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Xin Li March 25, 2016

“Gift or Burden: Economics of Gift-exchange in China”

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An abstract of
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Abstract

"Gift or Burden: Economics of Gift-exchange in China"

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The practice of gift exchange has been seen as "aiding in the formation and maintenance of social relationships and ultimately as contributing to realizing social harmony," which has always been of paramount importance in Chinese culture. However, with the passing of time, gifts have seem to become a "sweet burden" for households as publicized by the media. In order to study the practice of gift-exchange in China and whether it has become a heavy burden, this study examined the relevant factors that influence Chinese gift-exchange using 2010 data from the China Family Panel Studies (CFPS) (2010). Gift-exchange is shown to be very prevalent in China and the ratio of gift-expenditure and income is much higher compared to households in other countries, such as the United States. All in all, gift giving does not appear to be an extremely heavy burden on most Chinese households. However, the poorest households devote a relatively large percentage of income to gifts. Various social and demographic factors, employment, income level, community level characteristics, and province fixed effects are found to be significant predictors of gift-exchange activities. The mechanism behind these factors can be explained using the combination of social status concern and utility functions.

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Figures and Tables

Gift or Burden: Economics of gift-exchange in China

1. Introduction

Harmony, the essence of Confucian theories of social interaction, has always been of paramount importance in Chinese culture (Chen 2001). The practice of gift exchange has been seen as "aiding in the formation and maintenance of social relationships and ultimately as contributing to realizing social harmony," (Mullis, 2008, p. 183). Because in the past, the entire social group supported the livelihood of an individual, the individual felt obliged to be loyal to the group, which was demonstrated and expressed through gift exchange. Throughout time, the cycle of giving and reciprocity was established. Although the society itself has been changing dramatically, the value of reciprocity and the practice of gift-exchange largely remained (Keng, Wang, Razzaque, 2007).

There are various occasions where gift-exchange takes place in different forms. Life-cycle events such as weddings and funerals are often associated with monetary-gifts giving, while birthday parties usually demand non-monetary gifts. All of these gifts are supposed to either express good wishes or establish and maintain relationships; however, with the passing of time, gifts have seem to become a "sweet burden" for households as publicized by the media. According to past theoretical and empirical research, there is a complex mechanism behind gift-exchange. The factors taking effect in the system include internal factors such as reciprocity and external factors such as income inequality (Chen, 2014).

In order to study the practice of gift-exchange in China and whether it has become a heavy burden, this study examined the relevant factors that influence Chinese gift-exchange

using 2010 data from the China Family Panel Studies (CFPS) (2010). The study mainly focused on three dependent variables to capture the household decision: gift-expenditure divided by total income, gift-received divided by total income, and gift-sent divided by gift-received, all in monetary values. The relevant factors include social, demographic, employment, income level, community level characteristics, and province fixed effects. The regression results showed that gift-exchange is very prevalent in China: everyone gives out gifts and income is much higher compared to households in other countries, such as the United States, which is 2% in 2013(BLS). The burden placed on households varies tremendously by income level, as the poorest households spend the highest percentage of their income on gifts and the richest households spend the lowest percentage of their income. Most of the factors included have significant predictive power for the first two dependent variables, while the effects of some of them balanced out for the third one. Most of the predictive factors can be explained by status concerns (Chen, Kabur & Zhang, 2011), while the others can be attributed to the substitution role of gifts for other important activities in people's life such as spending time with friends.

This study has several contributions. First, it used a nationally representative dataset to analyze gift-exchange, which is different from all other studies that covered a much smaller scale such as villages. By doing this, it partly corrected the bias created by the media that gift-giving has become a heavy burden on Chinese people. Meanwhile, it suggested the possible ways in which things can go wrong, i.e. gift-exchange becomes a burden unchecked, because it explored the relevant factors relatively comprehensively compared to other studies, most of which focused on social aspects or a very specific factor, such as the marriage market.

Another benefit of this comprehensive analysis is that one can, to some extent, predict a household's gift-exchange behavior according to the depiction of the analysis once obtain the relevant characteristics. Finally, it brought out another theory that explains gift-exchange behavior, particularly gift-giving by claiming that gift-giving is a substitute of other important things in people's life, such as time spent on social activities. .

The remainder of this paper consists of five sections. Section 2 covers the basic background information of traditional and current gift-exchange in China. Section 3 reviews related literature, Section 4 describes the data and methods, Section 5 presents the results, and Section 6 discusses the results and concludes.

2. Background information

Harmony, the essence of Confucian theories of social interaction has always been of paramount importance in Chinese culture (Chen 2001). The practice of gift exchange has been seen as "aiding in the formation and maintenance of social relationships and ultimately as contributing to realizing social harmony," (Mullis, 2008, p. 183). Because in the past, the entire social group supported the livelihood of an individual, the individual felt obliged to be loyal to the group, which was demonstrated and expressed through gift exchange. Throughout time, the cycle of giving and reciprocity was established. Although the society itself has been changing dramatically, the value of reciprocity and the practice of gift-exchange largely remained (Keng, Wang, Razzaque, 2007).

Specifically, there are different scenarios or purposes for gift sending, where there are corresponding groups of subjects receiving various types of gifts. For example, as a tradition, Chinese people prepare cash gifts before attending important life cycle events such as

one-month birthdays for babies, weddings, and funerals (The Economist, 2013). A one-month birthday celebration wishes the baby good luck and health throughout his/her life. In weddings, the gifts represent the good wishes of ever-lasting marriage to the newlyweds. It might be, at first glance, strange to give gifts on funerals, but traditionally, banquets are hosted to commemorate the death and people attending the banquet will usually contribute cash gifts to the banquets to both show their respect to the death and support the family for the expenditure on the banquets. For birthday parties, usually for children, people prepare non-monetary gifts. During holidays, especially the Chinese New Year (aka. Chinese spring festival), people give cash gifts to express their good wishes. During recent years, especially in the urban areas, some other celebrations strive and also start to demand cash gifts such as 80th birthday banquet and parties for children going to college (aka. Shengxueyan) (The Economist, 2013). Besides daily life activities, gift sending is increasingly important in business communication as well (Upton-McLaughlin, n.d.). Some business decision makers emphasized that gift sending is crucial for establishing and maintaining business relationships both with clients and government officials. (Upton-McLaughlin, n.d.)

All of these gifts are supposed to either express good wishes or establish and maintain relationships; however, with the passing of time, gifts have seem to become a "sweet burden" for households as publicized by the media. For instance, weddings can cause headaches both for the groom and the guests invited to the banquet. For the groom, the headache usually starts long before the wedding. According to an interview in 2013 reported on China daily, Mr. Ma, an online shop owner in Beijing, said that "I've racked my brain to come up with some romantic surprises or find some different gifts….They are really a burden". Besides

trying to satisfy his girlfriend on every special day, in order to maintain a relationship and finally get married, a man has to try hard to possess everything that represents wealth such as fancy cars and big apartments and gives his lover a diamond ring as a promise of true love. For the guests, they are receiving invitations at least once per month from relatives, friends, co-workers, etc. First of all, they have to decide which one they are attending, because they know that some of the invitations are just for courtesy under social pressure. After that, they have to decide how much cash gifts they will send. They have to give an amount that both satisfy everyone, because if they give too little compared to other people that are similarly close to the family, the host will be disappointed; one the other hand, if they give too much, other guests that are forced to match with them will be offended; finally, they have to be able to afford it. There is even an article on Guokr.com (a Chinese website) that came up with a regression line to help people decide how much cash gift they should send for a wedding in Taiwan. It uses a table with the "market level" of cash gifts in several different cities such as Taipei in 2015. The cash gifts range from 1,000 to 10,000 yuan and considered 'city', 'total # of guests in the banquet', '# of people attending with the cash gifts', 'proximity with the host' as regressors. Although the regression itself is not necessarily scientifically rigorous and the situation in mainland could be different from that in Taiwan to some extent, it at least reflects the phenomenon that gift sending is so predominant that people have to come up with some formula to calculate it in order for it to be appropriate. Another testimony from people.cn (a Chinese news website) showed how attending a wedding can be a burden for people these days. Mr. Zhu said that the cash gifts and the transportation fare spent on attending a wedding can take up as much as 30% of his monthly salary, which leaves him with almost nothing

except the basic utility expenditure.

3. Literature review

Social perspectives on gift-exchange

Based upon classical Chinese social and philosophical theories and empirical results, researchers and scholars explained the basic mechanism behind gift-exchange in china as follows: because people have social preferences, they care about other people's beliefs about them, which is the public image of an individual. Together with innate evolution-based logic of being success, improving the public image is one of the most important goals for an individual. Knowing that social network is the key to success, one establishes his/her network by exchanging resources, one of which takes the form of gifts. Out of reciprocity, the recipient party will give some resources back, including favors or gifts. Then the cycle of gift-exchange is successfully completed.

Specifically, this cycle first starts with social preferences and evolutionarily-favored desire of success. There are various theories on social preferences regarding altruism, reciprocity and fairness, among which reciprocity is a very important factor in gift-exchange. Before coming to the role of reciprocity, it is necessary for one to have the basic definition of social preference in mind. As proposed by Andreoni and Bernheim (2009) in the context of the dictator game defined the concept of social preference, people's utility does not only depends on the outcome of their decision but also other people's beliefs about them, which is defined as that the individual has a social preference. On the one hand, these beliefs of other people about the decision maker constitute an essential concept in Chinese culture: *Mianzi* (literal translation: face). *Mianzi* is a person's public image and everyone wants to protect it.

On the other hand, driven by the biological basis of evolution, every individual wants success to be the results of their decisions, which, in turn, improves their *Mianzi* as well. Therefore, another important cultural element comes in: *Guanxi*, which refers to "the direct particularistic ties between two or more individuals that determine the strength or closeness of interpersonal relationship (Keng, Wang, Razzaque, 2007, p.2)" The broader and stronger a *Guanxi* network is, the more powerful an individual is, especially in a work place context such as business (Keng, Wang, Razzaque, 2007). Therefore, as a "secret" to success, "*Guanxi* is an intricate and pervasive relationship network which the Chinese people cultivate energetically, subtly, and imaginatively (Keng, Wang, Razzaque, 2007)".

