DOES ENTREPRENEURSHIP MAKE YOU WEALTHY? INSIGHTS FROM THE UK WEALTH AND ASSETS SURVEY

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ABSTRACT

While there is growing interest in entrepreneurial earnings, prior studies have typically focused on the incomes derived from business ownership, a highly problematic measure, prone to under-reporting and mismeasurement, which fails to capture either the financial rewards of entrepreneurship or the economic well-being of entrepreneurs. Using the Wealth & Assets Survey (WAS), a large-scale British population survey, this study focuses on household wealth, the stock of economic resources in the form of accumulated personal assets. Results show that entrepreneurial households own disproportionately more wealth than other households, and that the household wealth of business owners with employees is greater than the household wealth of the self-employed with no employees. Attributing a causal relationship between entrepreneurship and household wealth is problematic; however, our estimates suggest entrepreneurship has a cumulative effect on household wealth. Households with levels of wealth at or above the median become wealthier as a consequence of entrepreneurship, but no such effect is observed on the wealth of households below the median level.

Keywords: Entrepreneurial earnings, Wealth & Assets Survey, Finance

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EXECUTIVE SUMMARY

- There is growing interest in entrepreneurial earnings; however prior studies have typically focused on incomes derived from business ownership - a highly problematic measure, which fails to fully capture the rewards of entrepreneurship. In contrast, wealth comprises a stock of accumulated assets providing a more robust measure of relative success and economic well-being over the life-course of the business and the individual entrepreneur.

- Using the UK Wealth & Assets Survey (WAS), we assess the relative wealth of entrepreneurs. First, we examine the size, composition and distribution of entrepreneurial wealth, comparing the wealth of business owners with employees (employers) and self-employed individuals with no employees (self-employed), with remaining population groups, measuring wealth at the household level. Second, we explore whether the wealth of entrepreneurial households can be shown to be causally related to entrepreneurship.

- Our findings show that entrepreneurial households are richer, in general, than others; median total wealth for entrepreneurial households is almost double that of employee households (£246,000 vs £475,000). More than 20% of entrepreneurial employer households are in the top decile of wealth and more than 50% are within the three highest deciles of wealth. At the other end of the scale, entrepreneurial employer households have virtually no representation in the lowest three deciles. In contrast, self-employed households and employee households are more or less evenly distributed across the various deciles of household wealth, while more than half of unemployed households (those where the main respondent is unemployed) are in the lowest two deciles.

- Entrepreneurial employer households account for only 2% (about half a million) of all UK households, but collectively own 4% of total household wealth. Similarly, self-employed households account for 6% (almost 1.5 million) of all UK households, but collectively own 7% of total household wealth. Between them, the two entrepreneurial groups comprise 8% of households, but own 15% of household property wealth, 13% of net financial wealth and 12% of physical wealth.

- Entrepreneurial households hold significant portions of their wealth in property; however, they also have higher property liabilities than other households, indicating larger mortgages, the ownership of multiple properties (e.g. buy to lets), or the use of property to collateralise business borrowing.

- While frequently described as income-poor, this study shows that entrepreneurial households are asset-rich. Wealth holdings in a variety of forms can be used to supplement household budgets in the short and long-term, smoothing consumption for the household and providing a credit cushion for the business. Further, greater physical wealth, such as motor vehicles and collectibles, suggests that entrepreneurial households enjoy a higher standard of living than other households.

- Concerns that entrepreneurs may be particularly prone to financial precarity in old age may be over-stated. Our estimates suggest that as a group, entrepreneurial households account for 8% of total pension wealth - proportionate with the incidence of

entrepreneurial households in the population. However, while the median employer household has £73,000 (mean £210,000) in pension wealth, the median self-employed household has only £38,000 (mean £190,000). In comparison, the median employee household has £77,000 (mean £220,000) in pension savings.

- While the high variability in pension saving among the self-employed may leave many at the risk of financial insecurity later in life, for provident entrepreneurs the ownership of property and other wealth forms may constitute a more diversified and versatile wealth portfolio that may supplement formal pension savings.

- Prior studies of entrepreneurial incomes have stressed the large variations in fortunes among entrepreneurs, suggesting that mean incomes are skewed by a handful of very high earning 'superstars'. In contrast, this analysis of entrepreneurial wealth finds that inequalities in total wealth distribution are actually lower among employers (Gini coefficient = 0.58) and the self-employed (0.57) than they are among the inactive (0.81) and the unemployed (0.74). Indeed, wealth inequalities among employers and the self-employed are on a par with wealth inequalities among employees (0.58).

- The extent to which the greater wealth observed among entrepreneurial households can be directly attributed to entrepreneurship is more difficult to demonstrate and prone to substantial methodological difficulties. However, our estimates suggest that for households at the median level of wealth, entrepreneurship can more than double household wealth (an increase of around £380,000 on the £340,000 unweighted median wealth). The impact of entrepreneurship on household wealth is seemingly even greater at higher levels of household wealth. Estimates of IHS and log transformed wealth suggests that entrepreneurship could triple household wealth for households at the 75th percentile; an increase of 300%, 600% and 700% is estimated at the 90th, 95th and 99th percentiles respectively.

- These results suggest that entrepreneurship has a cumulative effect on household wealth; entrepreneurship makes wealthy households wealthier but has no effect on the wealth of households below the median level. In this light, traditional views of entrepreneurship as a middle class occupation continue to have salience. In contrast, no evidence was found to show that entrepreneurship is an effective vehicle for enhancing social mobility among poorer households.

1 INTRODUCTION

That entrepreneurship can lead to great personal wealth is demonstrated by the number of individual success stories reported in the popular media. In recent years, up to 80% of the *Forbes* List of the wealthiest Americans has comprised business owners, while most of the others inherited their wealth, typically made from businesses started by their parents or grandparents (Cagetti & De Nardi, 2006). The UK's *Sunday Times* Rich List includes similarly high numbers of business owners and their immediate descendants (Shaw et al, 2013). But it is also evident that not all entrepreneurs are successful or wealthy. Risk is a defining characteristic of entrepreneurship, leading to great variability in the fortunes of entrepreneurs. Despite this, surprisingly little is known about the extent to which entrepreneurship leads to personal wealth for individuals who have started businesses. While there has been a growing interest in entrepreneurial earnings, this has focused mainly on measuring the relative incomes of entrepreneurs, rather than overall wealth measured by the stock of personal assets which may prove a more accurate measure of entrepreneurial earnings.

This study presents the first attempt to assess the relative wealth of entrepreneurs, examining two key questions critical to the entrepreneurial earnings debate. Firstly, we examine the magnitude, composition and distribution of entrepreneurial wealth. Using the UK Wealth and Assets Survey (WAS), a longitudinal population survey, as the main data source, we compare the wealth of two types of entrepreneurs, business owners with employees (employers) and self-employed individuals with no employees (self-employed), with remaining population groups, measuring wealth at the household level. Secondly, building on prior studies that have found a "tight relationship between being an 'entrepreneur' and being rich" (Cagetti & De Nardi, 2006: 838), we attempt to disentangle the extent to which household wealth is an outcome of entrepreneurship. In so doing, we

provide a more nuanced understanding of the financial rewards of entrepreneurship, contributing new insights that move the field beyond the 'entrepreneurial incomes puzzle' that has preoccupied scholars to date.

Following this introduction, the paper reviews prior research that has contributed to our current understanding of entrepreneurial earnings, and then describes the dataset and our analytical method. The results of our analysis are reported in two parts. The first reports descriptive data on the size, composition and distribution of wealth owned by entrepreneurial households relative to that owned by others, and the second reports evidence pertaining to a causal relationship between wealth and entrepreneurship. Finally, we provide conclusions and suggestions for future research.

2 ENTREPRENEURIAL EARNINGS: INCOMES VS WEALTH

There is growing research interest in entrepreneurial earnings and the financial rewards that may be derived from entrepreneurship. To date, the main focus of investigation has been the incomes derived from self-employment and business ownership relative to those derived from employment (Shane, 2008). Studies of entrepreneurial incomes offer diverse results. Several early studies reported consistently lower earnings among the self-employed (Hamilton, 2000; Blanchflower, 2004) and posed the question that has become known as the entrepreneurial earnings puzzle; why so many individuals choose to remain in self-employment given the considerably higher earnings available to them in paid employment (Shane, 2008). More recent studies have started to address this puzzle by improving the methodological approach taken to studying entrepreneurial incomes. Astebro and Chen's (2014) study of US entrepreneurs argued that the widely reported low incomes derived from entrepreneurship were largely a function of the systematic under-reporting of earnings, while

Sorgner et al's (2014) analysis of German micro-census data focused on unpacking the single, heterogeneous category of entrepreneurs into a number of different analytical groups. By controlling for measurement issues and disaggregating different types of entrepreneurial activities, these studies concluded that entrepreneurial earnings were often comparable, albeit with greater variability, to those gained in paid employment. As Sorgner et al (2014: 21) report "the common assertion that self-employed persons tend to earn less than paid employees does not hold true. Despite considerable heterogeneity, many but not all self-employed earn more".

Although incomes are a useful measure of relative prosperity, particularly for those in paid employment whose earnings are typically their main or sole income source, the use of incomes as the measure of the financial rewards of entrepreneurship is highly problematic. Economic well-being is a multi-dimensional construct, of which incomes constitute only one element (Carter, 2011). Entrepreneurs have considerable discretion in determining not only the type, but also the value and the timing of their personal financial rewards (Carter and Welter, 2015). Incomes in the form of drawings are one type of financial reward that may be derived from business ownership, but the financial rewards of entrepreneurship include both direct financial rewards (i.e. drawings, net profit, shareholder dividends and equity sale), and a range of indirect rewards, including goods and services owned by the firm but used for personal and household consumption. The extraction of financial rewards may be adjusted to suit prevailing business conditions and the entrepreneur's individual requirements. For example, frugal entrepreneurs may typically extract notional drawings, but the amount may vary depending on personal needs and the affordability to the business. Similarly, the value and timing of more substantial financial rewards, such as dividends and profit, may be varied by the judicious entrepreneur to suit prevailing business conditions and to maximize personal and business advantage. Arguably, the ability to vary the value, form and timing of financial

rewards extracted from the business is a distinguishing feature of entrepreneurship (Carter and Welter, 2015). Hence, research that focuses only on incomes is unlikely to be sufficient to fully address the entrepreneurial earnings puzzle.

While income can be viewed as a flow of economic resources, comprising money received over a particular period of time, wealth is a stock of economic resources in the form of accumulated personal assets (Rowlingson, 2012). As such, wealth constitutes a more stable and reliable measure of relative success and economic well-being over the life-course of the business and the individual entrepreneur. While the use of wealth as a measure of the financial rewards of entrepreneurship resolves many of the measurement and under-reporting issues commonly associated with studies of entrepreneurial incomes, it introduces other challenges and complexities. Most obviously, the distinction between income and wealth can be ambiguous as some assets provide a source of income (e.g. interest on savings), while income flows may be converted into assets (e.g. saved income). Assets also vary greatly in liquidity and fungibility; while pension assets are typically illiquid, housing assets can be used to collateralise business debt, and financial assets readily available for business purposes. Additionally, wealth can be negative; debt can be collateralised against the value of an asset to leverage funds for further investment (Rowlingson, 2012: 8). Finally and most problematically from a measurement perspective, the source of accumulated wealth may be misattributed to entrepreneurial success, but may actually derive from other sources. While these issues present methodological challenges, there are obvious advantages in focusing on the accumulated stock of an individual's economic resources, rather than income flows, as a more reliable indicator of the financial rewards of entrepreneurship.

