# Who Supports the Elderly Parents in Need?

## The Structure of Active and Latent Intergenerational Ties in Korea

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**Abstract**

We test the "latent kin network" hypothesis by considering both active and latent structures of intergenerational exchange in Korea. We first examine active intergenerational ties using the Latent Class Analysis. Then, we test how each latent classes differently react to family members' needs by using the longitudinal data. We found that active intergenerational ties are greatly stratified by families' socioeconomic backgrounds. While wealthier families have strong emotional bonds between parents and children regardless of their financial exchanges, poorer families have both lower emotional bonds and less frequent financial exchanges. Financial exchanges are prompted when there is an imbalance between parents' and children's economic resources. We also found that latent intergenerational ties emerge only when parents actually *need* support and children *have* economic resources. Therefore, the structure of latent intergenerational ties also greatly depends on families' socioeconomic resources.

**Introduction**

Examining the patterns of intergenerational exchange is one of the central research questions in assessing the quality of intergenerational relations (Silverstein and Giarrussso 2010; Seltzer and Bianchi 2013; Suitor 2011; Swartz 2009). Various demographic changes including longer life, smaller families, and diverse family formation have increased the importance of mutual support between parents and adult children across the life course (Seltzer and Bianchi 2013; Swartz 2009). Numerous studies have examined how parents and adult children exchange their resources and the observed patterns serve as an evidence to assess whether or not the modern nuclear family structure has weakened the extended family system and intergenerational ties (Hogan, et al. 1993; Silverstein and Bengtson 1997; Riley and Riley 1993; Bengtson and Roberts 1991; Eggebeen 1992; Lee and Aytac 1998;).

One noteworthy argument on assessing the strength of intergenerational ties is that we should consider not only the active transfer at a particular time point but also the latent potential of intergenerational exchange (Silverstein et al. 1997; Swartz 2009; Wong 2008). That is, the "snapshot" of intergenerational transfer at a specific time point does not fully reflect the nature of family relations since the dormant of intergenerational exchange is simply due to the condition that parents and adult children do not need help or support from family members at that time point. Therefore, the more important question is whether or not family members possess a latent potential for supporting their family members in need. Many studies have theoretically and empirically examined the latent potential of intergenerational exchange and argued that family safety net is still effective even if the exchanges are not consistently forthcoming (Silverstein and Bengtson 1997; Seltzer and Bianchi 2013; Swartz 2009).

While the theoretical notion of "latent potential" is worthwhile to understand dynamics of intergenerational relations, the empirical approach to examine the concept does not fully integrate its nature. If we define that the active intergenerational tie is the structure of

intergenerational exchange at a particular time point, the latent intergenerational tie is embedded in active intergenerational ties but emerges when there is a significant life event or transition of family members. Many studies on intergenerational transfer, however, rely on the cross-sectional data and focus only on detecting the typology of the active intergenerational ties. For example, Silverstein and Bengtson (1997) used several indicators to capture the latent potential ("solidarity" in their study) such as contact, emotional closeness, similarity of opinions, and geographic distance in addition to instrumental exchanges. They argued that American families possess the potential to serve their members' needs based on the existence of intergenerational solidarity. However, this study uses cross-sectional data and detects the *potential* of intergenerational support rather than examining actual *instance* of exchange when the family members need support or care.

A few papers consider the life course perspective and examine how the latent potential actually converts into intergenerational exchange when the significant life event occurs (Silverstein, Gans and Yang 2006; Eggebeen and Davey 1998; Chan and Ermisch 2011). While these studies adopt the longitudinal perspective and effectively capture the evidence of the latent potential of intergenerational exchange, they do not consider the structure of intergenerational ties before the life event occurs. That is, they do not explicitly examine how people who have different active intergenerational ties at time 1, which is a cross-sectional structure of normal situation, differently react to the significant life event at time 2. Theoretically, the crucial question is whether a person who is assumed to have the latent potential but does not have active exchange at time 1 actually responds to the significant life event of family members. Therefore, the dynamics of intergeneration exchange have not been resolved satisfactorily since the active and latent intergenerational ties are not fully considered simultaneously in analytical models.

