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Inheritance and Financial Health: The Correlation Between Intergenerational Wealth Transfers and Income Levels of Personal Bankruptcies

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Abstract

This paper describes the correlations between intergenerational wealth transfers, or IWTs, and income of households in bankruptcy as existing research does not address any linkage between the two events. The effect that inheritances, trust payments, and lump sum gifts have on personal finances will impact the millions of Americans who will receive such transfers during the "Great Wealth Transfer" of the coming decades. I use bankruptcy data from the Federal Judicial Center's Integrated Database, or IDB, and income data from the University of Michigan's Panel Survey of Income Dynamics, or PSID, to produce a dataset that contains average IWT values of bankrupt households by income level per state, per year, from 2008-2016. Through basic ordinary least squares analysis, I find that inheritance, trust payment, and lump sum receipt do not consistently correlate with income but that the age of the head of the household positively correlates with income. I conclude that further research should be conducted in order to create an empirical model that predicts one's probability of declaring bankruptcy after receiving an IWT. This research could then be used to inform taxation policy based on the financial health outcomes of the recipient.

Table of Contents

I. Introduction

Declaring bankruptcy is rarely a fortunate undertaking. The admission that one can no longer fulfill one's monetary obligations is a tell-tale indication of poor financial health. What causes a person to file for bankruptcy is ultimately unique in every case, be it habitual overspending, earnings lagging behind living costs, a damaging unplanned happening, etc. One such financial event that may impact financial health is the receipt of an intergenerational wealth transfer, or IWT. IWTs such as inheritances, trust payments, and lump sum gifts can act as a shock to personal wealth and can modify the spending and saving habits of a recipient. Since the financial consequences of receiving an IWT can be significant, it is important to ask: does the receipt of an IWT negatively impact one's financial health by causing bankruptcy? Most studies on the effects of IWTs tend to focus on the changes in wealth or spending habits of recipients, but they do not address the question of financial health.

Now is a critical time to find the answer. In the coming few decades, the United States will witness the largest wealth transfer in her history as over $30 trillion will be passed down from the baby boomer generation to younger Americans through IWTs (Hall, 2019). The receipt of these funds, primarily by millennials, will change the financial positions and habits of those set to receive a portion of an increasingly large sum of wealth.

I describe the correlations between IWTs and the income of households who file for bankruptcy. I focus on filings of personal bankruptcy as it represents a clear and measurable negative financial outcome. By measuring the correlations between IWTs and personal bankruptcy by income level, I describe the characteristics of households who

have fallen into a dire financial situation. Revealing these characteristics will place small piece in the puzzle of understanding if there is a link between IWTs and bankruptcy.

I first review the existing literature on IWTs and personal bankruptcy. I then describe the data, methodology, and results before elaborating on the findings in the conclusion. Through a basic ordinary least squares analysis, I find that inheritance, trust payment, and lump sum receipt do not consistently correlate with income of bankrupt households. I also find that the age of the head of the household is positively correlated with income of bankrupt households and therefore provides a consistent descriptor of these households. I suggest that the age of the head of the household positive correlation with income may be because older heads earn more wages and have more savings and investments.

II. Literature Review

Does the receipt of intergenerational wealth transfers consistently describe the income of households in bankruptcy? The existing economic literature regarding IWTs and bankruptcy is segregated by subject matter; there is no known research on the direct linkage between the two.

When discussing the causes of personal bankruptcy, it is first important to understand the household decision to file for bankruptcy. Like any economic event, filing for bankruptcy is primarily a strategic decision based on financial incentives (Fay el. al., 2002). Households, and therefore individuals, are more likely to declare bankruptcy when the cost benefits of doing so increase (Zywicki, 2005). In other words, people declare

bankruptcy primarily as a tactic to save money rather than just as a consequence of an inability to pay their obligations due to a shock to income or debt.

The two most significant factors in an individual's likelihood of declaring bankruptcy are overconsumption, such as using credit to finance debt, and adverse like events, which are primarily medical (Gross and Notowidigdo, 2011). But overconsumption through credit is the more potent of the two, with high debt to income ratios of mortgages and credit cards being twice and four times more likely to lead to bankruptcy than an adverse medical event, respectively (Zhu, 2011). This suggests that an individual's chosen spend-save patterns may be the single most important indicator in bankruptcy filing. For those prone to overspend through credit card debt financing, low principal payments, high interest rates, and revolving debt availability all make credit cards prime to be abused (White, 2007). Payday loans are another available credit resource which individuals can use to increase their short-term spending. The structure of these loans also invites abuse. Payday loans are unsecured, have incredibly high interest rates, are small in size with short terms, and are easier to qualify for than more reputable sources of credit. Individuals with a desire or need to increase their current spending can easily gain access to these loans, and just as easily become trapped in cyclical lending, leading to bankruptcy (Skiba and Tobacman, 2019).