It is widely recognised that the distribution of wealth is highly unequal, and in most countries wealth distribution is more unequal than income distribution. On a global level, wealth share estimates show that the richest 1% of individuals account for 40% of global

wealth, while the richest 10% account for 85% of global wealth (Davies et al, 2007). Those in the top decile are, on average, 400 times richer than the bottom 50% (Davies et al., 2007). In the UK, studies of wealth show that the most unequal type of wealth is financial wealth, followed by private pension wealth and property wealth (Rowlingson, 2012). The wealthiest individuals are typically in the 55-64 year age group - though considerable inequality exists within this age group - typically because older people have had more time to accumulate assets than younger people (Birmingham Policy Commission on the Distribution of Wealth, 2013). Large variations in wealth are also apparent by occupation, with entrepreneurs frequently found to be among the wealthiest (Cagetti & De Nardi, 2006; Quadrini, 2000).

Prior research has shown that the concentration of wealth owned by entrepreneurs cannot be explained by their incomes, which are disproportionately lower (Quadrini, 2000). Instead, two alternative explanations of entrepreneurial wealth have been proposed. Firstly, there is evidence that the greater wealth of entrepreneurs is a result of different patterns of accumulation and higher levels of savings (Bradford, 2003; Cagetti & De Nardi, 2006; Quadrini, 2000). Entrepreneurs may have access to large lump sum payments through shareholder dividends and also have a greater incentive to save, both because of their need to offset future earnings risks and also to reduce the requirement for external finance (Gentry & Hubbard, 2004; Parker et al, 2005). Secondly, there is some evidence that the wealth of entrepreneurial households is not only an outcome of successful entrepreneurship it is also an input, providing capital facilitating business start-up and growth. Wealthy households have access to financial assets reducing borrowing constraints (Gentry & Hubbard, 2004; Nanda, 2008). In contrast, non-wealthy households may experience credit rationing and their reliance on external finance may constrain venture start-up and growth (Freel, 2007; Levenson & Willard, 2000; Stiglitz & Weiss, 1981).

Sources of wealth are varied, but can be categorised as either earned through saved income or unearned through gifts or price effects (Rowlingson, 2012). The accumulation of wealth usually, but not always, occurs over time as individuals earn more than they spend, saving residual income in order to smooth future consumption, or by price effect gains in property or share prices. Less commonly, wealth accrues through sudden windfalls, such as inheritance or lottery wins. Whatever its source, there is little doubt that the possession of wealth reduces the need for external borrowing and also provides collateral to securitise external credit (Birmingham Policy Commission on the Distribution of Wealth, 2013). Because wealth comprises a stock of different types of assets usually built over time, it provides a more durable resource to measure relative success and economic wellbeing over the life-course of the business and the individual entrepreneur. In contrast, income is a fluid asset prone to rapid out-flows and under-reporting.

A key question relating to wealth is whether it should be measured at the level of the individual, the family or the household (Rowlingson, 2012). Studies have increasingly recognised the role of families and households in supporting business ventures and the extent of sharing within entrepreneurial households (Aldrich & Cliff, 2003; Alsos et al, 2014). In this study we focus on the household, but recognise the additional complexity this entails, as the wealth observed within a household may not derive solely or mainly from the business, but may have accrued from other sources including, for example, spousal wealth (Carter, 2011; Mulholland, 1996). Following an examination of the size, composition and distribution of the relative wealth of entrepreneurs, we explore the extent to which household wealth is an outcome of entrepreneurship.

3 DATA AND METHODS

This study employs data drawn from Wave 2 of the Wealth and Assets Survey (WAS), a longitudinal general population survey conducted by the UK Office for National Statistics (ONS) that collects household and personal level data pertaining to wealth. Wave 1 was carried out between July 2006 and June 2008 and achieved a sample of 30,595 households and 71,268 individuals. The survey has a two yearly interval, such that Wave 2 commenced in July 2008 through June 2010. Wave 2 achieved a sample of 20,170 households (of which 18,910 can be linked to Wave 1) and 46,347 individuals. The present study considers variables at the household level; some, such as wealth, are only collected at the household level, others are aggregations of household members' responses, while others only pertain to the individual responses of the Household Reference Person (HRP). The HRP is defined as the person within a given household chosen to represent the household and characterise the household's social position using his/her individual characteristics with priority given to the individual with the highest income in the household (ONS, 2013). We employ only Wave 2 data as certain key questions of relevance to the present study, such as the respondents family background, were introduced in Wave 2. Our variables of interest are household wealth (dependent variable) and entrepreneurial households (independent variable).

Households were divided into six categories based on the economic activity of the HRP: economically inactive, pensioners, unemployed, employees, self-employed with no employees (self-employed) and business owners with employees (employers). While pensioners, the economically inactive, and the unemployed are self-explanatory, the distinction between employees, self-employed and employers is crucial, especially with regard to notions of entrepreneurship and business-ownership. A person whose main current occupational status is captured in the dataset as sole director of own company, partner, self-

employed or a director with ownership in a company with less than 500 employees was categorised as an entrepreneur. Company directors that have no ownership were categorised as employees, and employees with ownership are not captured in the data as the filtered question on proportion of ownership only targets directors. Entrepreneurs are therefore owner-managers of businesses, i.e. those that combine some degree of ownership and a strategic managerial position as director or partner. Within this broad category, the self-employed group captures those that employ only themselves or themselves and fellow partners but no employees. In turn, employers are any owner-managers whose firms have employees. Importantly, where an individual is a business owner but such ownership does not entail a formal managerial capacity, such an individual is not captured in these occupational groups. Thus, the six categories are essentially employment status indicators.

In the descriptive analysis of household wealth, we use these six occupational categories for the whole sample of British households. In the regression analyses, however, entrepreneurial households are defined as those where the HRP is either self-employed or is an owner-manager of a business with fewer than 500 employees (i.e. is an entrepreneur as defined above). This is primarily because there is an analytical need to observe entrepreneurial households as a binary variable. Further, in the regression analysis, we consider a sub-sample of households with working-age HRPs that are either employees or entrepreneurs. Conventionally, working-age includes individuals aged between 16 - 64 years (16 – 59 years for women); however, since data on family background was only sought from respondents that were at least 25 years old, we consider 25 years as the lower threshold for working-age HRPs. A further subsample of working working-age HRPs also eliminates households whose HRPs are either inactive or unemployed. This is partly because data on certain factors are only collected from working respondents. Being primarily age-related, a working-age sub-population is rather straightforward. However, there may be selection bias

issues with the working sub-sample should there be unobserved factors associated with both household wealth and not working. The wealth of the highly heterogeneous group of economically inactive may be especially problematic in this regard.

Besides selection, in seeking to establish whether entrepreneurship is causally associated with household wealth, there are three further main analytical concerns. The first two relate to negative wealth and the distribution of wealth. While most quantitative analyses employ the natural logarithm transformation to make skewed data more amenable to analysis and inference, wealth measures contain legitimate negative and zero values thereby making the log transformation unsuitable. Since wealth is not normally distributed in the population, researchers do not ordinarily employ means and mean-based linear methods to analyse wealth - medians and quantile regressions are deemed more suitable. Thus, non-positive wealth is often converted to a low positive figure (frequently one pecuniary unit, e.g. £1) and then logged. The support for this is that such transformation does not change the rankings of the pertinent observations and does not therefore distort the population median. Pence (2006), however, contends that this not only misrepresents the population, since instances of negative wealth do exist in the population, but also underestimates the true median regression standard errors since variability in the data is reduced. Truncating the data at the value of one also means that studies at lower quantiles of the response variable cannot be estimated, even when understanding the relationship between variables at the lower quantiles may be highly relevant. Following Burbidge et al, (1988) among others, Pence (2006) advances the use of the Inverse Hyperbolic Sine (IHS) as a transformation suitable for responses with negative values, such as wealth. Another option is the cube-root transformation (Cox, 2011).

The third issue pertains to the potentially endogenous relationship between entrepreneurship and wealth. It is well documented that entrepreneurial households tend to be richer (Cagetti & De Nardi, 2006; Carter, 2011); however, since wealthy households are more

likely to become entrepreneurs, not least because wealth enables the supply of capital required for start-up, entrepreneurship is endogenous in wealth. Where interest focuses on whether entrepreneurship makes households wealthier an instrumental variable approach is therefore imperative. In prior studies of entrepreneurship, parental variables have been employed as instruments for the endogenous variables pertaining to the entrepreneur (Coad et al, 2014; Dahl & Sorenson, 2012). This approach was also used in this analysis, as is explained below.

In view of these analytical considerations, the most appropriate approach to investigate whether entrepreneurship leads to higher wealth is an instrumental variable quantile regression with sample selection. Although Frölich and Melly (2010) have developed an Instrumental Variable Quantile Treatment Effects (IVQTE) module within STATA, an accurate implementation of such a strategy in the presence of sample selection is still challenging for three reasons. Firstly, the standard Heckman correction may not be appropriate in a quantile regression framework as its distributional assumptions are not consistent with the inherent heterogeneity that necessitates the quantile regression approach in the first place (Huber & Melly, 2011). Although advances have been made in this regard following (Buchinsky, 1998, 2001), this issue remains unsettled (Huber & Melly, 2011). Indeed, modules to estimate this within STATA, the analytical software we employ in the present study, are yet to be developed and potentially relevant user-written codes caution that they are as yet computationally overlong and complicated (see for example, Souabni, 2013). For this reason, in the present first approximations, we do not correct for selection in the quantile regressions and instead caveat our results as applying only to the selected sub-populations.

The second issue concerns instruments for entrepreneurial HRPs. Frölich and Melly (2008; 2010) identify four key assumptions that an instrumental variable should satisfy.

These are: compliance (some HRPs become entrepreneurs because their parents were themselves entrepreneurs); monotonicity and non-defiance (although having parents that were entrepreneurs may not have the effect of making the respective HRPs pursue entrepreneurship, having entrepreneurial parents does not make certain HRPs seek employment instead); exclusion and unconfoundedness (having entrepreneurial parents does not affect the HRPs household wealth directly or indirectly); and, independence (having entrepreneurial parents does not systematically influence the distribution of other HRP and household attributes).

Much of the extant empirical work supports the idea that children of entrepreneurs are likely to become entrepreneurs themselves (Colombier & Masclet, 2008; Davidsson & Honig, 2003; Dunn & Holtz-Eakin, 2000; Fairlie & Robb, 2007). Parental entrepreneurial status is thus considered a good instrument since children that become entrepreneurs because their parents were are 'compliers'. That is, taking parental entrepreneurship to be a 'treatment', in becoming entrepreneurs, such children comply with such treatment and their status changes accordingly, satisfying Assumption 1. Although Aldrich et al. (1998) have argued that entrepreneurial parents may not always pass on entrepreneurial privilege to their children, and it is not unusual for children of entrepreneurs not to become entrepreneurs, to the extent that the non-entrepreneurial status of such children is not directly attributable to the negative effect of their parents' entrepreneurial status, Assumption 2 on monotonicity and absence of defiance is not violated. However, there may be cases where children of entrepreneurs shun entrepreneurship altogether because they (or their parents) experienced undesirable effects, such as working long hours or financial risk. Others may also consider their parents' businesses to be old-fashioned or uninteresting and therefore elect to pursue different careers rather succeed their parents (see, for example, Anuradha, 2004; Parrilli, 2009). The presence of such cases constitutes defiance which undermines Assumption 2.