As another key element in the cycle, social exchange is necessary to establish such a network, so the medium of exchange comes into play: *Renqing,* which is another essential element in Chinese value systems and closely related to *Guanxi*. It can have different meanings in different contexts. Here, it refers to a type of resource, such as a favor or gift. One party would give favors or gifts as a signal. The recipient party will reciprocate in various ways out of various reasons. For example, when people would like to establish a personal relationship with someone in a higher hierarchy than themselves, the interaction usually starts with a gift to the superior, followed by the superior's doing a favor for the subordinate, which is perceived as a reciprocity to the gift. If the network is between two people in the same hierarchy, for example, two colleagues, gift-exchange is more common.

The mechanism behind reciprocity is interpreted in different ways. Sometimes it is viewed as pure reciprocity, which means the recipient wants to reciprocate genuinely; however, in some other occasions, the recipient just feels obligated to reciprocate due to

norms instead of genuine reciprocity since they care about other people's beliefs about them. Here, another definition of *Renqing* comes into play. It is interpreted as a set of social norms and obligations that require keeping in touch with those in one's *Guanxi* network by participating in exchange of gifts, greetings (e.g. phone calls), visits, and assistance (Guo, 2001). The third way to interpret reciprocity is based on one of the very important norms in Chinese traditional value system is *Li*, which is interpreted in different ways as well. Some scholars explain *Li* as politeness (Hairong Feng; Keng, Wang, Razzaque, 2007). According to Keng et al., reciprocity links gift-giving behavior to Li, translated as "notion of propriety" (Keng, Wang, Razzaque, 2007). Propriety is, again, an important elements in traditional Chinese value and constitutes "the basic concept of Confucianism." It requires a good person to give, receive, and return gifts in the long run, as captured in the Chinese proverb *li shang wang lai*.(Keng, Wang, Razzaque, 2007). Based on the Brown and Levinson's (B&L) politeness theory, which entails three central sociological variables: power, social distance, and ranking of imposition, Feng et al. used university students as subjects to investigate gift-giving activities and politeness. According to B&L's theory, there are positive and negative politeness strategies, which are used for minimizing the threat to positive and negative face respectively. Here, 'face' refers to *Mianzi* mentioned above; negative face is defined as "the freedom of action and freedom from imposition"; positive face refers to one's self-esteem (Brown and Levinson, 1987). Positive politeness strategies are used to protect positive face; correspondingly, negative politeness strategies are intended for protection of negative face. For factor "power", Feng et al. found that gift-givers responded more strongly toward positive politeness strategies when presenting a gift to a low power recipient, whereas

they responded more strongly toward negative strategies when presenting a gift to a high power recipient. For the factor "social distance", it was found that gift-givers responded more positively toward positive politeness strategies when a recipient was of close relationship; in contrast, they responded more positively toward negative politeness strategies when presenting a gift to a recipient of distant relationship. Finally, on the one hand, givers were more likely to use positive strategies when giving a gift of low value; one the other hand, they were more likely to use negative politeness strategies when giving a gift of high value. Overall, the efficacy of ranking of imposition on both politeness strategies are greater than that of power but smaller than that of social distance.

Despite the comprehensive and convincing theory behind the experiment, there are some scholars do not agree with the concept of politeness here. For instance, Hua, Wei, and Yuan (2000) argued that *Li* is different from politeness in content and structure because Confucius established the notion of *Li* and made it an ideal model for society and human relations, which covers a much broader scale and is much more complicated than politeness. Li (2007) proposed an interesting metaphor to explain the meaning of *Li* and its role in society. According to Li, the meaning of *Li* encompasses "all established ethical, social, and political norms of human behavior, including both formal rules and less serious patterns of everyday behavior." *Li* plays a similar role for the society as grammar does for language. There are several reasons behind it. First, grammar is by its nature a public property; *Li* is also essentially a public phenomenon. Second, grammar, at least in natural languages, is rooted in tradition and is passed down from generation to generation as *Li*. Third, grammar has a descriptive function. Similarly, *Li* describes how people in a society behave. Fourth, grammar

has an instrumental function in the learning of language. Similarly, learning to behave appropriately according to *Li* is a necessary step for children to become mature members of a community. Fifth, grammar regulates good use of language; similarly, *Li* is a measure of appropriate social behavior. Finally, although grammar largely remains constant over time, it does also change over time. So does the meaning of *Li* or the rules required by *Li*. No matter which explanation of *Li* is more reasonable, *Li* per sei makes the cycle of gift-exchange complete and most of the time, as people wish, makes *Guanxi* maintained. This cycle continues followed by the expansion of social network.

Economic perspectives on gift-exchange

Some other scholars took a closer look at this phenomenon specifically in rural China. In a study by Chen, Kabur and Zhang (2011), three competing factors behind gift giving were tested motivated by the claim that the poor spend a significant proportion of their income on gifts even at the expense of basic consumption. The three explanations are peer effect, status concern, and risk pooling. This study was based on a census-type household survey in three villages in rural China and on household gift records. It was shown that among the three factors, peer influence and status concern do have significant impact on gift-giving behavior. In particular, poor families with sons spend more on gift giving in proportion to their income than their rich counterparts, in response to the marriage market. Peer influence, here, reflects one of the different dimension of *Mianzi*, an important factor in Chinese people's social preference utility function, mentioned at the beginning of this section. Since people care about how they are perceived by their peers, they try to keep up with the amount of gifts they peers give. Similar logic applies for status concern. Since people care about being perceived

as successful or in high status, if they believe gift-giving can reveal their status, they will try to give as much as they can. A similar conclusion was drawn by Brown, Bulte and Zhang (2011). They showed that gift spending by households is highly sensitive to social spending by other villagers, which is similar to the peer effects mentioned previously. There is another interesting study by Chen (2014) which focuses on some primary villages in Guizhou provinces. This study largely focused on the economic aspects of gift-exchange. To avoid measurement error, a multiple wave census-type household survey and a long term gift record collection were implemented together. The pattern of gift-giving in major household social events and its recent escalation was analyzed by network mapping and doing correlations and regressions. They found that there are significantly positive correlations between gift network centrality and various forms of informal insurance. Also, economic inequality and competitive marriage market are among the main demographic and socioeconomic determinants of the observed gift network.

Gift-sending in other countries

Although gift-sending behaviors can be different across cultures, there are certainly common factors. For Americans, in 1991, Garner and Wagner established a model for American consumers' gift-giving behaviors by exploring its demographic, social, and economic dimensions. In this study, they found that the probability of extra-household gift expenditures is influenced by family size, the number of female adults in the household, stage in the family life cycle, ethnicity and education of the reference person, and degree of urbanization. Specifically, the family size and being in a city or rural area (compared to suburban area) are negatively correlated with the probability of gift-expenditure, while the

number of female adults in the household is positively correlated with it. For other variables, the results do not have a consistent trend of increasing or decreasing. For example, with regards to stage in the family life cycle, mature (35-64) retired married adults and older (>=65) single retired adults are more likely to spend on gifts, whereas coefficients for other stages are not significant. The expected value of these expenditures is influenced by family size, stage in the family life cycle, education of the reference person, and region. Specifically, family size is negatively correlated with magnitude of gift-expenditure, while other variables have mixed results. For example, again with regards to stage in the family life cycle, mature married employed adults spend more on gifts, while people in other stages do not display significant tendency. Also, for education, compared to high school graduates, people who were college graduates or higher spend more on gifts. People with lower education do not have a significant tendency to spend less on gifts, while the coefficients are negative.

There are also studies comparing and contrasting American and Japanese consumers. According to Green and Alden (1988), the decision processes related to gift giving differ, as do the specific products and services purchased for gifts. Moreover, the occasions and the gift recipients show several differences. The occasions, where Americans do not send gifts but Japanese do, overlap with Chinese habits largely, such as ‘entrance exams’, ‘sixtieth birthday’, ‘funeral gifts’ and ‘return from hospital’.

4. Data and methods

4.1 Data

This study used 2010 data from the China Family Panel Studies (CFPS) (2010) to examine the relevant factors that influence Chinese household decision of gift-exchange. The

Institute of Social Science Survey (ISSS) of Peking University launched this annual longitudinal survey in 2010 to collect individual-, family-, and community-level data in contemporary China. There have been multiple waves of surveys conducted, among which 2010, 2011, and 2012 are released. This paper used the 2010 survey results, which cover 25 out of 34 provincial-level administrative divisions that include 23 provinces, four Municipalities, five Autonomous Regions, and two Special Administrative Regions (for additional details see Appendix Table 1). Except for Shanghai and Gansu provinces, of which the share of community numbers is relatively higher than their population share in the entire Chinese population, the weights in other provinces are fairly reasonable compared to the Chinese population distribution. Applying the sample weights in the dataset can solve this issue. As for the age-structure, the median and mean of individual age are both around 45 years old; the average percentage of people over 60 years old is about 18%. This nationally representative survey involves 57,155 individuals that come from 14,960 households across China. 33.52% of the households come from urban residential communities (Ju Wei Hui), while 66.48% of them come from villages (Cun Wei Hui). The minority ethnicity consists of approximately 10% of the sample. As for occupations, 28.45% of the adults are employed. To analyze the potential impact of occupation on gift-exchange decisions, individuals that were marked as household representations were also categorized into ten industries (for additional details see Appendix Table2).

There are several reasons for which only the 2010 dataset was used. First of all, compared to the datasets in other years, it contains a wealth of information about household level financial decision-making, particularly the part that is relevant to the present study on

gift-exchange. Also, it provides enough demographic and other relevant information to be controlled in regression analyses. Moreover, the present study does not focus on the over-time changes of behaviors; therefore using one of the panel datasets will not only suffice the purpose of the study, but also avoid the issues that exist potentially in panel datasets.

4.2 Estimation sample and variables

Independent variables

Since this paper focused on the examination of decision-making regarding gift exchange at household level, it is necessary to convert some individual level variables into household level variables in statistical analysis when there are more than one individual in a household. The relevant characteristics of the primary decision makers: adult couples were converted into a representation of household characteristics since children can barely influence decision-making in a household. If there is only one adult in a household, then his/her information represents the household characteristics. Within this framework, specifically, household-level age and household level time spent on social activities are all the averages of responses from adult couples. Household-level education is the maximum of adult education levels in years. For some binary responses, such as employed or not and having an administrative/managerial position or not, the maximum value of the responses from adult couples are taken as the household level representations, which means that the household level variable takes a value of one if there is at least one adult meeting the specified status. Household level communist party membership is captured by three dummy variables: “noCom,” “fewCom,” and “manyCom”, which represent households with no communist party member, one communist party member, and more than one communist party member,

respectively.