While credit card debt represents the largest portion of filing causes for bankruptcy, at 33%, medical debt is present in nearly half of bankruptcies (Himmelstein et. al., 2009). Although that figure was measured before the widespread adoption of the ACA, medical debt remains the most prominent non-consumption factor in individual bankruptcies. They show average medical debt amounts in bankruptcy are higher than

average consumption debt, which leads to greater potential savings when a household is deciding to declare bankruptcy since medical debt is not as easily discharged as credit card debt. A near majority of medical bankruptcies also listed an illness related loss of income as a significant contributing factor (Himmelstein et. al., 2009).

Individuals who declare bankruptcy, even if they are relieved of their previous debt, face one last challenge: future borrowing. Declarants, due to the derogatory mark of a bankruptcy appearing on their credit reports, typically face higher interest rates, lower access to unsecured credit, and higher consumption of sub-prime credit like payday loans (Cohen-Cole et. al., 2013). These factors combine to increase a declarant's financial distress post-filing, leading to an increased chance of a future bankruptcy (Han and Li, 2011).

Most studies have focused on the purely financial impacts of receiving various kinds of IWTs, which treat them as unexpected, positive shocks to wealth due to their one-time nature. The choices that recipients of transfers face are whether to save, and increase their wealth, spend, and increase their consumption, or smooth their consumption via income substitutions. Almost all recipients choose a combination of these baskets, so the average increase of net wealth is typically smaller than the absolute value of the IWT, sometimes resulting in a net negative impact on wealth if too much consumption smoothing via debt occurs (Joulfaian, 2006). Wealthier recipients face an increasing chance of reducing their net wealth as the size of the transfer increases due to their decreasing marginal utility of net wealth, opting instead to focus more on consumption (Joulfaian, 2006). IWTs tend to have a positive effect on the probability of retiring in a given time period at any age of the recipient, an effect that linearly scales

with the amount of the transfer, even if it was unplanned (Brown et. al., 2010). Many recipients also choose not to supplement their consumption or wealth but instead supplement their income. Those who choose to replace active income with their IWTs may even choose to stop working entirely, creating a negative relationship between receipts of IWT and labor force participation (Brown e.t al., 2010). This effect scales with the size of an IWT as recipients of larger IWTs decrease earned wages as a portion of their total income, choosing instead to rely more heavily upon their inherited assets (Holtz-Eakin et. al., 1993). The impact on the participation of labor holds even for older recipients and only the recipient is less likely to work. Spouses and other household members see no effects (Blau and Goodstein, 2016).

Intergenerational wealth transfers can affect more than just an individual's decisions to save, spend, or smooth. IWTs also have knock-on effects that can impact generations beyond the initial recipient and non-financial effects. There is a strong connection between a recipient's wealth, their parent's wealth, and even their grandparent's wealth; though the connection weakens over time (Adermon et. al., 2018). This strong intergenerational determinant may imply inherited inequality. "The rich get richer" is a popular intuition and is accurate on this issue. But the effects of IWTs on wealth inequality are less impactful than other factors such as innate skill, the time retirement savings has to grow, and the inclination of people of similar socioeconomic backgrounds to marry (Gokhale et. al., 2001). As for non-financial effects, there is a small link between a recipient's inheritance and physical health, though it is likely not causal. What is more likely is that parents with enough assets to prepare an IWT also have enough financial strength to invest in better healthcare for their children, as no

change in physical health follows the receipt of an inheritance (Carman, 2013). These links support the possibility that the effects of IWTs may be better explained by a person's background or characteristics rather than the receipt of the IWT itself.

III. Data

My aim is to estimate how consistently intergenerational wealth transfers describe the income of households in bankruptcy at different income levels and ages. To do so, I require data that observes household IWTs such as inheritances, trust payments, and other lump sum payments, as well as bankruptcies. However, the input and output data that measure IWTs and bankruptcies, respectively, are typically found only in separate sets. I therefore draw data from two sources and combine them to assess the relationship between IWTs and bankruptcy. I describe each dataset individually before describing how I create a combined dataset.

