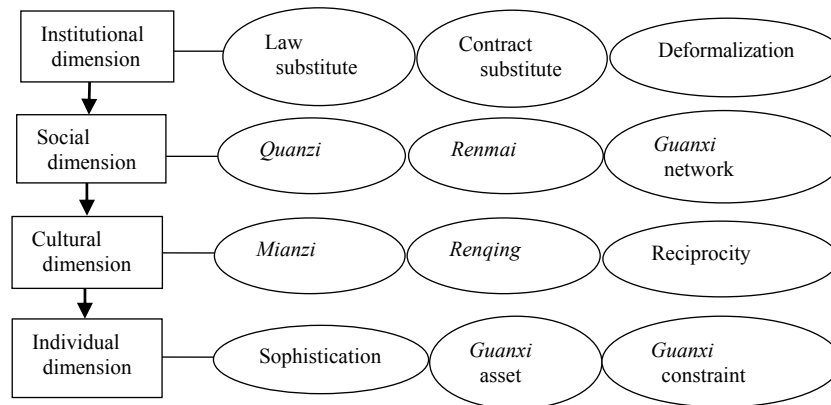

Fig. 1   Categorical perspective of *guanxi*

Guanxi at the institutional level refers to commercial *guanxi* as an unofficial institution or hidden rules. Such rules can cover up the vacuum of law, official regulations or formal contracts. Under certain circumstances, these commercial *guanxi* can even be used as substitutes for formal institutions or rules to regulate social behaviors. *Guanxi* at the social level refers to the business "*guanxi*" network. That is what we call it as "*quanzi*" which is made up of acquaintances that are connected by special social ties. Therefore, we can tell whether one person is an insider or an outsider of a "*quanzi*".   For individuals within *guanxi* networks, having position in more *quanzi* means more personal power to acquire

resources, influence and control. Cultural level refers to the characteristics and features of *guanxi* network, especially the unique culture phenomena in China, such as *renqing* and *mianzi*. *Guanxi* at the Individual level refers to significance of commercial *guanxi* to individuals, which is both a manifestation of personal value, and a constraint of personal behavior. It involves the wisdom of how to be a cultivated person.

(2) How to establish and realize *guanxi*—dimensional perspective of *guanxi*: economical, emotional and social *guanxi* (Table 10).

Table 10 Dimensional perspective of *guanxi*

Economical *guanxi*	Utility	Mobilize resources, exchange for each other to attain their own objectives
		Build *guanxi* to use it as a tool to attain one's own objectives
	Benefit	Economic profit is the base and precondition for *guanxi* building
	Bonding	High cost of *guanxi* termination, difficulty in finding substitute
Social *guanxi*	Association	Social connection, communication, cooperation
	Adaptation	Adapt to the environment in *guanxi* networks, willing to be flexible to adapt to changes of one's partners
	Commitment	Attract customer through promise, persuade them to behave in an expected way, be honest and keep your promise
	Trust	Have confidence in one's business partners and believe they will behave as expected
Emotional *guanxi*	Empathy	Understand one's business partners and consider things from their perspectives
	Business friendship	Make friends and build up commercial *guanxi* on the basis of mutual trust
	Emotional connection	Emotional communication and connection between business partners

3.3.2 Comparison of qualitative and quantitative results

As above, the quantitative results obtained from this research accord with our qualitative judgment. Quantitative results support more of the local constructs, but imported constructs such as empathy and adaptation were only partially supported. The results show that localized construct such as *renqing*, *mianzi*, harmony and reciprocity are very important factors in Chinese business community.

3.3.3   Theoretical and practical significance

Through qualitative and quantitative research, we conducted an exploratory study on Chinese commercial *guanxi* and developed a scale for *guanxi* measuring. This research has important implications in understanding *guanxi* in Chinese local context and in developing Chinese local marketing theory. Of course, several limitations exist due to the exploratory nature of this research.

4   Limitations and implications for future research

4.1   Limitations

(1) Quality of the questionnaire needs to be further improved. Due to limitations of research conditions, further improvements are seriously needed for both the quality and quantity of the samples. A small sample, lack of representativeness and other uncontrollable factors during investigation may negatively affect the applicability of our conclusion. In addition, the validity of questionnaire also needs improvements since many factors still remain unknown to us. In-depth exploration on the profound connotation of *guanxi* concept is needed in future study.

(2) The *guanxi* classification system we proposed needs to be further perfected. As above, the system we proposed is by no means exclusive. Other classification approaches, such as classifying *guanxi* in accordance with *guanxi* basis, have been proposed by some researchers, which, however, are beyond the range of this paper.

4.2   Implications for future research

(1) Perfection of the commercial *guanxi* scale. A good scale takes more than one study to develop. Much further perfection is needed to substantiate and verify the commercial *guanxi* we proposed. Because of the limitations mentioned above, more samples with better representativeness are needed to retest the scale. What is more, scale investigation to other respondents, especially to foreign businessman in the West and foreigners doing business in China, are most likely to bring in new enlightenments to the perfection of our scale.

(2) Widen the applicability of the commercial *guanxi* scale. For example, future study can try to make the *guanxi* scale more suitable for individual enterprise. The scale developed in this research is an overall macro-measurement of Chinese commercial *guanxi*. For a specific micro-measurement of *guanxi* for individual enterprise, many items in this scale need to be changed accordingly.

(3) Case study of a specific *guanxi* network. Case study can be used to

describe and analyze *guanxi* network, its structure and connotation; how to execute *guanxi* management; and how it is connected with business performance.

(4) Development of functional indexes of *guanxi* and conduction of quantitative research. For these purposes, we have designed relevant research program to facilitate research in this direction. Even though the quantitative measurement of *guanxi* still seems too ambitious a goal, the development of functional indexes of *guanxi* will definitely bring a closure to the debate on advantages and disadvantages of *guanxi* in the business world.

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