To control potential influential factors, family size, community level factors, income level, employment industry, and province fixed effects were all included in regressions. More specifically, family size is captured by three dummy variables:"smallfamily," "regularfamily," and "largefamily". Each of them takes a value of one when the family size is less than three, three or four, and more than four, respectively. There are four community level factors included: community area in squared kilometers, community population size, whether the household is in rural areas (as in villages administrated by Cun Wei Hui and takes a value of zero) or urban areas (as in residential community administrated by Ju Wei Hui and takes a value of one), and income inequality captured by the range of income within community. Households are divided into ten groups with different income levels. The employed industries are categorized into ten groups as described in "data" subsection and the household level industry is captured by the selected individual's occupation within the household. There are 25 province dummy variables used to capture province fixed effects.

Dependent variables

There are three main regressions, each of which has a different dependent variable. The dependent variable of the first regression is gift-expenditure divided by household total income (GS/Inc). In other words, it is the share of gift-expenditure in total income. Gift-expenditure is measured by the self-reported monetary value of all possible forms of cash and non-cash gifts, such as cash gifts sent to friends' weddings and non-cash gifts sent while visiting relatives during spring festival. Total income is "adjusted total income" as specified in the dataset. Adjusted means self-consumed agricultural products are considered

as part of the income for households involved in agricultural, forestry, and husbandry activities. The second dependent variable of is gift-received divided by total income (GR/Inc). Total income is the same as in the first regression. Gift-received is the monetary value of all the gifts received last year including cash and non-cash gifts. The third dependent variable is gift-sent divided by gift-received (GS/GR). In other words, it is the ratio of the monetary value of all the gifts given away by the household and of all the gifts received, i.e. it is the ratio of the two dependent variables of the previous two regressions.

4.3 Regression analyses

There are three regression equations in this study. Each of them has a different dependent variable as mentioned above, while they all have similar list of independent variables. The basic structure of the regressions is as follows.

$$Y = \beta_0 + \boldsymbol{\beta_1} Demo + \boldsymbol{\beta_2} Employ + \boldsymbol{\beta_3} Social + \boldsymbol{\beta_4} Community + \boldsymbol{\beta_5} Industry + \boldsymbol{\beta_6} IncLevel + \boldsymbol{\beta_7} Province + \varepsilon$$

On the left-hand side, Y represents the dependent variable of interest. In the first main regression, Y = GS / Inc, where GS stands for monetary value of all the gifts sent out from a household and Inc stands for total income as described previously. In the second main regression, Y = GR / Inc, where GR represents the monetary value of all the gifts received by a household. In the third main regression, Y = GS / GR.

On the right-hand side, each $\boldsymbol{\beta_i}$ is a vector of coefficients corresponding to a set of independent variables. More specifically, *Demo* represents six demographic variables: three dummy variables related to family size: smallfamily, regularfamily, and largefamily, age,

education level in years, and another dummy variable: with communist party membership or not. *Employ* represents two dummy variables related to employment: whether there is at least one person employed in the household or not and whether there is at least one person employed as an administrative/managerial position or not. *Social* represents three variables related to the degree of household involvement in social activities: number of relative families and number of friends that visited the household this spring festival, and in the last month that was not a vacation, number of hours per day the household spent on social activities on average. Social activities include talking or chatting with friends, visiting relatives and friends, entertaining guests, reading and writing personal letters, and so on; having face-to-face conversation, making phone calls, sending text messages, online chatting (e.g., QQ, MSN), and sending and receiving emails; participating or organizing all kinds of ceremonies and parties, such as weddings, funerals and so on. Note that having dinner with friends is also considered as social activities rather than pure eating activities.

Community represents three community level variables: the area of the community, the population size of the community, whether it is a rural village or an urban residential community, and income range within community capturing income inequality. *Industry* stands for ten dummy variables of the top ten industries where the household head worked. *IncLevel* stands for ten dummy variables of ten income levels. *Province* stands for 25 dummy variables for 25 provinces. Furthermore, top coding is applied to both deal with outliers of the dependent variables and keep as many observations as possible. GS/Inc was top coded to 1, which was at 99 percentile. GS/GR was top coded to 20, which was at 96 percentile.

5. Results

Table 1 presents the descriptive summary of all variables. Among three dependent variables, the mean of gift-expenditure versus income ratio is around 11.6%. The standard deviation is over 16%, which is relatively high compared to the magnitude of the ratio itself, which means the ratio differs a lot across households. Figure 1 is the distribution of gift-expenditure versus total income ratio. The distribution also confirms that the ratio varies widely. The mean of gift-received versus income ratio is 3.9% and the standard deviation is over 12%, which means this ratio fluctuates even more severely compared to gift-expenditure versus income ratio. Its distribution is presented in Figure 2. The average of the third dependent variable is 3.83, which means an average household reported that the amount of gifts given was almost four times the amount of gift received. This imbalance will be analyzed later in the discussion section. Its distribution is displayed in Figure 3. Figure 4 compares GS/Inc and other expenditure versus income ratios.

Table 2, 3, and 4 present estimates of effects of different factors on gift-expenditure versus total income ratio, gift-received versus total income ratio, and gift-expenditure versus gift-received ratio, respectively. In each table, six columns represent 6 models used to predict its corresponding dependent variable. Model 1 estimates the relationship between social factors and the dependent variables. Model 2 adds employment and industry information. Model 3 controls for demographic characteristics. Model 4, 5, and 6 further control for community level factors, income levels, and province fixed effects, respectively.

In Table2, the dependent variable is gift-expenditure versus total income ratio. It is strongly positively correlated with the number of relative families visited this spring festival, the number of friends visited this spring festival, and the average number of hours spent on

social activities per day even after controlling for employment and demographic information, and community level effects. However, after income level and province fixed effects are further controlled, the average number of hours spent on social activities per day became insignificant, while the other two factors remained significant at 1% level. More specifically, model 6 where all the covariates are included shows that the more families of relatives visited this spring festival, the higher gift-expenditure versus total income ratio; same relationship holds for the number of friends visited this spring festival.

Employment and gift-expenditure versus total income ratio are negatively correlated, which means households with at least one adult employed send out smaller portion of their income as gifts. Interestingly enough, holding an administrative/managerial position and gift-expenditure versus total income ratio are positively correlated, i.e. households with at least one adult at an administrative/managerial position send out larger portion of their income as gifts. Within the included top-ten industry, households with at least one adult in wholesale and retail industry, and public administration and social organization send out a larger portion of their income as gifts compared to the tenth category, all other industries, which was excluded in the regression as a reference group.

For demographic characteristics, the dummy variables regarding family size are not significant after controlling for income levels and province fixed effects, which means the proportion of income sent out as gifts for included households with small family sizes (1 or 2) or large family sizes (>4) does not differ significantly compared to that for the omitted group in the regression with regular family sizes (3 or 4). The average age of adults in the household is negatively correlated to the dependent variable as well, i.e. the older the

household is, and the larger the proportion of their income is given away as gifts. The results for communist party membership are very interesting. The coefficients changed from being negative and non-significant to positive and significant after controlling for more information. This results show that households with communist party member send larger proportion of their income as gifts compared to the reference group without communist party member.

For community level factors, income inequality captured by income range and the population size are both positively correlated with the proportion of gift-expenditure in total income, although the size of the coefficients is very small. All the income level and province fixed effects are positive and significant. Since for income level the omitted reference group is the highest income level, the results mean that compared to households in the highest income group, other poorer households sent a larger proportion of their income as gifts. It is noteworthy that after controlling for income levels, the R-squared jumped from less than 6% to 30%, which shows the strong correlation between income levels and the share of gift-expenditure in total income.

Table 3 shows the regression results when dependent variable is the ratio of gift received in monetary value and total income. There are six models in total as well. The structure is the same as those in Table 2. However, the results are different in several ways. In model 1, the number of relative families visited this spring festival, the number of friends visited this spring festival remained robustly significant across the models. While the average number of hours spent on social activities per day was not significant in model 1, 2, and 4, it became highly significant in model 6, which included all covariates. As shown by the coefficients, the larger these variables are, the more gifts the household received. After adding variables

related to employment and industry information, one can see that the household with at least one adult employed received less gifts than those without anyone employed. Whether there is at least one individual holds an administrative/managerial position is not correlated with the gifts received by the household. Among the industries included, households with one individual employed in the construction industry received significantly more gifts compared to the reference group.

Moving on to model 3 where demographic information was added, family size appeared to be an important factor. Specifically, families with less than three members received more gifts relative to their income compared to families with three or four members. Interestingly enough, we do not see any significant effect of having more than four family members. Moreover, the higher the average age of the household adults is, the less gifts the family received. The maximum education level was significant and negatively correlated with the gifts received versus income ratio in model 3 and 4, but it became insignificant after controlling for income level and province fixed effects. Communist party membership is not correlated with gifts received versus income ratio, since the coefficients are not significant in any of the models. In model 4 community level factors are added. Income inequality was significant in model 4 and 5 but became not significant after controlling for province fixed effects. The population size of the community exhibited this pattern as well. The dummy variable denoting whether the household is urban or rural became significant in model 6 after controlling for all the covariates. It shows that households in urban areas received less gifts relative to their income. As for income level control variables, one can see that only the coefficients for households with lowest and the ninth highest income level received

significantly more gifts compared to the reference group with the highest income.

Table 4 provides the regression results with gift-expenditure versus gift-received ratio as the dependent variable. In model 1, both the number of relative families visited this spring festival and the number of friends visited this spring festival are significant. However, while the former remained significant in every model, the latter became insignificant after controlling for community level variables. The number of family members visited this spring festival is negatively correlated with gift-expenditure versus gift-received ratio. The average number of hours spent on social activities per day remained insignificant in all of the models. In model 2, whether at least one person in the household is employed is negatively correlated with the dependent variable, which means if there is at least one person employed in the household, they sent out less gifts relative to the gifts they received. However, it became insignificant in model 4 and 6. For the top ten industries included, households involved in agriculture, forestry, and husbandry, and education and public administration or social organization sent out more gifts relative to what they received compared to the reference industries.

