Parental Altruism and Transfers
Work in Progress

Stephen Hennessy

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1 Overview

The purpose of this work is to rationalize key dynamics in parental transfer behaviour to their adult children. Specifically, I will examine average transfers, average transfers conditional on receipt, and the likelihood of receiving a transfer among all children. Each of these objects will be evaluated in the context of existing theory and empirical evidence, and I will propose a novel theory of parent assets to account for a positive relationship conditional average transfers and child income.

This paper is organized as follows: section 2 outlines the relevant theory of altruism. Section 3 provides an overview of the literature and this paper's contribution. Section 4 presents a summary of the Health and Retirement Study, and Section 5 introduces a static model of transfers and saving that can match key features from the data.

2 Theory

Parents make financial transfers to children for a variety of reasons. Some of those documented in the literature include exchange, to compensate adult children for desirable behaviour (such as household labour), but this work focuses on altruism. Specifically, an altruistic motive for family transfers posits that parents value the lifetime utility of their children in a similar (if discounted) fashion to their own.

Empirical evidence suggests family transfers are increasing in parent income but decreasing in child income. This relationship becomes intuitive when considered in the context of a typical dynamic household problem with uncertainty. Basic theory dictates that households will self-insure against income shocks through saving such that expected marginal utility is equated across all periods of their life.

Altruistic parents will use consumption smoothing via saving and transfers in a similar way. The key difference is smoothing happens across the life cycle (to self-insure against negative income shocks) as well as between generations.

Parents with children whose utility they value will save on behalf of their children.

2.1 Static model

To further illustrate the theory, consider a stylized static model with parental altruism. Parents and children come into existence with an exogenous endowment e_p, e_k. They live for one period, and the world ends (there is no savings decision).

$$\begin{aligned}
&\max_{c_p, c_k, t} u(c_p) + \nu u(c_k) \\
&\text{s.t.} \quad c_p = e_p - t \\
&\qquad\quad c_k = e_k + t
\end{aligned}$$

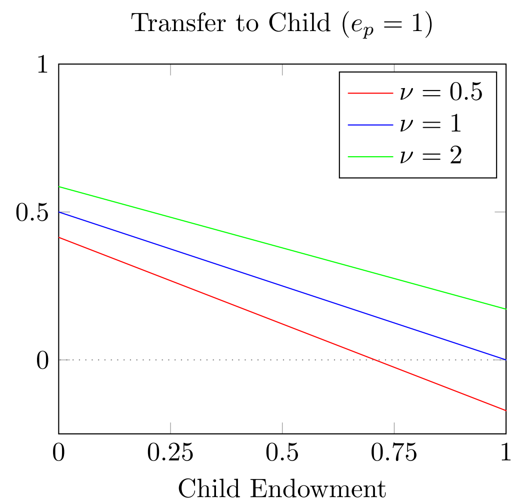
Parents choose how much of their endowment to transfer to their children, $t \geq 0$. Since there are no savings in this model, the choice of transfer also determines consumption for both parents and children, c_p and c_k. If we impose constant relative risk aversion preferences, the equilibrium condition can be shown as:

$$\begin{aligned}
U &= \frac{(e_p - t)^{1-\sigma}}{1-\sigma} + \nu \frac{(e_k + t)^{1-\sigma}}{1-\sigma} \\
\frac{\partial U}{\partial t} &= -(e_p - t)^{-\sigma} + \nu (e_k + t)^{-\sigma} \\
\nu &= \left(\frac{e_k + t}{e_p - t} \right)^{\sigma}
\end{aligned}$$

Altruism is summarized by a single parameter: ν, which acts as a relative weight that the parent places on their child's consumption. At a baseline of $\nu = 1$, parents care equally for themselves as well as for their children. Rearranging the equilibrium condition above allows us to pin down a function for equilibrium transfers:

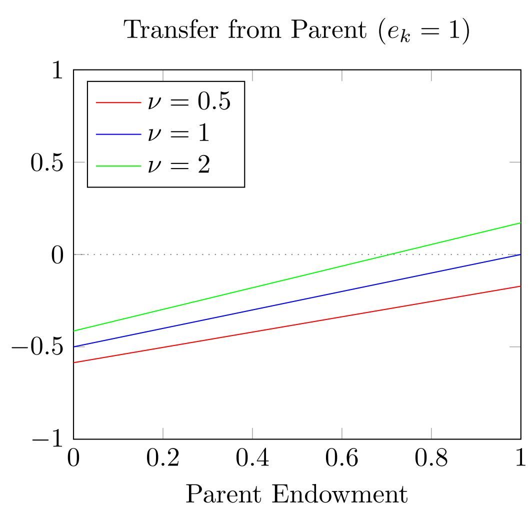
$$\begin{aligned}
\nu^{1/\sigma}(e_p - t) &= e_k + t \\
(1 + \nu^{1/\sigma})t &= \nu^{1/\sigma} e_p - e_k \\
t^* &= \frac{\nu^{1/\sigma} e_p - e_k}{1 + \nu^{1/\sigma}}
\end{aligned}$$

Suppose endowments range from 0 to 1, we can plot the transfer function for a rich parent ($e_p = 1$):



Parents who value their child's consumption as much or more than their own ($\nu \geq 1$) will choose a positive transfer as long as their endowment is greater than their child's. Reducing the altruism weight ($\nu < 1$) lowers this threshold in child's income for a positive transfer from the parent, indicating that some level of consumption inequality is acceptable for a relatively less altruistic parent.

Similarly, we can plot an analogous function for rich children ($e_k = 1$):



Only relatively altruistic parents ($\nu > 1$) will choose a positive transfer for children who have a high endowment.

We can think of altruism as a parent's preference for inequality between their child's consumption and their own. When $\nu \leq 1$, a parent giving a positive transfer to their child is worsening inequality (since their child's endowment exceeds theirs) and failing to smooth consumption. This is why parents would choose a negative transfer — taking money from their kids — if it were feasible.

Conversely, more altruistic parents ($\nu > 1$) do not minimize inequality via their transfer as long as consumption inequality favours their child. For example, an altruistic parent with a much richer child will still make a positive transfer, even when the transfer is inequality-enhancing.