In this study, we test the "latent potential" hypothesis by considering both active and latent intergenerational ties in the Korean society. We adopt both cross-sectional and longitudinal approach in our analysis. We first examine the active intergenerational ties at time point 1 using the Latent Class Analysis (LCA). Then, we test how each latent classes differently react to family members' needs between time point 1 and 2 using the panel data. The main contribution of this study is that our analytic approach clearly sheds light on the static and transforming nature of intergenerational exchange and directly examines the "latent potential" hypothesis with a longitudinal approach.

**Analytical Strategies**

Our study proceeds in two steps. First, we conduct the Latent Class Analysis to examine the typological structure underlying intergenerational exchange at time point 1 (2006). We measured three types of exchange and each measure includes three items: 1) emotional (number of meeting per week, number of calls per week, and satisfaction on the relationship), 2) financial support from parents to adult children (routine monetary support, intermittent monetary support, intermittent goods support), 3) financial support from adult children to parents (routine monetary support, intermittent monetary support, intermittent goods support). These nine variables are analyzed for the latent class structure and the LCA finally provides the best model composed of several latent classes based on the goodness-of-fit indicators. We use the term *latent class* to represent the types of intergenerational exchange at time point 1, which are results of the LCA. We conduct separate LCA by children's gender. Then, we use an Anova test to examine the variations of socio-demographic characteristics among latent classes. This first step shows the structure of active intergenerational ties (latent classes) in Korea and the association between latent classes and families' socio-demographic characteristics.

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Second, we conduct a series of regression analysis to see how the active intergenerational ties (latent classes) differently respond to significant life events. We utilize panel data for two time points (T1:2006 and T2:2008).

$$y_{2i} - y_{1i} = \alpha + \delta(\omega_i) + \beta(X_{1i}) + \varepsilon_i$$

Where $y_{2i} - y_{1i}$ indicates the differences of monetary exchange between time 2 and time 1. $\omega_i$ indicates whether individuals experience health worsening event between time 1 and 2. We utilize five health worsening events such as declining self-rated health (0/1), declining IADL (0/1), incidence of major illness (0/1), incidence of depression (0/1), and incidence of traffic accidents (0/1). We added all five indicators and thus $\omega_i$ has ranges from 0-5. If estimates of $\delta$ have a statistically significant effect on outcomes, it presents that family members increase or decrease intergenerational exchanges according to the health worsening events. $X_{1i}$ includes a set of observable covariates in time 1. First, we include parents' demographic characteristics such as age, education, gender, and marital status. Second, we consider parents' economic status including employment status, household income, and house ownership status. Lastly, we include adult children's characteristics such as the total number of siblings, age, education, employment status, and house ownership status. We conduct this analysis separately by latent classes that are classified in the first analysis to see how latent classes show different responds to the health worsening events.

**Data**

In this study, we utilize Korean Longitudinal Study of Ageing (KLoSA). KLoSA is conducted by Korea Employment Information Service (KEIS), a government agency. KLoSA is a nationally representative sample of middle and old aged population (45 or older). The KLoSA is panel data starting from 2006 and conducted every even-numbered year. The 2006 KLoSA collected information about 10,000 individuals by using proportional stratified

sampling method. The survey includes extensive information on family backgrounds and relationships, demographic backgrounds, socioeconomic status, health status, and social networks of old aged population in Korea. The data used in this study are the first two waves of KLoSA (2006 and 2008). We restricted the sample to those who have at least one adult children (age over 25) and do not cohabit with their adult children. We further eliminated samples who have missing information for key variables such as nine variables used in the LCA and health worsening events. The final sample of this study is about 2576 for parents-male adult children and 2661 for parents-female adult children.