In model 3, family size related variables are significant. The families with less than three members sent out significantly more gifts relative to what they received compared to what they received according to model 3 and 6. However, it was insignificant in model 4 and 5. The dummy variable denoting families with more than four members remained robustly significant throughout all the models with it. It shows that these families sent out gifts less compared to what they received. The highest education level is negatively associated with the relative ratio of gifts sent out and received according to model 3 and 4, but it became

insignificant after controlling for income levels and province fixed effects. The average age and communist party membership are not significant factors related to the dependent variable. After controlling for community level factors, one can see that income inequality is not significant, whereas the population size of the community and whether the household is in a rural or urban community are significant. The larger the population size of the community is, the larger the gift-expenditure versus gift-received ratio is. In addition, households in urban communities send out less gifts relative to what they received compared to those in rural communities. In model 5 and 6, income levels and province fixed effects were added accordingly. As a general trend, people with lower income spend more on gifts relative to what they received compared to the households with the highest income. However, different from the pattern in the first regression, when we take a look at the robust coefficients, we can see that the trend is not always consistent when the reference group changes. In other words, it is not the case that the lower the income level is, the larger the coefficients are.

6. Discussion

General aspects

Gift-exchange, particularly gift-giving, is extremely prevalent in China. All of the households in the estimation sample gave gifts and 44.88% of them received gifts. An average household spent slightly more than 11% of their income on gifts, which is relatively modest compared to the average food expenditure of a household, which was around 30%. On surface this indicates that the media was likely focusing on extreme cases, thus exaggerating the negative economic impact of gift-exchange on people's life.

However, when we take a closer look at it for different income groups, one can see that

gift-giving does appear to be a burden for Chinese people, especially for the poor. For people at the lowest income level, gift-expenditure takes up as much as 30% of their income. Although this percentage is much lower than the share of food, clothing, and education expenditure, which are 67%, 57%, 78%, respectively, we can easily notice that this group of people are in debt in order to pay for all kinds of "bills". Every expenditure is essentially a burden to them due to their extremely low income level. If they were able to be spend less on gifts, they could have had less burden. For households at income level 2,3, and 4, they have much less burden from being in debt, but still, they spend almost as much on gifts as on food, which is also equivalent to half of the amount they spend on education. If they were able to spend less on gifts, they would have been able to invest more in their health and education. Households with income level 5 through 8 have a much more reasonable expenditure structure in the sense that they are very likely to save a fair amount of their income for future usage. However, we notice that their gift expenditure versus income ratio exceeds both food expenditure and clothing expenditure versus income ratio, which is comparable to their education spending. Were they be able to spend less on gifts, they would be able to invest more in their education or other economic activities, which are beneficial both to themselves and the economy. The households in income group 9 and 10 are facing similar situations, but considering none of their expenditure takes up a very large percent of their income, they are very much free from the burden of gift-expenditure. For additional details please see Figure 4. Moreover, from the results, we see that first the poor generally has a larger GS/GR, however the pattern of the effect is not necessarily the same within any income range. For example, if we only look at GS/Inc, it is not only true that the poor have a higher ratio, but also the effect

of being a poor gradually and consistently declines when income level goes up. Although the lower income groups all have a larger GS/GR compared to the highest income level group, the coefficients actually increased from income level1 to income level 3, and then they decreases all the way up to income level 9. The poor indeed suffers more from this over-output in social exchange activities. However, the group suffers the most is the group that is not the least fortunate but still struggle for life with a below-average income. The least fortunate does not even have capacity to invest much in social activities since they, on average, spent more than 60% of their income on food.

Although we are less worried about people in higher income groups, we still need to pay more attention to GS/GR, which measures how much people gave as gifts relative to what they received. The average GS/GR is around 3.84, which is astonishingly large, especially if we suppose a healthy social exchange would produce a ratio around one. Where did the gifts go? One possible explanation could be that the party received the gifts often reciprocate by doing a favor for the party who sent the gifts instead of giving back gifts, which is mentioned in the literature review section. Another possible explanation could be that people tend to under-report the amount of gifts they received, which leads to an extremely high GS/GR. Also, it is possible that a relatively small number of household receive gifts from a relatively large number of households, such as a situation where employees all give their boss gifts. Another alternative explanation could be that since adults were asked to consider the money given to children as gifts expenditure, they accounted for that in gift-giving. However, when they calculated the gifts they received, they did not account for the money received by their own kids. Moreover, we need to be cautious that more severe income inequality predicts

larger GS/Inc, which aligns with the research results by Chen as mentioned in the literature review section. Since the income inequality in China is exacerbating, it can indirectly make gift-exchange an issue in the future.

Status concern

As found by Chen, Kabur and Zhang (2011), status concern has significant impact on gift-giving behavior. According to present study, this can be applied more generally to gift-exchange: explain why many of the factors are found to be significant predictors of gift-exchange. Specifically, the negative correlation between employment status and GS/Inc suggests that if there is at least one person employed in the household, they send out less gifts as a proportion of income compared to households in which all the members are out of the labor force. Since people employed have already had a social network embedded in their job, they have some need to maintain it but have relatively less need to establish new ones. However, for people who are not in the labor force and very likely to be perceived as "not successful" or low status, they need to establish new networks and/or invest more in existing ones in order to enter the labor force and become "successful" or high status. The results are also very likely to be driven by the large proportion of rural observations, since research results found by Chen, Kabur and Zhang showed that status concern is one of the important factors for gift-exchange in rural area. Over 60% of the observations who are not in the labor force are from the rural communities. These observations send out more gifts in order to improve their social status. Further, we can infer that employment itself is a very important aspects of social status. Moreover, we need to be aware that, employment is not a very effective predictor for GS/GR, which means that its effects on GS and GR are balanced out.

However, the coefficients are positive, which follows the tendency of the coefficients for GS. The insignificance can be attributed to the drop of sample size to some extent.

Another very interesting results regarding employment is that having at least one adult holding an administrative/managerial position predicts more gifts sent compared to received. In China it is considered a common practice to send gifts to people in a higher status at the workplace, such as supervisors or managers, in order to get a better position. It is consistent with the information provided in the background section: many business decision makers emphasized that gift sending is crucial for establishing and maintaining business relationships both with clients and government officials (Upton-McLaughlin, n.d.). It is possible that since the magnitude of GS/Inc for the group of people seeking better status within a business entity is negligible by that for business decision makers such that the coefficients are positive and significant only for GS/Inc. It is also possible that due to the influence of foreign companies, people's perception of the effectiveness of gift-giving in workplace is shifting away by either gaining status only from their work or some other forms of social interactions.

However, with some specific industries, that is not the case. Compared to other industries not specified in the ten categories and those not in the labor force, being in a wholesale and retail industry and in public administration and social organizations are positively correlated with GS/Inc. Surprisingly being in the agriculture, forestry, and animal husbandry industry, Education, and Public administration and social organizations are positively correlated with GS/GR. Status concern can easily explain the behavior of households involved in the Agriculture, forestry, and animal husbandry industry, since the average income of households involved in Agriculture, forestry, and animal husbandry is 24% lower than the average

income level of all the households in the dataset and being involved in such an industry is usually considered as low status. Another possible explanation is the existence of informal insurance among rural household, particularly those with low income. A big part of their gift-expenditure may be used for the purpose of informal insurance. However, what about the other two sectors? The households in the other two industries, who earn more than twice of the average income and are most of the time considered as relatively high status. In fact, their spending is even much less balanced compared to the poor people, since the coefficients are much larger than those for the poor. The explanation could be they care even more about their status within their group! If we compare the wholesale and retail industry, in which households send significantly more compared to other industries but the effect on GS/GR balances out eventually. We do not have much information about the group that received their gifts or source of the gifts that the household received, but we can make several conjectures. As widely recognized, financial capital and human capital are traditionally the most important resources for any industry. A proper amount of these leads to the growth of the industry and benefits the workers involved in both in terms of status and pay. Compared to other "top-10" industries here, the structure of Education system, and Public administration and social organizations are much more rigid and more pyramid-like. Therefore the flow of the two important resources is much slower and harder. Thus people use gift-giving much more intensively in order to speed up this flow in order to reach a higher status.

Gift-giving as a substitute

Another very important aspect of gift-giving besides status concern is that it is a substitute of other important things. It can be a substitute of social activities/ time spent on

social activities, as least for some people. In other words, if a household has already spent enough time doing these activities with people in similar social status, such as relatives and friends, they do not have to send too many gifts to maintain the social network or sometimes family ties. It is justified by the negative correlation between the time spent on social activities and the GS/Inc, although later it became insignificant. However, we still need to be aware of that situation where for people, who are in a higher social status than the individuals in the household, for example supervisors in the working place, since it is much harder to interact with them in the social activities listed above, most people would choose to send gifts to establish or maintain social networks. Overall, this can be explained by the structure of people's utility functions. Assuming that everyone cares about their social status and they can establish or maintain social relationship at the cost of money or time. The more they value the relationship, the more cost they are willing to incur. Meanwhile, depending on how much expected benefit, i.e. social status improvement, can be brought to the agents, they will choose to incur different amount of costs. Different people will have different preferences over their costs. Even for the same person, he/she is likely to have different preferences over different costs overtime. Intuitively, when net benefit from time is less than money, the agent will prefer to use money, which means the agent values time over money. When net benefit from time is more than money, the agent will prefer to use time, which means the agent values money over time. For mathematical model, explanation, and proofs, please see appendix.