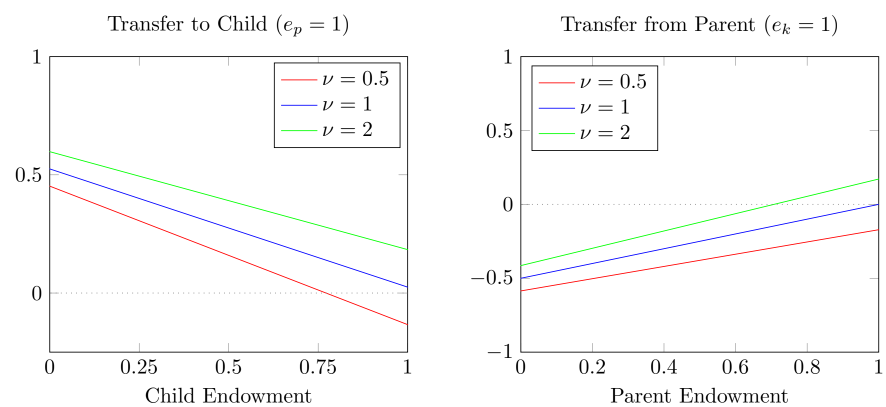
2.1.1 Subsistence consumption

One extension to this static model would be to consider a case where parents and children are subject to some subsistence consumption, and the level of that consumption can vary. For example, we can think of a parent who is retired and a child who is a young adult living independently. The parent owns their home in a low cost-of-living area, while the child rents in a higher cost-of-living area. This setup implies $\bar{c}_p < \bar{c}_k$, which is relatively simple to include in the algebra from the baseline static model.

Suppose endowments are uniformly distributed such that the mean endowment is $e_{mean} = 0.5$. Let the parent's subsistence consumption be equal to 10% of the mean endowment ($\bar{c}_p = .05$), and the child's equal to 20% ($\bar{c}_k = 0.1$). Equilibrium transfers with subsistence consumption are:

$$t^* = \frac{\nu^{1/\sigma}(e_p - \bar{c}_p) - (e_k - \bar{c}_k)}{1 + \nu^{1/\sigma}}$$

Similar to the baseline model, we can plot the transfer function for rich parents ($e_p = 1$) and children ($e_k = 1$):



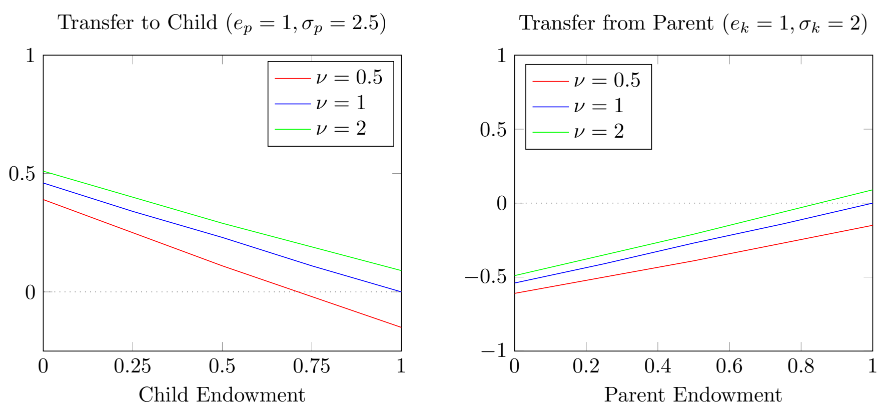
Imposing differential subsistence consumption induces a positive shift in parental transfers, regardless of their level of altruism. This is because in our example children face higher subsistence levels of consumption than their parents. Relative to a world without subsistence consumption, the child requires a larger transfer to achieve the same consumption.

The reverse case can also be shown to be true: suppose instead of the previous world we now have one where the parent is in ill health which is accompanied by expenditure shocks. If $\bar{c}_p > \bar{c}_k$, transfers will be lower relative to the baseline world, because parents have a lower post-subsistence endowment $(e_p - \bar{c}_p)$.

2.1.2 Heterogeneity in risk aversion

As a final extension, suppose there is heterogeneity in risk aversion between parents and their children. Suppose parents with newly independent young adult children are more risk averse than is standard in the literature ($\sigma_p = 2.5, \sigma_k = 2$). This version of the problem does not have a closed form solution for equilibrium transfers, but one can be computed numerically. The equilibrium condition is given by:

$$\nu = \frac{(e_k + t)^{\sigma_k}}{(e_p - t)^{\sigma_p}}$$



Imposing differential risk aversion induces a slope change in the transfer functions. Specifically, it flattens the slopes when $\nu = 0.5$ and $\nu = 2$, creating a tighter dispersion of transfers relative to altruism. This implies that abnormally risk averse parents ($\sigma = 2.5$) will give larger transfers regardless of their altruism weight.

3 Literature

This paper contributes to a rich literature on inter-vivos transfers within households, primarily from parents to children. With respect to altruistic motives, a routine focus is placed on how parents can use transfers to smooth consumption of other family members. This can be within households, for example among multiple children with different relative needs, or between generations, wherein parents supplement their child's lifetime consumption such that they experience a common standard of living. This work focuses on the latter conception of altruism where there is a single parent and child pair in the household.

This paper addresses a previously unexplained empirical finding: conditional on receipt, transfers from parents to children are increasing in the child's income. This conflicts with the canonical model of lifecycle altruism first proposed by Barro (1974) and more importantly, recontextualizes seminal results from McGarry & Schoeni (1995) and Altonji, Hayashi, & Kotlikoff (1997) that suggest unconditional average transfers are progressive in child income.

I am not the first to identify this increasing trend in the intensive margin of parental transfers with respect to child income. In the Health and Retirement Study, Akin & Leukina (2015) draw attention to this phenomenon. Older work from Cox (1987) identifies this trend in the Presidential Commission on Pension Policy, a 1979 cross-section of American households.