**Results**

*The structure of active intergenerational ties*

---------- Figure 1 about here -----------

In this section, we summarize the key findings of this study. First, figure 1 shows the five latent classes of male adult children family. First, in terms of emotional measures (Yellow section), while three latent classes – LC1, LC2 and, LC3 – have relatively strong bonds between parents and adult children, LC4 and LC5 have extremely low levels of intergenerational affective bonds. The transfer flows from parents to adult children (Green section) show that most Korean parents do not provide financial support to their adult children except LC1 who provides intermittent goods and monetary support. In contrast, adult children provide various financial supports to their parents (Red section). LC1 provides intermittent monetary support and goods, LC3 provides routine monetary support, and LC4 gives intermittent monetary support. However, LC2 and LC5 do not give any financial supports to their parents.

---------- Table 1 about here -----------

Next, we conduct the Anova test to see how socioeconomic backgrounds are associated with latent classes. Table 1 shows the result of the Anova test for parent-male adult children family. We adjust the brightness: darker color means high values. The first notable pattern is that parents of LC1 and LC2 are much wealthier than the other three latent classes. More specifically, while LC2 has the greatest household income, LC1 has the greatest real estate and cash assets. In terms of children's characteristics, the most notable pattern is that LC3 has the highest educational attainment, the highest employment rates, and the highest level of house ownership status. While LC1 and LC2 have relatively higher education levels than LC4, the employment and house ownership status do not greatly differ between them. LC5 has the lowest level of education, employment, and house ownership status.

Combining the results of the LCA and the Anova test suggests interesting patterns of intergenerational relationship in current Korean society. Active intergenerational ties greatly depend on the combination of socioeconomic backgrounds of parents and adult children. First, when both parents and children are rich such as LC1 and LC2, they have strong affective bonds but rarely exchange their financial resources. The only observed exchange is that parents and children in LC1, the wealthiest parents group, provide intermittent goods and monetary supports to each other. Parents in LC1 provide their adult children with financial support only. We can speculate that they give and receive "presents" each other rather than exchange monetary resources routinely. Both parents and children of LC5 have a very low socioeconomic status and they do not exchange any financial supports as in LC2. However, the crucial difference between LC2 and LC5 is that LC5 has the lowest affective bonds while LC2 has a strong one.

However, when there is an imbalance of socioeconomic resources between parents and children as in LC3 and LC4, routine or intermittent monetary supports are observed. In particular, LC3 is a very interesting group because it has the greatest imbalance between —

children with the highest socioeconomic resources and parents with very low resources. In this case, children provide routine monetary support to their parents. The difference between adult children of LC3 and LC4 is that LC4 has relatively lower socioeconomic resources than LC3.

In sum, the results of the LCA and the Anova tests suggest that active intergenerational ties are highly stratified by families' socioeconomic status. While financial exchange is not greatly associated with affective bonds for rich families, poor families have both lower levels of exchanges and affective bonds. However, when rich adult children provide routine monetary support to their poor parents as in LC3, their affective bonds are highest among the five latent classes. These results seem to suggest that the solidarity of Korean families depends greatly on the socioeconomic backgrounds rather than the actual instance of intergenerational exchange.

---------- Figure 2 and table 2 about here -----------

The figure 2 and table 2 show the results of the LCA and the Anova test for parents-female adult children. The notable pattern is that latent classes of female adult children are only four types. While LC1, LC2, LC3 and LC4 of female latent classes are very similar to LC1, LC2, LC4 and LC5 of male latent classes respectively, LC3 of male latent classes is not observed in the female cases. That is, there are males who have poor parents and have achieved high educational attainment and economic resources, whereas this kind of latent class is not typical for female adult children in Korea. Therefore, no latent classes provide routine monetary support to their parents in the female case. Except this difference, other patterns are very similar to each other between male and female adult children. That is, the richest families exchange "presents" (LC1) and relatively wealthier families enjoy high affective bonds (LC1, LC2 and LC3) regardless of financial exchanges. If both parents and adult children have lower socioeconomic resources (LC4), they have the lowest financial exchanges and emotional bonds. Similar to parents-male adult children relationship, active intergenerational ties are greatly stratified by families' socioeconomic resources for parents-female adult children relationship.