I use annual bankruptcy data from the Federal Judicial Center's Integrated Database (IDB) from 2008-2019, of newly filed case, to measure bankruptcy outcomes. I use data from the biennial Panel Survey of Income Dynamics (PSID), from 2005-2017, to measure inheritance, trust payment, lump sum receipt, and age observations. The publication of each PSID is completed in odd-numbered years; however, IWT transactions and annual income reports take place in the even-numbered year prior. I also use annual income and state of residency observations from both datasets and use these variables, along with year, to merge the two datasets. The raw distribution of annual incomes for both datasets can be found in Figure 1, which shows the differences in income distribution between the two populations. The IDB has a mean annual income

nearly $22,000 lower than the PSID and has a distribution more tightly concentrated towards lower income earners.

The IDB has all new, pending, or concluded bankruptcy cases in the United States. I focus only on newly filed cases in each year to avoid counting the same bankruptcy filing in multiple years. From 2008-2019, personal bankruptcies swell following the economic downturn brought on by the Great Recession. The average bankruptcy filer also had a lower income during this swell as the proportion of lower income bracket filers increased. These effects are temporary and dissipate by 2015. I control for these fluctuations by including fixed year effects in my descriptive model.

In order to link the data, I group IDB observations by annual income. I use Pew's 2014 definitions of household income brackets because that is the most recent year that Pew defines five brackets, rather than three, that range from lower income to upper income, the distributions of which can be seen in Figure 2. Figure 2 displays the aforementioned swell in bankruptcy filings after 2008 as well as the proportional changes in the income brackets of those filings. Using five brackets, I provide more detail when describing correlations between IWTs and bankruptcy and I more closely match common conceptions of income classes by including lower-middle and upper-middle income classifications. I generate five binary variables that indicate a filer is in the corresponding income bracket. By assigning each observation in the IDB an income bracket, state, and year value, I am able to match them with observations from the PSID of the same values. I therefore create a dataset with observations that describe a representative average household per income bracket, state, and year with IWTs that filed for bankruptcy. I explain how I create this dataset after fully describing the IDB and PSID.

Summary statistics for the IDBs annual income observations can be found in Table 1; for income brackets, Table 2. The mean income of the IDB is slightly under $40,000 annually and the lower income bracket comprises the largest group in my sample. The standard deviation of IDB annual income is just under $51,000, implying a large range of above-mean incomes although few in relative proportion to lower income filers. A maximum value of $9,982,968 further confirms the distribution of IDB income, where less than 1% of filers have annual incomes over $250,000. The limitation of the IDB is that the FJC does not release the age of the filers for legal and privacy reasons. I therefore must use the ages contained in my next dataset, the PSID.

The PSID surveys nearly 10,000 families to create a nationally representative and comprehensive dataset of household finances. In order to form IWT input observations, I use the binary and continuous variables for inheritance, trust, and lump sum income per household. Income from IWTs is reported separately from normal annual income. I group PSID respondents into the same annual income. Summary statistics for the PSID's income and IWT observations can be found in Table 1 while statistics for its income brackets can be found in Table 2. Mean income for my PSID sample is $61,825.39 and has a standard deviation of just over $90,000. Both of these figures are higher than the summary statistics for my IDB sample, indicating that the PSID has a larger proportion of higher income earners. Table 2 demonstrates these relative proportions, in which middle income is the largest bracket of the PSID and upper-middle and upper income households are observed nearly ten times more frequently than the IDB. While the PSID includes the ages of the head of the household (a gender-neutral term which the PSID also refers to as response person) and their spouse (also referred to as wife in older surveys), I only use

the age of the head of household. I do so in order to reduce collinear variables as the ages of the heads of household and their spouses have a correlation coefficient of 0.465. Furthermore, all households must have a head but not all households have a spouse. I include the age of the head of the household because age may affect the likelihood of a household's income bracket and should be controlled for, as demonstrated in Figure 3. Figure 3 demonstrates that age and income bracket are positively correlated for both heads of household and spouses, suggesting that households with older inhabitants earn more money on average than younger households.

While the PSID is an impressively thorough dataset, I should address some shortcomings of the survey that may impact the correlation between IWTs and bankruptcy by income level. The PSID does not seem to capture any high or ultra-high net-worth recipients in the study years, as evidenced by there being no IWT exceeding one million dollars (the PSID does code for such observations). Another problem is that the PSID does not differentiate between trust fund receipts and royalty receipts, nor inheritances and large insurance settlements. While the PSID methodology does state that observed amounts of royalties and insurance payouts are quite small, hence combining them with other financial events, their inclusion introduces possible noise into IWT observations that cannot be filtered out. The final shortcoming of the PSID is that it is conducted every other year. While current levels of funding and logistical complications likely dictate this restraint, it reduces the strength of my conclusions by halving the number of possible observations. To try and correct for this, I interpolate odd-numbered year observations for my input variables. I use these interpolated observations in my combined IDB-PSID dataset.