Assumption 3 may also be violated where entrepreneurial parents afford wealth to their children not just directly, but also through other factors such as inheritance or unobserved social capital. Here, however, the direct effect can be investigated empirically. Further, the indirect effects may be mitigated by controlling extensively for other factors, such as inheritance, which more or less randomise the instrument (Frölich & Melly, 2008). A random instrument also ensures that assumption 4 is satisfied. In any event, most of the other household and HRP attributes that may affect wealth are factors such as age, ethnicity, gender and family background. It is unlikely, therefore, that their distribution in the population is influenced by having entrepreneurial parents. In all, while it is widely appreciated that implementing instrumental variables is a challenge in empirical analysis (see for example, Bound, Jaeger, & Baker, 1995), this approach may help recover the causal effects of entrepreneurship on household wealth.

The third concern with the implementation of the IVQTE model in the present study is that we employ survey data but the IVQTE model does not as yet allow the estimations to be adjusted in line with the survey design. Thus, accounting for sample weights and clustered observations, and therefore standard errors, is not accommodated within IVQTE. Nevertheless, since our study investigates wealth over its distributional profile and we know that the WAS survey deliberately oversampled richer households, we expect that the sample median is higher than the population median and can thus qualify the inferences accordingly. Thus, although the point estimates and standard errors, and therefore what returns as statistically significant, may not be correctly estimated, the results are still informative given especially the large sample size. Bootstrapping with resampling within clusters enabled has been found to significantly improve the estimates of standard errors (see for example, Shih & Konrad, 2007), and was also implemented.

4 ANALYSIS

4.1 The magnitude, composition and distribution of household wealth among occupational groups

As the weighted statistics in Table 1 shows, in the period 2008/2010, there were almost 25 million households in Great Britain sharing among them a total of almost £11 trillion in household wealth.[1] Table 2 presents wealth at the household level. The median British household had about £230,000 in household wealth. That the distribution of wealth is highly skewed is attested to by the magnitude of the difference between the mean and the median of total wealth. At about £414,000, the mean is more than 75% larger than the median. This suggests that while the majority of the population owns modest wealth, there are a few households with very high amounts of wealth who pull up the average. This trend is common among all occupational groups but is perhaps most marked in households in the inactive category, which includes, among others, people who cannot participate in the labour market because of illness or disability, persons looking after the family home and those that have taken early retirement (Leaker, 2009).

[1] Wealth is inflated to 2012 calendar year prices using UK GDP deflators obtained from https://www.gov.uk/government/statistics/gdp-deflators-at-market-prices-and-money-gdp-march-2013.

Table 1: The Distribution of Occupational Categories of British Households and Their Wealth by HRP

HRP occupational category	No. of house-holds ('000)	% Share	British household wealth (2008/10) in £ Millions in 2012 prices													
			Total Household wealth	% Share	Property wealth	% Share	Physical wealth	% Share	Net Financial wealth	% Share	Collecti bles	% Share	Motor vehicles	% Share	Pensions	% Share
Inactive	2,800	11%	976,000	9%	245,000	7%	85,800	8%	125,000	11%	3,960	10%	11,200	7%	520,000	10%
Pensioners	6,500	26%	2,860,000	26%	1,110,000	31%	264,000	24%	369,000	32%	10,000	24%	25,100	16%	1,120,000	22%
Unemployed	630	3%	83,100	1%	28,700	1%	14,400	1%	5,400	0%	477	1%	1,340	1%	34,600	1%
Employees	13,000	52%	5,790,000	53%	1,690,000	47%	584,000	54%	503,000	43%	15,000	36%	97,100	61%	3,010,000	59%
Selfemployed	1,500	6%	820,000	7%	325,000	9%	86,800	8%	95,800	8%	7,450	18%	14,900	9%	313,000	6%
Employers	520	2%	433,000	4%	208,000	6%	45,200	4%	61,500	5%	4,450	11%	9,350	6%	118,000	2%
	24,950	**100%**	**10,962,100**	**100%**	**3,606,700**	**100%**	**1,080,200**	**100%**	**1,159,700**	**100%**	**41,337**	**100%**	**158,990**	**100%**	**5,115,600**	**100%**

Table 2: Mean and Median Household Wealth by the Occupational Category of the HRP (at current prices)

HRP occupational category	**Total household wealth**		**Property wealth**		**Physical wealth**		**Net Financial wealth**		**Pension wealth**		**Motor vehicle wealth**		**Total financial liabilities**		**Property liabilities**	
Employment status	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Inactive	331,460	36,809	82,963	0	29,004	16,000	42,718	200	176,775	0	3,803	500	2,445	120	9,529	0
Pensioners	413,181	264,663	159,608	139,999	38,156	30,000	53,202	13,105	162,215	48,645	3,623	1,000	731	0	3,656	0
Unemployed	123,585	26,893	42,611	0	21,484	15,000	8,034	-141	51,455	0	2,005	0	3,457	464	15,089	0
Employees	420,685	246,870	123,026	80,000	42,511	35,500	36,369	5,715	218,780	77,006	7,060	4,000	5,397	960	59,158	29,500
Selfemployed	508,115	287,250	200,369	128,000	54,085	41,000	59,806	9,850	193,855	38,921	9,276	6,000	5,445	458	66,078	22,000
Employers	774,283	475,700	371,882	213,563	80,093	59,000	110,362	33,606	211,946	72,738	16,508	9,750	6,591	400	131,511	73,000
Total Sample	**413,825**	**232,380**	**136,048**	**89,999**	**40,798**	**32,500**	**43,776**	**6,400**	**193,552**	**52,469**	**5,990**	**3,000**	**3,812**	**40**	**39,741**	**0**

Between the various occupation groups on aggregate, Table 1 shows that entrepreneurial households own more wealth than their representation in society would suggest. Although only 2% (about half a million) of households have HRPs who are owner-managers of small businesses with employees, collectively these households own 4% of total household wealth. Similarly, there are almost 1.5 million self-employed HRPs in the UK accounting for 6% of households; however, this group owns7% of total household wealth. Between them, these two groups, while comprising only 8% of households, own 15% of household property wealthy (the sum of all property values minus the value of all outstanding mortgages and amounts owed as a result of equity release), 13% of net financial wealth (formal and informal financial assets less non-mortgage debt), and 12% of physical wealth (including household contents, collectibles and valuables, and motor vehicles). In particular, entrepreneurial households own 15% of the values of all household motor vehicles and almost 30% of all household valuables and collectibles.

Figure 1 shows the distribution of the different household occupational groups within the different wealth deciles. While the share of self-employed households is not markedly different across the different deciles of wealth, households comprising business owners with employees (employers) do not feature in the lower deciles and their representation is greater in the upper wealth deciles. Figure 2 illustrates this further. Within the totality of employer households, more than 20% are found within the top decile of wealth, with very low representation in lower deciles of household wealth. Indeed, more than 50% of employers are within the three highest deciles and there is virtually no representation in the lowest three deciles, suggesting a strong positive relationship between employing entrepreneurs and household wealth. In contrast, self-employed and employee households are fairly evenly distributed across the wealth spectrum, while more than half of households with an unemployed HRP are to be found in the lowest two deciles. That employers are wealthier is

not particularly surprising; As Knight ([1921] 2006) observed, the ability to give satisfactory guarantees of the contractual incomes promised to employees and other suppliers is fundamental in entrepreneurship.

Figure 1: Representation of Occupational Groups in Different Wealth Deciles

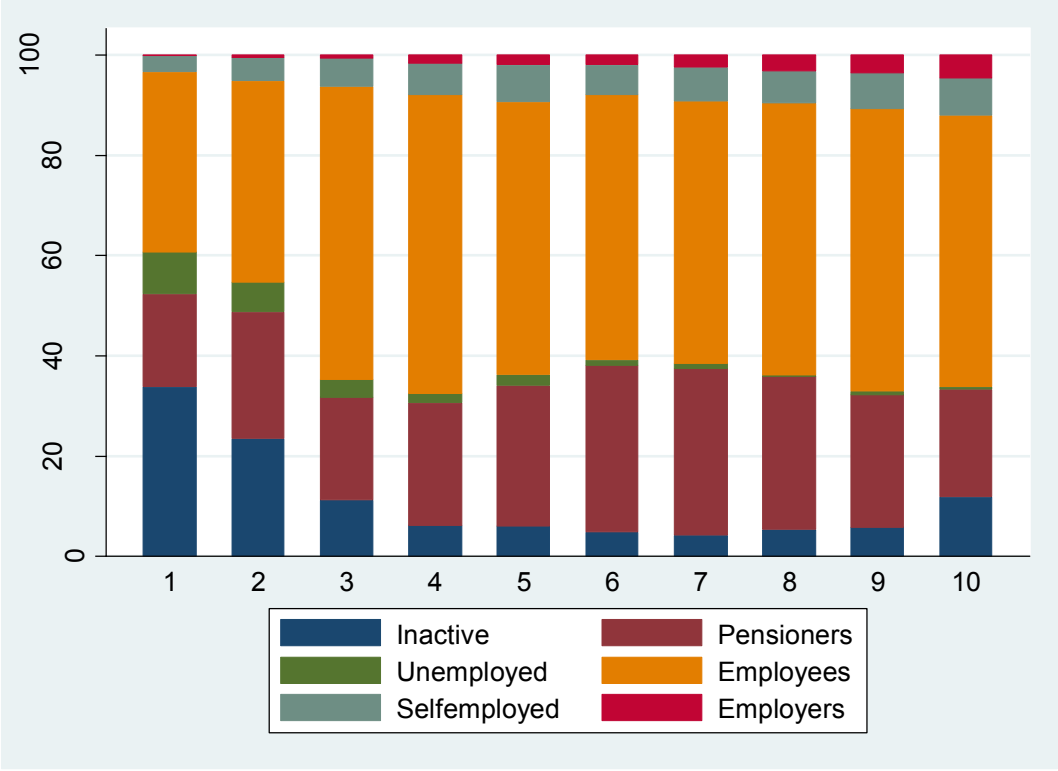
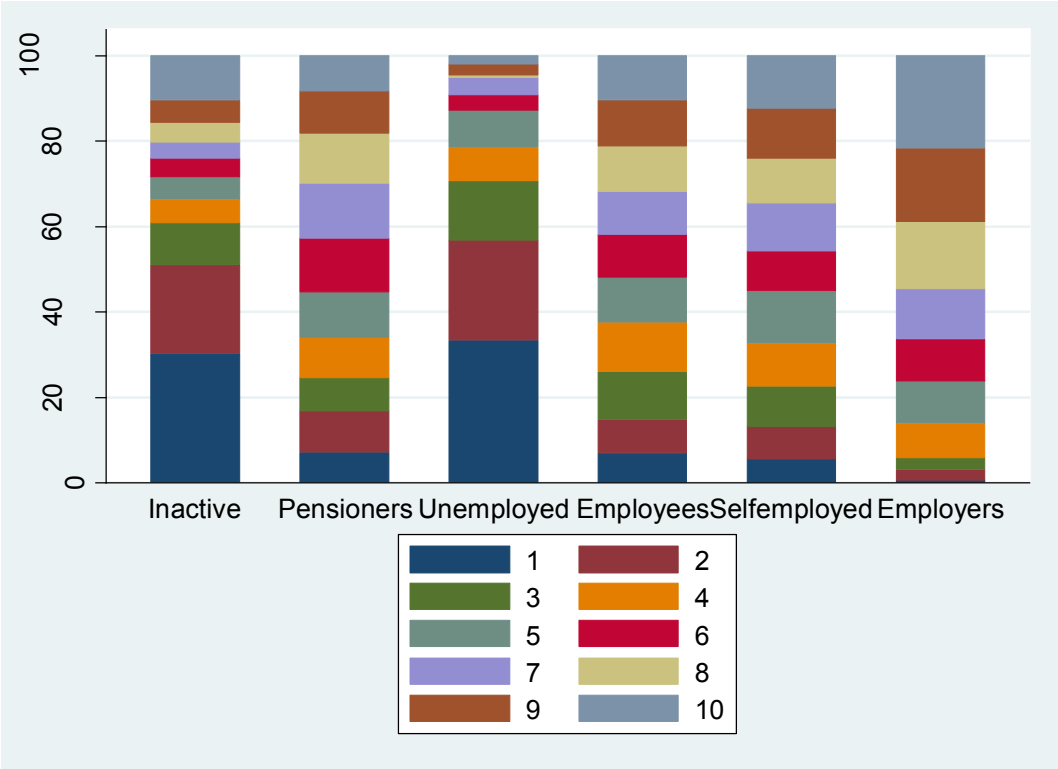


