Downward Transfers from Parents to Adult Children in Contemporary China

Exploring Mechanisms underlying the Feedback Model

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Abstract

In contemporary China, it is quite common for parents to offer financial as well as time transfers to their adult children. This research aims to dig out what factors can explain these tangible downward transfers. Three perspectives are generated based on previous research to provide potential explanations. The first two perspectives regard downward transfers as reflection of classical feedback model and responses to adult children's needs due to the underdeveloped welfare system in contemporary China. The third perspective provides two competing mechanisms, namely rational self-interested and altruistic giving, to explain what is underlying the downward transfers described in the previous two perspectives. A raw database from CGSS2006 is applied and two analytical samples are selected to analyse these perspectives. Logistic regression is carried out to test three sets of models with three outcomes respectively: downward time transfers, downward financial transfers and parents' happiness. Main predictors generated from theories include upward financial transfers, parents' health and income levels, whether adult child is in a dual-worker family and whether there is a young third generation. Empirical findings have shown that downward transfers reflect a non-patrilineality feedback model and more importantly, it is mainly the altruistic parenting cultivated by family-oriented culture that is underlying these downward transfers.

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Key words: downward transfers, intergenerational relationship, family-oriented culture, CGSS2006, logistic regression
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Table of contents

1   Introduction

Traditional Chinese culture describes parenting as altruistic giving out. One popular metaphor to describe the intergenerational relationship in China is that parents raise their children as if they are paying back the debt that they have owed to their children in the past life[1]. What this metaphor shows is an invisible deep-rooted idea that parents are supposed to take the very responsibility to take care of their children. Another widespread saying is that no matter how old the children have grown up to, they are always regarded as children by their parents and parents are always seeing them as those who need care and help. In contemporary China, it is quite common that even the children have got married and established their own family parents are still helping them in various ways. Even not living together, it is quite universal for parents to help with household duty for their adult children. For young couples having their own children, it is often the case that the grandparents are taking the main responsibility of looking after the third generation. During rush hours every workday, one can always see the elderly ferrying their grandchildren to and from school. Apart from all these time transfers, it is also not rare for parents to give money to their adult children.

In this context, it is meaningful to dig into the question: why are parents supporting their adult children[2]? What can explain this phenomenon? Is it true that they are doing this just because of cultural heritage or only out of human nature as parents? Or are they doing this for other considerations? Previous research have provided some perspectives to understand these downward transfers given by parents to their adult children. Classical feedback model, as a cultural heritage, may be used to explain this downward transfer as an integral part of intergenerational exchange described in this model. Another different perspective argues that the downward transfers are parents responding to the needs of their adult children in contemporary China. These needs are illustrated to come from the increasing dual-worker families (the second generation) as well as underdeveloped welfare system particularly the system regarding pre-school education and care. To further understand both the classical feedback model as well as parents' responses to their children's needs, the third perspective presents

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[1] The underlying assumption in this metaphor is that parents and children are not in the same parents and children relationship in the past life. In the past life, they are only debtors and creditors.

[2] Since as many as three generations may be involved in this research, some clarification is necessary about the terminology issue. In this research, the first generation is referred to when "parents" or "the parental generation" are mentioned. The adult children of the first generation form the second generation or "the filial generation". Some of adult children may have their own children. These children are the third generation and they are the grandchildren of the first generation. This research focuses on the downward transfers given by the first generation to the second generation.

two different mechanisms: rational self-interested and altruistic giving. Some scholars maintain that the rational mechanism is playing the crucial role and this mechanism is becoming more evident with decline in filial piety. While others argue that it is mainly the altruistic parenting nurtured by family-oriented culture that supports the downward transfers. Although all these perspectives have provided somewhat reasonable explanations about why parents are giving transfers to their adult children, no one has yet come up with a comprehensive analysis that integrating all these perspectives. By testing hypotheses derived from these different perspectives based on a database achieved from a nation-wide survey, this research contributes to drawing a more comprehensive picture about what factors give rise to the downward transfer.

Downward transfers from parents to their adult children may come in various forms. To clarify, this research will involve two types of transfers, namely time transfers and financial transfers. The former one mainly refers to labour transfers, involving helping with household duty (such as cooking and cleaning), taking care of babies or other family members. The latter one of financial transfers points to the behaviour of giving money to adult children. In other words, this research will only discuss tangible transfers given by parents.

Based on those perspectives provided by previous research, several models are built to look into downward time and financial transfers given by the parental generation applying logistic regression. The results have shown that traditional feedback model still provides an exact description of reciprocal care for the intergenerational relationship in contemporary China: there is a significant relationship between downward time transfers and upward financial transfers. However, data cannot show very strong evidence for the argument that parents are giving transfers as a response to their adult children's needs if the adult children are a dual-worker family (especially those with a young grandchild). What data have shown is a significant relationship between downward time transfers and whether there is a young grandchild (the third generation) in all cases, and this significance disappeared when only including cases where the second generation are dual-worker families. In this case, it would be more reasonable to conclude that it is parents' own willingness to help more when there is a young third generation rather than they are responding to the adult children's needs as a dual-worker family with a young grandchild. Other results have also strengthened this altruistic parenting nurtured by family-oriented culture: parents will devote more financial transfers to adult children if they earn higher income and more time transfers will be delivered if parents are in better health condition. To conclude, the downward transfers are more than reciprocal care revealed by the feedback model. As the traditional family-oriented culture indicates, parents are always willing to help their adult children, especially when there is young third generation.

This thesis will start with theoretical section, in which previous research will be analysed and hypotheses will be generated. After that, research design will be introduced, explaining how data is collected and what statistical models will be applied. Results of data analysis will be presented after this, based on which

analysis and discussion would be made. Finally, it will end with limitation and conclusion of this research.

2 Theory

In order to answer the research question, first of all I refer to previous studies regarding intergenerational relationship in this theoretical section. Among these previous research, the downward transfers discussed here from the parental generation to the filial generation have not gained as much attention as other issues like aging or the role of family in old-age care. In fact, very few studies treat these downward transfers as the main focus of research and in most cases scholars regard these transfers just as one component of intergenerational interaction. This research aims at contributing to the filling of this gap by building a general picture explaining why parents are giving out the downward transfers based on previous research.

To achieve this aim, this theoretical section will be arranged as follows: three perspectives that may provide potential explanations (important potential predictors) for why parents give transfers to their adult children will first be discussed through integrating previous related research. After that, a brief analysis will be made to introduce other relative factors (control variables) when analysing the downward transfers. Finally, aim of this research will be introduced based on previous literature review. Following I will start with introducing the three perspectives based on previous studies.

## 2.1 Three perspectives based on previous research

In this main body of theoretical section, three perspectives will be illustrated one by one in this part. One is to regard the downward transfer just as reflection of the classical feedback model, indicating a certain social arrangement of reciprocal care. The second perspective, instead, emphasizes that downward transfers given by parents are responses to the second generation's needs in contemporary China. Based on these two perspectives, the third perspective discusses what kind of mechanism (rational/altruistic) holds more weight in downward transfers described in previous two perspectives. One (rational mechanism) argues that with declining filial piety, the downward transfers are becoming the "investment" parents make with the expectation that they can get return from their adult children and to respond to children's needs by giving downward transfers will cause burden for parents because they just do this out of social pressure. While the other (altruistic mechanism) asserts that the downward transfers given by parents just show parents' willingness to help their children cultivated by family-oriented

culture. The following section will start with introducing the first perspective of classical feedback model.

2.1.1 Classical feedback model

As mentioned before, this perspective regards the downward transfer as a reflection of classical feedback model. This model was first raised by a Chinese sociologist Xiaotong Fei in the 1980s (1983) to describe this social arrangement of reciprocal care. He argued that unlike most western countries, intergenerational transfers in China are bilateral, including both downward transfers from parents to children as well as upward transfers from children to parents. The very basic logic behind this intergenerational interaction could be described by a well-known proverb in China, that is parents bringing up children and children will look after them when they get old (yang'erfanglao). Following figure 2.1.1.1 provides a simple model of this reciprocal care. (Di et al, 2008, 86) F1, F2 and F3 represent the first, second and third generation respectively.

Figure 2.1.1.1 Simple Feedback Model

$$F_1 \rightleftarrows F_2 \rightleftarrows F_3$$
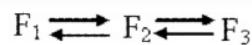
Source: Di et al, 2008, 86.

These intergenerational transfers may involve various forms. As summarized by Guo (2008, 99-100), there are both tangible transfers such as financial support as well as all kinds of intangible transfers like emotional communication and mutual help regarding ritual issues[3].

Among all these transfers, Fei (1983, 9) described one simplified classical feedback model. According to his generalization, the model runs as follows. Normally the mother is about 40 years old when the adult child (always the son) gets married, the young couple will stay with their parents and the mother will quit her previous work outside the family and put all her efforts to doing household duty as well as taking the responsibility of looking after the new-born babies (her grandchildren). In this case, since the mother will not have any income from outside the family, the young couple will pay for her living cost. As for the father, normally he can work and afford himself until 60 years old and after that, both he and the mother will depend on their adult children. At that time, the young couples are just about to finish their duty on raising their own children and immediately they face the burden of taking care of their aging parents. As mentioned by many scholars (Guo, 2008, 101; Fei, 1983, 8; Chen, 1998), the process of mutual support runs in such a long-term that it may involve one's

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[3] The most common example is that parents will help children to manage their wedding and the children will help their parents arrange their funerals.

whole life. However, based on this simplified feedback model, at least one hypothesis (Hypothesis 1a) can be generated in terms of a relatively short period.

Moreover, patrilineality is another fundamental concept in the classical feedback model described by Fei (1983). As he pointed out in his book (Fei, 1998, 240-246) unilateral descent is a social arrangement that simplifies the process of descending. In China, this arrangement is reflected as patrilineality. In this context, a women's life is divided into two phases. During the first phase she is subordinated to her father while when it comes to the second phase after she gets married she is dependent on her husband. (Fei, 1998: 198) And therefore, Fei asserted that more precisely, parents are actually raising sons rather than children so that they can be looked after when they are old. (Fei, 1983, 9) Following figure 2.1.1.2 presents the feedback model with patrilineality. F_1, F_2 and F_3 represent the males in the first, second and third generation and E_1, E_2 and E_3 indicate females correspondently.

Figure 2.1.1.2 Feedback Model with Patrilineality
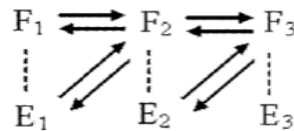
Source: Di et al, 2008, 86.

However, many scholars have noticed that in contemporary China, the connection is becoming increasingly stronger between daughter and their own parents even after the daughter has got married. (Zhang, 2003; Yan, 2006; Jin, 2000, 370-371；Xie & Zhu, 2009) In other words, various forms of transfers are now also taking place between the parents and their already married daughters, which seems to be just against the traditional patrilineality.

As for this change, different scholars have given different explanations. Some argue that the newly emerged transfers between daughters and their parents just reflect some changes within the patrilinear structure and the fundamental patrilineality is still deeply rooted in Chinese society. (Jin, 2000; Ma, 2003) Applying two different concepts of "negotiated commitments" and "cumulative commitments" raised by Finch (1989: 190-211), Tang, Ma and Shi (2009) further pointed out that these two concepts are just depicting two different intergenerational relationships between parents to their adult son and parents to their adult daughter. Only the negotiated commitments between parents and their adult sons are within the scope of patrilinear descent and take a rule of reciprocity. The cumulative commitments between parents and their adult daughters are more out of gratitude and therefore, it differs greatly from the traditional reciprocal feedback model. Other scholars like Judd (1989) and Hu (1995: 104) also emphasize this role of gratitude and love in the relationship between daughter and parents.

But there are also other scholars who maintain that the patrilineality that centers on the father-son axis has already changed in contemporary China. (Di et al, 2013; Yan, 2006) Yan (2006, 95-106) asserts that husband-wife axis within a core family is now achieving more importance and the father-son axis is losing its

previous status. One important factor that is argued to lead to this change is women's increasing social status. For instance, the research conducted by Di, You and Xin (2013) has shown that women are now gaining more power in family and they are playing more decisive roles in intergenerational relationships than before.

Thus, based on all these arguments, the gender of the filial generation is a factor of great significance in the feedback model that may influence parents' downward transfers. If the patrilineality is still the mainstream in China, then hypothesis 1b can be generated.

Hypothesis 1a: After the young couple gets married, the amount of financial transfers directed upward from the young couple to their parents correlates positively to the amount of time transfers directed downward from the parental generation[4] to their adult children.

Hypothesis 1b: If the patrilineality is still the mainstream, then parents would give more time transfer to their son and daughter-in-law and less time transfer to their daughter and son-in-law.

