

## Gye (financial club) Participation among Koreans

This study establishes a profile of Gye participants and identifies who is more likely to participate in Gye, using the 1993 Korean Household Panel Study. Financial and demographic characteristics of participants differ from that of non-participants. The results of probit analysis show that earned and unearned income, liquid assets, expectation for their future financial status, residence, marital status, age, and the length of residency in current housing are significant factors in explaining Gye participation.

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### Introduction

Gye, often called a "financial club," was originated thousands years ago when Korea was a kingdom. The primary purpose of Gye was to maintain and improve community welfare through cooperation and mutual assistance. Gye played an important role as a co-op in a self-sufficient agricultural society where financial institutions did not exist. It was started in rural areas to establish a common fund for social gathering, ancestral worship, or emergency. The significance of Gye has historically diminished as societal changes occurred such as the development of the financial market, increased mobility, and the establishment of a social welfare system.

Gye is a voluntary association based on ties of family, region, employment or school. It operates based on mutual trusts among associates. The main function of Gye is the pooling of financial resources from each associate to establish a fund so it can be available for one of the associates who is assigned in advance. The time at which the fund is received by each member is usually determined by the associates with a consensus. It is common that the associates have a regular meeting, usually monthly, and a financial transaction based on the pre-planned schedule proceeds an informal social gathering. (Kim, 1987; Kim, 1991a).

The purposes of participating in Gye have been altered. According to the studies that have examined the purposes of Gye participation, establishing a commonweal for marriage or funeral funds was the main purpose of participation in earlier years. Since the 1980s, Gye has been a popular tool to establish funds for traveling, children's education, purchasing household appliances, and leisure activities (Eikemeier, 1980; Choi, 1987; Kim, 1987; Kim, 1991b; Kim, 1992).

The level of Gye participation has also been changed as the society changes. In 1965, about 21% of rural households participated in Gye (Do, 1965). The participation rate was much higher in 1986; 47% for rural households and 41% for urban households (Chung, 1986). However, a report by the Bank of Korea (1989) indicated that only 25.7% of urban households participated in Gye. On average, urban households were involved in two Gyes while rural households participated in one Gye (Kim, 1991b). The inconsistent patterns of Gye participation rates may be the result of the data used in each study.

The existing research on Gye focused on the major functions and purposes of Gye. For example, economists studied the role of Gye as a substitute for personal financial management and sociologists examined the characteristics of Gye as a cooperation, and how Gye was managed as an organization (Park, 1988; Kim, 1988). A few studies focused on the purposes of Gye (Wang, 1983; Choi, 1987; Kim, 1987). Despite the important function of Gye in family finance, limited attention has been given to Gye by consumer and family economists. Furthermore, the existing research used local data with small samples, limiting generalizability of the results. This study will utilize a national data (1993 Korean Households Panel Study) and it has three objectives: (1) to examine the characteristics of those who participated in Gye; (2) to compare the financial status of the Gye participants with the non-participants; and (3) to identify the influencing factors in Gye participation.

## Previous Studies

### Purposes for Gye Participation

Wang (1983) identified five purposes of participation in Gye: establishing a fund to loan to others, being involved in a cooperative business, for social gathering, saving for education and wedding funds. Kim (1988) classified Gye into two types: social and economic. Social Gye focuses on the social interaction among associates and economic Gye concentrates on the capital accumulation such as savings, emergency funds, and commonweal funds for marriages, children's education, and funerals.

According to the Bank of Korea (1989), 32% of those involved with Gye participated in it for social gathering, 21.4% for housing funds, 19.5% for children's education, 8.6% for business start-up funds, 5.8% for marriage and funeral funds, 4.8% for purchasing large expense items, and 7.9% for other reasons. Kim (1991b) studied the patterns of Gye participation among homemakers residing in Seoul (n=366). Three major reasons were identified: 35.5% for social intimacy, and marriage or funeral funds, 33.3% for the preparation of a lump sum of money, and 30.6% for purchasing durable goods or jewelry. Kim (1992) also studied the purpose of Gye participation among 1,519 rural households and reported the following reasons: 37.7% for social gathering, 30.7% for children's marriages, 12.8% for traveling and leisure funds, 9.3% for the preparation of a lump sum of money, and 9.5% for other reasons.

### Contributing Factors to Gye Participation

Researchers were interested in examining the role of household financial characteristics on Gye participation because of the significant function of Gye in family finance (Kim, 1988; Kim 1991b, 1992). Family income was found to be an important factor explaining the participation in Gye. As family income increased the number of Gye that individuals involved with also increased. The level of liquid and non-liquid asset holdings had a positive effect on Gye participation: the higher the liquid and non-liquid assets the higher the probability of Gye participation. The ownership of a farm or land had a positive influence on Gye participation while home ownership had no significant effect.