Figure 2: The Distribution of Wealth within Different Economic Groups



Curiously, more than 10% of households where the HRP is categorised as economically inactive belong in the wealthiest decile in society. This may be explained by early retirement by rich individuals, or the financial contributions by other household members. However, it has been noted that the economically inactive group is highly diverse (Leaker, 2009). Table 3 depicts this further showing the distribution of wealth inequality for those with positive values using Gini coefficient, the main measure of the distribution of wealth across populations. While total wealth across the overall population showed a Gini coefficient of 0.6, the highest levels of inequality were seen within the inactive (0.81) and unemployed (0.74) groups. Inequality in total wealth was lower among pensioners (0.57), the self-employed (0.57) and employees (0.58), and even lower among business-owners (employers) (0.53) perhaps given that employers are relatively rich in the first place as

alluded to above. While prior studies have stressed the large variations in entrepreneurial fortunes, suggesting that mean incomes are skewed by a handful of very high earning 'superstars', this analysis of wealth distribution suggests that wealth inequalities are actually lower among business owners and the self-employed than they are among the inactive and the unemployed. Indeed, wealth inequalities among business owners and the self-employed are on a par with, indeed, slightly less than, wealth inequalities among employees. Inequalities in the distribution of wealth were highest when considering wealth in the firm of collectibles (0.75) and net financial wealth (0.74), and lowest when considering property wealth (0.45) and physical wealth (0.45).

Table 3: The Distribution of Wealth (within Groups and within the Population)

	Gini coefficients (0-1; 0 = complete equality, 1= complete inequality)								
	Total wealth	**Property wealth**	**Physical wealth**	**Net Financial wealth**	**Pensions wealth**	**Collectibles wealth**	**Motor vehicle wealth**	**Total liabilities**	**Property liabilities**
Inactive	0.81	0.44	0.56	0.88	0.74	0.84	0.61	0.71	0.56
Pensioners	0.57	0.35	0.44	0.73	0.67	0.74	0.55	0.74	0.62
Unemployed	0.74	0.44	0.53	0.85	0.71	0.67	0.54	0.70	0.46
Employees	0.58	0.47	0.40	0.72	0.65	0.69	0.52	0.61	0.43
Selfemployed	0.57	0.48	0.43	0.72	0.70	0.77	0.49	0.62	0.45
Employers	0.53	0.55	0.43	0.68	0.66	0.78	0.52	0.63	0.45
Overall Population	0.60	0.45	0.45	0.74	0.67	0.75	0.54	0.65	0.45

Further, while prior research suggests that entrepreneurs may be particularly prone to financial risk in their old age (D'Arcy and Gardiner, 2014), our estimates (Table 1) suggest that as a group, entrepreneurial households account for 8% of total pension wealth which is proportionate with the incidence of entrepreneurial households in the population. However, while D'Arcy and Gardiner (2014) consider the individual pensions of entrepreneurs, the Wealth and Assets Survey observes total pensions at the household level. Consequently, some pension wealth accredited to entrepreneurial households may have been accumulated

by spouses. Although the median employee household has about £77,000 (mean £220,000) in pension savings and the employing business owner household has about £73,000 (mean £210,000), the median self-employed household has accumulated only about half as much pension wealth (£38,000, mean £190,000). While self-employed households may not be significantly worse off in terms of pension savings on average, there is high variability in pension saving among the self-employed which may leave many at risk of financial insecurity later in life. Indeed Table 3 shows that inequality in pension wealth is very high among the self-employed, with only the inactive and unemployed groups with exhibiting higher pension inequality.

Nevertheless, with significantly higher levels of wealth overall, especially property wealth, it may be the case that provident entrepreneurs invest in property and other assets and hold a generally more diversified and versatile wealth portfolio besides formal pension schemes. As Table 4 shows, not only do entrepreneurial households hold significant portions of their wealth in property while employees have more of their wealth in pensions, entrepreneurial households also have higher property liabilities. This suggests that larger mortgages may be used to finance either more expensive homes or the ownership of multiple properties (e.g. buy to lets), re-mortgaging to raise capital, or the use of household property as business collateral. With higher financial wealth, physical wealth and property wealth, entrepreneurial households that are frequently argued to be 'income poor' (see, Carter, 2011, for a review), can instead be seen to hold a variety of assets that can be used to supplement household budgets in the short, medium and long-term. While it is clear that employers constitute the wealthiest of all the occupational categories, descriptive analysis cannot determine whether the wealth observed among business owners is a consequence or an antecedent of their entrepreneurial activities and whether the munificence of entrepreneurship holds across the distribution of wealth.

Table 4: The Composition of Household Wealth

	As a share of total household wealth…. (mean/ median of household shares)													
	Property wealth		**Physical wealth**		**Net Financial wealth**		**Pension wealth**		**Motor vehicle wealth**		**Total financial liabilities**		**Property liabilities**	
Socio-econ group	Mn	Md	Mn	Md	Mn	Md	Mn	Md	Mn	Md	Mn	Md	Mn	Md
Inactive	14%	0%	72%	42%	-11%	1%	25%	0%	3%	0%	21%	0%	5%	0%
Pensioners	36%	39%	25%	12%	12%	7%	27%	22%	1%	0%	0%	0%	2%	0%
Unemployed	14%	0%	100%	67%	-36%	0%	22%	0%	4%	0%	47%	2%	18%	0%
Employees	27%	26%	30%	14%	4%	3%	39%	38%	5%	2%	6%	0%	45%	6%
Selfemployed	39%	41%	25%	15%	11%	5%	24%	16%	4%	2%	0%	0%	16%	5%
Employers	45%	47%	18%	12%	13%	6%	24%	19%	4%	2%	1%	0%	37%	16%
Total Sample	**29%**	**27%**	**35%**	**14%**	**4%**	**4%**	**32%**	**27%**	**4%**	**1%**	**7%**	**0%**	**27%**	**0%**

4.2 Regression Analysis

Towards investigating the causal effect of entrepreneurship on household wealth, the primary specification for the present study is:

$$HWealth_i = \alpha + \beta \bullet Entrepreneur_i + \lambda \bullet X_i + \varepsilon_i \quad (1)$$

$HWealth_i$ is total household wealth owned by household i measured in 2012 GB Pounds divided by ten thousand (£'0,000s) and transformed accordingly. $Entrepreneur_i$ is a dummy variable equal to one if the household reference person is an entrepreneur (either self-employed or owner-manager with employees) and zero otherwise indicating whether household i is an entrepreneurial household. The vector X_i includes other observable determinants of household wealth and ε_i is the error term with assumptions corresponding to the pertinent specification. HRP characteristics included in X_i are: age, gender, education, industry, health (whether they have a long-term illness or disability), ethnicity, country of

birth, religion and whether they or their partner have ever received an inheritance or a lump-sum payment from gambling, redundancy, insurance, compensation claim payments or money gifts in excess of £1000. HRP's family background factors include whether their father or mother was an entrepreneur, father's and mother's education, number of siblings, and their family's tenure of accommodation when the HRP was a teenager. Other household factors such as type of household, education of other householders, total number of working householders, and whether there are cases of long-term illness in the household are also controlled for, as are broader contextual factors including region, whether rural/urban and calendar year.

As a starting point, we sought to explore the linear relationship between entrepreneurship and household wealth (using the inverse hyperbolic sine, the natural logarithm and the cube root of wealth) using the standard OLS estimator. In these estimations, standard OLS assumptions pertaining to the mean and distribution of residuals were not supported. This means that assuming the models were correctly specified and the employed transformations effectively mitigated the skewness in wealth data (and therefore the errors thereof), a linear relationship between the identified variables and wealth cannot be fitted accurately and therefore that other techniques should be more appropriate.

In Table A1, Model 1 shows the results unweighted, Model 2 incorporates sample weights but no clusters, Model 3 accounts for both sample weights and clusters, and Model 4 clusters standard errors but does not weight the data. Model 5 uses both sample weights and clusters and corrects for selection of working HRP households in the wealth estimations. All else equal, there is no evidence that entrepreneurial households are richer. Further, the models show the differences in the point estimates, standard errors and statistical significance across the different models. In particular, with sample weights considered, there is evidence of selectivity (Chi-sq= 321.70, *p-value*= 0.000) and most coefficients in the wealth equation are

indeed noticeably different once the selectivity is accounted for. This suggests that unobserved factors associated with being in the working working-age group are also in part responsible for some of the variability in wealth and that for those selected, these unobserved effects will bias the estimated coefficients.

A further important assumption that is potentially violated is that of exogeneity, since entrepreneurship may be endogenous in wealth. To be able to implement a treatment effects model towards recovering elements of entrepreneurial households that are not correlated with household wealth residuals, we run a first stage regression to establish that our instruments are appropriate. OLS linear probability regression results shown in Table 4 indicate a strong correlation between HRP's father's entrepreneurial status and the HRP's own entrepreneurial status, and a strong F-statistic. This is especially the case when HRP's mother's entrepreneurial status is dropped, confirming the aggravating influence of additional weak instruments (Bound *et al.*, 1995). Column 3 shows that the instrument is stronger for the sample, i.e. with data unweighted. Further support for the validity of the instrument is that in the OLS results (Table A1), HRP's father's entrepreneurial status was not found to have a significant direct relationship with the HRP's household wealth. While the exclusion restriction may be violated should HRP's father's entrepreneurial status have an indirect impact on HRP's wealth via inheritance (which includes the inheritance of business), this risk may be mitigated by the fact that the inheritance variable also captures inheritance received by the HRP's partner. This reduces the effect of inheritance originating from HRP's with entrepreneurial fathers. Further, number of siblings may also capture other inheritance effects thereby reducing the confoundedness of the instrument.