2.1.2 Needs of adult children in contemporary China

In this section I will move on to the second perspective illustrating the needs of adult children in contemporary China. Unlike the first perspective which traces the contemporary downward transfers to the traditional classical feedback model, this perspective emphasizes that the downward transfers are parents' responding to the needs of their adult children. (Bai & Chen, 2012; Tao, 2011) Specifically, dual-earner families (the families of the second generation), particularly those with young children (the third generation) are illustrated to need special help from the parental generation (the first generation).

First of all, much more women are now participating in the labour market and dual bread-earner family has become the mainstream in contemporary China. Statistics show that the number of women employed in the labour market has grown from 291 million in 1990 to 337 million in 2003, accounting for 44.8% of all employed people. [5] Lin (2011) noticed that most of the "post-80s" couples (couples who were born in the 1980s) are dual bread-earner.

Secondly, in these dual bread-earner families, most women are not willing to give up their work for sparing time to take care of babies or to do other household duties. Scholars have given different explanations on this. Lin (2011) argue that the females went out to work not only because of rising financial pressure such as

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[4] It is widely acknowledged that in China (even nowadays), female takes the main responsibility for household duty. Reflected in the feedback model, in most cases it is mother that is giving time transfers to the adult children. Due to the limitation of data used in this research, the first analytical sample cannot prove this point and thus only "parents" are mentioned in the hypotheses. However, in the descriptive analysis of the second sample, data have shown that healthy mothers give much more time transfers than healthy fathers.

[5] The statistics come from the website of Xinhua: http://news.xinhuanet.com/zhengfu/2004-04/26/content_1440778.htm.

high housing price but also due to the females' being deeply influenced by the idea of gender equality. Tao (2011) also agrees with the reason of rising financial pressure. Bai and Chen (2012, 60) argue that even the family is rich enough and the female can live well without working outside the family, still very few women would be willing to quit their job and to be a housewife. According to their explanation, this is because that in modern families, the bond to maintain a marriage is really fragile. With the value of household duty not being recognized by the market or the law, the female would suffer a lot if the marriage breaks up. Whatever reason it may be, all scholars agree that in contemporary China, it would be very difficult for the female to give up her own job for the family.

In this context of growing dual bread-earner families, current welfare system fails to provide these families with necessary social security for raising young children, which has made it necessary for their parents to provide supports. This failure can be reflected by the underdevelopment of birth insurance as well as the various problems regarding pre-school education and care.

As for the birth insurance, the very first problem is that only a small number of female workers are covered. As mentioned by many scholars, large numbers of women living rural area are excluded from this insurance, as well as many females involved in informal employments. (Song & Shi, 2009, 57-59) In average, only 28% of adult women are covered by this insurance in the whole country with great gap among different areas. Rich provinces such as Jiangsu had a rate of more than 68% while the lowest rate in Guizhou was less than 1%. Until the end of 2006, even among those employed females, the average rate of being covered by this birth insurance was still only 55%. (Song & Shi, 2009, 59) All these statistics have shown that the covering of birth insurance is very limited and even for women employed in the labour market, this insurance is still not necessarily available for them.

Moreover, even with this birth insurance, the welfare women get is still far from enough. Wan (2007, 31) notice that the social welfare for women has improved a lot and now with birth insurance, women can enjoy paid maternity leave of about 90 days, medical care as well as fertility subsidy. But this offers really tiny help for women in a dual bread-earner family. The most realistic problem that this insurance cannot help with is that someone needs to look after the baby after that 90 days' leave.

Unfortunately, early childhood education and care (for children from 0 to 6 years old) in China cannot help solve this problem neither. In urban areas, the market reform since the 1980s has pushed pre-school education into an awkward status and this has made it not only difficult but also expensive for parents to get their children into nursery schools or kindergartens, as illustrated by a number of scholars. (Hong & Pang, 2009, 3-4; Liu, 2009, 1-2; Liu & Xu, 2011) Before the reform, normally the enterprises and institutions where the young parents worked would provide nurseries and kindergartens and this provision was regarded as one part of welfare. However, after the reform, most of these nurseries and kindergartens have closed. (Liu, 2009,1-2) From then on, large amount of social capital has flowed in and nowadays the number of either private nurseries or private kindergartens has far surpassed the number of public ones. (Chen, 2009;

Chu, 2008) However, this has not brought any convenience for parents. Firstly, as many scholars argue, this reform has denied the social security function of early childhood education and care that was previously achieved through funding offered by social enterprises and institutions. (Hong & Pang, 2009, 3-4; Liu & Xu, 2011) Secondly, as pre-school education is beyond the nine-year compulsory education, very few public expenses are devoted to it, especially when local governments are under the pressure to expand compulsory education. (Hong & Pang, 2009, 3-4; Liu, 2009, 1-2) In this case, only children who go to public nurseries or kindergartens can enjoy previous welfare because public funding only flows to public nurseries and kindergartens. But the number of public pre-schools is so small that only a tiny fraction of young parents can have the opportunity to send their children there. As for those private pre-schools, since they run as profitable companies, the expenses are really high. Moreover, as illustrated by Hong and Pang (2009, 3-4), the quality of these private pre-schools cannot be ensured due to lack of regulation and supervision.

In rural areas, this problem is even more serious. As Pang & Han (2010) point out in their research, with more labours migrating from rural areas to urban areas, one significant problem is emerging of the care and education for those young children of these migrating people. Nowadays, a large amount of these young children are still living in rural areas, away from their parents who are working in urban areas. As for these children, nurseries and kindergartens are even more difficult to get in than those in urban areas. In Li's (2006, 41) empirical research on one relatively rich county in Fuzhou, only half of the interviewees have got pre-schools around where he or she lives.

Thus, the early childhood care and education is now quite under-developed and it is not able to meet the social demands. Until 2009, only 40% of children between 3 to 6 have the chance to get in a kindergarten. (Liu, 2009, 1-2) Along with this low rate, there is also a serious problem of great gap between different areas. Meanwhile, as pointed out by Liu (2009, 2), even in urban areas, the resources are allocated with great inequality since good preschool education is only available to a very small fraction of children.

In this context, those dual bread-earner families always face such a problem to find someone to take care of the children when both partners are working. In fact, when typing "dual bread-earner families" (in Chinese) into Google, the first several pages are all about discussions and reports on this problem.

It is in these circumstances that the parental generation stands out and gives their adult children the necessary help that they need. Thus, it can be inferred that young couple with children who are between 0 to 6 years old need the parental generation's help most, just as what Tao (2011) has discussed in her research. What needs to be pointed out here is that to help raise young children is just one of the supports given by the parental generation. Apart from this most significant help, the parental generation also gives time transfers to deal with the household duty so that the young couple can devote all their efforts to their own work, as reflected by Shen's (2013) research.

Following two hypotheses can be generated based on previous arguments.

Hypothesis 2a: *The parental generation tends to give more time transfers to their adult children if the two partners of young couple both work outside.*

Hypothesis 2b: *In the cases that two partners of young couple both work outside the home (dual-worker family), the parental generation tends to give more time transfers to the filial generation if the young couple has their own child who is between 0 to 6 years old.*

2.1.3 Underlying mechanism: rational self-interested or altruistic giving

After introducing previous two perspectives, this section will provide another perspective that helps understand what mechanism (rational or altruistic) is actually underlying the downward transfers described in previous two perspectives. For those who support rational mechanism, downward transfers are offered out of considerations for parents themselves' interest. It is argued that the intergenerational interaction is now becoming more self-interest-based due to the declining filial piety and increasing individual awareness. While for other scholars who are for the altruistic mechanism, acknowledging the fact that traditional piety filial is decreasing does not mean that the parents are becoming more rational. They assert that influenced by deep-rooted traditional family-oriented culture, parents are still always willing to help their adult children and as a corollary, a new trend is emerging that resources are now flowing downward from the parental generation to the filial generation. Arguments about these two mechanisms will be described in details in the following sections, starting from the rational mechanism.

As mentioned before, the very core idea of rational mechanism is that parents act on their own interest consideration[6]. Applying this idea to the first perspective of feedback model, the downward transfers are strategic investments made by rational parents in order to get return from their adult children. Parents act like this because the traditional filial piety is decaying while they still need support from adult children to get old-age care.

The starting point of this argument is the decaying of filial piety, the traditional culture that bolsters the classical feedback model. To understand this culture backbone, the key is the imperative role of family in old-age care throughout Chinese history. This importance of family in old-age care can firstly be reflected by the filial piety rooted in Confucian culture as mentioned before. Fei (1998, 48-53) has pointed out that in ancient China, the main approach to get society organized was a series of common codes of behaviour that were generally acknowledged by the society at that time. These codes are not necessarily ethically good or courteous; rather sometimes one code may even be cruel from

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[6] Here "interest" is applied to indicate material interest.

contemporary values. And according to Fei (1998, 50), these codes were not decided by one person like the emperor, instead they were passed on from generation to generation due to the effectiveness of these codes. The filial piety is just one of these codes. In ancient China, if one contravened this piety, not only would he or she be despised by the public, but it was also possible for him or her to get death penalty in some extreme cases. (Qu, 1981, 27-49) Even in current laws, one can find provisions that stipulate this filial piety. For instance, according to the Law on the Rights and Interests of the Elderly that was introduced in 1996, the filial generation should provide care through informal approaches for the elderly who may have illness.

Nevertheless, even with these stipulations, many scholars assert that the backbone culture of filial piety is decaying in contemporary China. In Chen's study about the elderly's suicide (2009, 165-166), he has classified four types of reasons about why the old-age people committed suicide and 70 out of 128 suicides are classified as despair suicide. This means that in most of the suicide cases, old-age people committed suicide due to their children's non-respect and not caring them at all. And the number of this type suicide has experienced a rapid growth from the 1980 to 2008. (Chen, 2009, 167) More importantly, in Chen's surveys, most people living in the neighbourhood said that they could do nothing concerning these suicides because they do not have the power to condemn those children not caring their parents. This has shown that previous traditional common code of behaviour is now losing original restrictions.

For this decline in filial piety, scholars have given many different explanations. For Guo (2008), the main factors that have caused this trend are the economic development and more importantly, the intervention of state administrative power into the grass roots. Guo argued that several political campaigns since 1949 are quite ritual and these campaigns have demolished the traditional codes of behaviours like filial piety that based on previous local life patterns. Sui (1989) also argued for the great effect on traditional culture of this intervention from the monopolistic state power.

As illustrated by Yan (2006, 261), with this declining of filial piety, individual awareness of rights is increasing all the time. This emerging awareness can relate to one's education background as well as one's age. One quantitative research carried out by Yu (2011) has shown that education background is significantly related to people's attitudes concerning the classical feedback model raised by Fei. Specifically, the more educated one person is, the less likely he or she will be influenced by the traditional culture of filial piety. Wu and Jiang (2008) also confirmed this finding in their research based on surveys conducted in Jiangsu Province and beyond this they also found age as another significant factor. In other words, the younger one person is, or the higher education level he or she achieves, the less he or she would agree with the idea that the filial generation should take the main responsibility for supporting the parental generation on old-age care.

In this context, it is claimed by some scholars that the intergenerational transfers are now more likely to base on self-interest, as reflected as reciprocal resource exchange rather than a continuation of traditional culture. As illustrated

by Nie (2007), individual interest is now becoming the main guidance for conducts and behaviours. In Chen's research (1998), he has pointed out that due to the decaying of filial piety, the parental generation has lost their previous status in the family and they have to "invest" in their children so that when they get old, the children are willing to take care of them in return. This investment is named by Chen as some kind of strategy that can be shown in various forms, such as providing financial support for their children's education and marriage, helping raising babies and dealing with household duty. And according to his data and analysis, a positive relationship has been corroborated between the parents' investment and the return they receive from their children.

With this logic of emphasizing individual interest, it can be inferred that old-age people with more independence will have less motivation to depend on their children. (Tao, 2011, 16-17) In other words, the main reason for parents to give transfers to their children is to expect returns and in this case, if they do not need the return, then they would not give transfers to their adult children. Tao (2011, 16-17) supports this argument and she maintains that those parents with relatively high income are always financially independent and thus it is not necessary for them to count on the feedback support from their adult children. In both Ye's (2012) and Yu's (2011) empirical research, this speculation has been corroborated since they have showed that people with higher income are less likely to hold the idea of traditional feedback model. Thus, income will be one vital factor that may affect intergenerational relationship. The higher income they earn, the more independent they are, the less necessary for them to make such "investments" to give out downward transfers. Only considering individual interest, parents will give less if they expect less from their children.