Other factors

There are some other important predictors. The results with respect to demographic

factors partly align with the results obtained by Garner and Wagner. As what they found among American consumers, family size is an important predictor of the magnitude of gift expenditure in Chinese society as well. Different from what they found was that family size itself as a variable was not a significant predictor in the regression of GS/Inc initially. After categorizing the families into three different sizes: less than three, three to four, and more than four, one can finally see the effect of family size: compared to being a regular size family(3-4), being a smaller family correlates with larger proportion of gift-giving, whereas being a larger family correlates with smaller proportion of gift-giving. Interesting enough, being a smaller family also predicts much higher GR/Inc and the absolute value coefficients are similar to the ones for this variable in the previous regression, while being a larger family is not a statistically significant predictor of GR/Inc. When it comes to the combined effect on GS/GR, the results may seem strange at first, since both being a smaller family and larger family predict smaller ratio of GS and GR with the coefficients for "large family" being more robust than those for "small family". Since larger families sent less and did not receive more, it is reasonable to see that their GS/GR is significantly less than the regular families. It also indicates that larger families financially involved in gift-exchange activities less than the regular-sized families do. After looking at the demographics of the smaller families in detail, the puzzle can be solved: since the average "household age" of the smaller families is around 60, it is possible that although they need to give gifts in order to socialize, most of the time people reciprocate to that and even give back more out of respect and/or sympathy or compassion for the elders. In some other situations, people would do the same thing for single-parent families.

The effect of having communist party member in the household is interesting as well. When we used the number of communist party member in the household as a regressor, it was not significant in any models. However, after we grouped the households and created different dummy variables for different number of communist party membership in the household, they become significant (see appendix). Compared to households with no communist party members, households with at least one communist party member sent significantly more gifts, though having a communist party member does not have much predictive power in GR/Inc or GS/GR. Since the effect balance out on GS/GR, there should be considerable amount of gifts received as well. This indicates the possible under-report of gifts-received, since it is often considered as corruption if a communist party member receives a large amount of gifts, although that is not the case sometimes. There is no significant difference between families with one communist party member and those with more.

Limitations and future research

There are several limitations in this study. First of all, since there is no variable found in the dataset that marks the household head, I had to use the possible decision makers' information to represent the household head's decision. It can be a valid representation, but it can also be a misrepresentation depending on the actual decision making process in the household. Second, there is possibility of under-reporting gifts-expenditure and especially gift-received, which introduces measurement error. Furthermore, this study mostly focused on predictive analysis instead of establishing causality. For future study, researchers can try to obtain family gift-exchange records, which makes the measurement of dependent variables

more accurate. Also, one can try to find some more exogenous factors and establish a causal relationship between gift-exchange and the factors drive it, such as the anti-corruption campaign launched by chairman Xi Jinping. Moreover, one can examine panel data to study the effect of change in people's opinions regarding gift-exchange activities over time. On the one hand, there are limited number of factors considered, future research can try to construct a more comprehensive regression to explain gift-exchange behaviors. On the other hand, the present study focused on gift-exchange in general, future study can zoom in to examine gift-exchange in a specific occasion such as weddings. Finally, the utility function model can be further improved.

Table1. Sample characteristics

Variable	Obs	Weight	Mean	Std. Dev.	Min	Max
Dependent Variables						
GS/Inc(Topcoded to 1)	11,900	375341631	0.11604	0.16485	0.0000167	1
GR/Inc	13,900	438882222	0.03951	0.12924	0	1
GS/GR(topcoded to 20)	5,380	159434023	3.83833	5.13258	0.001875	20
Independent Variables						
social variables						
# of relative families that visited the household this spring festival	14,798	465316871	5.58334	6.78370	0	100
# of friends that visited the household this spring festival	14,798	465316871	3.50498	6.71995	0	100
# of hours per day the household spent on social activities on average	14,798	465316871	-2.44493	4.81733	-8	20
Employment variables						
At least one adult is employed	13,512	424669662	0.63779	0.48066	0	1
At least one adult holds an administrative/managerial position	13,025	408946858	0.06916	0.25373	0	1
Industry variables						
Response of N/A for industry catogorization	14,083	441752644	0.39046	0.48787	0	1
Agriculture, forestry, animal husbandry	14,083	441752644	0.21944	0.41388	0	1
Manufacturing	14,083	441752644	0.05290	0.22385	0	1
Construction	14,083	441752644	0.01314	0.11390	0	1
Transportation, storage, and postal ser	14,083	441752644	0.01572	0.12440	0	1
Wholesale and retail	14,083	441752644	0.02435	0.15414	0	1
Residential and other service industry	14,083	441752644	0.01195	0.10867	0	1
Education	14,083	441752644	0.01265	0.11177	0	1
Public administration and social organization	14,083	441752644	0.01329	0.11453	0	1
Demographic Variables						
family size<3	14,798	465316871	0.23047	0.42115	0	1
family size>4	14,798	465316871	0.05129	0.22059	0	1
age_mean	13,512	424669662	46.40729	11.21225	0	92
edu_MAX(year)	14,540	457367432	8.49410	4.79792	0	22
communist party member=1	14,798	465316871	0.12035	0.32538	0	1
communist party member>1	14,798	465316871	0.10167	0.30222	0	1
Community level variables						
IncomeRange	14,798	465316871	139237.60	198953.20	10459	2041745
community area size(km^2)	13,312	409684283	30.51	279.79	0.00014	4600
community population size	14,557	460278619	4181.03	4504.36	149	51139
Urban community(Ju Wei Hui=1) or Rural community(Cun Wei Hui=0)	14,557	460278619	0.34166	0.47428	0	1
Income level dummy controls						
incLevel1	13,920	439392117	0.13500	0.34173	0	1
incLevel2	13,920	439392117	0.10037	0.30050	0	1
incLevel3	13,920	439392117	0.10291	0.30385	0	1
incLevel4	13,920	439392117	0.10179	0.30238	0	1
incLevel5	13,920	439392117	0.09738	0.29649	0	1
incLevel6	13,920	439392117	0.10229	0.30304	0	1
incLevel7	13,920	439392117	0.09019	0.28647	0	1
incLevel8	13,920	439392117	0.09654	0.29534	0	1
incLevel9	13,920	439392117	0.09141	0.28820	0	1

Province dummy controls						
Beijing	14,798	465316871	0.01179	0.10794	0	1
Tianjin	14,798	465316871	0.01195	0.10867	0	1
Hebei	14,798	465316871	0.08921	0.28506	0	1
Shanxi	14,798	465316871	0.06645	0.24908	0	1
Liaoning	14,798	465316871	0.03222	0.17660	0	1
Jilin	14,798	465316871	0.03219	0.17651	0	1
Heilongjiang	14,798	465316871	0.06617	0.24859	0	1
Shanghai	14,798	465316871	0.01774	0.13200	0	1
Jiangsu	14,798	465316871	0.02691	0.16182	0	1
Zhejiang	14,798	465316871	0.02724	0.16278	0	1
Anhui	14,798	465316871	0.02850	0.16639	0	1
Fujian	14,798	465316871	0.01723	0.13013	0	1
Jiangxi	14,798	465316871	0.02063	0.14213	0	1
Shandong	14,798	465316871	0.08222	0.27471	0	1
Henan	14,798	465316871	0.05572	0.22939	0	1
Hubei	14,798	465316871	0.03188	0.17569	0	1
Hunan	14,798	465316871	0.05465	0.22730	0	1
Guangdong	14,798	465316871	0.06153	0.24031	0	1
Guangxi Zhuang Autonomous Region	14,798	465316871	0.03011	0.17090	0	1
Chongqing	14,798	465316871	0.01359	0.11578	0	1
Sichuan	14,798	465316871	0.07936	0.27031	0	1
Guizhou	14,798	465316871	0.06401	0.24478	0	1
Yunnan	14,798	465316871	0.03949	0.19476	0	1
Shaanxi	14,798	465316871	0.02439	0.15426	0	1

Table2. Multivariate linear regressions predicting household gift-expenditure and income ratio

Dependent Variable	**GS/Inc(gift-expenditure/Total income)**					
models	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Social variables						
# of relative families that visited the household this spring festival	0.0017***	0.0018***	0.0019***	0.0021***	0.0026***	0.0029***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
# of friends that visited the household this spring festival	0.0004*	0.0004	0.0007***	0.0007**	0.0013***	0.0013***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
# of hours per day the household spent on social activities*	-0.0034**	-0.0006	-0.0007	-0.0032**	-0.0022*	0.0010
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)
Employment variables						
At least one adult is employed		-0.0409***	-0.0335***	-0.0350***	-0.0166***	-0.0173***
		(0.004)	(0.004)	(0.005)	(0.004)	(0.004)
At least one adult holds an administrative/managerial position		-0.0051	0.0107	0.0108	0.0190***	0.0194***
		(0.007)	(0.007)	(0.008)	(0.007)	(0.006)
Industry variables						
Response of N/A for industry catogorization		0.0202***	0.0262***	0.0273***	0.0163***	0.0123***
		(0.004)	(0.004)	(0.005)	(0.004)	(0.004)
Agriculture, forestry, animal husbandry		0.0136***	0.0099*	0.0098*	0.0048	0.0013
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Manufacturing		0.0045	0.0134*	0.0122	0.0144**	0.0075
		(0.008)	(0.008)	(0.008)	(0.007)	(0.007)
Construction		0.0114	0.0158	0.0198	0.0204*	0.0166
		(0.014)	(0.014)	(0.014)	(0.012)	(0.012)
Transportation, storage, and postal service		0.0124	0.0212*	0.0181	0.0223*	0.0122
		(0.013)	(0.013)	(0.013)	(0.012)	(0.011)
Wholesale and retail		0.0172*	0.0256**	0.0245**	0.0201**	0.0205**
		(0.010)	(0.010)	(0.011)	(0.010)	(0.010)
Residential and other service industry		-0.0045	0.0047	0.0034	-0.0094	-0.0103
		(0.015)	(0.015)	(0.015)	(0.013)	(0.013)
Education		-0.0017	0.0187	0.0253*	0.0151	0.0145
		(0.014)	(0.014)	(0.014)	(0.013)	(0.012)
Public administration and social organization		0.0208	0.0368***	0.0374**	0.0281**	0.0228*
		(0.014)	(0.014)	(0.015)	(0.013)	(0.012)