Table 5: Instrument Validity Test

	Dependent variable: HRP entrepreneur (0/1)		
VARIABLES	(1)	(2)	(3)
HRP father entrepreneur	0.088***	0.089***	0.108***
(0 = otherwise)	(0.014)	(0.014)	(0.011)
HRP mother entrepreneur	0.010		
(0 = otherwise)	(0.021)		
F Stat	21.76	43.46	100.08
Prob > F	(0.000)	(0.000)	(0.000)
R-squared	0.008	0.008	0.010
Observations	10,043	10,043	10,043

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Estimates of average treatment effects suggest that while the instrument may be suitable, the hypothesis that no correlation is present between residual determinants of household wealth and residual determinants of entrepreneurship cannot be rejected. Estimates presented in Table A2 suggest that on average, in the present specification, no significant effects of entrepreneurship on household wealth are detected. While it may be the case that our instrument is unable to recover true treatment effects, in considering the sub-population of working working-age HRPs, the treatment is subject to selection bias. Since a two-step Heckman correction procedure is not supported with complex survey data, an attempt to control for both selectivity and endogeneity was carried out manually in a compromise strategy that analyses the data unweighted and thereby overlooks the survey design.

In the first stage, to correct for self-selection of HRPs into the sub-population comprising working-age HRPs that are either employees or entrepreneurs, a selection equation is estimated manually and the lambda term (the inverse Mills ratio) included in the endogenous binary-treatment regression. The resulting Heckman selection correction term in the first stage is not significant suggesting that while the unweighted data may not accurately representative of the population, since WAS oversamples wealthier households, the

subpopulation of working-age HRPs in employment or entrepreneurship is not itself systematically undermined by selection bias. Hence, the endogenous treatment estimates are carried out directly. In all the three estimates of wealth, the respective likelihood ratio tests indicate that the hypothesis of independence between unobserved factors associated with both wealth and entrepreneurship is rejected and the use of the specified endogenous treatment supported (IHS: Chi-sq=5.23; *p-value*=0.02; Log wealth for positive values: Chi-sq=7.26; *p-value*= 0.007; Curt wealth: Chi-sq=3.316; *p-value*= 0.06). As Table 6 shows, it is estimated that on average, entrepreneurship increases household wealth by 22-26%. The log transformed estimate is higher at around 32% but this only considered households with positive wealth.

Coefficients for IHS transformed data approximate the log at large values (in the present case above 3 units of wealth, i.e. £30,000) and can therefore be interpreted in percentages. At lower values, the IHS approximates a linear (levels) estimation. The extent to which the IHS transformation is linear or logarithmic is determined by the scaling parameter θ (Pence, 2006). In the present work, we have not applied a scaling parameter (thus θ=1). While differences between the IHS and log are quite large at low figures (i.e. those around zero), the IHS is largely only a vertical displacement of the log (i.e., $\ln 2\theta + \ln w$, (Pence, 2006) at higher values. Since the point at which IHS and log become similar is below the 10^{th} percentile of the overall sample (even lower for the working working-age subsample), to avoid further transformation of the original data and for ease of analysis and interpretation, a scaling parameter is not employed.

For the cuberoot transformation, the coefficients pertain to the marginal effect estimated at the mean of the cuberoot of wealth. To obtain a result that refers to the original distribution, we apply the marginal effect at the mean of the cuberoot and then cube both the mean cuberoot and result after adding the marginal effect to establish the additive

(percentage) effect at the raw wealth level. In the estimates above, the mean of the cuberoot of wealth = 3.2 and estimated marginal effect = 0.216 which results in 3.416. The cube of mean of cuberoot=32.768 (i.e. £327,680) and the cube of the result after applying the marginal effect=39.862. The multiplicative effect=1.216 which is equivalent to a 22% increase in mean wealth.

Table 6: Local Average Treatment Effects

Dependent variable = Total household wealth; Endogenous variable = Entrepreneurial household (i.e. HRP is an entrepreneur)						
VARIABLES	(1) IHS Wealth	(2) Entr'l Hhold	(3) Log Wealth	(4) Entr'l Hhold	(5) Cuberoot Wealth	(6) Entr'l Hhold
Entrepreneurial household (0 = otherwise)	0.235**		0.282***		0.216*	
	(0.105)		(0.102)		(0.113)	
HRP father entrepreneur (0 = otherwise)		0.313***		0.316***		0.315***
		(0.050)		(0.051)		(0.050)
HRP age (yrs)	0.213***	0.037**	0.202***	0.033*	0.170***	0.037**
	(0.011)	(0.018)	(0.014)	(0.018)	(0.011)	(0.018)
HRP age squared	-0.002***	-0.000	-0.002***	-0.000	-0.001***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HRP Female (0 = Male)	-0.123***	-0.334***	-0.111***	-0.335***	-0.129***	-0.335***
	(0.028)	(0.050)	(0.031)	(0.050)	(0.029)	(0.050)
HRP Qualification; 0=No Quals						
HRP other qualifications	0.356***	-0.135*	0.385***	-0.128*	0.318***	-0.132*
	(0.045)	(0.069)	(0.059)	(0.069)	(0.046)	(0.069)
HRP Degree qualifications	0.859***	-0.185**	0.886***	-0.175**	0.904***	-0.181**
	(0.049)	(0.077)	(0.071)	(0.077)	(0.051)	(0.077)
Observations	9,064	9,064	8,973	8,973	9,064	9,064
Model p-value	0.000	0.000	0.000	0.000	0.000	0.000

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Other personal, family background, present household and contextual factors included in the regression including industry, health, ethnicity, country of birth, religion, father and mother's education, number of siblings, family back ground home tenure, present household type, health of other householders, human capital of other householders, number of householders presently working, rural/urban, region and year.

As with other transformations, note that the cube of the mean of the cuberoot of wealth does not correspond with the untransformed sample mean (which is £577,425 for the working-age employees and entrepreneurs sub-sample). Further, unlike the logarithm that

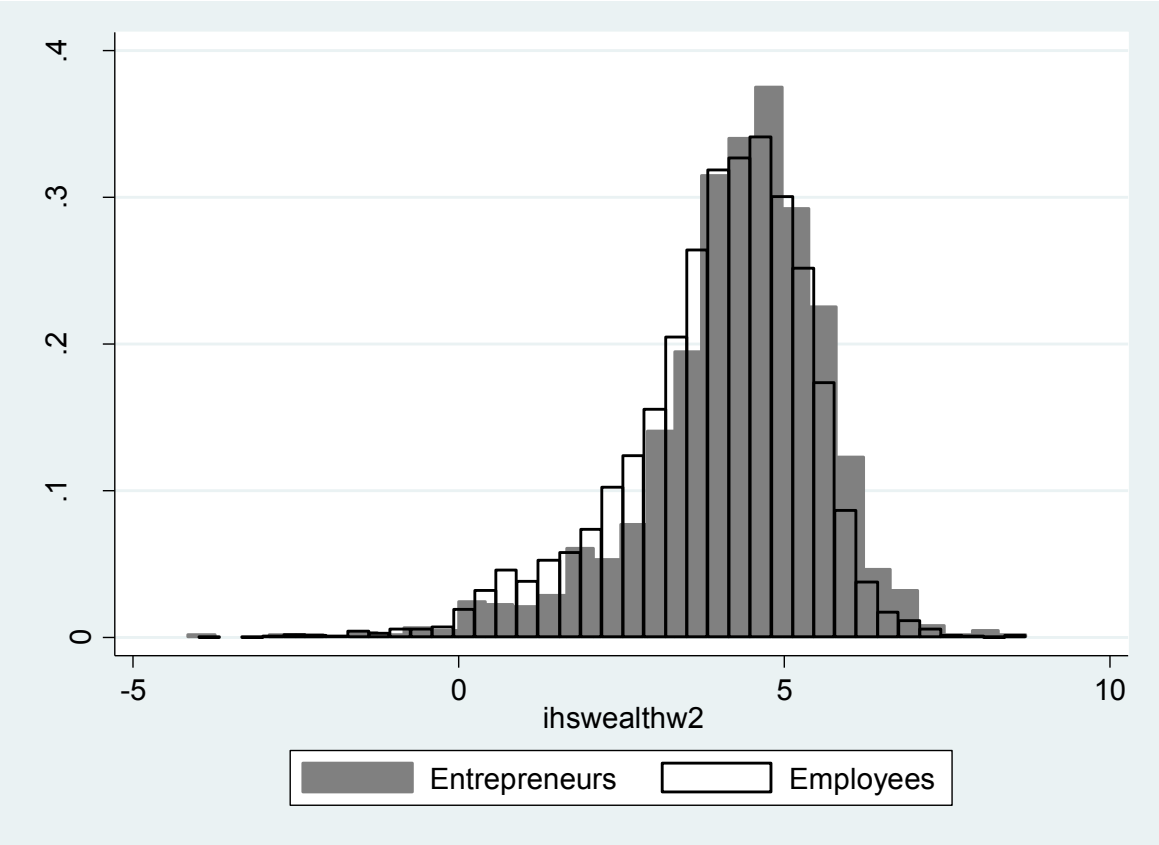
changes the nature of the data such that coefficients are interpreted as percentages, since it is merely a root of the raw data coefficients pertaining to the cuberoot of wealth should be interpreted as absolute changes. Thus, on average, entrepreneurship adds 0.216 (i.e. £2,160) to the cuberoot of household wealth. The 22% increase therefore only applies at the cube of the mean of the cuberoot of wealth; percentage increases will vary at different values of wealth. Since the cuberoot results are similar to the IHS and log transformed results we focus especially on the IHS transformed results.

4.2.1 Conditional quantile regression analysis

Because wealth is highly skewed, the distribution of errors may not meet the assumptions stipulated for standard linear regressions. Hence, a quantile regression estimation strategy may be more appropriate in this analysis. In addition, understanding the various effects at different points along the distribution of household wealth in society may be more informative. For a binary variable such as whether households' HRPs are entrepreneurs or employees, the difference in wealth *prima facie* associated with their occupational status corresponds to the horizontal distance between the given quantiles in the corresponding distributions.

Figure 3 shows that although both distributions are skewed, in spite of IHS transformation, the distribution of the wealth of entrepreneurial households is more broadly dispersed but with relatively fewer households in the lower levels of wealth and more in the higher levels of wealth. While no marked differences in the distributions are apparent, a significant horizontal gap may exist between given quantiles of the two distributions and therefore a significant difference in the wealth of the households at such quantiles.

Figure 3: The Distribution of Household Wealth by Entrepreneurial Status



At the same time, while it is possible to estimate more robust standard errors by employing cluster bootstrapping, this option is not allowed alongside weights. More correct standard errors may therefore be obtained at the expense of biased point estimates. To evaluate the differences, we compared the weighted and unweighted results including those that employed clustered bootstrapping with 50 replications and 1000 replications. Although there were minor differences in the point estimates for the median regression, correcting standard errors through clustered bootstrapping did not provide notable gains in precision. Furthermore, the clustered bootstrapping could not be implemented consistently across all quantiles. This is perhaps because in the random resampling with replacement that bootstrapping undertakes, certain clusters, which correspond to postcode sectors and postcodes are heavily associated with wealth, could not be included in the analysis at upper or lower quantiles of wealth if no observations within those clusters could be included.