*The structure of latent intergenerational ties*

Next, we examine the "latent potential" hypothesis. Since we found that the flow of financial support mainly comes from adult children to their parents, we examine how parents' health worsening events affect their adult children's financial supports to their parents. Table 3 presents the results of regression analysis. First, the significant estimates of health worsening event variable are observed only in LC3 of male adult children and LC2 of female adult children. Both latent classes increase the amount of financial support when their parents experience health worsening events.

---------- Table 3 about here -----------

Except LC3, all other male children latent classes do not respond to their parents' health events. Considering families' socioeconomic resources, we speculate that latent classes have different reasons for their non-responsive patterns. Parents of LC1 and LC2 do not need financial supports from their children since they have sufficient financial resources. In contrast, parents of LC4 and LC5 may need financial supports, but their adult male children do not have financial resources to respond to their parents' needs. We expect similar patterns for the cases of female adult children. While parents of LC1 do not need financial support from their children, female adult children of LC4 may not have sufficient financial resources to help their parents.

These results do not seem to strongly support latent potential hypothesis. In the case of male children, if latent potential hypothesis is true, all latent classes should increase financial supports when their parents experience health worsening events. One possible interpretation of this pattern is that "latent potential" emerges only when parents actually *need* support and children *have* the resource to help their parents. Only LC3 meets these conditions for financial support. In the case of female children, LC2 and LC3 may meet these conditions. However, adult children in LC2 who do not have any financial exchanges before increases financial

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support to their parents. In sum, these results suggest that the effect of latent potential seems to be modest at best and it greatly depends on the socioeconomic resources of family members.

**Summary**

In this study, we examine both active and latent intergenerational ties in Korea. We found that active intergenerational ties are greatly stratified by families' socioeconomic backgrounds. While wealthier families have strong emotional bonds between parents and children regardless of their financial exchanges, poorer families have both lower emotional bonds and less frequent financial exchanges. Financial exchanges are prompted when there is an imbalance between parents' and children's economic resources. In particular, when children have economic resources and their parents are poor, routine and intermittent financial supports from children to parents occur. We also found that latent intergenerational tie emerges only when parents actually need support and children have economic resources. Therefore, the structure of latent intergenerational ties also depends greatly on families' socioeconomic resources.

Figure 1. Latent Class Models for parent and male adult children.
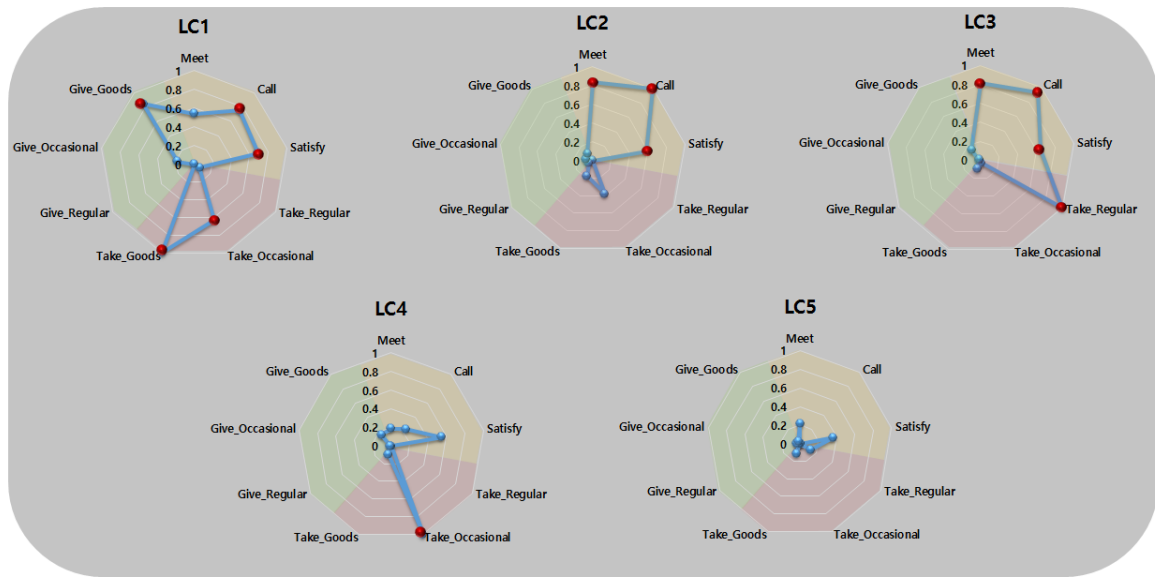