When applying this rational mechanism to understand the second perspective, then parents respond to their children's needs just because they have no other choice and this kind of downward transfers will cause extra burden to them. As illustrated by some scholars (Bai & Chen, 2012; Tao, 2011), the mother always plays the key role in providing labour/time transfers to the young couple. It is argued by these scholars that it is these old-age women's contributions that are supporting those dual bread-earner families. Based on this fact, Tao (2011) points out that these transfers would do harm to the welfare[7] of the parental generation, especially to the mother.

In contrast to rational mechanism, those who argue for altruistic giving illustrate that parents take it as granted that they should devote themselves to helping their children. In other words, parents support their adult children due to

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[7] The literature is in Chinese and the phrase used here is "福利" (translated as "welfare"). However, this Chinese phrase can be applied to refer to happiness as well as material interest. The first character "福" mainly means happiness and the second "利" refers to interest. By reading through the context of this literature, it can be told that the author argues for the rational mechanism and therefore it can be inferred that not only material interest will be harmed but also happiness will be injured. In later analysis, considering that the data provide indicators for happiness and material interest is difficult to measure, happiness will be chosen here to indicate "welfare" in hypotheses 2c.

their "instinct" cultivated by the specific cultural environment of family orientation.

Unlike the reciprocal care described in the rational mechanism, many contemporary studies emphasized that in China nowadays, both in rural and urban areas, there is a trend for resources to flow downward from the parental generation to the filial generation. (Liu, 2005; Kang, 2009; Wei, 2011; Yang, 2011; Wang, 2011; Wang, 2013) Specifically, Kang (2009) pointed out in urban areas, children successfully get material as well as labour benefits from parents while parents' emotional demands are not met perfectly. Wang (2013) looked into rural families in which adult children migrated into urban areas and he named the intergenerational transfers in these families as "auxiliary model". In this model parents provide financial support for their adult children to purchase housing in urban areas as well as preparing dowry, betrothal gifts or bride price for their adult children (the second generation) when they get married. It is also very common that it is the parental generation that takes the responsibility of bringing up their grandchildren (the third generation). Meanwhile, the parental generation tries their best to be independent, not adding any extra burden for their adult children who are working in the urban areas.

The subjective attitude of altruistic parenting cultivated by family orientation culture is mentioned here to explain the behaviour of parents' supporting their adult children. Rooted in the Confucian orientation, the traditional Chinese culture puts great emphasis on the family. As illustrated in the book "The Geography of Thought" (Nisbett, 2003, 15-19), a conception of individual rights is foreign to Chinese people in ancient times and in their social life, individuals are connected "as ropes in a net". The family is just the most significant net and "the individual works not for self-benefits but for the entire family". For people living these nets, family advancement is prior to self-advancement. With this background, Yang (2011, 157) maintains that the family orientation culture has led the parents to make strict demand on themselves while being quite lenient to their adult children. This can be reflected by their every effort to helping their adult children while caring little about the return they may get. He (2007, 2) and Li (1993) have also discussed this family orientation's effects on parents' altruistic transfers to their children. They both assert that the various supports given by the parental generation are not only out of paternal or maternal love, but also due to great influences by the traditional culture. To help children get married and establish his or her own family is regarded by parents as the most paramount responsibility. And it is worthwhile for parents to sacrifice their own interest to meet the demands of their children. Some extreme cases have been discussed in Chen's research about old-age people's suicides. In this research, he classified one type of suicide as "volunteer suicide", in which case old-age people chose to commit suicide for the sake of their children. (Chen, 2008, 164) For instance, some old people were seriously ill and they though that if they lived on their children would have to take much more burden to take care of them.

This altruistic mechanism of willingness to help children can also be reflected by parents' generosity towards the decrease in care they received from children. Yang (2011, 157) illustrates that underlying the downward flow is the increasing

difficulty for the filial generation to care for their aging parents. Wei (2011) further elaborates how these difficulties come into being. Based on Guo (1995)'s and Wang (2004)'s research about recent changes in Chinese population and family patterns, he pointed out that with the emergence of core families it has become less convenient for adult children to take care of their aging parents. In the past, most adult children (always the son) would live with their parents even after they get married and in these expanded families, it is very easy and convenient for them to look after their parents. However, nowadays, more and more young people live independently after they begin to work or get married and thus, it is not as easy as in the past for them to care for their parents. As Yang illustrated (2011), with this family-oriented culture, parents always treat their children with generosity and thoughtfulness and they are quite tolerant to the decrease in care from children, which further strengthens the downward resource flow from parental generation to filial generation.

Applying this altruistic mechanism to interpret the downward transfers, the more capability parents hold, the more transfers they will devote to the adult children. As for parents with higher income, more financial transfers will be offered to their adult children. Similarly, more time transfers will be delivered if parents are in better health condition. This is because giving time transfers, mainly doing household duty and taking care of family members such as a young grandchild, is a labour-costing and time-consuming task. Then parents with better health condition will be able to give more time transfers. And based on altruistic mechanism, if parents are able to help their children, they are always willing to offer these help.

Based on these rational and altruistic mechanisms, three sets of hypotheses (Hypotheses 3a, Hypotheses 3b and Hypotheses 3c) are generated. For each set, two competing claims are developed based on these two different mechanisms. For parents' income, claim 3a.1 is generated based on rational mechanism because parents with higher income are more independent and they rely less on the return offered by their adult children. Claim 3a.2 is established on altruistic mechanism since altruistic parenting will lead parents to help their adult children more if they are able to do this. Similarly, hypotheses 3b.1 and 3b.2 are generated based on rational and altruistic mechanism correspondently. Health condition is regarded as another indicator for capability to give transfers and altruistic mechanism will argue that better health condition of parents will lead to more downward time transfers. Apart from these, another set of hypotheses 3c are built based on these two mechanisms. As mentioned before, according to rational mechanism, responding to children's needs will be regarded as extra burden by parents and the more they need to help, the heavier the burden is, the more harm they have to face. (Hypothesis 3c.1) However, the altruistic mechanism will not regard this response as burden and they would even argue that the more parents help, the happier they would be. [8]

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[8] The analytical sample that is applied to analyse happiness of parents does not include information of whether there is third generation or whether the second generation is a dual-worker family (see Table 3.4). In this case, in

***Hypothesis 3a.1:** Based on rational mechanism, parents with higher income will give less transfer (time or financial) to their children.*

***Hypothesis 3a.2:** Based on altruistic mechanism, parents with higher income will give more financial transfers to their adult children.*

***Hypothesis 3b.1:** Based on rational mechanism, parents' health condition will not influence their time transfers given to their adult children.*

***Hypothesis 3b.2:** Based on altruistic mechanism, parents with better health condition will give more time transfers to their adult children.*

***Hypothesis 3c.1:** Based on rational mechanism, the more time transfers parents give, the unhappier[9] they will be.*

***Hypothesis 3c.2:** Based on altruistic mechanism, more time transfers parents give will not harm their happiness. In contrast, it is even possible that the more time transfers they give, the happier they would be.*

2.2   Controls and other considerations

Finished with the three perspectives provided by previous studies, this section will introduce some controls and some other considerations that are important for later analyses. First of all, previous studies have shown that regional differences can be greatly significant when looking into intergenerational interaction and the distinction between rural and urban areas is one of the most important. For instance, when analysing three kinds of transfers given by the adult children to their parents (namely financial transfers, life care and emotion communication), Xia and Ma (1995) found that families from urban areas differ greatly from families from rural areas. On one hand, the total financial intergenerational interaction in urban area shows a larger number in terms of quantities due to more advanced economic development while on the other hand, the adult children in rural area plays a more important role in providing living cost for their old-age parents. (Xia & Ma, 1995, 13) As they illustrated, different economic development as well as other factors may contribute to different intergenerational interaction modes and thus, when looking into the downward transfers given by parents, the regional factor should also be taken into consideration.

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later analysis for happiness as an outcome, it would be impossible to control these variables. As a complement, I control upward transfers (both financial and time transfers) given by adult children to their parents. According to rational mechanism what parents care about are mainly cost and benefit. In this way, controlling the benefit, there should be a significant relationship between what they pay out (cost: downward transfers) and their happiness.

[9] Here happiness is used to indicate "welfare" mentioned before. See footnote 7. Also in order to analyse happiness of the parents, a different analytical sample will be used for the set of hypotheses 3c. This would be illustrated in details in the section 3.2 Analytical Samples.

Age of parents is another important factor that will be controlled when analysing the downward transfers. For one reason, age can give a rough measure for parents' needs, capability and independence. As illustrated by Chen (1998, 139), the needs of parents or in other words, their lack of independence will influence the transfers among different generations and apart from health condition or income level, age is also an important measure to indicate this level of independence. In this research, this level of dependence can be regarded as "need to invest" for the rational mechanism and for altruistic mechanism, it stands for capability to help adult children. Another reason to control age is that data used in this research do not involve complete information about whether parents are both retired or not. Considering available time would also influence parents' capability to offer time transfers, age is used here as a rough measurement for time that parents have.

Another consideration here is about whether the first generation and the second generation live together and how convenient it is for parents to reach where their adult children live. This is also an important factor that will influence parents' capability to offer transfers (especially time transfers) as well as the difficulty for parents to receive returns (especially time transfers) from their adult children. However, in the first analytical sample that will be analysed in this research, only 16 out of 546 cases (2.85%) are the first and second generation living together. And for the majority of living separately, it is unknown how far they live from each other and how difficult for them to reach each other. Apart from these reason, I exclude the factor of cohabitation in this research considering that cohabitation can be understood both as a reason and as a result. One can say that cohabitation has made it more convenient for the parents to provide transfers. However, it also makes sense to argue that cohabitation is a decision made by parents because parents want to provide transfers to their adult children. Nevertheless, whether the two generations live together is still of great importance and it needs to be discussed in future studies.

2.3   Aim of this research

After introducing three main perspectives and some controls based on previous research, this final part of the theoretical section would illustrate the aim of this research and what contribution this research plans to make to current studies. In general, this research aims to combine perspectives offered by previous research based on a database collected from a nation-wide empirical study so that a more general and comprehensive understanding can be achieved to figure out the motivation underlying these downward transfers. Specifically, the aims/contributions of this research are listed as follows.

First of all, this research will try to look into the intergenerational relationship from the parents' (the first generation) perspective. From the literature review, one can see that most focus has been given to old-age care and how this is

affected by changes in feedback model. In other words, most current discussions are about how filial generation treats their aging parents after they become independent adults. Therefore, a discussion about why parents are giving transfers to their adult children from the perspective of the parental generation would help give a more comprehensive understanding of intergenerational relationship.

Secondly, most previous research are based on local empirical studies. By using a database collected from a nation-wide study, one can see whether or not the research conclusions got by local empirical study can be applied to the overall case all around China.

In addition, the most critical aim of this research is to combine these perspectives and then try to draw a more general and comprehensive picture about what factors are contributing to the downward transfers. What these perspectives provide are potential factors that may motivate parents to help their adult children, including the return they get from children, the help that their children need, their own capability and their willingness to give. And it is probable that one will be driven by multiple motives at the same time. What this research aims to do is to illustrate these motives in one general picture. Specifically, by testing and combining these factors, one can see whether these factors are significant in shaping parents' supporting behaviour for their adult children and how those significant factors work to influence the downward transfers.

3 Research design

Equipped with theoretical perspectives that will provide potential answers to the research question, the second step of research design is made in this section to answer the research question. This research will apply quantitative methods based on a database achieved by a nation-wide survey. This database is public and available to any one who are interested in. (A process of application is needed.) In this section, data source and how analytical samples are selected will be introduced first. Descriptive analyses for all variables as well as limitation of the data will come after that. Finally, two statistical models that will be applied are presented.

3.1 Data source

The first step of this research design is to get a raw database. The raw data were collected by the research project "Chinese General Social Survey" host by the National Survey Research Center, Renmin University of China. So far, several surveys have been conducted within this project. This research chooses the one that is carried out in 2006 because an extra family questionnaire is included in this survey. In this extra questionnaire, respondents answer questions regarding intergenerational relationship, involving the transfers between different generations.

The survey applied non-probability stratified sampling from 30 provinces and regions (municipalities and autonomous regions) all around China. In total 10,151 effective samples are obtained, including 6,013 from urban area and 4,138 from rural area. Among all these effective samples, 3,208 were selected to conduct face-to-face interviews to fill in the extra family questionnaire and finally 3,207 effective samples are achieved. In each of these 3,207 samples, solicited information is obtained about the respondent's individual as family situations. The data of these 3,207 samples constitute the raw data source for this research.