Table A3 presents estimates of the weighted and unweighted coefficients of the different correlates of household wealth at different quantiles of wealth. In general, older HRPs are wealthier. However, at higher quantiles of wealth, the effect of age on household wealth gradually diminishes. Female HRP households are also found to generally have lower wealth compared to male HRPs although no effect is detected at the 1st and 99th percentile. Having a degree as opposed to no qualifications has a highly significant effect across the entire distribution of wealth albeit slightly lower at higher levels of wealth. When it comes to industry, it generally does not matter which sector the HRP works in for both the poorest and the richest households. However, HRPs in the hospitality sector are relatively poorer compared to those in agriculture, while those in ICT, finance and public administration, education and health appear to be comparatively better off especially between the median level and the 90th percentile. The health of the HRP is also estimated to be an important determinant of household wealth. HRPs suffering from a long-term illness are generally associated with lower household wealth compared to those who have never had a long-term illness with effects greater as one approaches both tails. However, for those that previously had a long-term illness but have since recovered, there are generally no significant wealth differences across the quantiles.

The results also suggest some interesting ethnicity and immigration effects in household wealth. Compared to White British HRPs, White other, Black African, Other Asian and mixed-race HRPs are generally worse off especially between the 10th and the 75th percentile. With the White other and Black Africans, there is perhaps a story of recent migrants not having established themselves in the UK enough to accumulate wealth at comparable rates. There may also be effects related to immigrant households remitting money back to their countries of origin (Dustmann and Mestres, 2010) and perhaps also the 'permanence of temporary migration' (Tsuda, 1999) where immigrant households expecting

to go back home ‘one day soon’ do not take up mortgages, for example. Country of origin itself is an important correlate of household wealth. Estimates suggest that although the effect is progressively lower with higher wealth, non-British HRPs born in other Anglo-Saxon countries (Australia, Canada, Ireland, New Zealand, and the US) are generally richer than the British. In contrast, HRPs born elsewhere in Europe, commonwealth countries or the rest of the world are generally poorer than their British counterparts. Further ethnicity and cultural effects are also captured by religion. While differences between practising Christian and non-practising Christian, Muslim, Jewish and Hindu/Sikh households are largely insignificant, evidence suggests that households that practice Buddhism, other religions or profess no religion at all have significantly lower wealth than practising Christians at the lower to upper middle wealth levels.

Having received lump-sums in the form of money gifts, redundancy, insurance or compensation claims payments, or gambling windfalls is also a significant factor. As one would expect, receiving inheritance is strongly associated with higher household wealth. However, inheritance is not significant at the 99^{th} percentile suggesting that for the very wealthy in society, inheritance is statistically inconsequential to their overall wealth. Besides property, money and other physical goods, it would appear that non-material (e.g. cultural) inheritance matters too. From the median level upwards, the educational qualifications of the HRP’s father have a very strong relationship with household wealth. More importantly, however, across the whole wealth spectrum, HRPs that did not have a father or step-father while growing up have significantly less wealth than HRPs whose (step)father was university educated. Curiously, mother’s education is only statistically significant at the lower echelons of household wealth and largely affects HRPs who had no mother growing up. Other significant family background variables include number of siblings, and the tenure of accommodation the HRP’s family of origin had when the HRP was adolescent. HRPs from a

lone child background are found to be richer at all quantiles of wealth, especially as compared to HRPs with 5-9 siblings. HRPs whose family lived in rented accommodation, free housing, foster homes, institutional or other accommodation as opposed to their own homes are relatively poorer.

Present household characteristics are also significant correlates of household wealth. Compared to single households, lone parent are less wealthy while couples (with and without children) and multiple occupancy households richer. Indeed, having multiple persons in work is strongly associated with wealth, albeit up to the 75th percentile. By the same token, the health of other householders is a significant determinant of household wealth. Households with at least one person suffering a long-term illness are generally less wealthy with greater effects on the wealth of poorer households. Nevertheless, additional non-HRP human capital, measured as total number of years of schooling of other householders, is not significant except at the 95th percentile.

In terms of the broader context of the household, our estimates suggest that rural households are generally richer than urban households. Regional effects were also detected with households in London and the South East significantly richer than those in Scotland – an effect that was not detected among other regions. Indeed, there is evidence of widening divergence between households in London and the South East and those in the corresponding wealth quantiles in Scotland, i.e. the gap between the wealthiest households in Scotland and the wealthiest in London and the South East is greater than that between households at lower quantiles in the respective regions. Weighted estimates however suggest that households at the 1st percentile in the East of England, East Midlands and the North West have less wealth than their Scottish peers. Our estimates also indicate that British households sustained modest losses in wealth in 2009 and 2010 compared to 2008 due to certain year specific factors.

Accounting for the HRP, household and contextual factors noted above, conditional quantile regressions suggest that the effect of entrepreneurship on household wealth is highly heterogeneous with varying impacts at different parts of the wealth distribution. As Table 7 shows, assuming that the 1st percentile of wealth conditional on the covariates discussed above corresponds to the unconditional one, the weighted quantile regression estimates the marginal effect of entrepreneurship to household wealth is a reduction of about £3,000. In contrast, at the 90th percentile, entrepreneurship is estimated to increase household wealth by around 7%.[2]

As entrepreneurship is likely endogenous in household wealth, the estimated effects are potentially biased. Conversely, the entrepreneurial status of the HRP's parents is arguably exogenous. Further, having controlled for inheritance, which includes the inheritance of a business, the entrepreneurial status of the HRPs' parents should not impact household wealth. However, weighted estimates indicate that at the 1st percentile, households whose HRP's father was an entrepreneur are about £5,000 poorer. At the opposite end, having had entrepreneurial parents adds 17% to household wealth at the 95th percentile and 35% at the 99th percentile of the wealth distribution. For richer households with entrepreneurial fathers, but not necessarily entrepreneurs themselves, having shares in their (even still living) fathers' businesses will leave these HRPs as shareholders without a directorship role in such businesses. These shares may be highly valuable, but they may not count as lump-sum gifts since only goods and cash gifts received in the two years preceding the survey were observed. Still, it may be the case that the rich children of entrepreneurs acquired certain behaviours and attitudes, such as saving, even where they themselves pursued alternative employment. Notably, these effects are only observed in the weighted estimates that may more or less approximate the effects at the level of the sub-population of working households.

[2] Recall that with our IHS transformed data estimated coefficients are approximately linear at low levels and approximately logarithmic at higher levels (Pence, 2006). Thus, with an assumed 1st percentile value of around £0, the estimated marginal effect is -.323 which corresponds to £3230.

Table 7: Quantile Regression Estimates (IHS Wealth)

	1st Percentile		10th Percentile		25th Percentile		Median		75th Percentile		90th Percentile		95th Percentile		99h Percentile	
VARIABLES	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted
Entrepreneurial household	-0.323**	-0.414	-0.086	-0.054	0.020	0.020	-0.033	0.005	-0.028	0.028	0.069***	0.089**	0.073*	0.081	0.129*	0.183
(0 = otherwise)	(0.152)	(0.319)	(0.056)	(0.070)	(0.050)	(0.047)	(0.032)	(0.033)	(0.034)	(0.034)	(0.024)	(0.038)	(0.042)	(0.056)	(0.073)	(0.115)
HRP father entrepreneur	-0.537***	-0.552	0.027	0.028	-0.008	0.048	-0.014	0.015	0.015	0.003	0.062	0.063	0.157**	0.119**	0.299***	0.141
(0 = otherwise)	(0.189)	(0.339)	(0.059)	(0.075)	(0.048)	(0.050)	(0.033)	(0.035)	(0.032)	(0.036)	(0.038)	(0.040)	(0.064)	(0.060)	(0.082)	(0.122)
HRP mother entrepreneur	-0.605*	0.636	0.056	0.067	0.081	0.015	0.122	0.071	0.137***	0.111*	0.037	0.127**	0.108	0.126	0.111	0.307
(0 = otherwise)	(0.325)	(0.532)	(0.083)	(0.117)	(0.072)	(0.079)	(0.080)	(0.055)	(0.049)	(0.057)	(0.038)	(0.063)	(0.110)	(0.094)	(0.236)	(0.192)
HRP age (yrs)	0.329***	0.292***	0.213***	0.227***	0.208***	0.223***	0.210***	0.214***	0.230***	0.223***	0.211***	0.194***	0.183***	0.180***	0.135***	0.180***
	(0.051)	(0.104)	(0.017)	(0.023)	(0.014)	(0.015)	(0.010)	(0.011)	(0.008)	(0.011)	(0.008)	(0.012)	(0.013)	(0.018)	(0.027)	(0.037)
HRP age squared	-0.003***	-0.002*	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HRP Female (0 = Male)	-0.196	-0.232	-0.289***	-0.290***	-0.141***	-0.135***	-0.115***	-0.116***	-0.116***	-0.110***	-0.147***	-0.110***	-0.127***	-0.106**	-0.007	-0.073
	(0.134)	(0.269)	(0.041)	(0.059)	(0.038)	(0.040)	(0.027)	(0.028)	(0.022)	(0.029)	(0.019)	(0.032)	(0.031)	(0.048)	(0.088)	(0.097)
HRP Qualification; 0=No Quals																
HRP other qualifications	0.313	0.411	0.300***	0.439***	0.368***	0.497***	0.296***	0.322***	0.264***	0.283***	0.180***	0.233***	0.203***	0.252***	-0.164	-0.267*
	(0.231)	(0.433)	(0.100)	(0.095)	(0.074)	(0.064)	(0.047)	(0.045)	(0.049)	(0.047)	(0.043)	(0.052)	(0.041)	(0.077)	(0.186)	(0.156)
HRP Degree qualifications	1.195***	1.301***	0.914***	1.047***	0.902***	1.052***	0.733***	0.776***	0.653***	0.674***	0.549***	0.620***	0.611***	0.654***	0.413**	0.218
	(0.263)	(0.477)	(0.105)	(0.105)	(0.078)	(0.071)	(0.050)	(0.049)	(0.051)	(0.051)	(0.044)	(0.057)	(0.050)	(0.084)	(0.198)	(0.172)
Observations	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Other personal, family background, present household and contextual factors included in the regression including industry, health, ethnicity, country of birth, religion, father and mother's education, number of siblings, family back ground home tenure, present household type, health of other householders, human capital of other householders, number of householders presently working, rural/urban, region and year.See Table A3 for the full set of results.

4.2.2 Unconditional quantile regression analysis

A key shortcoming of the standard quantile regression method is that the estimated effect at a given quantile pertains to an analysis of a distribution that is conditional on the included covariates, i.e. assuming the covariates take given values. While the conditioning is crucial in the more analytical understanding of the various effects, the (residual) distributions upon which the quantile analysis is undertaken will often not correspond to the unconditional distribution observed in the data. This makes the interpretation of the quantile regression coefficients in a way that is relevant for policy and practice very difficult (Firpo, 2007; Firpo *et al.*, 2009). Towards estimating the various effects at the observed sample or population quantiles, Firpo (2007) proposed an unconditional quantile treatment effects estimator. To increase the efficiency of the model and still account for the effect of covariates, rather than conditioning the estimates on the included covariates being held constant at some value, control variables are included but are employed in a first stage estimation and then integrated out. The estimated unconditional coefficients therefore approximate the effects remaining in the distribution of the outcome variable that may be attributed to the independent variable in question (Frölich and Melly, 2010).

Assuming that entrepreneurship is not endogenous in wealth, Table 8 shows that there are no statistically significant differences between the wealth of entrepreneurial households and that of employee households at the different unconditional quantiles. However, Table 9 shows that the unconditional treatment effects model is able to detect some direct exogenous effects of entrepreneurial parents on their children's (HRPs) household wealth. Although having a direct effect weakens the ability of HRPs' paternal entrepreneurship status to recover the causal effects of entrepreneurship on household wealth, it is not highly significant and may therefore still be useful.