Demographic Variables						
family size<3			0.0365***	0.0397***	0.0039	0.0032
			(0.005)	(0.005)	(0.005)	(0.005)
family size>4			-0.0151**	-0.0125*	-0.0033	-0.0039
			(0.007)	(0.007)	(0.006)	(0.006)
age_mean			-0.0005***	-0.0006***	-0.0011***	-0.0011***
			(0.000)	(0.000)	(0.000)	(0.000)
edu_MAX(year)			-0.0044***	-0.0048***	-0.0003	0.0005
			(0.000)	(0.000)	(0.000)	(0.000)
communist party member=1			-0.0077	-0.0088*	0.0077*	0.0080*
			(0.005)	(0.005)	(0.005)	(0.004)
communist party member>1			-0.0102	-0.0074	0.0255**	0.0212*
			(0.013)	(0.013)	(0.011)	(0.011)
Community level variables						
IncomeRange/10,000				0.0000	0.0005***	0.0004***
				(0.000)	(0.000)	(0.000)
community area size(km^2)				-0.0000*	0.0000	0.0000
				(0.000)	(0.000)	(0.000)
community population size				-0.0000	0.0000**	0.0000**
				(0.000)	(0.000)	(0.000)
Urban community(1) or Rural community(0) *				0.0029	0.0163***	0.0050
				(0.005)	(0.004)	(0.004)
Income level dummy controls						
incLevel1					0.3396***	0.3473***
					(0.007)	(0.007)
incLevel2					0.1258***	0.1356***
					(0.007)	(0.007)
incLevel3					0.1053***	0.1130***
					(0.007)	(0.007)
incLevel4					0.0878***	0.0954***
					(0.007)	(0.007)
incLevel5					0.0755***	0.0836***
					(0.007)	(0.007)
incLevel6					0.0606***	0.0639***
					(0.007)	(0.007)
incLevel7					0.0527***	0.0593***
					(0.007)	(0.007)
incLevel8					0.0328***	0.0369***
					(0.007)	(0.007)
incLevel9					0.0248***	0.0268***
					(0.007)	(0.007)
Constant	0.1010***	0.1140***	0.1625***	0.1693***	0.0342***	-0.0356**
	(0.002)	(0.005)	(0.010)	(0.011)	(0.011)	(0.015)
Province fixed effects controlled	**NO**	**NO**	**NO**	**NO**	**NO**	**YES**
Observations	11,900	10,251	10,248	9,291	9,291	9,291
R-squared	0.008	0.027	0.048	0.055	0.300	0.333

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Footenotes:

* Urban community means they are administrated by Ju Wei Hui; Rural community means they are administrated by Cun Wei Hui

*Definition of social activties: in the last month that was not a vacation, number of hours per day the household spent on social activities on average. Social activities include talking or chatting with friends, visiting relatives and friends, entertaining guests, reading and writing personal letters, etc.; having face-to-face conversation, making phone calls, sending text messages, online chatting (e.g., QQ, MSN), and sending and receiving emails; participating or organizing all kinds of ceremonies and parties, such as weddings, funerals and so on.
Note that having dinner with friends is also considered as social activities rather than pure eating activities.

Table3. Multivariate linear regressions predicting household gift-received and income ratio

Dependent Variable	**GR/Inc(gift-received/Total income)**					
models	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Social variables						
# of relative families that visited the household this spring festival	0.0011***	0.0012***	0.0012***	0.0012***	0.0013***	0.0014***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
# of friends that visited the household this spring festival	0.0004*	0.0006***	0.0007***	0.0008***	0.0009***	0.0008***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
# of hours per day the household spent on social activities*	-0.0001	0.0017*	0.0015	0.0016	0.0020*	0.0020*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Employment variables						
At least one adult is employed		-0.0157***	-0.0114***	-0.0115***	-0.0068**	-0.0080**
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
At least one adult holds an administrative/managerial position		0.0044	0.0077	0.0047	0.0023	0.0040
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Industry variables						
Response of N/A for industry catogorization		0.0154***	0.0153***	0.0157***	0.0131***	0.0139***
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Agriculture, forestry, animal husbandry		0.0060*	0.0038	-0.0003	-0.0006	-0.0016
		(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Manufacturing		-0.0001	0.0010	0.0017	0.0017	0.0019
		(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
Construction		0.0192*	0.0198**	0.0215**	0.0234**	0.0218**
		(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Transportation, storage, and postal ser		0.0118	0.0131	0.0109	0.0097	0.0086
		(0.009)	(0.009)	(0.010)	(0.009)	(0.009)
Wholesale and retail		0.0063	0.0073	0.0150*	0.0122	0.0094
		(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Residential and other service industry		-0.0079	-0.0061	-0.0035	-0.0074	-0.0089
		(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Education		0.0066	0.0095	0.0032	-0.0021	0.0006
		(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Public administration and social organization		-0.0006	0.0014	0.0084	0.0056	0.0017
		(0.010)	(0.010)	(0.011)	(0.010)	(0.010)
Demographic Variables						
family size<3			0.0316***	0.0315***	0.0224***	0.0241***
			(0.003)	(0.004)	(0.004)	(0.004)
family size>4			0.0048	0.0058	0.0049	0.0019
			(0.005)	(0.005)	(0.005)	(0.005)
age_mean			-0.0002*	-0.0001	-0.0003**	-0.0004***
			(0.000)	(0.000)	(0.000)	(0.000)
edu_MAX(year)			-0.0009***	-0.0006**	0.0003	0.0003
			(0.000)	(0.000)	(0.000)	(0.000)
communist party member=1			0.0038	0.0021	0.0041	0.0033
			(0.004)	(0.004)	(0.004)	(0.004)
communist party member>1			-0.0134	-0.0103	-0.0054	-0.0086
			(0.009)	(0.010)	(0.009)	(0.009)
Community level variables						
IncomeRange/10,000				0.0001*	0.0002**	0.0001
				(0.000)	(0.000)	(0.000)
community area size(km^2)				-0.0000	0.0000	0.0000
				(0.000)	(0.000)	(0.000)
community population size				-0.0000***	-0.0000***	-0.0000
				(0.000)	(0.000)	(0.000)
Urban community(1) or Rural community(0)*				-0.0051	-0.0023	-0.0099***
				(0.003)	(0.003)	(0.003)

Income level dummy controls						
incLevel1					0.0777***	0.0786***
					(0.006)	(0.006)
incLevel2					0.0046	0.0077
					(0.006)	(0.006)
incLevel3					0.0003	0.0025
					(0.006)	(0.006)
incLevel4					-0.0003	0.0047
					(0.006)	(0.006)
incLevel5					-0.0026	0.0004
					(0.006)	(0.006)
incLevel6					0.0011	0.0032
					(0.006)	(0.006)
incLevel7					0.0034	0.0065
					(0.006)	(0.006)
incLevel8					0.0040	0.0058
					(0.006)	(0.006)
incLevel9					0.0078	0.0094*
					(0.006)	(0.006)
Constant	0.0317***	0.0313***	0.0407***	0.0365***	0.0243***	0.0175
	(0.002)	(0.003)	(0.007)	(0.007)	(0.009)	(0.013)
Province fixed effects controlled	**NO**	**NO**	**NO**	**NO**	**NO**	**YES**
Observations	13,900	11,726	11,723	10,576	10,576	10,576
R-squared	0.005	0.016	0.026	0.030	0.065	0.085

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Footenotes:

* Urban community means they are administrated by Ju Wei Hui; Rural community means they are administrated by Cun Wei Hui

*Definition of social activties: in the last month that was not a vacation, number of hours per day the household spent on social activities on average. Social activities include talking or chatting with friends, visiting relatives and friends, entertaining guests, reading and writing personal letters, etc.; having face-to-face conversation, making phone calls, sending text messages, online chatting (e.g., QQ, MSN), and sending and receiving emails; participating or organizing all kinds of ceremonies and parties, such as weddings, funerals and so on.
Note that having dinner with friends is also considered as social activities rather than pure eating activities.

Table4. Multivariate linear regressions predicting gift-expenditure and gift-received ratio

Dependent Variable	**GS/GR(gift-expenditure/Gift-received)**					
models	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Social variables						
# of relative families that visited the household this spring festival	-0.0224**	-0.0304***	-0.0292**	-0.0381***	-0.0353***	-0.0300**
	(0.011)	(0.011)	(0.011)	(0.012)	(0.012)	(0.013)
# of friends that visited the household this spring festival	-0.0189*	-0.0253**	-0.0226**	-0.0178	-0.0118	-0.0079
	(0.010)	(0.011)	(0.011)	(0.012)	(0.012)	(0.012)
# of hours per day the household spent on social activities *	-0.0779	-0.1172	-0.0982	-0.0733	-0.0691	0.0066
	(0.067)	(0.073)	(0.074)	(0.076)	(0.077)	(0.077)
Employment variables						
At least one adult is employed		-0.3973*	-0.3474*	-0.3301	-0.4059*	-0.3519
		(0.205)	(0.211)	(0.223)	(0.225)	(0.222)
At least one adult holds an administrative/managerial position		-0.0314	0.0851	0.0885	0.3122	0.3948
		(0.307)	(0.317)	(0.330)	(0.339)	(0.333)
Industry variables						
Response of N/A for industry catogorization		-0.1208	-0.0332	-0.0312	-0.0119	-0.2428
		(0.215)	(0.218)	(0.232)	(0.235)	(0.233)
Agriculture, forestry, animal husbandry		0.7064***	0.7034***	0.6230**	0.6851**	0.3720
		(0.250)	(0.250)	(0.271)	(0.276)	(0.275)
Manufacturing		0.0510	0.0846	-0.0720	0.0472	0.1017
		(0.349)	(0.352)	(0.367)	(0.372)	(0.371)
Construction		-0.0538	-0.0137	-0.2841	-0.1829	-0.2182
		(0.677)	(0.678)	(0.705)	(0.711)	(0.699)
Transportation, storage, and postal ser		-0.9459	-0.8612	-0.8466	-0.6294	-0.7217
		(0.605)	(0.606)	(0.646)	(0.648)	(0.639)
Wholesale and retail		0.3839	0.4154	0.6404	0.9613*	1.0983**
		(0.487)	(0.489)	(0.508)	(0.521)	(0.514)
Residential and other service industry		-0.0092	0.0324	-0.8579	-0.6449	-0.2337
		(0.753)	(0.754)	(0.774)	(0.779)	(0.765)
Education		1.6301**	1.7691***	2.2094***	2.2324***	1.5932**
		(0.671)	(0.681)	(0.708)	(0.710)	(0.699)
Public administration and social organization		2.6694***	2.7839***	2.5614***	2.6567***	2.4109***
		(0.611)	(0.617)	(0.634)	(0.645)	(0.633)