Because of the requirement for regular contributions to the Gye fund, usually monthly, it is commonly expected that the salaried are more likely to involve themselves in Gye than those who are on wage incomes or other types of irregular income. Kim (1991b), however, found no significant relationship between receiving a regular income and Gye participation.

Chung (1986) found that those who lived in rural areas were more likely to participate in Gye than those who lived in urban areas. Their major purposes were social gathering and establishing children's wedding funds. Urbanity was also found to be related to the participation rate of Gye in Cheju Island (Kim, 1988); rural residents were more likely to participate in Gye than urban residents. The length of residence affected the likelihood of participation in Gye. The length of residency was positively associated with Gye participation for urban homemakers while it had a negative effect on the Gye participation of rural homemakers (Kim, 1992). Age is also an important factor (Kim, 1991b): one is more likely to participate in Gye as he/she ages. Education had no significant effect on Gye participation (Kim, 1991b). The self-employed tended to be more involved in Gye than others (Kim, 1992).

## Methods

### Data and Sample

The data used in this study are from the 1993 Korean Household Panel Study (KHPS). It is a panel of data collected every other year by the Daewoo Economic Research Institute. The 1993 KHPS contains information on detailed expenditures of various categories, comprehensive financial information, and socio-demographic characteristics of 4,547 households (Daewoo Economic Research Institute, 1993). The sample in this study consists of the primary respondent in each sample household (n=4,081). Households with no response to Gye participation question were excluded (n=466).

### Variables and Hypothesis

The dependent variable is a dichotomous variable: 1 if participated in Gye, 0 if not. The independent variables were selected based on the previous research and categorized into three groups: financial, social, and demographic. Financial factors include earned income, unearned income, liquid assets, home equity, and the perceived financial status by the respondent for their current and future financial situation. It is expected that the likelihood of participation in Gye decreases as the level of financial assets increases if the purpose is to establish a

fund for occasions that requires large expenses. A higher level of financial resources may lead to a higher level of participation in Gye if the respondent seeks only a social function of Gye. Therefore, the effect of the level of financial resources on Gye participation is not clear. It is also unclear how the respondent's perceived financial status influences the likelihood of Gye participation. No previous studies examined this variable. The value of all financial variables were converted to U.S. dollars (900won = approximately one U.S. dollar).

Social factors are city size reflecting the level of urbanization and the length of residence. Kim (1988) and Kim (1992) found that rural residents are more likely to participate in Gye than urban residents. A lower participation, thus, is expected for those who reside in a large city. The length of residency has not been examined in previous research. In this study, we expect that the likelihood of Gye participation increases as the period of residency in their current housing increases, with an assumption that establishing a trustworthy relationship requires time.

Demographic variables are gender, marital status, life cycle stage, education, occupation, self-employment, and family type. The role of gender in Gye participation has not been examined in previous research although literature indicated that women may participate more in Gye than men (Choi, 1987; Kim, 1992). No previous studies examined the effect of marital status on Gye participation and the effect is, therefore, not clear. In this study, we assume the married may be more likely to involve themselves in Gye than the non-married because the major reasons identified for Gye participation tend to be related to married life (e.g., children's education and marriage). Older individuals are more likely to participate in Gye than the young (Kim, 1991).

Education had no significant effect in the previous research. In this study, it is expected that education may decrease the likelihood of Gye participation since educated individuals tend to be aware of the financial risk involved in Gye, and alternative saving and investment options. Whether the respondent is salaried or not captures the constant cash flow of income. Since Gye usually requires a regular monthly payment, it is expected that the salaried are more likely to participate in Gye than others. The effect of being self-employed is not clear. Since the self-employed tend to have irregular incomes as compared to the salaried, they may not join a Gye as often as when compared to others. However, Gye can provide them with an opportunity to establish a lump sum of money for their business. Living in an extended family may affect the Gye participation of the respondents. It is common in Korea that the adult child who lives with his/her parents is responsible for family affairs (e.g., special birthdays at 61st or 70th, silver or golden anniversary of parents' wedding) that require large expenses and thus, are likely to join Gye.