In order to describe the relationships between intergenerational wealth transfers and the income of bankrupt households, I produce a dataset that combines the outcome variables of the IDB and input variables of the PSID by matching on unique combinations of income bracket, state, and year. However, the relative proportions of each income bracket are quite different between the two datasets, as demonstrated in Table 2 which displays the results of t-tests between the relative bracket proportions. The difference in income bracket proportions in turn creates a large gap between the mean incomes of the IDB and PSID since these proportions measure the frequency of observations per income range. Performing a regression analysis without adjusting for these differences would produce results that have not controlled for this variance and may not be accurate given the different weights of income brackets in each dataset. To resolve this, I modify the proportions of each income bracket within the PSID dataset through random sampling to match the PSID proportions to the proportions of the IDB. This modification will also create a PSID sample with a mean income closer to that of the IDB sample.

To combine the IDB and modified PSID datasets, I collapse both datasets into a summary of means for each unique combination of state, year, and income bracket. Because the PSID only takes place on even years, I then interpolate input observations for odd numbered years from 2005-2015. I then merge the two datasets on these unique combinations of identification variables. Each observation in this combined dataset represents the mean age, annual income, inheritance, trust fund payment, and lump sum receipt per income bracket of all bankrupted households in that state-year.

With my combined dataset, I describe different models for income based on proportional, nominal, and naturally logged input variables. I derive the proportional measurements from the collapsed binary indicators of each IWT. Since I collapse the binary variables to their mean, they are no longer values of either 0 or 1; instead, they are values between 0 and 1 that represent the proportion of "yes" observations in the pre-collapse data. Therefore, input values for proportional models are either 0 or some number less than 1. The means of these proportional values 0.0189 for *I*, 0.0126 for *T*, and 0.0465 for *L*. I interpret these means as the values each correlation coefficient is multiplied by instead of 1 when input to my descriptive equation. For instance, if β3 were 50, then *I* increases the expected income bracket by (50 * .0189) or 0.945.

IV. Methods & Results

I use a basic ordinary least squares analysis to describe the correlation between intergenerational wealth transfers and bankruptcy by income level. I describe the relationship between IWTs and the income of a household in bankruptcy with the following equation:

$$IB_r = \beta_0 + \beta_1 AH_r + \beta_2 I_r + \beta_3 T_r + \beta_4 L_r + \tau_r + \varepsilon_r$$

where *IB* is income measured as either income bracket or annual ordinary income, *AH* is age of the head of household, *I* is inheritance, *T* is trust fund payment, *L* is lump sum receipt, τ stands for fixed year effects, and *r* stands for a representative average household. *I*, *T*, and *L* can each be proportional of bracket, nominal, or natural logarithmic measurements. I produce five distinct models that describe the relationship between IWTs and the income of households in bankruptcy, the results of which can be

found in Table 3. Two models have income bracket as the outcome with proportional and nominal IWT inputs and two models use the same types of inputs variables to determine annual ordinary income. The final model has the natural logarithm of annual ordinary income as the output with the natural logarithm of IWT inputs variables. All five models use nominal age input variables.

The input variables of my equation predict either the income bracket or the annual ordinary income of a representative average household that filed bankruptcy per state-year. Model 1 shows that income bracket is negatively correlated with proportional inheritance, while age of the head of household, proportional trust payment, and proportional lump sum receipt are positively correlated. Model 2 shows that income bracket is negatively correlated with nominal inheritance and lump sum receipt, while age of the head of household and trust payment are positively correlated. Models 3 and 4 show that annual ordinary income has the same directions of correlation as Model 1 for age of the head of household and for when IWTs are measured proportionally and nominally, respectively. Model 5 shows that the natural logarithm of annual ordinary income is positively correlated with inheritance and age of the head of household, while trust payment and lump sum receipt are negatively correlated.

Comparing across the different models, I can assess which inputs most consistently produce the same outcome. A consistent input should produce the same direction of correlation for the income bracket and total income models since those outputs are positively correlated themselves. Furthermore, a consistent input should produce the same direction of correlation across the proportional, nominal, and logarithmic models.