Table 8: Unconditional Quantile Treatment Estimates: Assuming Exogenous Entrepreneurship

Dependent variable is total household wealth; Independent (treatment) variable is entrepreneurship (i.e. HRP entrepreneur vs. employee)				
	(1) IHS	(2) LOG	(3) CURT	(4) Levels
1st Percentile	-0.471	-6.036	-1.109	-0.484
	(1.508)	(4.749)	(1.345)	(11.129)
10th Percentile	0.201	0.206	0.114	0.942
	(0.257)	(0.264)	(0.147)	(1.254)
25th Percentile	0.030	0.030	0.024	0.421
	(0.104)	(0.104)	(0.085)	(1.558)
Median	0.016	0.016	0.018	0.558
	(0.057)	(0.057)	(0.062)	(1.951)
75th Percentile	0.003	0.003	0.004	0.220
	(0.040)	(0.040)	(0.055)	(2.863)
90th Percentile	0.080	0.080	0.135	10.486
	(0.057)	(0.057)	(0.097)	(7.651)
95th Percentile	0.064	0.064	0.119	11.239
	(0.071)	(0.071)	(0.134)	(13.099)
99th Percentile	0.054	0.054	0.130	20.396
	(0.110)	(0.110)	(0.265)	(42.002)
Observations	9,553	9,553	9,553	9,553

Cluster bootstrapped (1000 replications) standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Other personal, family background, present household and contextual factors included in the regression including industry, health, ethnicity, country of birth, religion, father and mother's education, number of siblings, family back ground home tenure, present household type, health of other householders, human capital of other householders, number of householders presently working, rural/urban, region and year. IHS, LOG and CURT refer to Inverse Hyperbolic Sine, log and cuberoot transformed wealth. Levels is raw wealth in 2012 £'0,000s.

Table 9: Unconditional Quantile Treatment Effects of Entrepreneurial Parents

Dependent variable is total household wealth; Independent (treatment) variable is HRP father being an entrepreneur				
VARIABLES	(1) IHS	(2) LOG	(3) CURT	(4) Levels
1st Percentile	-0.406	-6.424	-1.100	-0.413
	(0.323)	(4.671)	(0.735)	(0.335)
10th Percentile	-0.091	-0.094	-0.049	-0.372
	(0.164)	(0.171)	(0.088)	(0.638)
25th Percentile	0.043	0.043	0.035	0.607
	(0.086)	(0.086)	(0.070)	(1.242)
Median	0.103*	0.103*	0.113*	3.672*
	(0.053)	(0.053)	(0.059)	(1.957)
75th Percentile	0.057	0.057	0.080	4.201
	(0.047)	(0.047)	(0.065)	(3.481)
90th Percentile	0.129**	0.129**	0.220**	17.254**
	(0.058)	(0.058)	(0.101)	(8.043)
95th Percentile	0.129*	0.129*	0.243*	23.445*
	(0.069)	(0.069)	(0.131)	(12.852)
99th Percentile	0.239*	0.239*	0.585*	95.050
	(0.140)	(0.140)	(0.355)	(61.780)
Observations	9,553	9,553	9,553	9,553

Cluster bootstrapped (1000 replications) standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Other personal, family background, present household and contextual factors included in the regression including industry, health, ethnicity, country of birth, religion, father and mother's education, number of siblings, family back ground home tenure, present household type, health of other householders, human capital of other householders, number of householders presently working, rural/urban, region and year. IHS, LOG and CURT refer to Inverse Hyperbolic Sine, log and cuberoot transformed wealth. Levels is raw wealth in 2012 £'0,000s.

Using HRPs' paternal entrepreneurial status to instrument for the HRP's own entrepreneurial status, Table 10 reports the estimates of the unconditional endogenous quantile treatment effects, the estimator proposed by Frölich & Melly (2008; 2010). This model estimates that entrepreneurship has no effect on lower wealth households but substantially increases household wealth for households that are already well off. For households at the median level of wealth, all estimates suggest that entrepreneurship could more than double household wealth (an increase of around £380,000 on the £340,000 unweighted median wealth). The impact of entrepreneurship on household wealth is seemingly even greater at higher levels of household wealth. Estimates of IHS and log transformed wealth suggests that entrepreneurship could triple household wealth for households at the 75th percentile; an increase of 300%, 600% and 700% is estimated at the 90th, 95th and 99th percentiles respectively.

Importantly, with relatively large standard errors, the precision of the estimates is rather poor. Further, the estimates do not take the sampling weights into account and while only financial wealth in shareholding was used in the design stage, in every primary sampling unit (PSU) relatively wealthier households (those above the 90th percentile of financial wealth in such a PSU) were oversampled at a rate of 3 times that of other households (ONS, 2012). Hence, the unweighted sample is highly skewed. For example, for the sub-sample of working-age employees and entrepreneurs, the weighted 99th percentile is about £3 Million (£2.99 Million for all households) while the unweighted one is £3.7 Million (£3.9M for full sample). The weighted and unweighted medians are £270,000 and £340,000 respectively. This means that while the analysis of unweighted data is highly instructive, it is important to recognise that wealth quantiles in the unweighted sample are higher than those expected in the population. In line Table A3, assuming that point estimates are broadly similar between the weighted and unweighted data, significant effects found at the median level in the sample

would correspond to above-median households in the population. The implication is that entrepreneurship may only be interpreted to have an effect on the wealth of above-median households in the population.

Nevertheless, as recent research has also observed (Coad et al., 2014), the efficacy of parent's entrepreneurship status as an instrument for entrepreneurship may itself be questioned. Indeed, while not strongly significant, parental entrepreneurship was found to instrument for itself and may not efficiently recover the causal effects of HRPs' entrepreneurship on household wealth. The presence of defiers may also not be ruled out completely and only a few compliers may be observed after all. In the present case, the proportion of compliers was 6%. These estimates should therefore be interpreted with caution.

Table 10: Causal Effect of Entrepreneurship on Household Wealth: Unconditional Endogenous Quantile Treatment Estimates

Dependent variable is total household wealth; Independent (treatment) variable is instrumented entrepreneurship (i.e. HRP entrepreneur instrumented by HRP father is entrepreneur)				
	(1)	(2)	(3)	(4)
VARIABLES	IHS	Log	Curt	Levels
1st Percentile	1.725	1.754	1.210	17.103*
	(1.467)	(2.705)	(1.039)	(10.333)
10th Percentile	0.889	0.891	0.769	15.836
	(1.002)	(1.102)	(0.646)	(10.080)
25th Percentile	0.880	0.881	0.850	21.822*
	(0.693)	(0.707)	(0.546)	(12.828)
Median	0.916**	0.917**	1.049**	37.995**
	(0.458)	(0.459)	(0.469)	(16.274)
75th Percentile	1.106**	1.106**	1.413*	64.445
	(0.551)	(0.551)	(0.744)	(46.393)
90th Percentile	1.486**	1.487**	2.246**	146.994
	(0.628)	(0.628)	(1.003)	(98.517)
95th Percentile	1.950***	1.950***	3.389**	305.819*
	(0.740)	(0.741)	(1.335)	(163.589)
99th Percentile	2.161***	2.161***	4.364***	543.084**
	(0.758)	(0.758)	(1.445)	(226.536)
Observations	9,549	9,549	9,549	9,549

Cluster bootstrapped (1000 replications) standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Other personal, family background, present household and contextual factors included in the regression including industry, health, ethnicity, country of birth, religion, father and mother's education, number of siblings, family back ground home tenure, present household type, health of other householders, human capital of other householders, number of householders presently working, rural/urban, region and year.; IHS, LOG and CURT refer to Inverse Hyperbolic Sine, log and cuberoot transformed wealth. Levels is raw wealth in 2012 £'0,000s.

5 CONCLUSIONS

This study attempted to address two issues central to understanding the financial rewards of entrepreneurship. Firstly, we examined the size, composition and distribution of wealth owned by entrepreneurs relative to the wealth of other groups of economically active or economically inactive groups. Secondly, we explored whether a causal relationship could be established to understand whether the apparent wealth of entrepreneurs was directly

attributable to entrepreneurial activities rather than other factors. In so doing, we provide a more nuanced understanding of the financial rewards of entrepreneurship, contributing new insights that move the field beyond the entrepreneurial incomes puzzle that has preoccupied scholars to date.

It is clear from this study that entrepreneurial households own disproportionately more wealth than other households. Between them, the two groups of entrepreneurs, self-employed with no employees and business owners with employees, comprise 8% of households, yet own 15% of household property wealthy, 13% of net financial wealth and 12% of physical wealth including 15% of the value of household motor vehicles and almost 30% of all household valuables and collectables. The wealth of entrepreneurs with employees is greater than the wealth of the self-employed with no employees. While only 2% of households have HRPs who are owner-managers of small businesses with employees, collectively these households own 4% of total household wealth. The self-employed with no employees account for 6% of households, but own a slightly higher proportion (7%) of total household wealth. This finding contradicts some prior studies that have measured entrepreneurial earnings using incomes data (Blanchflower, 2004; Shane, 2008), which have argued that entrepreneurship does not pay. Rather, entrepreneurial households that are frequently argued to be 'income poor', can instead be shown to hold a variety of assets that can be used to supplement household budgets over time, smoothing consumption for the household and providing a credit cushion for the business.

It is apparent that entrepreneurial households are relatively overrepresented in the higher echelons of wealth and there are also indications that entrepreneurship could be, to some extent responsible, for the higher levels of wealth observed. However, there is a great diversity in the wealth owned by entrepreneurial households, and it is important not to over-hype the fortunes that may be expected from entrepreneurship. Indeed, differences between

entrepreneurial households and employee households over the entire distribution of wealth are small. The extent to which differences in wealth observed among entrepreneurial households can be directly attributed to entrepreneurship are more difficult to demonstrate. Among the methodological difficulties encountered, finding good instruments remains a huge challenge and estimation tools that take into account issues such as survey data sampling weights, selectivity, endogeneity, and heterogeneity have yet to be developed, although Frölich and Melly's (2010) instrumental variable quantile treatment effects (IVQTE) STATA module is an important step in this direction. Nevertheless, the present first approximations suggest that entrepreneurship may have a cumulative effect on household wealth; entrepreneurship makes wealthy households wealthier but has no effect on the wealth of households below the median level. In this light, traditional views of entrepreneurship as a middle class occupation continue to have salience, while no evidence was found to show that entrepreneurship is an effective vehicle to enhance social mobility among poorer households. However, while the Wealth & Assets Survey provides powerful insights, it is relatively new and further waves will provide a robust panel dataset tracking the fortunes of individuals and households over time, providing more insights into the effects of entrepreneurship on socio-economic mobility.

6 References

Aldrich, H., Renzulli, L. A., & Langton, N. 1998. Passing on privilege: Resources provided by self-employed parents to their self-employed children. Research in social stratification and mobility, 16: 291-318.

Aldrich, H. E. & Cliff, J. E. 2003. The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. Journal of Business Venturing, 18(5): 573-596.

Alsos, G. A., Carter, S., & Ljunggren, E. 2014. Kinship and business: how entrepreneurial households facilitate business growth. Entrepreneurship and Regional Development, 26(1-2): 97-122.

Anuradha, B. 2004. Entrepreneurial aspirations among family business owners. International Journal of Entrepreneurial Behavior & Research, 10(1/2): 12-33.