Quantitative models of transfers under altruism have thus far focused on matching average transfers to explain differential treatment of transfers and bequests (Slavik & Wiseman 2018), as well as obtain structural estimates of the wealth distribution (Nishiyama 2002, De Nardi 2004) and test Ricardian equivalence of government policy across generations (Barczyk 2016).

To my knowledge, no quantitative work has been completed on the nature of the intensive margin and its increasing nature with respect to child income. Subsequent sections will examine this further, but my contribution relates to incorporating parent assets and the correlation between parent assets and parent income.

4 Data

The HRS (Health and Retirement Study) is sponsored by the National Institute on Aging (grant number NIA U01AG009740) and is conducted by the University of Michigan. It is a longitudinal panel dataset following aging parents and their children in biannual waves, ranging from 1992 to present. Each wave is comprised of a representative sample of approximately 20,000 individuals by birth cohort.

The HRS reports in-depth information on demographics, health, cognition, disability, pensions, housing, employment, assets, and family transfers to parents, siblings, and children. Crucially, family transfers are reported each wave and characteristics of the recipients (e.g. children) are also recorded. This rich observation of transfers represents a significant departure from comparable data, such as the Panel Study of Income Dynamics which relies on periodic cross-sectional supplements rather than a full panel survey design.

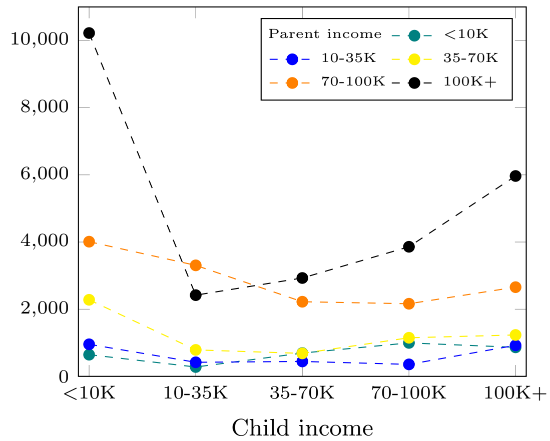
I will rely on a transformed version of this dataset, provided by the RAND Corporation. The HRS Family Data subsets the raw HRS into just those observations of parents with children. Each parent-child pair represents a unique observation in the Family Data; across the life of the survey this combines to 150,000 observations, approximately 1/3 of which are active in the most recent wave used.

For my analysis I limit the sample years from 1998-2018. There are two reasons for this: 1) In the years before 1998, child income is categorized into separate bins relative to 1998-2018; 2) 2018 is latest available version of the RAND-transformed HRS. Incomes in my sample are binned at less than $10,000, $10,000-$35,000, $35,000-$70,000, $70,000-$100,000, and greater than $100,000.

4.1 Transfers relative to incomes

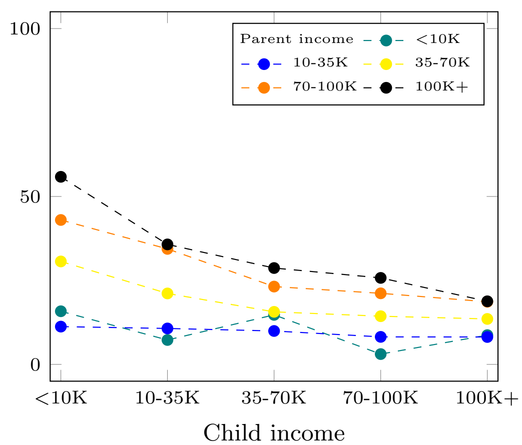
To evaluate the theory of altruism, I will consider transfers in the context of parental and child resources. There are three objects of interest with respect to transfers: average unconditional transfers, and intensive and extensive margins. The latter two are estimated by the model, but the former is important for understanding the aggregate relationship between resources, altruism, and transfers.

Mean Transfer

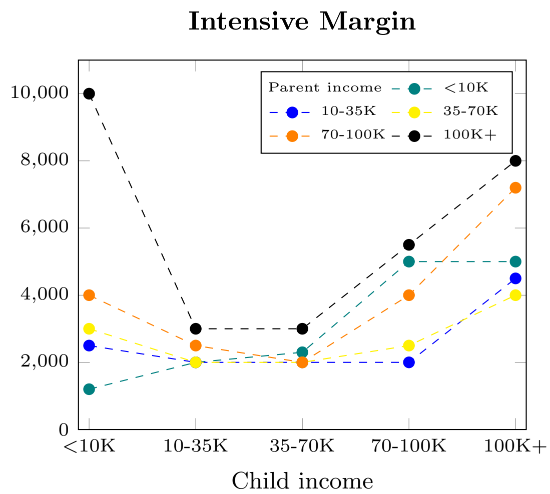


The likelihood of a parent giving a transfer, or the extensive margin, largely conforms with theory. Parents of higher incomes are more likely to give transfers. As child incomes rise, the likelihood of transfer falls.

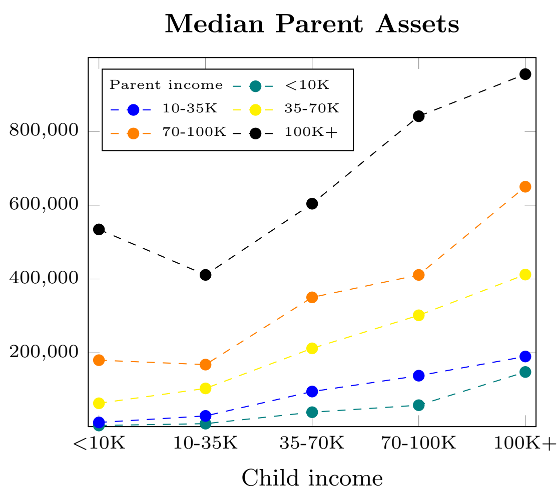
Extensive Margin



Conditional on giving a transfer, the average transfer or intensive margin is increasing in parent incomes (as before). However, the intensive margin is increasing in child incomes, which is counter to theory and presents a major puzzle I seek to address in this work. I will revisit this finding in the model section but in brief this mechanism can be explained by 1) heterogeneity in altruism, and 2) parental saving.