## Analysis

Means and frequencies were computed for the three groups; the total sample and the dichotomized sample by Gye participation status. T-tests and chi-squared tests were performed to examine whether significant differences exist between the characteristics of the participants and non-participants. To estimate the participation model, probit analysis was performed since the dependent variable, Gye participation, is binary. The estimated coefficients are the changes in the odds ratio, the ratio between the odds of one event occurring versus the other event occurring. The coefficients are the indication of the direction not the magnitude of the relationship (Greene, 1993). Since the probit estimates are not directly interpretable, marginal effects of explanatory variables were computed at the sample means and modes for parameter estimates that were identified statistically significant.

## Results

### Sample Characteristics

The characteristics of the sample are presented by the Gye participation status in Table 1. Those who participated in Gye were better educated and had a higher earned income than those who did not participate in Gye, on the average. The earned income and home equity of the participants was \$24,255 and \$68,602, respectively while the numbers were \$18,935 and \$57,211 for the non-participants. The perceived current and future financial status was better for those who participated in Gye than for those who did not.

Among the participants in Gye, 21.7% were self-employed while the number was 14.8% for non-participants. More individuals who were under 35 participated (52.1%) in Gye than the middle (41.7%) and old age groups (6.2%). About two-thirds of Gye participants resided in a large city whereas about half of non-participants did. About half of the participants had lived in their current housing less than three years while the number was about 40% for non-participants. About half of the participants owned their home, while almost 57% owned one among non-participants.

Table 1  
Descriptive Statistics by Gye Participation Status

<u>Variables</u>	<u>Total</u> (n=4,081)	<u>Participated</u> (n=743)	<u>Not-participated</u> (n=3,338)
<i>Continuous variables:</i>			
Earn income (\$) ***	19,903 (13,890)	24,255 (13,690)	18,935 (13,750)
Unearned income (\$)	8,627 (12,365)	10,753 (13,492)	7,649 (11,722)
Liquid assets	10,010 (13,534)	10,570 (14,607)	9,861 (13,232)
Home equity***	59,322 (76,921)	68,602 (89,183)	57,211 (73,701)
Perceived current financial status *	2.64 (.85)	2.71 (.80)	2.63 (.86)
Expected financial condition ***	3.03 (.74)	3.11 (.76)	3.01 (.73)
Education ***	10.60 (3.70) <sup>a</sup>	11.47 (2.93)	10.41 (3.82)
<i>Categorical variables:</i>			
City size ***			
Large city	2,195 (53.8) <sup>b</sup>	495 (66.6)	1,700 (50.9)
Otherwise	1,886 (46.2)	248 (33.4)	1,638 (49.1)
Residence period ***			
less than 1 yr.	815 (20.0)	156 (21.0)	659 (19.7)
1-2 yr.	940 (23.0)	215 (28.9)	725 (21.7)
3-5 yr.	786 (19.3)	156 (21.0)	630 (18.9)
6+ yr.	1,540 (37.7)	216 (29.1)	1,324 (39.7)
Gender			
Male	2,037 (49.9)	375 (50.5)	1,662 (49.8)
Female	2,044 (50.1)	368 (49.5)	1,676 (50.2)
Salaried			
Salaried	1,169 (28.6)	218 (29.3)	951 (28.5)
Self-employed ***			
Self-employed ***	655 (16.0)	161 (21.7)	494 (14.8)
Marital status *			
Married	3,523 (86.3)	659 (88.7)	2,864 (85.8)
Not-married	558 (13.7)	84 (11.3)	474 (14.2)
Life cycle ***			
Under 35	1,889 (46.3)	387 (52.1)	1,502 (45.0)
35-54	1,605 (39.3)	310 (41.7)	1,295 (38.8)
Over 55	587 (14.4)	46 ( 6.2)	541 (16.2)
Home ownership ***			
Owned	2,264 (55.5)	372 (50.1)	1,892 (56.7)
Not-owned	1,817 (44.5)	371 (49.9)	1,446 (43.3)
Family type			
Nuclear family	3,645 (89.3)	669 (90.0)	2,976 (89.2)
Extended family	436 (10.7)	74 (10.0)	362 (10.8)

Note : <sup>ab</sup>Numbers are in parenthesis represent standard deviation and percentage, respectively.

p < .05 \*\* p < .01 \*\*\* p < .001

#### Distribution of selected financial status

The median values of the selected financial variables were computed to compare the financial portfolio of those who participated in Gye with those who did not. The median value of Gye was \$4,000. A typical household of the participated had an annual total income of \$26,887, while that of the not-participated was \$18,125. The participants also had a higher asset, debt, and net worth than the non-participants. The median dollar values of savings and stocks held by the non-participants were higher than those of the participants, whereas the median dollar values of bonds and transfer income were almost the same.