More specifically, the survey collected information from both the parental generation and filial generation discussed in this research. In other words, the respondent may be a parent (the first generation) who has adult child or an adult child (the second generation) whose parents are alive. In these two different cases, different information is obtained due to the questions set in the survey. This will affect the selection of analytical samples as discussed in the following part.

3.2　Analytical samples

As mentioned before, the raw database provides different information for the parental generation and the filial generation discussed in this research. Based on this fact, two analytical samples are selected to meet research purposes. In general, the first analytical sample will include data from respondents as adult children and only those cases are selected where the two couples of both the first and the second generation are married and alive. For the second analytical sample, cases are chosen from those respondents as parents with adult children but it is not ensured whether or not the adult child is married. Following will introduce more detailed information about these two analytical samples and why they are selected like this.

The general principle for selecting analytical sample is that this research will focus on the tangible transfers given by parents to their married adult children and only consider those cases in which parents, the adult children and his or her partner are all alive. The adult children have to be currently married since it is always the case that once adult children get married, they will be independent and have their own family. In this case, it would be meaningful to look into why their parents still give downward transfers. Otherwise, it would be really difficult to set a standard to justify whether or not the adult children are independent or not. Apart from this, this research will only look into cases in which both the parents and the young couple of adult children are all alive. Considering that the situation of widow or divorce will probably influence the level of dependency between the first and second generation, this restriction on research objectives will remove this potential influence that may affect the downward transfers.

The first analytical sample is selected based on this general principle. Due to the fact that based on the survey one cannot know whether the respondent's adult child is married or not (if he or she has adult child), only data from the adult child are applied in this first analytical sample. Thus, to further select this analytical sample, respondents who does not meet any one of the following requirements have been dropped: the respondent must be married and his or her partner is alive; additionally, the respondent's parents are also married and alive; and finally, all necessary answers that are applied to indicate dependent or independent variables are not missing/not applicable. At last, 562 effective cases/respondents are reserved to constitute this first analytical sample.

For the second analytical sample, there should be indicators for parents' happiness. Since only the respondent's happiness is asked during the survey, data from the parent are analysed in this second analytical sample. Therefore, to get this analytical sample, cases that do not meet any one of the following requirements have been dropped: the respondent must be married and his or her partner is alive; additionally, the respondent's answers are not missing/not applicable for the questions of "Do you give your adult child time transfers/financial transfers" as well as "Do your adult child give you financial/time transfers" so that it is ensured the respondent has an adult child; and finally, all necessary answers that are applied to indicate dependent or

independent variables are not missing/not applicable. All these restrictions result in an analytical sample of 1,067 respondents.

However, there is one limitation here when it comes to the second analytical sample: in this sample, it cannot be assured that the adult children are married. As mentioned before, when the respondent is a parent, what can be achieved from the survey is whether or not he or she has an adult child but the information is missing concerning the marital status of this adult child. This is because when asking the question "Do you give your adult child time transfers/financial transfers", there is one extra instruction pointing out that the "adult child" in this question refers to the one that is the closest to the respondent. Although from other questions, information is available regarding the marital status of the respondent's every child, we do not know exactly which child the respondent is referring to when answering the question about intergenerational transfers.

3.3 Measures and descriptive analysis

After achieving two analytical samples as mentioned before, outcome variables and explanatory variables are introduced with some descriptive analysis in this part. Following will start with outcome variables.

3.3.1 Outcome variables

Three outcome variables are listed as follows. As analysed before, the first analytical sample will be applied to analyse time transfers and financial transfers from parents to adult children and the second analytical sample will be used to analyse happiness of parent.

Time Transfers from Parents to Adult Children—are measured with frequencies. In the first analytical sample, the respondent is an adult child and he or she is asked "In the past year, have your parents helped you with household chores or taken care of your babies/other family members?" The respondents can choose answer from never, seldom, sometimes, regularly, always and not applicable. Since those not applicable cases have been dropped in the analytical sample, the answer could only be one of the previous five choices. These choices are successively coded from 1 to 5 with "1" referring to the least "never" and "5" standing for the most "always".

Financial Transfers from Parents to Adult Children—are also measured with frequencies. The measurement is quite similar to that of time transfers. As an adult child, the respondent is asked "In the past year, have your parents given money to help you?" Also the respondent can choose one answer from the six choices and since the no applicable cases have been dropped, the answer could only be one of the previous five, namely never, seldom, sometimes, regularly and

always. The coding is also the same with a range from 1 to 5 and "1" refers to the least "never" and "5" stands for the most "always".

Nevertheless, this measurement has one notable limitation. It is reasonable to measure the time transfers with frequencies but it may be quite problematic to use frequencies as a measurement of financial transfers. One can say that with low frequency, the total amount can still be very high as long as the amount of each time is big enough. Therefore, when analysing financial transfers, an additional model will be established based on another way of coding. Specifically, the financial transfer will be recoded as a dichotomous variable. If the respondent answers "never", then it would be coded as 0 meaning that the adult children receive no financial transfer from parents. All other cases would be recoded as 1 to show that no matter more or less, the adult child gets some money from the parental generation.

With two different approaches of coding, it is hoped that the data can be made fully use of, while at the same time, the data could be analysed and interpreted in a more cautious way. With the first coding, one can tell some stories about the frequency of financial transfers. With the second coding, accurate analyses can be achieved about what determines whether or not parent will give money to help their adult children.

The majority of this research is concerned with these two outcome variables. In Table 3.3.1.1 the distributions of these two outcomes are presented.

Table 3.3.1.1 Downward Time, Financial Transfers in the 1st Analytical Sample

	Time	Financial
5 - Always	2.31	0.71
4 - Regularly	9.79	5.52
3 - Sometimes	24.20	22.95
2 - Seldom	28.47	25.27
1 - Never	35.23	45.55
Total	100.00	100.00

Note: Numbers are percentages. N = 562.

From Table 3.3.1.1, we can tell that on one hand, no matter more or less, more than half of the respondents have received time transfers/financial transfers from their parents in the past year. And in comparison, time transfers are more common than financial transfers. On the other hand, for both time and financial transfers, respondents who receive transfers with the highest frequency only account for a small fraction. And the cases with a medium frequency have made up for the majority.

Happiness of the Parent—is measured with different levels ranging from 1 to 5. The second analytical sample will be applied to analyse since only the happiness of the respondent himself or herself is asked in the survey. Specifically, the respondent is asked: "In general, how do you feel about your life?" Except for missing values, the answer could be: very unhappy, unhappy, so-so, happy or very happy. Again a scale from 1 to 5 is used to code these five levels successively with 1 referring to very unhappy and 5 referring to very happy. Since the later part of this research will be concerned with gender of parents, their time transfers to

adult children and happiness, Table 3.3.1.2 presents the distribution of parents' happiness levels by gender difference and Table 3.3.1.3 presents the distribution of parents' offering time transfers by gender difference.

Table 3.3.1.2 Parents' Happiness by Gender Difference
(2nd Analytical Sample)

	Mother	Father	Total
5 - Very happy	6.11	5.86	6.00
4 - Happy	38.20	41.63	39.74
3 - So-so	48.05	46.86	47.52
2 - Unhappy	7.13	4.60	6.00
1-Very unhappy	0.51	1.05	0.75
Total	100.00	100.00	100.00

Note: Numbers are percentages. N = 1,067.

In general, we can see that most respondents are at least not unsatisfied with their life. And when we compare female to male, it comes out that gender issue does not make much difference. The average level for female is about 3.42 and the average for male is 3.47. The p-value of 0.3299 (t-test) shows that different genders are not significantly different in terms of happiness.

Table 3.3.1.3 Parents' Offering Time Transfers by Gender Difference
(2nd Analytical Sample)

	Mother	Father	Total
5 - Always	10.19	6.90	8.72
4-Regularly	24.79	21.97	23.52
3-Sometimes	19.35	25.73	22.21
2 - Seldom	24.11	22.18	23.25
1 - Never	21.56	23.22	22.31
Total	100.00	100.00	100.00

Note: Numbers are percentages. N = 1,067.

In general, it seems that both father and mother offer time transfers to their adult children. And comparing all female to all male respondents, the t-test (p = 0.1716) does show that there is no significant difference between these two groups in terms of the time transfers they give. However, when dropping those cases where respondents are unhealthy (only keeping cases where health condition > 2), it is shown by t-test that there is a statistically significant difference between female and male respondents with $p = 0.0169 < 0.05$. Specifically, healthy mothers are providing more time transfers to adult children than healthy fathers. This responds to the illustration in footnote 4.

3.3.2 Independent variables

After outcome variables, explanatory variables are listed as follows.

Financial Transfers from Adult Children to Parents—are also measured with frequencies, just as the same way of financial transfers from parents to adult children. This variable will be applied in both two analytical samples. In the first one, this variable will be applied as an explanatory variable for downward transfers. As a child, the respondent is asked: "In the past year, have you given your parents money?" In the second analytical sample, this variable will be applied to control the return parents get from their children. As a parent, the respondent is asked: "In the past year, have your adult child given money to you?" In both cases, answers includes never, seldom, sometimes, regularly, always and not applicable.

Also two approaches of coding will be applied here considering the limitation of using frequencies to measure financial transfers as mentioned before. In one approach, the five choices of different frequencies will be coded successively with a range from 1 to 5, with "1" referring to the least "never" and "5" standing for the most "always". In the other approach, all cases except "never" will be coded as 1, showing that the adult child has given his or her parents some money no matter more or less. The cases of "never" will be coded as 0, showing no financial transfers from adult children to parents.

Table 3.3.2.1 presents the distribution of financial transfers from the respondent (adult child) to the parent in the first analytical sample, showing that most respondents have given their parents financial support in the last year. Table 3.3.2.1 gives the distribution in the second analytical sample.

Table 3.3.2.1 Upward Financial Transfers in the 1st Analytical Sample

	Upward Financial Transfers
5 - Always	2.85
4 - Regularly	18.15
3 - Sometimes	38.97
2 - Seldom	25.27
1 - Never	14.77
Total	100.00

Note: Numbers are percentages. N = 562.

Table 3.3.2.2 Upward Financial Transfers in the 2nd Analytical Sample

	Upward Financial Transfers
5 - Always	2.34
4 - Regularly	16.78
3 - Sometimes	29.33
2 - Seldom	18.84
1 - Never	32.71
Total	100.00

Note: Numbers are percentages. N = 1067

Time Transfers from Adult Children to Parents—are also measured with frequencies, just as the same way of downward time transfers. This variable will

be applied in the second analytical sample as another control of the return received by parents from their adult children. As a parent, the respondent is asked: "In the past year, have your adult children helped you with household chores or taken care of other family members?" Answers includes never, seldom, sometimes, regularly, always and not applicable. Following 3.3.2.3 shows the distribution of this variable.

Table 3.3.2.3 Upward Time Transfers in the 2nd Analytical Sample

	Upward Time Transfers
5 - Always	2.34
4 - Regularly	17.06
3 - Sometimes	31.77
2 - Seldom	29.80
1 - Never	19.03
Total	100.00

Note: Numbers are percentages. N = 1067.

Gender of the Adult Child—is a dummy variable, with female coded 0 and male coded 1. Among all the 562 respondents in the first analytical sample, 354 (62.99%) are female and 208 (37.01%) are male.

Income of Adult Children (Neglog[10])—neglog of the total annual income of the respondent and his or her partner in 2005. In the survey, the respondent gives an exact number of his or her income in 2005 as well as the income his or her partner. This income includes all forms of benefits, such as salaries, insurance and interests. By deleting those missing cases, we get the total amount income of the young couple (the second generation) by adding up the income of the respondent and the partner. Table 3.3.2.4 presents some summary statistics about the original income data. One possible limitation here is that last year's income may be biased to stand for the usual income level sometimes. However, since the data about intergenerational time transfers and financial transfers are also describing the situation last year, it is reasonable to analyse these data together.

Table 3.3.2.4 Income of Adult Children (1st Analytical Sample)

	N	Mean	Std. Dev.	Min	Max
Income	562	20,816.32	19,701.08	0	230,000

Note：N: Number of observations; Std. Dev.: Standard deviation.

When transform the original data into logarithm using normal log transformation, missing values are generated for those cases with no income. However, these cases should be included into analysis because they stand for real cases where incomes are zero.[11] In this context, neglog[12] is applied here as an

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[10] See footnote 12.

[11] According to the design of the questionnaire, respondent can choose not to answer or not know for questions regarding income. And these cases have already been dropped when selecting the analytical sample. In addition,

alternative for normal log transformation (Nichols & Zimmerman, 2008, 11). With neglog, we also assume that it is percentage change in income that matters and the skewness is also reduced. In other words, the advantages of applying normal log transformation are also realized in this approach.