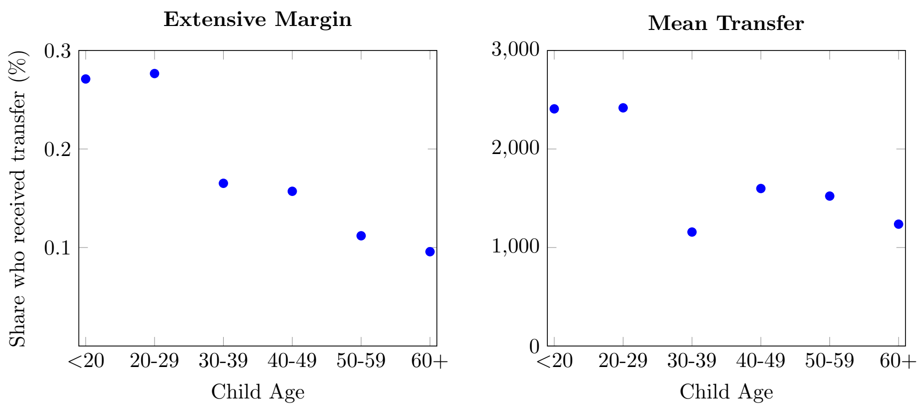


A key fact that will be important for modelling parental assets is the correlation between those assets and child incomes. Since incomes between parents and children are subject to positive intergenerational correlations, and income and assets for parents will be positively correlated, parent assets must be positively related to child incomes. This will put upward pressure on transfers from parents with higher-incomes because their children will have on-average higher incomes.



4.2 Transfers across the lifecycle

Standard theory and existing literature place an emphasis on transfers to children when they are in early adulthood. When one thinks of an individual's largest lifetime expenditures, they often occur early in life when incomes are lowest (e.g. post-secondary education, first-time home purchases). In the context of transfers, intuition would suggest that for many young adults, these expenditures are partially financed by parents.

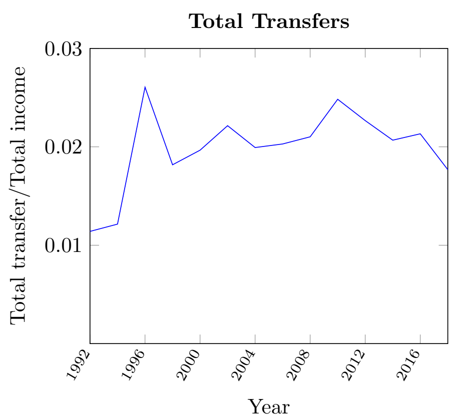


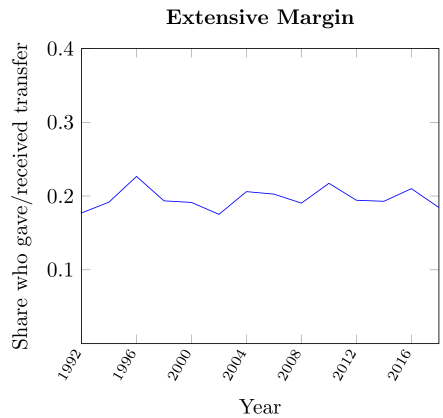
It can be shown from the data that while transfers are prevalent among young adults, roughly 79% of children who receive transfers are over the age of thirty. This suggests that parents continue to give transfers as they age, regardless of their children's relative need, perhaps as a form of strategic bequest.

4.3 Transfers across time

Across the length of my sample, transfer behaviour from parents is relatively consistent. The share of parent-child pairs in each survey wave who engage in transfers, also known as the extensive margin, averages roughly 20% across all waves.

As a quantitative measure of the real value of transfers, I plot the ratio of total transfers to total income in each wave. In the 1990s, there is significant variation in this ratio, especially around 1996. This variation may be partially a result of changes to the survey design this period: in the years 1992-1996, the HRS was combined with the Asset and Health Among the Oldest Old (AHEAD) survey, collected in 1993 and 1995. In my core sample from 1998 onward, this transfer ratio comprises approximately 2% of parent income. Relative to other expenditures, this finding is quantitatively significant. Across the same time period (1998-2018), spending on unemployment insurance in the United States ranged from 0.2% to 0.5%, with a transitory increase to 1% following the 2008 financial crisis.





4.4 Transfer persistence

Transfers are relatively persistent. Among parents, approximately 40% give three or more transfers. Those that give repeated transfers on average have higher incomes and assets. Additionally, they are in better health.

The average value of transfer is increasing in the number of transfers given by parents. This means that parents who give multiple transfers on average give more. For example, among parents who give 2 transfers, the average amount is \$1768; among parents who give 5 transfers, the average amount is \$3179.

# Transfers	Frequency	Mean Transfer	Parent Income	Parent Assets
0	11,797	0	43,629	227,109
1	5,079	755	63,254	315,845
2	3,590	1768	77,498	380087
3	2,336	2069	89,079	549,182
4	1,734	3380	93,431	489,430
5	1,219	3179	93,392	567,385
6	975	4383	101,961	721,359
7	686	3883	101,250	702,017
8	552	4777	122,460	849,300
9	393	5909	129,122	877,015
10	293	6135	125,419	936,660

The children of these parents who receive multiple transfers are also on average more educated. These findings are likely at least partially due to intergenerational persistence in earnings and education. For example, parents with high incomes give more and larger transfers, which enable their children to pursue post-secondary education and in turn experience higher earnings.

5 Model

The model is static and endowment-based where parents are decision-makers. They choose how much of their endowment to dedicate to consumption, savings, and transfers to a child. The child's consumption will be determined completely by their endowment and the transfer they receive from their parent. A parent in this environment will equate the marginal utility of allocating an additional unit of their endowment between their consumption, their child's consumption (via transfer), and saving.

$$\max_{t,a'} \frac{c_p^{1-\sigma}}{1-\sigma} + \nu \frac{c_k^{1-\sigma}}{1-\sigma} + \frac{\psi_1(\psi_2 + a')^{1-\sigma}}{1-\sigma}$$

subject to

$$c_p = e_p + a - a' - t$$
$$c_k = e_k + t$$

Allowing for heterogeneity in parent and child endowments allows the model to account for basic altruism theory. As parent incomes rise, transfers are also increasing. In contrast, child incomes are negatively related to the quantity and likelihood of transfer.