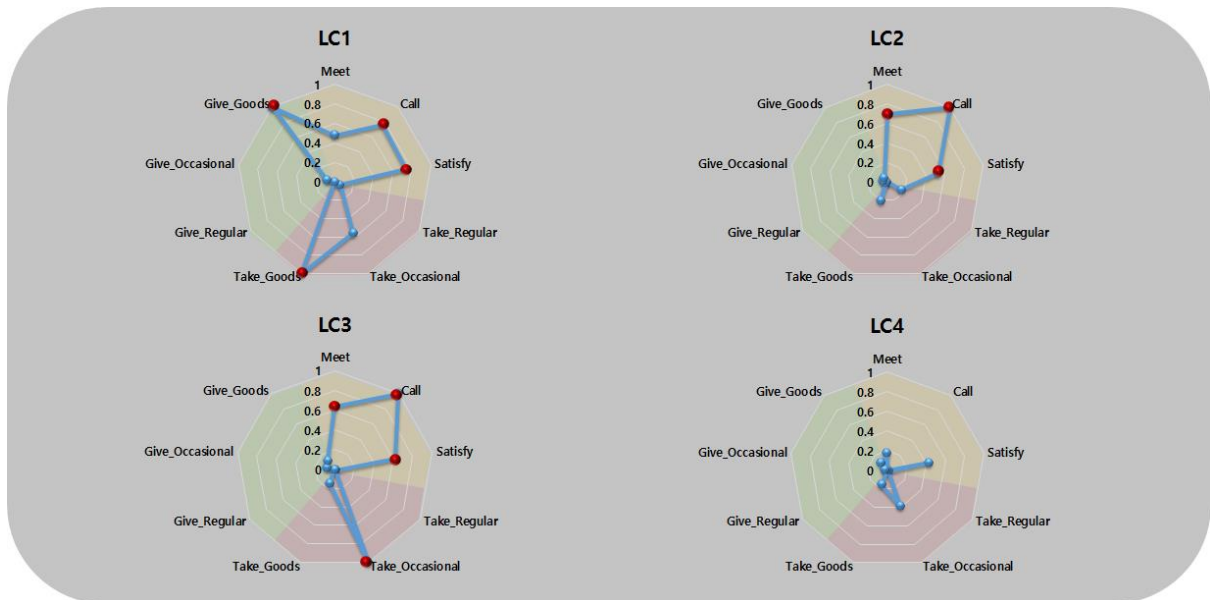Figure 2. Latent Class Models for parent and female adult children.

Table 1. Socio-demographic backgrounds by latent classes, parents and male adult children

| Variables | | LC1 | LC2 | LC3 | LC4 | LC5 | F-value |
|---|---|---|---|---|---|---|---|
| | | mean | mean | mean | mean | mean | |
| Parents' socio-demographic backgrounds | age | 64.14 | 62.87 | 67.94 | 66.84 | 68.02 | 42.48*** |
| | Years of education | 8.48 | 8.9 | 8.11 | 7.55 | 7.56 | 27.82*** |
| | Gender (1=male?) | 0.44 | 0.44 | 0.36 | 0.43 | 0.39 | 2.02 |
| | Marital status (1/0) | 0.85 | 0.84 | 0.69 | 0.81 | 0.67 | 21.56*** |
| Parents' economic backgrounds | Employment status (1/0) | 0.52 | 0.37 | 0.16 | 0.27 | 0.27 | 22.30*** |
| | Household income | 1648.76 | 1652.11 | 1022.18 | 1137.71 | 1037.28 | 17.75*** |
| | Own House (1/0) | 0.91 | 0.8 | 0.84 | 0.85 | 0.7 | 19.00*** |
| | Profitable asset(1/0) | 0.29 | 0.13 | 0.09 | 0.13 | 0.07 | 19.23*** |
| | Financial asset (1/0) | 0.62 | 0.47 | 0.4 | 0.4 | 0.29 | 24.00*** |
| | Interest income(1/0) | 15.07 | 4.29 | 5.47 | 0.93 | 1.12 | 5.74*** |
| Children's socio-demographic backgrounds | Number of siblings | 3.18 | 3.08 | 3.29 | 3.67 | 3.53 | 19.73*** |
| | age | 40.21 | 39.02 | 43.92 | 43.76 | 44.52 | 45.58*** |
| | Years of education | 14.48 | 14.28 | 14.55 | 13.24 | 12.77 | 48.75*** |
| | Employment status (1/0) | 0.94 | 0.84 | 0.99 | 0.96 | 0.78 | 35.76*** |
| | Own House (1/0) | 0.57 | 0.41 | 0.7 | 0.6 | 0.37 | 34.11*** |
| | Health worsening events | 0.38 | 0.5 | 0.58 | 0.53 | 0.54 | 2.36* |
| | n | 209 | 894 | 220 | 529 | 724 | |