I find that all IWT inputs are not consistent descriptors of the income of bankrupt households. Inheritance is not a consistent descriptor because it is negatively correlated with income when measured proportionally and nominally but positively correlated with income with measured by natural logarithm. Trust payment is also not a consistent descriptor although it has the opposite correlations with income as inheritance. Lump sum receipt is the least consistent descriptor as it positively correlates with income when measured proportionally and for annual ordinary income when measured nominally, but negatively correlates with income bracket when measured nominally and with the natural logarithm of annual ordinary income when by measured by natural logarithm.

I find that the age of the head of household is the only input that consistently describes the income of bankrupt households because it positively correlates with income across all models. Since this input positively correlates with income, I interpret that older heads of representative average bankrupt households also have higher incomes. I find that while the correlation between age of the head of household and the income of bankrupt households is consistently positive, the magnitude of the relationship between these variables is not consistent across models. All else being equal, a 50 year-old head of household will be three income brackets above 40 year-old head of household. But in terms of annual ordinary income, the 50 year-old head household will also have $215,500 - $246,170 more than the 40 year-old, depending on the model. And when annual ordinary income is measured by natural logarithm, a 25% increase in age is associated with a roughly 7% increase in annual ordinary income.

V. Discussion & Conclusion

Intergenerational wealth transfers are significant events in our financial lives. They have the ability to drastically change the financially situation of an individual or household. I focus on personal bankruptcy filings as it represents a clear negative outcome for the financial health of households who receive an IWT. By describing the correlations between IWTs and the income of a representative average household that files for bankruptcy, I find that the age of the head of household is consistently positively correlated with income, meaning older heads of bankrupt households have higher incomes. Inheritance, trust payment, and lump sum receipt are not consistent descriptors of the income of bankrupt households.

While I cannot speculate on the microeconomic reasons on the correlations between trust payment, lump sum receipt, and age of head of household with expected income given the inconclusive results of the models, I can propose reasons why the age of the head of household is consistently positively correlated with income. To reiterate, the term "head of household" is gender neutral and therefore does not describe income trends related to sex or gender identity. Generally speaking, older heads of households may have more years of professional experience than their younger peers which might result in higher wages for a given job title or job function. Older heads of households could also be working in more advanced positions within a given industry or company due to promotions. Higher wages would explain the higher annual ordinary income expected of older heads of households, as described by the models I interpret in this paper. Older heads of households may also have more years of savings or investments to draw upon than younger heads, thus increasing their income brackets. This difference in

income, and therefore income brackets, would increase exponentially as the age gap between heads of households increases linearly given the power of compounding interest.

I use terms such as “may” and “might” since the equation and models are purely descriptive. To understand the empirical causes of correlations between intergenerational wealth transfers and personal bankruptcy, further research must be conducted. Most datasets that include variables relating to income rarely include variables that describe the cash outflows of respondents. Other datasets that include cash outflows have the opposite problem as they rarely include thorough breakdowns of sources of income. I recommend that future research into personal and household finances include both income and financial outcomes such as bankruptcy in their surveys or studies. I also recommend that these surveys occur at least once every other year to best capture annual changes in household finances with all variables being measured in each survey. For instance, the annual Survey of Consumer Finances contains income figures, outflows, and a question about bankruptcy, but does not measure IWTs specifically and only asks respondents if they have filed for bankruptcy in the last five years. Future research could also explore lagged models that explain correlations between IWTs and the income of bankrupt households as a function of time. These intra-year models found that IWTs are not consistently correlated with income intra-year, but it is possible that receipt of an IWT in one year could impact a household’s annual income for the few years following.

As the empirical links between intergenerational wealth transfers and the income of households in bankruptcy become better understood, research into this question could better inform taxation policy. Taxes on IWTs currently serve as an effort to redistribute wealth using the same method as income taxes: the larger the IWT, the higher percentage

tax. Such a policy takes more in taxes from wealthier recipients to be spent by governments on public goods, effectively redistributing wealth from the top towards the bottom. However, the progressive rate tiers and exemptions of the current US tax code on IWTs are more influenced by interest groups and numerical convenience than economics (Kopczuk, 2013). In order to inform tax policy based on economic welfare, future research would have to move beyond descriptive models and into empirical models.

If further research produces empirical models that predict an IWT recipient's probability of declaring bankruptcy, then the findings could be used to create an IWT tax policy based on the welfare of the recipient. For instance, if it is found that increasing a recipient's IWT from $50,000 to $100,000 would decrease their chance of going bankrupt by 60%, then exempting IWTs of less than $100,000 would be wise step to promote healthy financial incomes. Additionally, if it is found that increasing a recipient's IWT from $5 million to $10 million only decreases their change of going bankrupt by 2%, then perhaps taxing IWTs above $5 million at higher rates would raise more funds that could be spent on programs and public goods that more efficiently promote social welfare.