Gender of the Parent—is a dummy variable, with female coded 0 and male coded 1. Among all the 1067 respondents in the second analytical sample, 589 (55.20%) are female and 478 (44.80%) are male.

Age of Father/Mother—is calculated by using 2006 to subtract the birth year because the survey was conducted in 2006. This variable will be applied in both analytical samples.

In the first analytical sample, the respondent gives information about the birth year of his or her parents. And accordingly, both father's and mother's ages can be achieved. Table 3.3.2.5 presents some summary statistics for parents' age in the first analytical sample.

Table 3.3.2.5 Age of Parents by Gender Difference in the 1st Analytical Sample

	N	Mean	Std. Dev.	Min	Max
Father	562	64.89	9.20	44	94
Mother	562	63.06	8.90	42	92

Note：N: Number of observations; Std. Dev.: Standard deviation.

In the second analytical sample, data from a parent is analyzed. Therefore, parent's age can be calculated based on the respondent's birth year. Table 3.3.2.6 presents summary statistics of parent's age by gender difference.

Table 3.3.2.6 Age of Parents by Gender Difference in the 2nd Analytical Sample

	N	Mean	Std. Dev.	Min	Max
Father	478	54.58	7.74	37	70
Mother	589	52.76	7.98	37	70

Note：N: Number of observations; Std. Dev.: Standard deviation.

Health Condition of Father/Mother—is measured based on subjective evaluation of the respondent. This variable will be applied in both analytical samples.

For the first analytical sample, as an adult child, the respondent gives evaluation on his or her parents' health conditions, choosing from very unhealthy, unhealthy, so-so, healthy and very healthy. These five answers are coded with a range from 1 to 5, with 1 referring to the worst and 5 referring to the best. Table 3.3.2.7 provides the distribution of health conditions by gender difference, showing that the majority of parents are in good health conditions.

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it is possible to have zero income in reality when the expenditure is positive. It is even possible to have negative income for those self-employed ones. (Nichols & Zimmerman, 2008, 4)

[12] $neg\log(y) = \begin{cases} \ln(y+1) & if \quad y \geq 0 \\ -\ln(1-y) & if \quad y < 0 \end{cases}$

Table 3.3.2.7 Parents' Health in the 1st Analytical Sample

	Mother	Father
5-Very healthy	13.70	14.59
4 - Healthy	51.78	57.47
3 - So-so	13.35	10.50
2- Unhealthy	19.93	16.55
1-Very Unhealthy	1.25	0.89
Total	100.00	100.00

Note: Numbers are percentages. N (mother) = N (father) =562.

In later analysis, age and health conditions would be treated as explanatory variables for the same outcome variable, thus it would be necessary to look into the potential correlation between them. Correlation test has shown for both mother and father, age and health condition are correlated at a significant level with p = 0.000 < 0.001. However, the absolute value of correlation coefficient is 0.1832 < 0.5 for mother and 0.2785 < 0.5 for father. Therefore, it is acceptable to put these two variables in one model as predictors at the same time.

For the second analytical sample, the respondent is a parent and he or she evaluates the health condition of himself or herself as well as his or her partner. The same coding is applied as that in the first analytical sample. Table 3.3.2.8 provides the distribution of health conditions of respondents and their partners.

Table 3.3.2.8 Parents' Health in the 2nd Analytical Sample

	Respondent	Partner
5-Very healthy	15.28	16.03
4 - Healthy	51.83	56.04
3 - So-so	12.28	10.03
2- Unhealthy	17.24	15.93
1-Very Unhealthy	3.37	1.97
Total	100.00	100.00

Note: Numbers are percentages. N (respondent) = N (partner) =1076.

Similarly, correlation test has been carried out between respondent's age and respondent's health condition. There is a significant correlation (p = 0.000 < 0.001) while the absolute value of coefficient is 0.2045 < 0.5.

Income of Parents (Neglog[13]) — is measured by the same approach of children's income, using the annual income in 2005. The survey provides the income of the respondent, the respondent's partner and father.

In the first analytical sample, the respondent reports his father's annual income in 2005. However, mother's income is not available. Therefore, father's income will be applied to stand for parents' income. Table 3.3.2.9 shows a summary description of the original data for father's income.

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[13] See footnote 12.

Table 3.3.2.9 Father's Income in the 1st Analytical Sample

	N	Mean	Std. Dev.	Min	Max
Father	562	7,478.897	9,790.536	0	120,000

Note：N: Number of observations; Std. Dev.: Standard deviation.

In the second analytical sample, the respondent is a parent and thus, both the respondent and his or her partner's incomes are available. Table 3.3.2.10 shows summary statistics of these two.

Table 3.3.2.10 Parents' Income in the 2nd Analytical Sample

	N	Mean	Std. Dev.	Min	Max
Respondent	1067	7216.12	8648.76	0	10,000
Partner	1067	8775.32	61673.12	0	2,000,000

Note：N: Number of observations; Std. Dev.: Standard deviation.

Whether or not Adult Children are Dual-worker Family — is a dichotomous variable with dual-worker family coded 1 and not dual-worker family coded 0. In the first analytical sample, the respondent is the adult child and he or she reports the vocation of himself or herself as well as that of his or her partner. Based on such information, if both of them work outside the family, then they are dual-worker families. Among the 526 cases, 382 (67.97%) are dual-earner families.

Whether or not there is a Young Grandchild (the third generation) — is a dichotomous variable with having a young grandchild (between 0-6 years old) coded 1 otherwise coded 0. Among all the 526 cases in the first analytical sample, 171 (30.43%) respondents (adult child, the second generation) have their own young child who is between 0 to 6 years.

Rural or Urban Area— is a dummy variable with rural area coded 1 and urban area coded 0. This describes the region where the respondent resides. In the first analytical sample, 411 (73.13%) respondents live in urban area and 151 (26.87%) reside in rural area. In the second analytical sample, 666 (62.42%) respondents live in urban area and 401 (37.58%) reside in rural area.

3.4   Limitation with the data

In order to summarize previous sections about analytical samples, also to start the following discussion of data limitation, table 3.4 is presented to get an overview of what information are available in each analytical sample.

Table 3.4 Information Contained in Each Analytical Sample

Information	1st Sample	2nd Sample
Downward transfers in the past year (Time & Financial)	Y	Y
Upward transfers in the past year (Time & Financial)	Y	Y
Adult child's marital status	Y	N
Parent's marital status	Y	Y
Happiness of parent	N	Y
Adult child is in a dual-worker family or not	Y	N
Whether there is young third generation	Y	N
Parents' health conditions	Y	Y
Parents' income (in 2005)	Only father's income	Y
Adult children's income (in 2005)	Y	N
Gender of adult child	Y	N
Gender of parent	N	Y
Age of parents	Y	Y
Rural or urban area (respondent)	Y	Y

Note: Y: Information is available. N: Information is not available.

This data has limitations. Most notably, as Table 3.4 shows, the data cannot provide complete information about the first and second generations. Even though two analytical samples are selected to look into different outcome variables, some information is still missing with each analytical sample. In the first one mother's income is not available and for the second one, the marital status of the adult child cannot be controlled, neither do whether there is young third generation and whether the second generation is a dual-worker family.

Secondly, lots of information provided by the data are measured based on subjective evaluation. This may bring some bias when comparing answers given by different respondents with different understandings. For instance, the frequency of "very often" may have different meanings for different respondents. This will be mentioned again in later analysis in section 6 Limitation and Future Analysis.

Another limitation lies in the measurement of financial transfers. It is possible that frequencies may bring bias when indicating the amount of financial transfers. Thus two different coding approaches are applied as illustrated before.

Short-term indicators for intergenerational transfers (the past year) as well as for income (in 2005) may also bring some problem. As an indicator of financial capability, income only in one year may bring some bias. It is possible that although someone's income is really low in that certain year, he or she has a large deposit or owns some resources that have a very promising profitable future. However, these short-term indicators may have an advantage in capturing the simple feedback model described by Xiaotong Fei. And since the indicators for intergenerational transfers and income both base on the year of 2005, it is reasonable to assume some interaction between them and to put them in the same model.

Finally, the variable of region only reflects the residence of the respondent, which may miss some meaningful information. There may be some cases that the two generations live in different areas. For instance, it is quite possible that the first generation resides in the rural area while the second generation lives in urban area. This difference in residence between two generations may also exert some effect on intergenerational transfers.

3.5   Statistical model for multivariate analysis

With theoretical basis as well as data source prepared, now it is time to search for suitable statistical models. Considering the characteristics of outcome variables, ordinal logistic regression (OLR) and binary logistic regression (BLR) will be applied in this research for multivariate analysis. OLR belongs to multi-nominal logistic regression and both OLR and BLR are nonlinear regression models estimated through maximum likelihood. In later discussion, these two models will be introduced in more details.

3.5.1   Ordinal logistic regression

Ordinal logistic regression is applied here because the three response variables in this research are all measured on an ordinal scale. Each outcome variable has five categories that can be ordered in a meaningful sequence.

The model can be specified as follows:

$$\ln\left(\frac{Pr(Y_k \leq m)}{Pr(Y_k > m)}\right) = \beta_m + \sum_{j=1}^{n} \beta_j \, x_j$$

In this model, Y_k stands for three dependent variables with sequential categories m=1 − 5. Specifically, k could be 1 (time transfers from parents to children), 2 (financial transfers from parents to children with the first coding approach) and 3 (happiness of the parent). $x_1, x_2, \ldots x_n$ are explanatory variables and β_j is the effect parameter for x_j. β_m is a constant term and this constant would

be different if m changes. Hence, β_j captures the expected change in the ordered log-odds scale of the response variable if the respective independent variable x_j increases one unit, holding all other variables constant.

The proportional odds assumption is underlying this OLR model. Specifically, in this model, we can see that for a certain k (for each outcome variable), although the constant term will change, the effect parameter/coefficient for the same independent variable will stay the same. In other words, for a certain x_j, the β_j will be the same when m gets different values. This means that the OLR assumes that the relationship is the same between each contiguous level of a certain outcome variable and it is this assumption that allows us to use one equation to describe the relationship among all levels. (UCLA Statistical Consulting Group)

To check whether this assumption is violated, test of parallel items is conducted for every model. Specifically, in the program of Stata, Brant's test is applied to carry out this test of parallel items. In some cases, this assumption is violated in the beginning and some adjustments have been made (detailed information will be provided in later section 4 Results and Interpretation). For all models that are presented later in this analysis, the Brant's test has shown insignificant chi-square value (p < 0.05), which means that this assumption is met. The results of the Brant's test for all presented models can be found in the appendix.

3.5.2 Binary logistic regression

Regarding the response variable of financial transfers from parents to adult children, two coding approaches will be applied as analysed before. In the second approach, the financial transfer is measured as a dichotomous variable. Thus, to analyse this dichotomous variable, binary logistic regression will be applied.

The model can be specified as:

$$\ln\left(\frac{Pr(Y=1)}{1-Pr(Y=1)}\right) = \beta_0 + \sum_{j=1}^{n} \beta_j\, x_j$$

Correspondingly,

$$Pr(Y=1) = \frac{exp(\beta_0 + \sum_{j=1}^{n} \beta_j\, x_j)}{1 + exp(\beta_0 + \sum_{j=1}^{n} \beta_j\, x_j)}$$

In this model, $Pr\,(Y=1)$ is the probability that the outcome is 1, which indicating that the adult children has received some financial transfers from parents no matter more or less. $x_1, x_2, \ldots x_n$ are explanatory variables and β_j is the effect parameter for x_j. β_0 is a constant term. From β_j we can know how x_j influences the outcome variable.

4   Results and interpretation

With prepared hypotheses, selected analytical sample and chosen statistical models, it is time to run the model and look into the results. For every response variable, all related explanatory variables are integrated into several models with the expectation that better explanation could be attained. In order to give a more coherent understanding, this section will be divided into three parts and in each part discussion will orient on one outcome variable. In later section 5 Discussion, these results achieved for every outcome variable will be analysed to respond to the three perspectives discussed in the theoretical section.

In following three parts, one table would be presented for each part, integrating results for all models explaining a certain outcome variable. For all the three tables presented later, four indicators for models[14] are offered. The main entries of logit coefficients (B) for every variable are reported with correspondent standard errors (SE) in the parentheses. Odds ratios will not be reported in these tables in order to keep the tables clean and concise but they will be mentioned and interpreted in analysis so that more straightforward understanding can be caught.[15] Following I will start with the part for downward time transfers, followed by discussion for downward financial transfers and parents' happiness.