#### The Factors Associated with the Probability of Participating in Gye

Table 2 presents the results of the probit analysis. Those who have higher earned and unearned incomes are more likely to participate in Gye than those with lower earned and unearned incomes. An increase in liquid assets decreases the likelihood of Gye participation. Those who perceive their future household's financial condition



would be improved, are more likely to participate in Gye than those who do not. However, how they perceive their present household's financial status and home equity do not influence the probability of participating in Gye.

Living in a large city affects the probability of participating in Gye positively. This result suggests that those who live in a city with a population of over 500,000 are more likely to participate in Gye than those who live in other areas. Compared to having less than a one year period of residency, one to two years of residency affects the likelihood of participating in Gye positively. There is no difference between the residency of over three years and less than one year of residency, indicating individuals tend to participate in Gye during the first or second year of residency.

Table 2.

The Estimated Probit Results of Gye Participation (n=4,081)

<u>Variables</u>	<u>Parameter Estimates</u>	<u>Standard Errors</u>
Financial factors:		
Earned income (\$100,000)	9.957 **	2.922
Unearned income (\$100,000)	9.094 **	3.034
Liquid asset (\$100,000)	-5.833 *	2.598
Home equity (\$ 100,000)	5.165	4.965
Perceived present financial status	-0.043	0.049
Expected financial condition	0.110 *	0.050
Social factors:		
City size (1 if large city)	0.311 ***	0.079
Residence period (less than 1 year )		
1-2 year	0.272 *	0.109
3-5 year	0.127	0.119
6+ year	0.099	0.119
Demographic factors:		
Gender (1 if male)	-0.038	0.100
Marital Status (1 if married)	0.429 **	0.131
Life cycle (under 35)		
35-54	-0.159	0.093
55 and over	-0.440 *	0.179
Education	0.010	0.016
Occupation		
Salaried (1 if yes)	-0.044	0.108
Self-employed (1 if yes)	-0.211	0.124
Family type (1 if nuclear family)	-0.120	0.126
Constant	0.898 *	
Log likelihood ratio	-739.166	
Chi-squared	1478.332 ***	

Note: \*p < .05 \*\* p < .01 \*\*\* p < .001

As expected, the married are more likely to participate in Gye than the non-married. Compared to those under 35, those who are older than 55 are less likely to participate in Gye, while there is no difference between those under 35 and the middle aged. Gender, education, occupation, and the family type have no significant effect on the probability of participating in Gye.

### Summary and Conclusion

Using the 1993 KHPS, this study established a profile of Gye participants and examined the factors associated with the probability of Gye participation. Approximately 20% of the respondents participated in Gye. As compared to the non-participants, the participants are better educated, have higher earned income, higher home equity, and have a better perceived financial status for their current and future financial standing. More participants are married, self-employed, young, live in a large city, have lived in their current housing for less than three years, and are non-homeowners than non-participants.

The results of probit analysis suggest that those who have higher earned and unearned incomes, those who have positive financial expectations for future, reside in a large city with more than 500,000 people, have lived in their current housing for one to two years, and are currently married, tend to participate in Gye. Those who are older than 55 are less likely to participate in Gye than those under 35. Having higher liquid assets decrease the likelihood of Gye participation.

A positive association between higher earned and unearned incomes and Gye participation, and a negative effect of liquid assets on Gye participation are worth noting. These findings indicate that Gye is a useful tool for only those with higher earned and unearned incomes but not for those with higher liquid assets. Since one of the reasons why individuals join Gye is to establish a large fund, those with higher liquid assets may not have any incentive to join Gye. Gye is risky since there is no protection against financial losses when it is dissolved. Using Gye as a saving or investment tool is, therefore, dangerous and could result in a financial catastrophe. Financial education for asset management and diversified investment should be readily available for those who are interested in Gye.

The results of this study have implications for financial educators as well as financial counselors and planners assisting in the financial planning of individuals and households. For instance, money management and budgeting skills can be taught to those who are interested in Gye so they can seek other financial tools for their saving and investment. Almost 20% of the households in this study are involved in Gye, indicating they could be a target population for introducing new financial products that could provide benefits as Gye does, such as the flexible timing of receiving funds and no tax liability on the funds.

Since Gye is a social tradition in Korea, it is unlikely to end. The proportion of individuals who are involved in Gye may decrease as the financial market develops and more financial products are available. The economic significance of Gye may diminish but Gye will continue to serve its social function. The lack of information about the purposes of participating in Gye in the data limits any further interpretation of this study. Examining the purposes of Gye participation by individual characteristics and the amounts invested in each Gye will enhance our understanding of it immensely.

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#### Endnotes

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