VI. Tables & Figures

Table 1: Summary Statistics of IDB and PSID Datasets

	Mean	***Std. Dev.***	***Minimum***	***Maximum***
Annual Income (IDB)	$39,602.65	$50,911.74	$0.12	$9,982,968
Annual Income (PSID)	$61,825.39	$90,616.99	$1	$630,0000
Age of Head	41.8	13.5	16	91
Age of Spouse	24.1	22.9	0	87
Inheritance (binary)	.01618	.1262		
Inheritance	$1,116.59	$22,519.37	$0	$2,500,000
Trust Payment (binary)	.009315	.09606		
Trust Payment	$168.41	$6,258.39	$0	$900,000
Lump Sum Receipt (binary)	.03743	.1898		
Lump Sum Receipt	$1,749.24	$28,611.3	$0	$3,000,000

Note: Based on 11,615,823 IDB observations from 2008-2019, excluding 197 outliers with annual incomes over $10,000,000. Including these outliers increases the mean income to over $250,000 and standard deviation above $1,000,000 due to three incomes of over $10 billion, which may be a clerical error. Also includes 45,733 PSID observations from odd-numbered years 2005-2017. Measured before collapsing or interpolating.

Table 2: Income Bracket T-test Before and After Adjustment

	Before				**After**		
Income Bracket ***($USD)***	***IDB Mean*** ***(std. dev.)***	***PSID Mean*** ***(std. dev.)***	***t-test***	***PSID*** ***Observations***	***PSID Mean*** ***(std. dev.)***	***t-test***	***PSID*** ***Observations***
Lower *(0 - 31,000)*	.4478 (.4973)	.3692 (.4826)	33.73	16,883	.4477 (.4973)	.0108	11,411
Lower-Middle *(31,001 – 42,000)*	.2106 (.4077)	.1174 (.3219)	48.84	5,368	.2106 (.4078)	.0026	5,368
Middle *(42,001 – 126,000)*	.3303 (.4703)	.4139 (.4926)	37.91	18,927	.3303 (.4703)	.0048	8,419
Upper-Middle *(126,001 – 188,000)*	.007204 (.08457)	.06492 (.2464)	140	2,969	.007219 (.08466)	.0294	184
Upper *(188,000+)*	.004123 (.06407)	.03468 (.183)	100	1,586	.004119 (.06405)	.007	102

Note: Frequency of IDB observations – 5,201,008 in lower; 2,446,415 in lower middle; 3,836,835 in middle; 83,678 in upper middle; 47,887 in upper. Represents PSID statistics before and after random-sampling modification to match income bracket proportions of IDB.

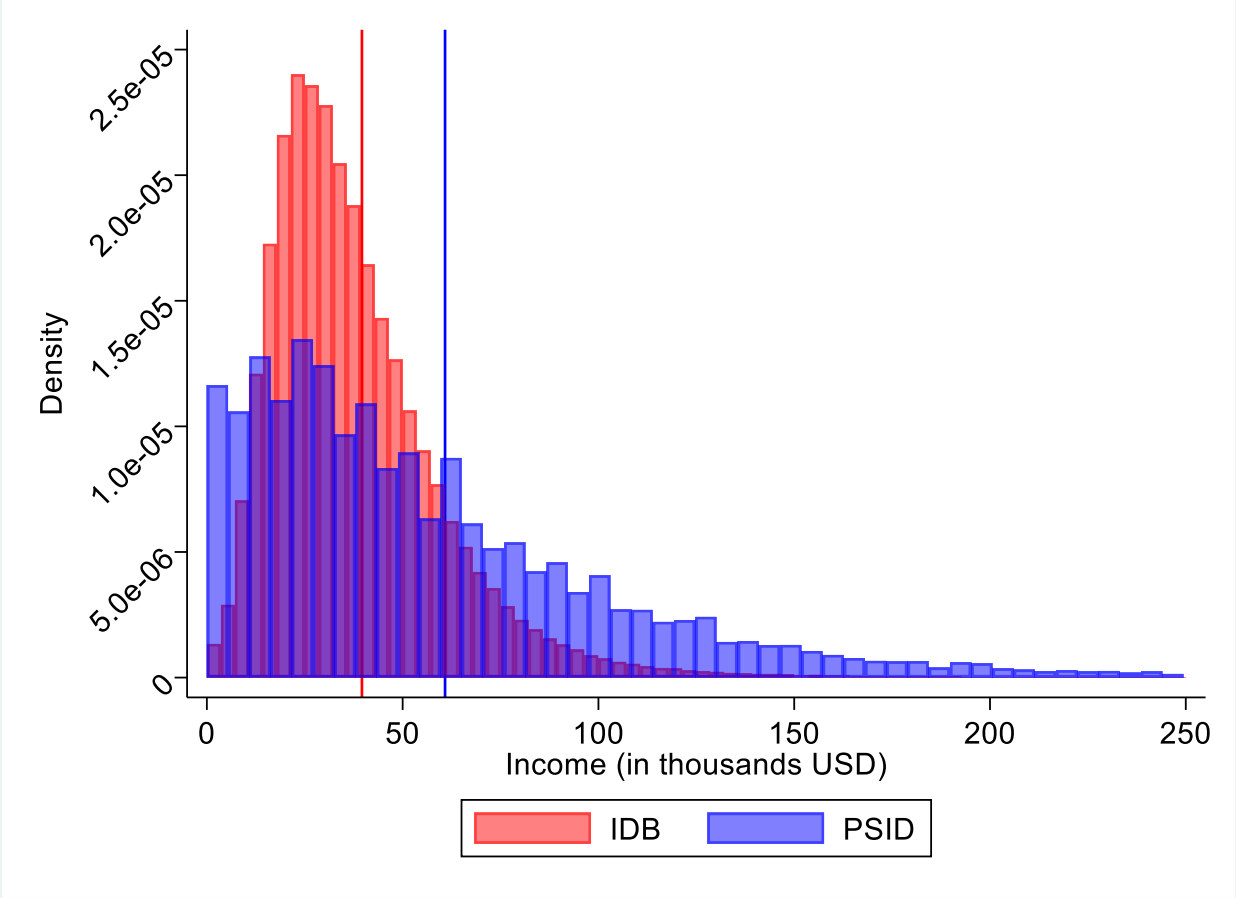
Table 3: Correlations between IWTs and Income for Households in Bankruptcy