Demographic Variables						
family size<3			-0.4395*	-0.2474	-0.3571	-0.4755*
			(0.240)	(0.252)	(0.257)	(0.255)
family size>4			-1.2091***	-1.3116***	-1.0758***	-0.8956***
			(0.311)	(0.324)	(0.327)	(0.323)
age_mean			-0.0006	-0.0098	-0.0088	0.0017
			(0.008)	(0.009)	(0.009)	(0.009)
edu_MAX(year)			-0.0551***	-0.0584***	-0.0321	-0.0208
			(0.019)	(0.021)	(0.022)	(0.022)
communist party member=1			0.0691	0.3047	0.3984	0.3501
			(0.232)	(0.242)	(0.246)	(0.242)
communist party member>1			0.3056	0.4959	0.7268	0.6410
			(0.551)	(0.578)	(0.579)	(0.568)
Community level variables						
IncomeRange/10,000				-0.0039	0.0005	0.0004
				(0.005)	(0.005)	(0.005)
community area size(km^2)				-0.0002	-0.0002	-0.0001
				(0.000)	(0.000)	(0.000)
community population size				0.0000*	0.0000**	0.0001***
				(0.000)	(0.000)	(0.000)
Urban community(1) or Rural community(0)*				-0.5438**	-0.4967**	-0.7315***
				(0.223)	(0.226)	(0.238)
Income level dummy controls						
incLevel1					0.9430**	1.0200**
					(0.404)	(0.404)
incLevel2					1.6761***	1.6119***
					(0.398)	(0.396)
incLevel3					2.1737***	1.9747***
					(0.390)	(0.388)
incLevel4					1.1083***	0.9034**
					(0.390)	(0.387)
incLevel5					1.1434***	1.0940***
					(0.365)	(0.363)
incLevel6					1.3146***	1.2141***
					(0.351)	(0.347)
incLevel7					0.7794**	0.7046**
					(0.350)	(0.345)
incLevel8					0.7508**	0.6748*
					(0.357)	(0.352)
incLevel9					0.2078	0.0615
					(0.335)	(0.329)
Constant	4.0752***	4.3134***	4.8691***	5.4347***	4.0099***	2.7040***
	(0.105)	(0.228)	(0.472)	(0.501)	(0.586)	(0.744)
Province fixed effects controlled	**NO**	**NO**	**NO**	**NO**	**NO**	**YES**
Observations	5,380	4,677	4,676	4,245	4,138	4,138
R-squared	0.003	0.014	0.019	0.023	0.035	0.085

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Footenotes:

* Urban community means they are administrated by Ju Wei Hui; Rural community means they are administrated by Cun Wei Hui

*Definition of social activties: in the last month that was not a vacation, number of hours per day the household spent on social activities on average. Social activities include talking or chatting with friends, visiting relatives and friends, entertaining guests, reading and writing personal letters, etc.; having face-to-face conversation, making phone calls, sending text messages, online chatting (e.g., QQ, MSN), and sending and receiving emails; participating or organizing all kinds of ceremonies and parties, such as weddings, funerals and so on.
Note that having dinner with friends is also considered as social activities rather than pure eating activities.

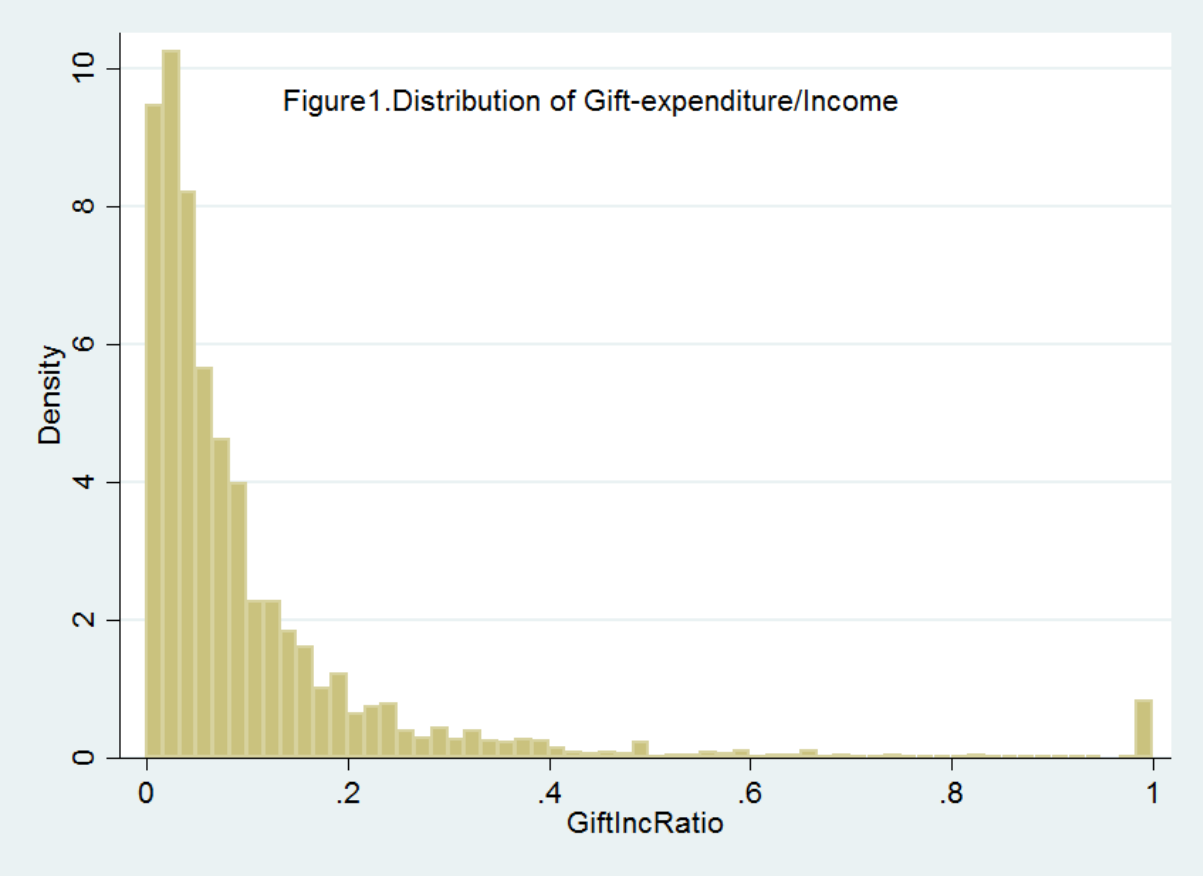
Figure1.Distribution of Gift-expenditure/Income
Density
0
2
4
6
8
10
0
.2
.4
.6
.8
1
GiftIncRatio

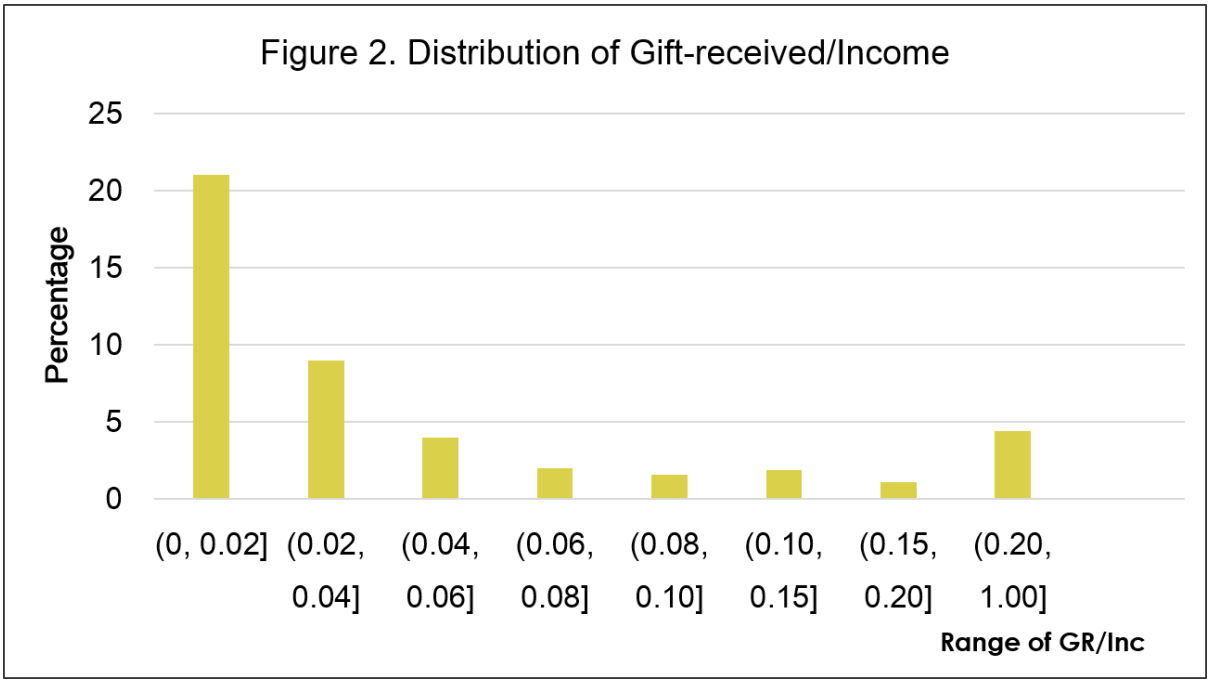
Figure 2. Distribution of Gift-received/Income
Percentage
0
5
10
15
20
25
(0, 0.02]
(0.02, 0.04]
(0.04, 0.06]
(0.06, 0.08]
(0.08, 0.10]
(0.10, 0.15]
(0.15, 0.20]
(0.20, 1.00]
Range of GR/Inc