5.1 Calibration

The static model can match the transfer intensive margin in the data, however it will over-estimate the extensive margin. To match the likelihood of transfer, I allow an additional dimension of heterogeneity in altruism.

Suppose parents are either altruistic or not, and the share of altruistic parents is now an internally calibrated parameter. In this setup, the model can match both intensive and extensive margins in the data. However, transfers are decreasing in child income contrary to what is observed in the data.

External Parameters

Parameter		Value	Source
σ	Risk aversion	2	Literature
t_ℓ	Transfer threshold	0.008195	Data
ψ_1	Saving preference	2.726	Jones & Li (2022)
ψ_2	Saving non-linearity	13.4	Jones & Li (2022)

Internal Parameters

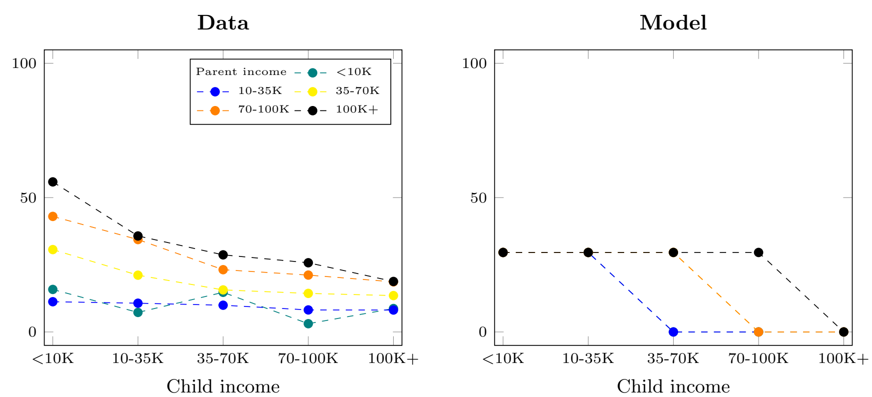
Parameter		Value	Target	Model	Data
ν	Altruism	0.00306	Average transfer	0.0375	0.0375
γ	Altruism share	0.25919	Extensive margin	0.1933	0.1933

Allowing high-altruism parents in the model results in the average intensive margin in the model exceeding the data. However, transfers are increasing in child income in this setup, a key dynamic from the data previously unexplained by theory.

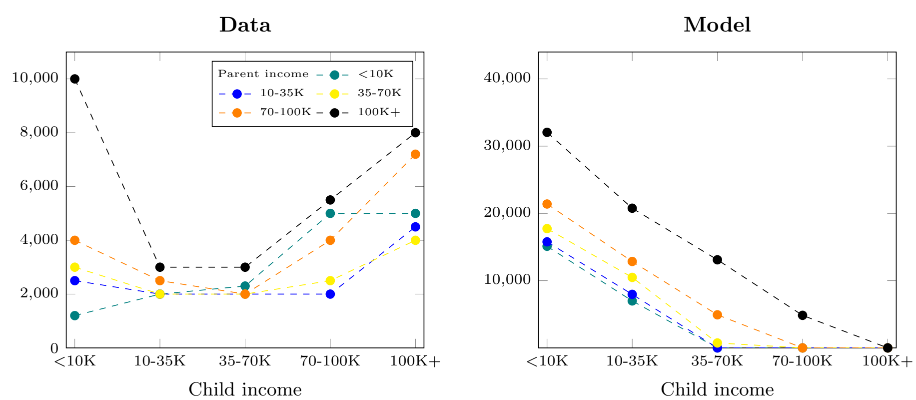
5.2 Results

The calibrated model can match both intensive and extensive margins on the averages, however it will miss the cross-sectional trend of increasing intensive margin in child income. The source of this cross-sectional trend is a conflict between two mechanisms. First, parents decrease transfers as child incomes rise, since the relative need for transfers also declines. Second, parents with higher assets give higher transfers, even though their children will also have relatively higher incomes. The first mechanism confirms altruism theory, while the second violates it. Given that the intensive margin is increasing in child income in the data, this implies the parental wealth effect dominates.

5.2.1 Extensive margin

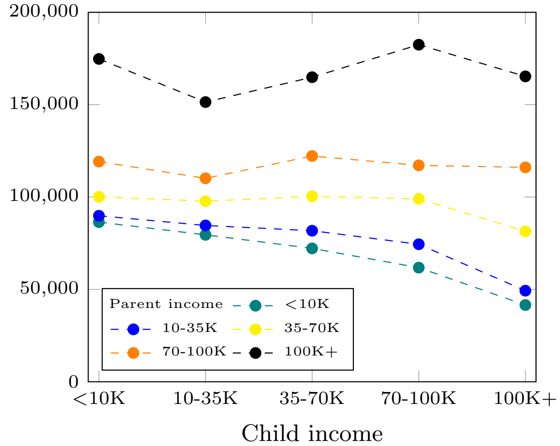


5.2.2 Intensive margin



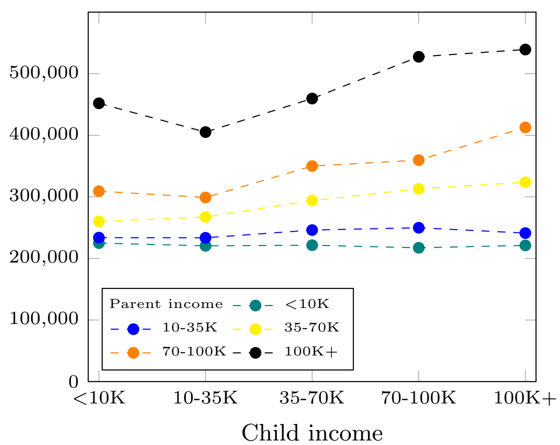
The intensive margin can match the increasing cross-sectional trend if I depart from the calibration and instead increase the altruism weight. When $\nu = 0.1$, the intensive margin becomes:

Intensive Margin



Where the intensive margin is increasing in child income for some parent incomes. I can expand the range of parent incomes where the intensive margin is increasing by further increasing the altruism parameter. When $\nu = 1$:

Intensive Margin



However, as altruism rises, so too do transfers and the model will stray further from the average intensive margin.