Table 2. Socio-demographic backgrounds by latent classes, parents and female adult children

| | Variables | LC1 | LC2 | LC3 | LC4 | F-value |
|---|---|---|---|---|---|---|
| | | mean | mean | mean | mean | |
| Parents' socio-demographic backgrounds | age | 61.16 | 65.15 | 63.19 | 68.48 | 72.31*** |
| | Years of education | 8.13 | 8.53 | 8.67 | 7.39 | 34.50*** |
| | Gender (1=male?) | 0.45 | 0.42 | 0.42 | 0.39 | 1.45 |
| | Marital status (1/0) | 0.88 | 0.8 | 0.81 | 0.69 | 20.97*** |
| Parents' economic backgrounds | Employment status (1/0) | 0.51 | 0.29 | 0.32 | 0.27 | 14.73*** |
| | Household income | 1887.66 | 1596.01 | 1660.53 | 1214.8 | 13.12*** |
| | Own House (1/0) | 0.25 | 0.15 | 0.1 | 0.1 | 3.98** |
| | Profitable asset(1/0) | 0.53 | 0.46 | 0.41 | 0.35 | 15.02*** |
| | Financial asset (1/0) | 5.8 | 2.77 | 2.47 | 1.7 | 11.11*** |
| | Interest income(1/0) | 0.88 | 0.79 | 0.81 | 0.77 | 2.12 |
| Children's socio-demographic backgrounds | Number of siblings | 3.51 | 3.49 | 3.45 | 4.13 | 43.46*** |
| | age | 37.35 | 40.91 | 38.92 | 45.32 | 91.90*** |
| | Years of education | 13.28 | 13.31 | 13.42 | 11.84 | 75.37*** |
| | Employment status (1/0) | 0.37 | 0.31 | 0.36 | 0.28 | 5.28** |
| | Own House (1/0) | 0.27 | 0.21 | 0.14 | 0.2 | 4.90** |
| | Health worsening events | 0.52 | 0.47 | 0.51 | 0.48 | 0.42 |
| | n | 196 | 645 | 745 | 1075 | |

Table 3. Parameter estimates from regression models for financial supports.

| Parents-male adult children | | LC1 | | LC2 | | LC3 | | LC4 | | LC5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Coef. | se | Coef. | se | Coef. | se | Coef. | se | Coef. | se |
| **financial** | Health worsening events (0-5) | -3.419 | 10.50 | 4.709 | 3.07 | 38.174* | 15.41 | -0.153 | 4.09 | 6.669 | 5.49 |

| Parents-female adult children | | LC1 | | LC2 | | LC3 | | LC4 | |
|---|---|---|---|---|---|---|---|---|---|
| | | Coef. | se | Coef. | se | Coef. | se | Coef. | se |
| **financial** | Health worsening events (0-5) | -2.789 | 6.93 | 12.744* | 4.02 | -2.204 | 4.06 | 5.573 | 3.17 |

Note: Each model includes all control variables but not shown.
*p < .05, **p < .01, ***p < .001.

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