4.1   Empirical findings of determinants for downward time transfers

One main model and four additional models are established to analyse time transfers given by parents to adult children. Predictors mainly involve three groups based on three perspectives discussed in the theoretical part. Financial transfers from adult children to parents and gender of adult children are the first group. To clarify, for financial transfers, the first coding approach is applied here with 5 levels. Health conditions of parents form the second group of predictors. And the third group of predictors is constituted of whether the adult children are dual-worker family and whether they have their own child (the third generation).

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[14] There four indicators involve: LR chi2, Prob>chi2, Pseudo R2 and Log likelihood.

[15] Although coefficients and odds ratios hold actually the same meaning, many scholars chose to include both in their reports' tables (Wu &Jiang, 2008, 64; Ye, 2012, 26; Yu, 2011, 77). However, in this research, due to the fact that results of several models are reported in one table, I choose to only to report coefficients, just as some other scholar have done in their research. (Chen, 1998, 145-146; Di et al, 2013, 91)

Parents' age and income, adult children's income and the residence region are controlled. Table 4.1 presents the results of all the five models to explain downward time transfers.

For the first model, all cases in the first analytical sample are involved. Generally, the model summary shows that the null hypothesis can be rejected that all coefficients in this model are zero. When looking into the predictors, two of them have shown statistically significant effect on the response variable, namely financial transfers parents received from adult children and the dichotomous variable indicating whether or not there is a third generation between 0 to 6 years old. Specifically, if financial transfers parents receive increases one level, time transfers given by parents are expected to grow by 0.46 in the ordered log-odds scale[16] holding all other variables constant. If one explains with odds ratio, then with one level increase in financial transfers offered by adult children, the odds of parents providing more than m (m can be any value ranging from 1 to 5) level time transfers versus less or equal to m level are 1.59 times greater, with all other variables in this model holding the constant. This result has confirmed hypothesis 1a. Similarly, if one family changing from having no third generation to getting one grandchild between 0 to 6 years old, time transfers given by parents are going to increase by 0.43 in the ordered log-odds scale keeping all other variables the same. Interpretation with odds ration would be that if one grandchild between 0 to 6 years old joins a family without third generation, the odds would be 1.54 times greater of parents providing more than m (m can be any value ranging from 1 to 5) level time transfers versus less or equal to m level, when holding all other variables in this model constant.

For other predictors in this model, it seems that they are not significant when explaining the outcome variable. Hypothesis 1b is rejected here since there is no significant relationship between gender of adult child and downward transfers. However, one consideration must be taken into account that when one partner is not healthy, the other one would have to take care of him or her and then the capability to offer help to adult children will be limited. In order to control this influence on parents' capability, model 1.2 and model 1.3 are established to further look into the second group of predictors indicating parents' health conditions.

Model 1.2 is established to look into cases where father is not unhealthy and Model 1.3 drops cases where mother is unhealthy. Specifically, when saying father/mother is not unhealthy, I refer to cases where the variable is less than 3 because 2 stands for unhealthy and 1 refers to very unhealthy. Thus, in model 1.2 cases are dropped if father's health condition is coded less 3 and similarly, cases with mother's health condition coded less than 3 are deleted in model 1.3. In addition, in model 1.2 father's health condition is excluded from explanatory variables since fathers are considered as not unhealthy in all cases. Likewise,

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[16] Ordered log-odds scale refers to outcome of $\ln\left(\frac{Pr(Y_k \leq m)}{Pr(Y_k > m)}\right)$ in the OLR model.

mother's health condition is not an independent variable in model 1.3 because in all cases included in this model, mother is regard to be not unhealthy.

Generally, both two models fit significantly better than an empty model as a whole. And the two significant variables in model 1 still show significant effect in these two models. Apart from all these, new significant findings appear with regards to parents' health conditions and these findings have confirmed hypothesis 3b.2 based on altruistic mechanism and hypothesis 3b.1 based on rational mechanism is rejected. In model 2, mother's health shows a statistically significant effect on time transfers given by parents. When father is not unhealthy, with mother's health condition improves by one level, time transfers offered by parents are expected to show an increase by 0.20 in the ordered log-odds scale holding other variables constant. Or one can say that, when father is not unhealthy, the odds of parents providing more than m (1 to 5) level time transfers versus less or equal to m level time transfers are 1.22 times greater if mother's health condition is improved by one level and all other variables stay the same. Similarly, father's health condition presents a statistically significant effect on predicting the outcome variable in model 3. If father's health condition changes to one level higher, then the ordered log-odds scale of the outcome variable is expected to grow 0.42 with all other variables are held the same. In other words, the probability increases 0.52 times that parents provide more time transfers to their adult children with other variables constant. Among control variables in these two models, adult children's income and regional factor have shown significant effect in both two models. For the first one, it may be interpreted as when adult children have higher income, they are probable to be busier and parents tend to give more time transfers. For the second one, parents in rural area tend to give more time transfers.

Model 1.4 is established in order to further check the influence of a dual-worker family. In model 1, it seems that it does not matter much no matter or not the second generation is a dual-worker family. However, based on the theoretical section, it is possible that the variable indicating whether or not having a young grandchild may play as a moderator here when checking the influence of whether a dual-worker family or not. Specifically, it is possible that only in the case of having a young grandchild, whether a dual-worker family will show some effect on predicting the time transfers giving by parents. Therefore, this model 1.4 is built in which cases are reserved only when there is a young grandchild (the respective variable is coded 1). However, the results have shown that still there is no significant relationship between whether or not the second generation is a dual-worker family and the time transfers given by parents. Moreover, the whole model has lost its original significance in predicting the outcome variable. As a result, hypothesis 2a can be rejected.

The final Model 1.5 is built by reserving cases with the second generation as being dual-worker families. The intention of this model is to test exactly hypothesis 2b to see whether having a third generation will lead to more downward time transfers in a dual-worker family. The results show that whether or not having a third generation is not significant in this model. Thus, hypothesis 2b is rejected based on this information.

Table 4.1 OLR Results for Predicting Downward Time Transfers

Variable	Model 1.1	Model 1.2	Model 1.3	Model 1.4	Model 1.5
Upward financial transfers	0.46*** (0.08)	0.36*** (0.09)	0.43*** (0.09)	0.39** (0.16)	0.39*** (0.10)
Gender of adult child	0.21 (0.16)	0.21 (0.18)	0.13 (0.19)	0.06 (0.31)	0.23 (0.20)
Father's health	0.19 (0.12)	Controlled >2	0.42** (0.13)	0.03 0.23	0.08 (0.15)
Mother's health	-0.03 (0.18)	0.20* (0.10)	Controlled >2	0.12 0.20	0.12 (0.13)
Have a young grandchild or not	0.43** (0.18)	0.47** (0.20)	0.45** (0.21)	Controlled =1	0.35 (0.22)
Dual-worker family or not	0.07 (0.18)	0.008 (0.20)	0.13 (0.21)	-0.11 0.32	Controlled =1
Father's age	-0.01 (0.03)	0.02 (0.03)	0.03 (0.03)	0.01 0.04	-0.03 (0.03)
Mother's age	-0.0003 (0.03)	-0.03 (0.03)	-0.04 (0.03)	-0.04 (0.05)	0.02 (0.03)
Father's income	0.04 (0.06)	0.05 (0.06)	0.08 (0.07)	0.006 (0.11)	-0.01 (0.07)
Adult children's income	0.09 (0.07)	0.18** (0.09)	0.18** (0.09)	0.04 (0.11)	0.09 (0.10)
Rural or urban	0.19 (0.07)	0.44* (0.24)	0.48** (0.24)	0.22 (0.34)	-0.01 (0.25)
N	562	464	443	171	382
LR chi2	59.12	43.20	59.17	10.95	32.73
Prob > chi2	0.0000	0.0000	0.0000	0.36	0.0003
Pseudo R2	0.04	0.03	0.05	0.02	0.03
Log likelihood	-747.77	-626.33	-587.22	-247.68	-515.63

Note: For each variable in a certain model, coefficient (B) is reported with standard error (SE) in the parenthesis.

*: p < 0.1; **: p < 0.05; ***: p < 0.001.

To summarize for this section focused on downward time transfers, all five models have shown the significance of upward financial transfers. Parents' health condition and the existence of a young third generation have shown significance in some models. It is interesting, however, that the significant effect of a young child generation only exists when all cases are included. What can be interpreted from this, what does this mean for the needs-based theory and how all these results can be integrated to explain the downward time transfers will be analysed later in the discussion part.

4.2 Empirical findings of determinants for downward financial transfers

Two models are built in this part to analyse downward financial transfers. In the first one, the outcome of financial transfers are being analysed in terms of frequency while in the second model, financial transfers from parents to adult children are regarded as a dichotomous variable. The two different coding approaches have been discussed in the section 3.2.

According to previous studies, the main predictor in these two models is father's income. However, some other potential predictors are also added in this model, including whether or not there is a young grand child and whether or not the second generation is a dual-worker family. The consideration here is that according to the third perspective discussed before, parents give more time transfers to adult children if there is a young grandchild. Then it is also possible that with more time transfers, parents will give more financial transfers to help raise the young grandchild.

As for control variables, financial transfers from children to parents, parents' age and health conditions, children's income as well as the residence area are involved.

At the first stage, the outcome variable with five levels is put into this model. However, the result of Brant test shows that this model violates the parallel regression assumption. According to this result, some adjustments are carried out. First of all, the original five levels of financial transfers are combined to three levels. Specifically, the original levels of 5 (always) and 4 (regularly) are combined and recoded as 3; original level 3 (sometimes) and 2 (seldom) are recoded together as 2; and "never" still keeps the previous coding of 1. After applying the new outcome variable of these three levels, Brant test still shows that the assumption is violated. According to the result, the problem mainly lies in the variable of mother's age. Thus, a new variable is generated through squaring the original mother's age. After this, Brant test shows that the assumption is not violated and the ordered logistic regression can be applied to run this model. The result of this model is presented in Table 4.2, combined with the results of Model 2.2.

The model as a whole is significant and more importantly, there are four independent variables that are statistically significant when predicting financial transfers given by parents. The first one is father's income. With one unit increase in father's income, the frequency for parents to give financial transfers is expected to grow by 0.29 in the ordered log-odds scale when holding all other variables constant. Consequently, hypothesis 3a.1 is rejected and 3a.2 is confirmed. The second significant variable is whether or not there is young grandchild between 0 to 6 years old. It is shown that if the adult children get a young child themselves, the frequency of receiving financial transfers from their parents is expected to increase by 0.35 in the ordered log-odds scale holding all other variables the same. In other words, the probability of getting more frequent financial transfers from parents will increase by 0.42 times if the family gets a young grandchild.

Table 4.2 Results for Predicting Downward Financial Transfers

Variable	Model 2.1 (5 levels)	Model 2.2 (2 levels)
Father's income	0.29*** (0.07)	0.30*** (0.07)
Gender of adult child	-0.08 (0.18)	-0.01 (0.19)
Have a young grandchild or not	0.35* (0.21)	0.33 (0.21)
Dual-worker family or not	-0.22 (0.20)	-0.24 (0.21)
Upward financial transfers (3 levels)	0.17* (0.09)	
Upward financial transfers (2 levels)		0.56** (0.26)
Father's age	-0.06* (0.03)	-0.06* (0.03)
Mother's age		0.04 (0.03)
Mother's age (squared)	0.0003 (0.00)	
Father's health	0.09 (0.14)	0.12 (0.15)
Mother's health	0.05 (0.13)	0.07 (0.13)
Adult child's income	0.03 (0.07)	0.01 (0.07)
Rural or urban	-0.33 (0.23)	-0.39 (0.24)
N	562	562
LR chi2	66.63	65.82
Prob > chi2	0.0000	0.0000
Pseudo R2	0.07	0.09
Log likelihood	-462.81	-354.41

Note: For each variable in a certain model, coefficient (B) is reported with standard error (SE) in the parenthesis.   *: $p < 0.1$; **: $p < 0.05$; ***: $p < 0.001$.

Among the control variables, upward financial transfers from children to parents and father's age also show significant relationship with downward financial transfers from parents to adult children. Specifically, downward financial transfers are expected to grow with more frequent upward financial transfers if all other variables are held constant. This may be explained by the culture of "courtesy demands reciprocity" in China. As for father's age, downward transfers given by parents are expected to decrease in terms of frequency with father getting older, holding all other variables the same.

In Model 2.2, the outcome variable indicating downward financial transfers are coded as a dichotomous variable. 1 shows that parents have offered some financial transfers in the past year and 0 refers to no downward financial transfers at all. As one control variable, upward financial transfers from children to parents are also applied as a dichotomous variable in the same way.