Variable	(1) Income Bracket	(2) Income Bracket	(3) Annual Income	(4) Annual Income	(5) Annual Income
Inheritance (proportional)	-6.459*** (0.525)		-1.986e+06*** (72,235)		
Trust Receipt (proportional)	4.129*** (0.578)		1.260e+06*** (95,253)		
Lump Sum (proportional)	0.784*** (0.293)		1.251e+06*** (32,320)		
Inheritance (nominal)		-1.52e-05 (2.54e-05)		-29.63*** (1.523)	
Trust Receipt (nominal)		0.000160*** (2.36e-05)		50.86*** (5.103)	
Lump Sum (nominal)		-1.91e-05*** (3.19e-06)		11.47*** (0.303)	
Inheritance (natural log)					0.142*** (0.0183)
Trust Receipt (natural log)					-0.161*** (0.00802)
Lump Sum (natural log)					-0.0645*** (0.0243)
Age of Head of Household	0.350*** (0.00406)	0.344*** (0.00373)	24,617*** (323.9)	21,550*** (285.0)	0.277*** (0.00389)
Observations	2,886	2,886	2,886	2,886	2,238
R^2	0.803	0.800	0.855	0.851	0.678

*** p<0.01, ** p<0.05, * p<0.1

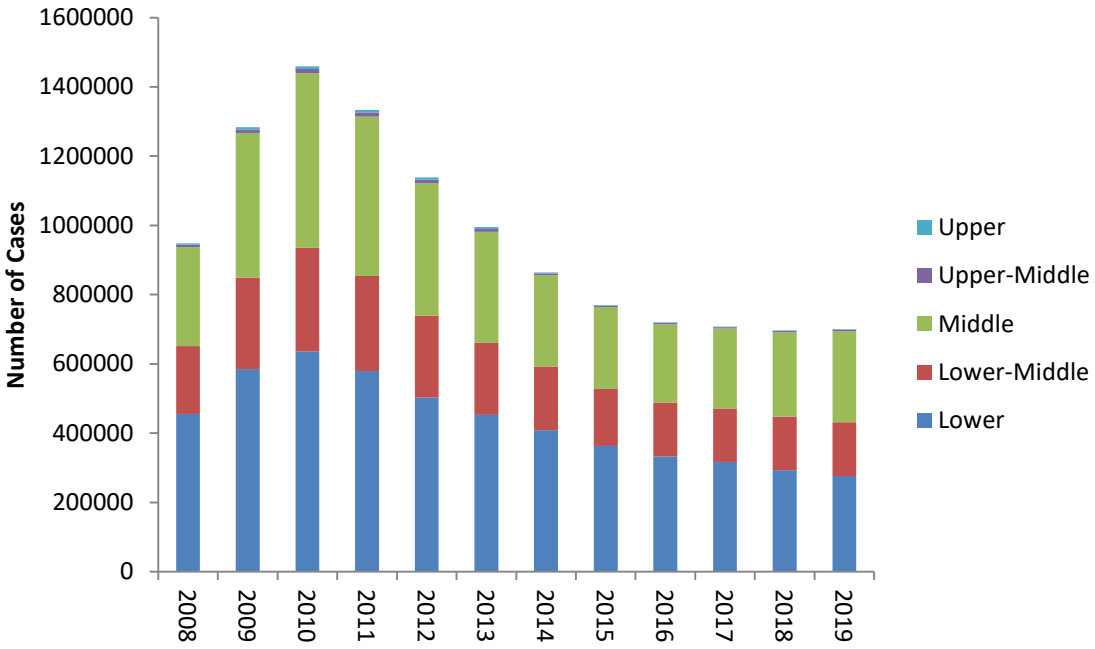
Note: Robust standard errors in parentheses. Models describe either the income bracket or the annual normal income of a representative average household that filed for bankruptcy. Model 5 uses