6 Appendix: Cross-sectional Analysis (2018 Wave)

The following section will outline some results from a cross-sectional regression estimation on the 2018 sample of the HRS. The regression can be specified as:

$$\begin{aligned}
transfer = b_0 &+ b_1 \times kidincome + b_2 \times parentincome \\
&+ b_3 \times (kidincome \cdot parentincome) + b_4 \times parentassets \\
&+ b_5 \times kidage + b_6 \times parenthealth + b_7 \times kidschool \\
&+ b_8 \times kideducation + b_9 \times parenteducation + b_{10} \times kgender \\
&+ b_{11} \times khmown + b_{12} \times kidwork + b_{13} \times parentwork + e
\end{aligned}$$

Where

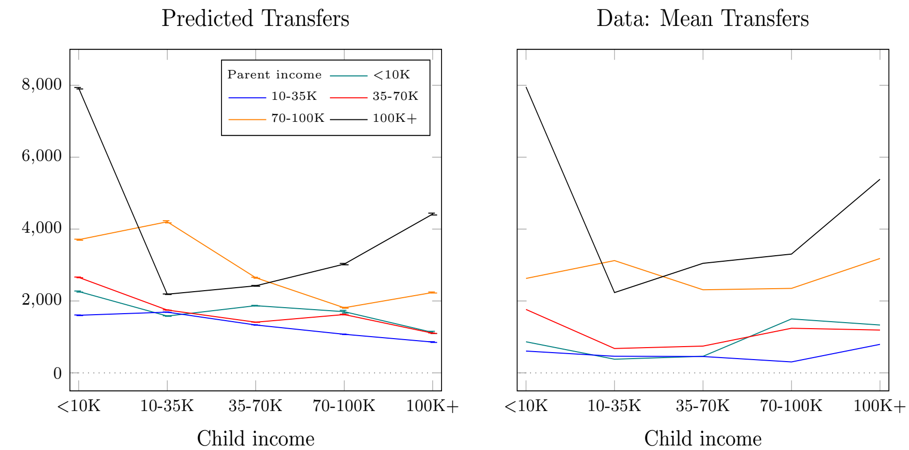
- *kidschool* (b_7): indicator for whether or not the child was in school during the previous wave (2016-2018)
- *khmown* (b_{11}): indicator for whether or not the child is a homeowner
- *kidwork*, *parentwork* (b_{12}, b_{13}): categorical variable for labour force status

The key statistics for understanding the relationship between family transfers, parent income, and child income will be b_1, b_2, and b_3. Note that each of these is interpreted as the absolute effect on transfers from moving from the bottom income bin ($< 10K$) to any other income bin. The coefficients of interest are summarized below.

Child income (b_1)			
Income	Coefficient	SE	p-value
10-35K	-681.7154	5.108866	0.000
35-70K	-393.6159	5.756064	0.000
70-100K	-560.0312	15.24167	0.000
100K+	-1137.333	13.06492	0.000
Parent income (b_2)			
10-35K	-660.0305	5.307832	0.000
35-70K	393.5019	6.117381	0.000
70-100K	1442.491	7.855632	0.000
100K+	5654.801	9.612964	0.000
Child income × Parent income (b_3)			
10-35K × 10-35K	768.5522	5.552294	0.000
10-35K × 35-70K	-226.3234	6.136868	0.000
10-35K × 70-100K	1179.153	13.26946	0.000
10-35K × 100K+	-5047.827	9.698389	0.000
35K-70K × 10-35K	122.8892	5.953054	0.000
35K-70K × 35-70K	-852.481	6.505577	0.000
35K-70K × 70-100K	-664.46	9.403831	0.000
35K-70K × 100K+	-5102.377	10.36785	0.000

70K-100K × 10-35K	31.04162	15.20938	0.041
70K-100K × 35-70K	-473.4832	15.67013	0.000
70K-100K × 70-100K	-1333.533	16.74962	0.000
70K-100K × 100K+	-4332.116	18.25297	0.000
100K+ × 10-35K	391.7465	13.44613	0.000
100K+ × 35-70K	-414.8282	13.37301	0.000
100K+ × 70-100K	-331.9307	14.95268	0.000
100K+ × 100K+	-2362.052	18.79343	0.000

6.1 Predicted Transfers



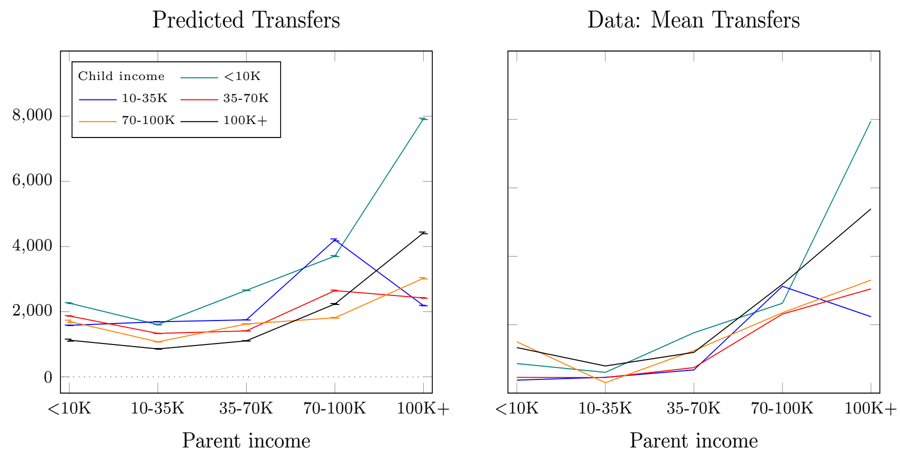
For relatively low income parents (<70K), transfer behaviour is largely consistent with theory. As child incomes rise, parents in the bottom three income bins will reduce transfers. For these parents, transfers are not very sensitive to their own or their child's income; parents will generally choose some baseline level of transfer $\sim$ \$1000.