Generally the model is statistically significant. Compared to previous model, father's income is still significant. With one unit increase in father's income, the probability for one adult child to get some financial transfers from parents is 1.35 times greater. However, in this model, whether or not there is a young grandchild is not significant. As for control variables, father's age and upward financial transfers from adult children to parents, also shows a statistically significance when predicting the outcome variable, just as the same with the previous model.

To conclude, father's income has presented a significant impact on downward transfers. And how this impact realizes will be a useful tool to tell which mechanism discussed in the third perspective is actually taking the main role. The significance exhibited by the existence of a young grandchild may also help answer this question to some extent.

4.3   Empirical findings of determinants for parents' happiness

The second analytical sample is applied to run these two models to analyse parents' happiness, in which the respondent is a parent with adult child. Respondent's own evaluation on happiness with 5 levels is the outcome variable. The main predictors here involve transfers given by parents. Both time transfers and financial transfers are included here. As for control variables, not only the respondent's gender, age, and residence area are included, but also the health condition and income of the respondent and his or her partner are involved into this model. On top of this, upward transfers are also controlled in these two models in order to indicate the return parents get from their children.

The first model 3.1 deals with all respondents while the second model 3.2 only analyses female respondents (mothers) considering that mothers are argued to take the main responsibility for offering time transfers to adult children and their

welfare will burden more loss. When running the second model at the first time, Brant test shows that the parallel assumption is violated and the main problem exists with the variable of the respondent's health condition. Therefore, some adjustments are carried out. For health condition of the respondent, the original five levels are changed to 3 levels instead. Previous 1(very unhealthy) and 2 (unhealthy) are now recoded as 1; previous 3 (so-so) is now recoded as 2; original 4 (healthy) and 5 (very healthy) are now recoded as 3. After this the assumption is met, as shown by Brant test results.

Results for these two models are presented together in Table 4.3. It is shown that neither downward time transfers nor downward financial transfers have any significant relationship with parents' happiness. As for control variables, those significant ones include the health condition as well as the income of the respondent and the partner. Parents are happier if they or their partner are healthier or earn higher income.

Table 4.3 Results for Predicting Parents' Happiness

Variable	Model 3.1 (All parents)	Model 3.2 (Mothers)
Downward time transfers	-0.002 (0.05)	0.02 (0.07)
Downward financial transfers	0.02 (0.05)	0.05 (0.07)
Respondent's health (5 levels)	0.20** (0.07)	
Respondent's health (3 levels)		-0.05 (0.11))
Partner's health	0.17** (0.07)	0.4*** (0.10)
Respondent's income	0.09*** (0.02)	0.09** (0.03)
Partner's income	0.04* (0.02)	0.03 (0.04)
Gender of respondent	0.07 (0.13)	Controlled = 0
Age of respondent	0.01 (0.01)	-0.01 (0.01)
Upward time transfers	0.07 (0.06)	-0.01 (0.09)
Upward financial transfers	0.06 (0.06)	0.04 (0.08)
Rural or urban	0.001 (0.13)	-0.27 (0.18)
N	1067	589
LR chi2	57.04	42.67
Prob > chi2	0.0000	0.0000
Pseudo R2	0.02	0.03
Log likelihood	-1139.34	-629.99

Note: For each variable in a certain model, coefficient (B) is reported with standard error (SE) in the parenthesis.   *: $p < 0.1$; **: $p < 0.05$; ***: $p < 0.001$.

In this last part for analysing parents' happiness, it seems that theoretical section discussed previously has not provided us with strong arguments. However, not significant results can at least help to reject hypothesis 3c.1. Although parents are not significantly happier when devoting more to their adult child, they are also not unhappier about this. Later discussion will go further about this by combining previous results.

5 Discussion

Finished with exhibition of empirical findings, it is time to interpret and understand these results. Through applying these results to looking into the three perspectives discussed before, it is hoped that a more comprehensive understanding could be achieved to figure out the research question. Also this discussion will raise some concerns regarding the data limitations discussed before and talk about how these limitations may confine the interpretation of the results.

For the first perspective about classical feedback model, results have shown that after the adult child gets married, more often adult children offer financial transfers to parents, more time transfers they will receive from parents. However, this significant relationship between upward financial transfers and downward time transfers does not indicate any causal connection and it cannot be concluded that it is these upward financial transfers that are driving the downward time transfers. What can be summarized is that the certain social arrangement of that feedback model is still alive in China and this intergenerational interaction does reflect a reciprocal care result.

One possible concern here is that both the downward time transfers and upward financial transfers were subjective evaluation made by the respondents and financial transfers are measured in frequencies rather than absolute values. One can argue that the data was collected in 2006 and the questions were set about the situation in 2005, in which case the respondents' memories were quite reliable. But still I have to acknowledge that this kind of subjective estimation does to some extent influence an exact and actual description of intergenerational transfers. However, I would like to argue that this subjective evaluation also holds an advantage in capturing "feeling" when the goal is to dig out motivations underlying people's behaviours. Here the respondent is the adult child, and this finding illustrates that in their estimation, there is a correlation between how much they receive from their parents and how much they offer to their parents. Furthermore, for upward financial transfers, although it is estimated in frequencies, still it captures the interaction between two generations. In this case, it is reasonable to use this finding to confirm the existence of such a feedback model in which intergenerational transfers are exchanged to realize reciprocal care.

Data also show that the very classical feedback model has not been kept completely. When parents provide time transfers to their adult children, there is no significant difference between daughters and sons. This has shown that patrilineality is decaying at least to some extent in contemporary China. This phenomenon has been discussed and explained by many scholars, as mentioned before in the theoretical section. Probably the one-child policy as well as the increasing gender equality has contributed to this change.

Combing what has been discussed so far a feedback model can still be applied to depict intergenerational interaction although traditional patrilineality is not the mainstream any more. The downward transfers that this research focus on can be understood as a reflection of this feedback model. However, under what mechanism (rational self-interested or altruistic giving) are parents offering these downward transfers still needs to be answered by later analysis.

Before going to analyse the underlying mechanism, the second perspective that focuses on the needs of adult children will be discussed first. It is surprising to find that the data analysis has rejected both two hypotheses based on this perspective. Whether the second generation is a dual-worker family has shown no significant effect on parents' downward transfers. And among those cases where the adult children are dual-worker families, whether or not there is a third generation is also not significant for how much time transfers parents will offer. However, one thing that deserves attention here is that in all cases in the first analytical sample, parents provide more time transfers if there is a young third generation. This is also true for downward financial transfers when they are measured by frequencies. Based on all these results, I would like to argue that rather than responding to adult children's needs passively, it is parents' active choice to offer more downward transfers when there is a young third generation. It cannot be concluded, however, that adult children do not need help in contemporary China from these findings. What I would like to argue here is instead, from the perspective of parents, even though they act as if they are responding to adult children's needs, they are actually taking a more active role in providing these help.

More data results further strengthen this active role of parents in providing downward transfers, offering support for the altruistic mechanism. Empirical findings have shown that as long as the partner is not unhealthy, healthier parent tends to give more downward time transfers. Specifically, with the assumption that mothers are taking the main responsibility for providing time transfers (this assumption can also be upheld by the data in the second analytical sample), more time transfers will be offered with mother's health conditions getting better as long as father is not unhealthy. Results also indicate that when mother is not unhealthy, the healthier father is, the more time mother can spare to offer time transfers to adult children. This has shown that parents are quite willing to help their children when they are in good health conditions. And the healthier they are, the more time transfers they will give.

This willingness to help adult children can also be reflected in terms of downward financial transfers. Although only father's income is available in this research, still there is a significant positive relationship between father's income and financial transfers parents give to their adult children. Although the exact amounts of financial transfers are not available in the data, at least the frequency as well as the probability of offering downward financial transfers increases with growth in father's income.

Both health condition and income level here are applied as indicators for parents' capability and resources. The argument generated here is that the more

capability and resources they have, the more transfers they will offer to their adult children.

About this argument there may be two concerns that I would like to discuss. The first is that apart from health condition and income level that are applied here, other factors will also influence capability and resources such as available time and how far parents live from their children. As mentioned before in section 2.2, parents' age is applied as one indicator to control these factors here and the distance of the two generations remains a limitation of this research. Even for measurements for income and health conditions, there is room for improvement considering that self-report approach applied in the survey may not capture an accurate description. In Chen's research (1998, 149) research, he listed eight daily actions and asked elderly people whether they are able to do these independently. This may be a better way to evaluate health condition.

The second concern is that based on current data, one can never say that parents are trying their best to helping their adult children since the data cannot tell what is "the best". It is because this reason that I try to avoid using "altruistic parenting" and instead apply "willingness to help" when interpreting the results. However, in order to show that this willingness to help is mainly for their adult children's interest, as a total opposite to what the rational self-interest mechanism argues, in later conclusion part, I will still apply the phrase of "altruism". In fact, if one looks into Chinese history and learns about the family-oriented culture, it is probable that he or she would use "altruism" to describe parenting nurtured by family orientation. This technical problem of how to measure one's "trying best" will also be mentioned in the limitation section.

More support for this altruistic mechanism has also shown by the findings regarding parents' happiness. Parents' happiness is not influenced by the downward transfers they give to adult children, showing that they do not regard the downward transfers as negative burden. This result, however, can only show that from parents' perspective, they do not see the downward transfers as negative burden. It can never be concluded that parents' welfare is not affected by offering downward transfers. Welfare also involves objective material interest and by offering downward transfers to others, it is probable that their material interest will be harmed.

To summarize what has been discussed so far, it can be argued that underlying the feedback model is parents' willingness to devote rather than only reciprocal exchange. Apart from acknowledging that downward transfers do reflect the certain social arrangement of reciprocal intergenerational interaction, the altruistic mechanism led by parents' willingness to offer downward transfers deserve more attention and provides a more in-depth answer to the research question. It is this willingness/altruistic giving out that underpins the downward transfers offered to adult children.

6 Limitations and future studies

Followed with previous analysis of results, this part will discuss limitations of this research. Previously some limitations have already been discussed in the data section as well as the discussion section. In this part, these limitations will be integrated and other limitations concerning the general research design will be added. Also some unsolved questions that need future studies are discussed in this part.

First of all, this research has limitations regarding the data source. These limitations have already been discussed in previous sections such as incomplete information of mother's income in the first analytical sample and adult children's marital status in the second sample. In addition, the data is based on individuals' self-evaluation on their certain behaviours. However, in order to give a better explanation for why parents are offering downward transfers, objective statistics as well as more detailed subjective description would be more helpful. For instance, the exact amount of financial transfers would be of great help. And semi-structured interviews would help us understand how these parents consider these downward transfers and some new perspectives may appear in these interviews.

Secondly, a nation-wide perspective is applied here and only rural or urban area is controlled. In other words, other district differences have been ignored in this research. Considering differences in terms of economic development level as well as traditional local culture, it would be meaningful to control more specific different districts in future studies. By doing this, one advantage would be the comparability of income levels. Absolute values are used as measurements for income in this research, taking no account of local economic development. Considering the gigantic gap between different areas in China in terms of economic development, it would also be a good idea to measure income level after adjusting for local living cost and average income in future studies that still apply a nation-wide perspective.

Thirdly, intentional limitations are made in the process of defining the research question and making research design in order to make this research more focused and straightforward. This research has set specific standards when selecting research objects: the two couples of the first and second generation have to be married and alive. This may exclude some other factors that may affect intergenerational relationship. It would be interesting to look into some special groups such as widow parents in further studies. Moreover, intangible intergenerational transfers like emotional exchange are not considered in this research, neither are long-term intergenerational transfers. All these need more future studies.

Apart from these, this research focuses on why parents are giving downward transfers, not discussing whether these downward transfers per se have experienced any changes. However, by looking into the latter question, it will also help analyse why parents are offering downward transfers. The data (Table 3.3.1.1) show that about one third (35.23%) of the respondents (as adult children) have never received time transfers from their parents and the number goes to 45.55% in terms of financial transfers. How is this compared to situations in previous times? Does this indicate a trend of decrease in downward transfers? Through looking into how the downward transfers change through history, it is probable that some new insights will be achieved for understanding the downward transfers given by parents.

In the final part of this section, I want to discuss some related thoughts that have been developed during this research and these thoughts may be interesting topics in future studies. One is that in Table 4.2, there is a significant relationship between upward and downward financial transfers and I have interpreted it as a culture of "courtesy demands reciprocity" in China. Then what is the role of this culture in the downward transfers? Another issue is that time transfers and financial transfers are analysed separately in this research, but it is probable that these two may have interaction mechanism. For instance, they will be complement to each other sometimes. One example is that financial transfers may be a substitute when parents and their children live far away from each other and time transfers are difficult to realize. Then how should this complementary interaction be taken into consideration when studying the downward transfers? The final issue is a technical problem of measurement. As mentioned before, traditional culture always establishes altruistic parenting but how can we use pragmatic measurements to verify this altruism in a more convincing way? How can one tell that parents are doing their best to help their adult children? How to verify this "best"? All these issues may be discussed further in future studies.