the natural logarithm of annual normal income as outcome variable. Models include values for a β_0 constant and τ_r fixed year effect but are excluded from the table as they do not help describe the correlation between IWTs and income. Age variables are reported as nominal values in all models.

Figure 1: Distributions of Income in IDB and PSID Datasets



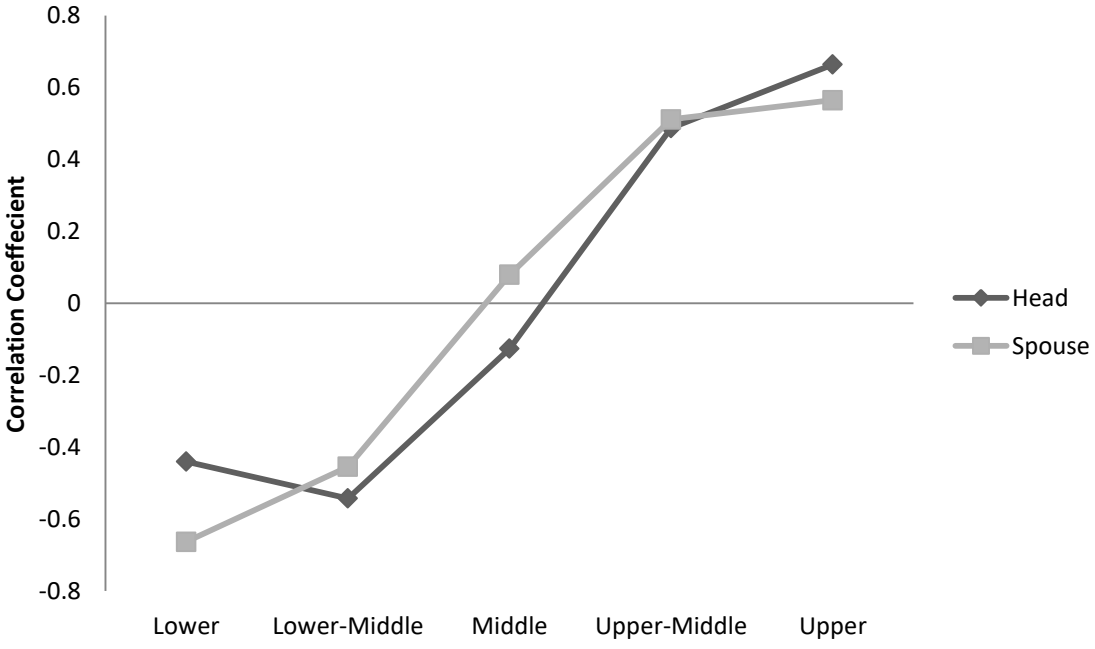
Note: Raw distributions in each dataset. Based on 11,615,823 IDB observations from 2008-2019, excluding 26,849 outliers with annual incomes over $250,000 and 45,733 PSID observations from odd-numbered years 2005-2017, excluding 704 outliers with annual incomes over $250,000. Vertical reference lines represent means by color-coded dataset.

Figure 2: Yearly Bankruptcy Cases by Income Bracket



Note: Based on annual IDB data. Displays new bankruptcy filings only. Grouped by Pew 2014 income bracket definitions.

Figure 3: PSID Correlation of Age and Income Bracket



Note: Based on aggregate of raw PSID data observed from odd-numbered years 2005-2017.

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