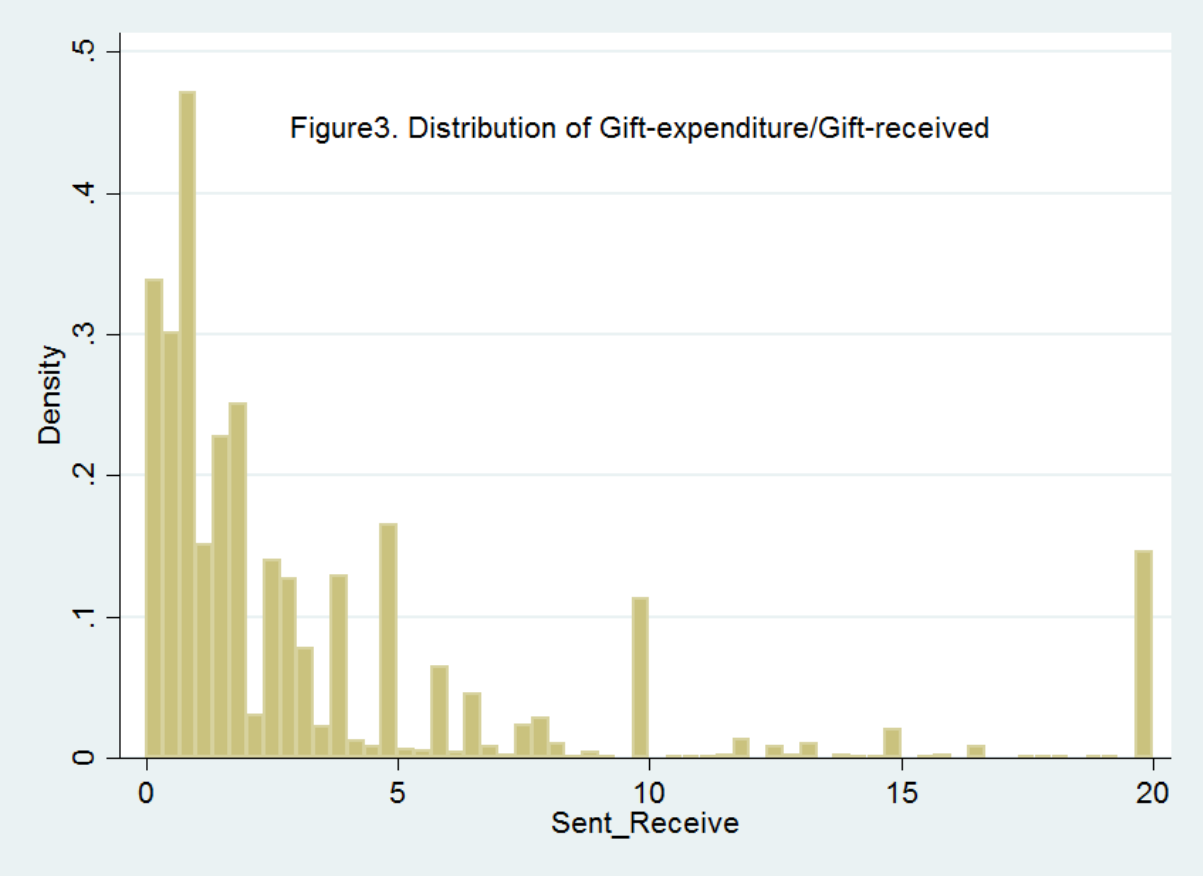
Figure3. Distribution of Gift-expenditure/Gift-received
Density
0
.1
.2
.3
.4
.5
0
5
10
15
20
Sent_Receive

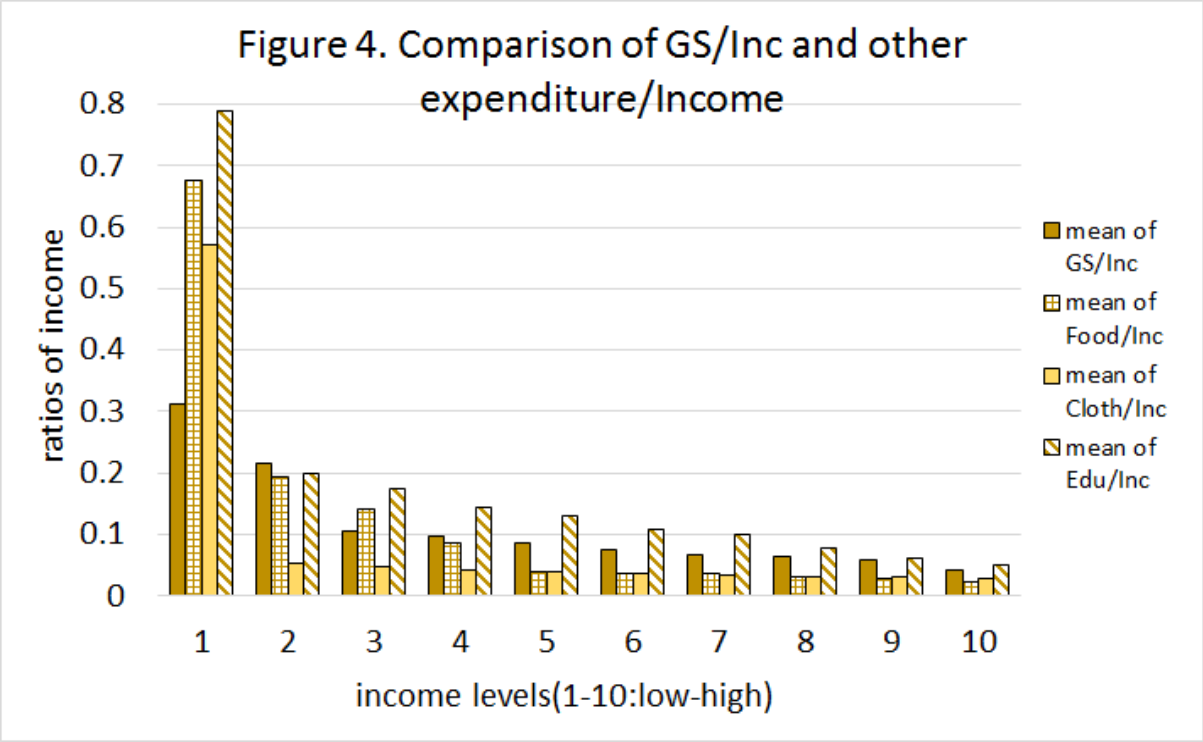
Figure 4. Comparison of GS/Inc and other expenditure/Income
ratios of income
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
1
2
3
4
5
6
7
8
9
10
income levels(1-10:low-high)
mean of GS/Inc
mean of Food/Inc
mean of Cloth/Inc
mean of Edu/Inc

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Appendix

Table1. Distribution of Provinces

Province code	Province Name	Freq	Percent	Cum.
11	Beijing	4	0.63	0.63
12	Tianjin	4	0.63	1.26
13	Hebei	33	5.2	6.46
14	Shanxi	27	4.25	10.71
21	Liaoning	63	9.92	20.63
22	Jilin	12	1.89	22.52
23	Heilongjiang	21	3.31	25.83
31	Shanghai	58	9.13	34.96
32	Jiangsu	12	1.89	36.85
33	Zhejiang	12	1.89	38.74
34	Anhui	12	1.89	40.63
35	Fujian	8	1.26	41.89
36	Jiangxi	12	1.89	43.78
37	Shandong	28	4.41	48.19
41	Henan	64	10.08	58.27
42	Hubei	12	1.89	60.16
43	Hunan	24	3.78	63.94
44	Guangdong	64	10.08	74.02
45	Guangxi Zhuang Autonc	12	1.89	75.91
60	Chongqing	8	1.26	77.17
51	Sichuan	32	5.04	82.2
52	Guizhou	20	3.15	85.35
53	Yunnan	16	2.52	87.87
61	Shaanxi	12	1.89	89.76
62	Gansu	65	10.24	100
	Total	635	100	

Table2. Distribution of Industry		
Not applicable	-8	31.51
Agriculture, forestry, animal husbandry	1	14.36
Manufacturing	3	4.08
Construction	5	0.96
Transportation, storage, and postal service	6	1.37
Wholesale and retail	8	1.79
Residential and other service industry	15	1.07
Education	16	0.85
Public administration and social organization	19	1.22
Other industries and anything else	99	42.79

Utility function model of gift-exchange behavior

1. Assumptions:

   1.1 People all care about their social status

   1.2 People can and are willing to improve their social status by spending money to buy gifts or time to socialize

2. Model

   U=$U(m,t,s(m,t),x) = \ln(m_0 - m) + p\ln(1-t) + q\ (a\ln(m) + \ln(t)) + b\ln(x)$

   Where

   0<= m <= m_0, the amount of money spent to buy gifts in order to improve or maintain social status;

   0<= t <=1, the percentage of time spent on socializing to improve or maintain social status;

   s, social status, s = $a\ln(m) + \ln(t)$;

   x >=0, other factors that can influence the utility function

   $m_0 \geq 0$, p >0, q >0, a >0 , b >0 $\epsilon \boldsymbol{R}$ are parameters; m, t, x, and s are variables

3. Optimization

FOCs:

$$\frac{\partial U}{\partial m} = \frac{1}{m - m_0} + q\left(\frac{a}{m}\right) = 0 \qquad \dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

$$\frac{\partial U}{\partial t} = \frac{p}{t-1} + q\left(\frac{1}{t}\right) = 0 \qquad \dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$

$$\begin{cases} m = \dfrac{q\,a}{1+qa}\, m_0 \\ t = \dfrac{q}{q+p} \end{cases}$$

SOCs:

$$A = \frac{\partial^2 U}{\partial\, m^2} = -\frac{1}{(m - m_0)^2} - \frac{q\,a}{m^2} \qquad \dots\dots\dots\dots\dots\dots\dots\dots\dots (3)$$

$$B = \frac{\partial^2 U}{\partial\, m\, \partial\, t} = 0 \qquad \dots\dots\dots\dots\dots\dots\dots\dots\dots (4)$$

$$C = \frac{\partial^2 U}{\partial\, t^2} = -\frac{p}{(t-1)^2} - \frac{q}{t^2} \qquad \dots\dots\dots\dots\dots\dots\dots\dots\dots (5)$$

$$B^2 - A\,C < 0$$

Thus to maximize utility the agent will choose the allocation as follows:

$$\begin{cases} m^* = \dfrac{q\,a}{1+qa}\, m_0 \\ t^* = \dfrac{q}{q+p} \end{cases}$$

4. Interpretation

Different agents have different parameter values for a, p, and q, so they have different optimal allocations of money and time.