For parents with incomes from \$70,000-\$100,000, there is a very small increase in transfers to children in the second income bin, followed by declining transfers for middle-income children (<100K) and another small increase for the highest-income children.

High-income parents (100K+) attach a large transfer to children with very low income (<10K), but reduce that transfer dramatically as their child's income rises. Contrary to theory, these parents will increase transfers as their children earn more, although never as much as for low income children.

Comparing these transfer functions to our basic theory of altruism: low-income parents largely follow theory (transfers are weakly progressive in income). Middle and high-income parents are more contradictory: for some child incomes transfers are increasing.

The regression model reasonably matches mean transfers for each income cohort, and differences are assumed to be a result of selection among other covariates.



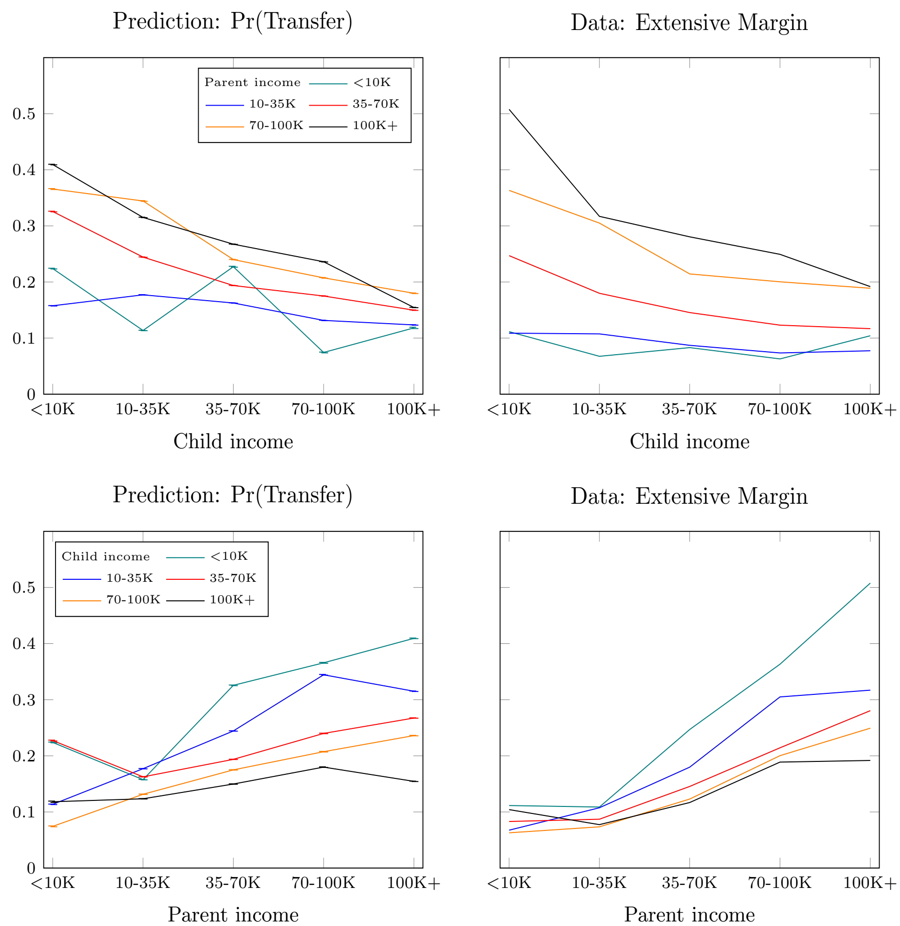
The above plot for predicted transfers is analogous to the results presented in section 4.1: the x-axis now plots transfers by parent income and the transfer functions are differentiated based on child income. Transfers are generally increasing in parent income, although the ordering of transfers according to child income is ambigious. At low parent incomes, children with low incomes (<10K) will receive more than children with middle and high incomes. Conversely, high-income parents (100K+) will still favour low income children, but they do give largely transfers to high income children (100K+) than middle income (35-100K).

6.2 Extensive margin

The extensive margin in this context is share of parent-child pairs that engage in transfers in any given wave of the HRS. As we saw in section 4, in the data this fluctates around 15-20%. For the purposes of our analysis, we create a dummy variable for each observation: whether or not a child received a transfer in a given wave. We estimate the mean probability of receiving a transfer conditional on incomes in a probit specification:

$$\begin{aligned}
Pr(transfer) = b_0 &+ b_1 \times kidincome + b_2 \times parentincome \\
&+ b_3 \times (kidincome \cdot parentincome) + b_4 \times parentassets \\
&+ b_5 \times kidage + b_6 \times parenthealth + b_7 \times kidschool \\
&+ b_8 \times kideducation + b_9 \times parenteducation \\
&+ b_{10} \times kgender + b_{11} \times khmown \\
&+ b_{12} \times kidwork + b_{13} \times parentwork + e
\end{aligned}$$

Child income (b_1)			
Income	Coefficient	SE	p-value
10-35K	-.1103126	.0002684	0.000
35-70K	.0033539	.0003673	0.000
70-100K	-.1495321	.0003642	0.000
100K+	-.1057022	.0005144	0.000
Parent income (b_2)			
10-35K	-.0662858	.0002539	0.000
35-70K	.1017513	.0003059	0.000
70-100K	.1418762	.0003724	0.000
100K+	.1855151	.0003018	0.000
Child income $\times$ Parent income (b_3)			
10-35K $\times$ 10-35K	.1298227	.0003061	0.000
10-35K $\times$ 35-70K	.0290232	.0003571	0.000
10-35K $\times$ 70-100K	.0889751	.0004543	0.000
10-35K $\times$ 100K+	.0160352	.000354	0.000
35K-70K $\times$ 10-35K	.0016092	.00039	0.000
35K-70K $\times$ 35-70K	-.1352758	.0004235	0.000
35K-70K $\times$ 70-100K	-.1291559	.0004895	0.000
35K-70K $\times$ 100K+	-.1453419	.0004196	0.000
70K-100K $\times$ 10-35K	.1234603	.0003924	0.000
70K-100K $\times$ 35-70K	-.0011025	.0004271	0.010
70K-100K $\times$ 70-100K	-.0088395	.0005054	0.000
70K-100K $\times$ 100K+	-.0237617	.0004213	0.000
100K+ $\times$ 10-35K	.0715547	.0005322	0.000
100K+ $\times$ 35-70K	-.0701806	.0005594	0.000
100K+ $\times$ 70-100K	-.0801353	.000612	0.000
100K+ $\times$ 100K+	-.1491439	.0005489	0.000