7   Conclusion

In this final section of this thesis, a brief overview will be given for this research and some implications of this research will be discussed. In general, this research focuses on the question that why parents are giving downward transfers to their adult children or what factors may explain these downward transfers. To answer this question, the first step is taken to look into previous studies and three different perspectives are generated as potential explanations for the downward transfers. Briefly speaking, the first perspective regards the downward transfers as a reflection of the classical feedback model, which is a certain social arrangement for reciprocal care among generations. While the second perspective focuses on the needs of adult children and the downward transfers given by parents are interpreted as responses to these needs. The final perspective, with two competing mechanisms, provides two different interpretations for whether rationale or altruism holds more weight in parents' downward transfers described in the previous two perspectives.

Equipped with these three perspectives, the second step is then carried out to collect data. After selecting two analytical samples from CGSS2006, logistic regressions are run for three sets of models. Downward time transfers, downward financial transfers and parents' happiness are three outcomes for these models. With the results shown by these models, discussions are given combing the three theoretical perspectives.

For the first perspective, the results have shown that the feedback model is still alive in China although the patrilineality is no longer the mainstream. Thus, the feedback model does capture the downward transfers to some extent. As for the need-based perspective, there is no significant result showing that the downward transfers are parents' response to their children's needs coming from a dual-worker family in an underdeveloped welfare system. Instead, parents are shown to devote more transfers (both time and financial) to adult children if there is a young third generation, no matter the second generation is a dual-worker family or not. Based on this, I conclude that the downward transfers are reflecting parents' own willingness to offer transfers rather than just passive responses to adult children's needs. This willingness is also confirmed by other significant relationships shown in the data analysis. More downward financial transfers are made if parents have higher income and more downward time transfers are provided if parents are in better health condition. Also their happiness has not been harmed at all if they devote more downward transfers. All these have shown that parents are really helping their children rather than offer downward transfers for their own interest.

Combining all these findings, it is concluded that the downward transfers do reflect the feedback model of intergenerational reciprocal care but more

significantly, it is mainly the altruistic mechanism nurtured by family-oriented culture that is underpinning the downward transfers within this feedback model.

Looking through the whole process of this research, there are limitations generated from data sources as well as from intentional plans for limiting the research scope. However, some limitations can be also regarded as an advantage. For instance, subjective evaluations are applied to make many measurements in this data. While this may not capture an accurate description, it can also be regarded as a merit when the research purpose is to dig out also subjective motivations underlying behaviours. During the interpretation and discussion process, these limitations have been integrated into analysis so that a more critical view can be achieved to understand the finding results. Also some problems as well as suggestions are raised for future studies based on these limitations like the role of "courtesy demanding reciprocity" culture in downward transfers and whether financial and time transfers complement each other.

Some implications of this research would be discussed in the very end of this thesis. This research has shown that the altruistic mechanism is actually underpinning the downward transfers. As analysed in the theoretical section, this mechanism is nurtured by the traditional culture of family orientation. Since it is really difficult for this kind of cultural influence to dismiss in a short term, it is probable that in near future, we can still see parents offering their adult children with various transfers. However, this does not mean that the existing problems regarding the welfare system can be ignored. Although parents do not see these transfers as extra burden, still their material interests are being harmed. As Tao (2011) argued, the underdeveloped welfare system (especially those regarding birth insurance and preschool education and care) is actually hurting the parents who are offering what the social system should have offered. They are not seeing this as extra burden does not mean that there needs no improvement for the welfare system.

8   Executive summary

This research focuses on the downward transfers offered by parents to their adult children in contemporary China. The research question is what factors can explain these downward transfers. Specifically, only tangible transfers are discussed in this research, namely time transfers and financial transfers.

To answer this research question, previous studies are analysed to provide potential explanations. Generally three perspectives are achieved from these research. For the first one, downward transfers are a reflection of the classical feedback model in China. This model refers to a certain social arrangement for reciprocal care and according to this model there should be a positive correlation between upward financial transfers and downward time transfers after the adult child gets married. Also the characteristic of patrilineality indicates that downward time transfers are mainly offered to sons rather than daughters. While the second perspective argues that these downward transfers are parents' responses to the needs of their adult children if the adult children are a dual-earner family since when two partners both work outside, they will not have enough time to do household duty. Another more intense need comes from these dual-worker families with a young grandchild (the third generation). This is due to the underdeveloped welfare system regarding birth insurance as well as preschool education and care. The third perspective provides two competing claims about what mechanism (rational or altruistic) is the main buttress for downward transfers described in previous two perspectives. Those who are for rational mechanism maintain that with decaying filial piety, parents are becoming more self-interested and the downward transfers are a kind of investment they make with the intention of getting return from their adult children. Thus, the more independent they are, the less they need from their adult children, the less transfers they will provide. If they have to offer help to respond to their adult children's needs, then extra burden will be caused and they will be unhappier. In contrast, those who vote for altruistic mechanism argue that the culture of family orientation has cultivated altruistic parenting and parents are always willing to help their children based on their capability and resources. The more capable they are, or the more resources they have, the more transfers they will provide to help their adult children. Specifically, income and health condition are applied here to indicate parents' independence, capability and available resources. Apart from these three perspectives, some controls are also generated from previous studies, including rural or urban areas and parents' age. Age is regarded as an extra control for parents' need as well as a rough control for parents' available time that is also relevant for indicating capability to offer downward transfers.

Equipped with theories, a database based on a nation-wide survey conducted in 2006 (CGSS2006) is applied as the data source in this research. This survey

includes an extra questionnaire where respondents answer questions regarding intergenerational relationship, involving the transfers between different generations. Since different information is collected for respondents as the parental generation and respondents as the filial generation, two analytical samples are selected from this database based on different research purposes (different response variables). The general standard for selecting analytical sample is that both partners of the parental and filial generation are currently married and alive. (Although this standard is not strictly met for the second analytical sample due to limitations of the data.)

After achieving these two analytical samples, three sets of models are established for three outcome variables respectively, namely downward time transfers, downward financial transfers and parents' happiness. Since these three outcome variables are either ordered variables with 5 levels or dichotomous variables, ordered logistic regression and binary logistic regression are chosen as statistical models. Based on the three perspectives, variables of upward financial transfers, gender of adult children, parents' health condition and income level, whether the adult child is in a dual-worker family and whether there is a young third generation are involved as key predictors in the first two sets of models for predicting downward time and financial transfers. While in the third set of model analysing parents' happiness, downward transfers (including time and financial) are included as main explanatory variables. For each set of models analysing one certain outcome, several models are run for different groups of cases holding a certain characteristic with the expectation that a comprehensive picture can be drawn to understand the outcome variable.

After that, empirical findings of these models are interpreted and discussed combing the three perspectives. For the feedback model, a significant relationship does appear between the upward financial transfers and downward time transfers. And the patrilineality hypothesis is rejected since there is no significant difference between adult sons and adult daughters in terms of time transfers they receive from their parents. This shows that a non-patrilineality feedback model does capture some explanation for the downward transfers. However, the significant correlation between upward financial transfers and downward time transfers cannot be interpreted as a causal relationship. As for the second perspective, data cannot show strong evidence for the argument that parents are giving transfers as a response to their adult children's needs if the adult children are a dual-worker family (especially those with a young grandchild). The only relevant significant result provided by data is the significant relationship between downward time transfers and whether there is a young grandchild (the third generation) when all cases are included (no matter dual-worker family or not). Specifically, parents will offer more time as well as financial transfers if there is a young grandchild. However, this significance disappeared when only including cases where the second generation is a dual-worker family. In this case, it would be more reasonable to argue that it is parents' own willingness to help more when there is a young third generation rather than they are responding passively to the adult children's needs as a dual-worker family with a young grandchild. Apart from these, other findings further strengthen this willingness of parents' to offer

transfers, as argued by the altruistic mechanism. With increasing income levels, parents tend to give more financial transfers. Also more downward transfers will be delivered if parents are in better health condition. Furthermore, neither downward time transfers nor downward financial transfers have shown significant effect on parents' happiness. All these findings have provided support for the altruistic parenting illustrated in the third perspective, showing that it is parents' own willingness to help that underpins the downward transfers. And offering downward transfers are not extra burden in their perspectives.

Combing all these findings, it is concluded that the downward transfers do reflect the feedback model of intergenerational reciprocal care but more importantly, it is mainly the altruistic parenting cultivated by family-oriented culture that is supporting the downward transfers within this feedback model. However, one can never conclude absolute parental altruism only based on these findings because technically, the data cannot show whether or not parents are doing their best to help their children.

Looking through the whole process of this research, there are limitations generated from data sources as well as from intentional plans for limiting the research scope. However, some limitations can be also regarded as an advantage. For instance, subjective evaluations are applied to make many measurements in this data. While this may not capture an accurate description, it can also be regarded as a merit when the research purpose is to dig out also subjective motivations underlying behaviours. Therefore, during the interpretation and discussion process, these limitations have been integrated into analysis so that a more critical view can be achieved to understand the finding results. Also some problems as well as suggestions are raised for future studies based on these limitations like the role of "courtesy demanding reciprocity" culture in downward transfers and whether financial and time transfers complement each other.

In the very end of this thesis, some implications are discussed. This research has shown that the altruistic mechanism is actually supporting the downward transfers. As analysed in the theoretical section, this mechanism is nurtured by the traditional culture of family orientation. Since it is really difficult for this kind of cultural influence to dismiss in a short term, it is probable that in near future, we can still see parents offering their adult children with various transfers. However, this does not mean that the existing problems regarding the welfare system can be ignored. Although parents do not see these transfers as extra burden, still their material interests are being harmed because it is these parents that are providing what should have been offered by the welfare system. They are not seeing this as extra burden does not mean that there needs no improvement.

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10 Acknowledgement

11 Appendix: results for Brand test

Brand test in Stata is used to test the parallel regression assumption for ordered logistic regression. A significant test statistic provides evidence that the parallel regression assumption has been violated. For all models, there is no significant test statistic (p > 0.05), indicating that all models have met this assumption (if OLR is applied for this model). In following tables, p-value is reported for every model.

Table A1 Brant Test Results for Models Predicting Downward Time Transfers

	Model 1.1	Model 1.2	Model 1.3	Model 1.4	Model 1.5
All	0.87	0.81	0.64	0.81	0.87
Upward financial transfers	0.89	0.87	0.70	0.06	0.59
Gender of adult child	0.60	0.75	0.89	0.43	0.25
Father's health	0.45		0.64	0.49	0.47
Mother's health	0.58	0.29		0.98	0.83
Have a young grandchild or not	0.30	0.38	0.12		0.33
Dual-worker family or not	0.45	0.33	0.48	0.81	
Father's age	0.80	0.54	0.41	0.92	0.56
Mother's age	0.52	0.21	0.43	0.94	0.43
Father's income	0.88	0.51	0.19	0.83	0.88
Adult children's income	0.77	0.74	0.57	0.71	0.99
Rural or urban	0.94	0.79	0.65	0.84	0.89

Note: p-values are reported for every variable in a certain model.

Table A1 Brant Test Results for Models Predicting Downward Financial Transfers

Variable	Model 2.1 (5 levels)	Model 2.2 (2 levels)
All	0.06	There is no necessary for Brant test since binary logistic regression is used here.
Father's income	0.05	
Gender of adult child	0.21	
Have a young grandchild or not	0.61	
Dual-worker family or not	0.99	
Upward financial transfers (3 levels)	0.59	
Upward financial transfers (2 levels)		
Father's age	0.66	
Mother's age		
Mother's age (squared)	0.16	
Father's health	0.64	
Mother's health	0.62	
Adult child's income	0.25	
Rural or urban	0.16	

Note: p-values are reported for every variable in a certain model.

Table A3 Brant Test Results for Models Predicting Parents' Happiness

Variable	Model 3.1 (All parents)	Model 3.2 (Mothers)
All	0.46	0.77
Downward time transfers	0.35	0.27
Downward financial transfers	0.86	0.73
Respondent's health (5 levels)	0.25	
Respondent's health (3 levels)		0.08
Partner's health	0.25	0.49
Respondent's income	0.89	0.98
Partner's income	0.67	0.86
Gender of respondent	0.27	
Age of respondent	0.72	0.99
Upward time transfers	0.82	0.85
Upward financial transfers	0.10	0.23
Rural or urban	0.06	0.43

Note: p-values are reported for every variable in a certain model.