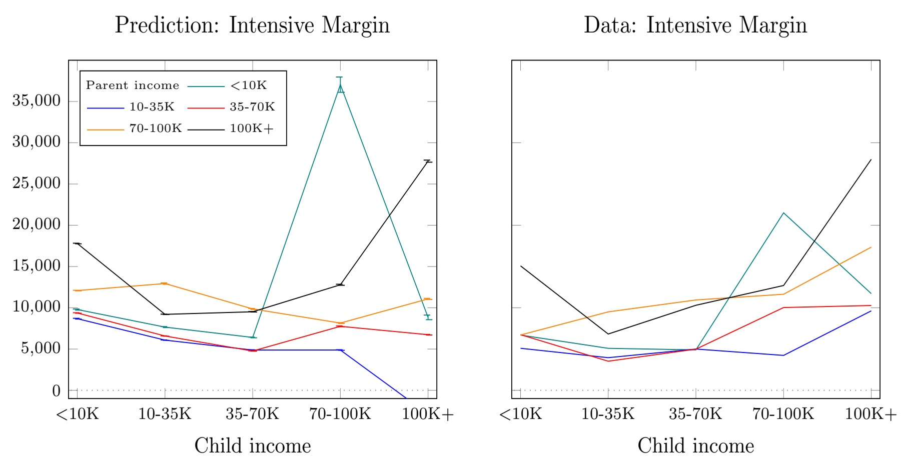


The extensive margin largely conforms to the theory of altruism. As child incomes rise, the likelihood of them receiving a transfer falls monotonically. Similarly, as parent incomes rise the likelihood of them giving a transfer to their child also increases, albeit with small plateaus at low- and high-incomes.

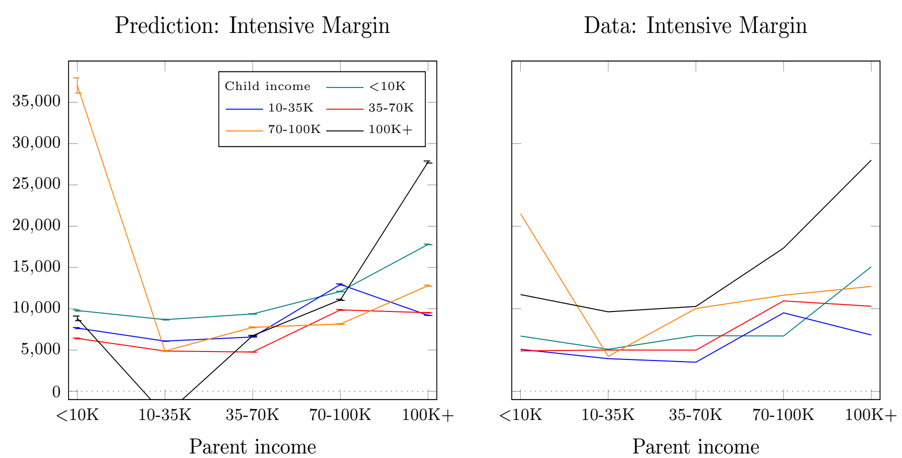
6.3 Intensive margin

$$
\begin{aligned}
transfer_{cond} = b_0 &+ b_1 \times kidincome + b_2 \times parentincome \\
&+ b_3 \times (kidincome \cdot parentincome) + b_4 \times parentassets \\
&+ b_5 \times kidage + b_6 \times parenthealth + b_7 \times kidschool \\
&+ b_8 \times kideducation + b_9 \times parenteducation \\
&+ b_{10} \times kgender + b_{11} \times khmown \\
&+ b_{12} \times kidwork + b_{13} \times parentwork + e
\end{aligned}
$$

Child income (b_1)			
Income	Coefficient	SE	p-value
10-35K	-2128.898	33.5694	0.000
35-70K	-3382.324	29.48512	0.000
70-100K	27251.1	360.6985	0.000
100K+	-951.0636	111.1823	0.000
Parent income (b_2)			
10-35K	-1107.727	29.7082	0.000
35-70K	-416.9683	27.27922	0.000
70-100K	2300.627	28.62874	0.000
100K+	8001.756	29.51491	0.000
Child income × Parent income (b_3)			
10-35K × 10-35K	-469.9067	38.01289	0.000
10-35K × 35-70K	-661.5851	35.66399	0.000
10-35K × 70-100K	2978.261	46.56558	0.000
10-35K × 100K+	-6456.43	36.69137	0.000
35K-70K × 10-35K	-418.979	33.38425	0.000
35K-70K × 35-70K	-1229.47	31.18563	0.000
35K-70K × 70-100K	1154.842	37.25742	0.000
35K-70K × 100K+	-4891.745	33.69028	0.000
70K-100K × 10-35K	-31049.71	360.4547	0.000
70K-100K × 35-70K	-28868.85	361.165	0.000
70K-100K × 70-100K	-31191.45	361.2207	0.000
70K-100K × 100K+	-32251.42	361.4696	0.000
100K+ × 10-35K	-10624.48	123.711	0.000
100K+ × 35-70K	-1681.506	111.681	0.000
100K+ × 70-100K	-59.41812	114.3054	0.603
100K+ × 100K+	10931.73	123.3064	0.000



Estimates of the intensive margin are noisier as a result of both higher variance and a smaller sample size. However, it is clear from the data that there is a positive relationship between the intensive margin and child incomes, at least for most parent incomes. The regression model can approximate this relationship controlling for child income, parent income, parent assets, and other demographic covariates.



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