Åstebro, T. & Chen, J. 2014. The entrepreneurial earnings puzzle: Mismeasurement or real? Journal of Business Venturing, 29(1): 88-105.

Barton H. Hamilton. 2000. Does Entrepreneurship Pay? An Empirical Analysis of the Returns to Self-Employment. Journal of Political Economy, 108(3): 604-631.

Birmingham Policy Commission on the Distribution of Wealth. 2013. Sharing our Good Fortune: Understanding and Responding to Wealth Inequalities: Report of the Birmingham Policy Commission on the Distribution of Wealth. Birmingham: Birmingham Policy Commission on the Distribution of Wealth.

Blanchflower, D. G. 2004. Self-employment: More may not be better: National Bureau of Economic Research.

Bound, J., Jaeger, D. A., & Baker, R. M. 1995. Problems with Instrumental Variables Estimation When the Correlation Between the Instruments and the Endogeneous Explanatory Variable is Weak. Journal of the American Statistical Association, 90(430): 443-450.

Bradford, W. D. 2003. The Wealth Dynamics of Entrepreneurship for Black and White Families in the U.S. Review of Income and Wealth, 49(1): 89-116.

Buchinsky, M. 1998. The dynamics of changes in the female wage distribution in the USA: a quantile regression approach. Journal of Applied Econometrics, 13(1): 1-30.

Buchinsky, M. 2001. Quantile regression with sample selection: Estimating women's return to education in the U.S. Empirical Economics, 26(1): 87-113.

Burbidge, J. B., Magee, L., & Robb, A. L. 1988. Alternative Transformations to Handle Extreme Values of the Dependent Variable. Journal of the American Statistical Association, 83(401): 123-127.

Cagetti, M. & De Nardi, M. 2006. Entrepreneurship, Frictions, and Wealth. Journal of Political Economy, 114(5): 835-870.

Carter, S. 2011. The Rewards of Entrepreneurship: Exploring the Incomes, Wealth, and Economic Well-Being of Entrepreneurial Households. Entrepreneurship Theory and Practice, 35(1): 39-55.

Carter, S. and Welter, F. (2015) Keeping it in the Family: Financial Rewards in Family Firms. In A. Fayolle, K. Randerson, G. Dossena and C. Bettinelli (eds.) Family Entrepreneurship. London: Routledge (Forthcoming).

Coad, A., Frankish, J., Nightingale, P., & Roberts, R. 2014. Business experience and start-up size: Buying more lottery tickets next time around? Small Business Economics, 43(3): 529-547.

Colombier, N. & Masclet, D. 2008. Intergenerational correlation in self employment: some further evidence from French ECHP data. Small Business Economics, 30(4): 423-437.

Cox, N. J. 2011. Stata tip 96: Cube roots. Stata Journal, 11(1): 149.

Dahl, M. S. & Sorenson, O. 2012. Home Sweet Home: Entrepreneurs' Location Choices and the Performance of Their Ventures. Management Science, 58(6): 1059-1071.
Davidsson, P. & Honig, B. 2003. The role of social and human capital among nascent entrepreneurs. Journal of Business Venturing, 18(3): 301-331.
Davies, J. B., Shorrocks, A., Sandstrom, S., & Wolff, E. N. 2007. The World Distribution of Household Wealth. University of California: Center for Global, International and Regional Studies: UC Santa Cruz.
Dunn, T. & Holtz-Eakin, D. 2000. Financial Capital, Human Capital, and the Transition to Self-Employment: Evidence from Intergenerational Links. Journal of Labor Economics, 18(2): 282-305.
Dustmann, C. & Mestres, J. 2010. Remittances and temporary migration. Journal of Development Economics, 92(1): 62-70.
Fairlie, Robert W. & Robb, Alicia M. 2007. Why Are Black-Owned Businesses Less Successful than White-Owned Businesses? The Role of Families, Inheritances, and Business Human Capital. Journal of Labor Economics, 25(2): 289-323.
Firpo, S. 2007. Efficient Semiparametric Estimation of Quantile Treatment Effects. Econometrica, 75(1): 259-276.
Firpo, S., Fortin, N. M., & Lemieux, T. 2009. Unconditional Quantile Regressions. Econometrica, 77(3): 953-973.
Freel, M. 2007. Are Small Innovators Credit Rationed? Small Business Economics, 28(1): 23-35.
Frölich, M. & Melly, B. 2008. Unconditional quantile treatment effects under endogeneity: IZA
Frölich, M. & Melly, B. 2010. Estimation of quantile treatment effects with Stata. Stata Journal, 10(3): 423-457.
Gentry, W. M. & Hubbard, R. G. 2004. Entrepreneurship and household saving. Advances in economic analysis & policy, 4(1).
Huber, M. & Melly, B. 2011. Quantile regression in the presence of sample selection: School of Economics and Political Science, Department of Economics, University of St. Gallen.
Knight, F. H. ([1921] 2006). Risk, uncertainty and profit, New York: Dover Publications.
Leaker, D. 2009. Economic Inactivity. Economic & Labour Market Review, 3(2): 42-46.
Levenson, A. R. & Willard, K. L. 2000. Do Firms Get the Financing They Want? Measuring Credit Rationing Experienced by Small Businesses in the U.S. Small Business Economics, 14(2): 83-94.
Mulholland, K. 1996. Gender Power and Property Relations Within Entrepreneurial Wealthy Families. Gender, Work & Organization, 3(2): 78-102.
Nanda, R. 2008. Cost of external finance and selection into entrepreneurship: Harvard University - Entrepreneurial Management Unit.
ONS. 2012. Wealth and Assets Survey Review Report: ONS.
ONS. 2013. Wealth of the Average Household: Great Britain, 2008/10. London: Office for National Statistics.
Parker, S. C., Belghitar, Y., & Barmby, T. 2005. Wage Uncertainty and the Labour Supply of Self-Employed Workers. The Economic Journal, 115(502): C190-C207.
Parrilli, M. D. 2009. Collective efficiency, policy inducement and social embeddedness: Drivers for the development of industrial districts. Entrepreneurship & Regional Development, 21(1): 1-24.
Pence, K. M. 2006. The role of wealth transformations: An application to estimating the effect of tax incentives on saving. Contributions in Economic Analysis & Policy, 5(1): 1-24.

Quadrini, V. 2000. Entrepreneurship, Saving, and Social Mobility. Review of Economic Dynamics, 3(1): 1-40.

Rowlingson, K. 2012. Wealth inequality: key facts. Birmingham: University of Birmingham: Policy Commission on the Distribution of Wealth.

Shane, S. 2008. The Illusions of Entrepreneurship: The Costly Myths That Entrepreneurs, Investors, and Policy Makers Live By: Yale University Press.

Shaw, E., Gordon, J., Harvey, C., & Maclean, M. 2013. Exploring contemporary entrepreneurial philanthropy. International Small Business Journal, 31(5): 580-599.

Shih, Y.-C. T. & Konrad, T. R. 2007. Factors Associated with the Income Distribution of Full-Time Physicians: A Quantile Regression Approach. Health Services Research, 42(5): 1895-1925.

Sorgner, A., Fritsch, M., & Kritikos, A. 2014. Do entrepreneurs really earn less?: German Institute for Economic Research.

Souabni, S. 2013. MMSEL: Stata module to simulate (counterfactual) distributions from quantile regressions (w/optional sample selection correction). Chestnut Hill, MA: Statistical Software Components, Boston College.

Stiglitz, J. E. & Weiss, A. 1981. Credit Rationing in Markets with Imperfect Information. The American Economic Review, 71(3): 393-410.

Tsuda, T. 1999. The Permanence of "Temporary" Migration: The "Structural Embeddedness" of Japanese-Brazilian Immigrant Workers in Japan. The Journal of Asian Studies, 58(3): 687-722.

7 Appendices

Table A1: OLS Regression: IHS of Wealth

VARIABLES	(1) Unweighted	(2) Weighted	(3) Clustered	(4) Cluster_nowgt	(5) ihswealthw2	(6) workinghrpw2
Entrepreneurial household	0.003	-0.029	-0.029	0.003	-0.008	
(0 = otherwise)	(0.033)	(0.043)	(0.044)	(0.034)	(0.040)	
HRP father entrepreneur	0.018	-0.002	-0.002	0.018	0.017	
(0 = otherwise)	(0.035)	(0.048)	(0.049)	(0.037)	(0.046)	
HRP mother entrepreneur	0.063	0.041	0.041	0.063	0.038	
(0 = otherwise)	(0.055)	(0.088)	(0.089)	(0.061)	(0.078)	
HRP age (yrs)	0.214***	0.210***	0.210***	0.214***	0.144***	0.144***
	(0.011)	(0.013)	(0.013)	(0.011)	(0.014)	(0.014)
HRP age squared	-0.002***	-0.002***	-0.002***	-0.002***	-0.001***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HRP Female (0 = Male)	-0.136***	-0.136***	-0.136***	-0.136***	-0.034	-0.114***
	(0.028)	(0.035)	(0.035)	(0.028)	(0.036)	(0.043)
HRP Qualification; 0=No Quals						
HRP other qualifications	0.349***	0.288***	0.288***	0.349***	-0.048	0.615***
	(0.045)	(0.058)	(0.058)	(0.049)	(0.062)	(0.047)
HRP Degree qualifications	0.851***	0.776***	0.776***	0.851***	0.312***	0.972***
	(0.049)	(0.064)	(0.065)	(0.054)	(0.070)	(0.057)
Observations	9,064	9,064	9,064	9,064	11,599	11,599
R-squared	0.454	0.442	0.442	0.454		

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Other personal, family background, present household and contextual factors included in the regression including industry, health, ethnicity, country of birth, religion, father and mother's education, number of siblings, family back ground home tenure, present household type, health of other householders, human capital of other householders, number of householders presently working, rural/urban, region and year.

Table A2: Average Treatment Effects

	(1) Outcome	(2) Treatment	(3) Outcome	(4) Treatment	(5) Outcome	(6) Treatment
VARIABLES	ihswealthw2	entrhholdw2	lnwealthw2	entrhholdw2	curtwealthw2	entrhholdw2
Entrepreneurial household	0.078		0.180		0.082	
(0 = otherwise)	(0.126)		(0.117)		(0.091)	
HRP father entrepreneur		0.302***		0.306***		0.303***
(0 = otherwise)		(0.057)		(0.058)		(0.057)
HRP age (yrs)	0.209***	0.052***	0.200***	0.047**	0.165***	0.052***
	(0.013)	(0.020)	(0.014)	(0.020)	(0.012)	(0.020)
HRP age squared	-0.002***	-0.000	-0.002***	-0.000	-0.001***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HRP Female (0 = Male)	-0.130***	-0.349***	-0.125***	-0.344***	-0.130***	-0.349***
	(0.035)	(0.055)	(0.033)	(0.055)	(0.032)	(0.055)
HRP Qualification; 0=No Quals						
HRP other qualifications	0.291***	-0.126*	0.355***	-0.112	0.246***	-0.125*
	(0.058)	(0.075)	(0.059)	(0.075)	(0.048)	(0.075)
HRP Degree qualifications	0.780***	-0.178**	0.852***	-0.160*	0.782***	-0.177**
	(0.064)	(0.084)	(0.064)	(0.085)	(0.056)	(0.084)
Observations	9,064	9,064	8,973	8,973	9,064	9,064

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Other personal, family background, present household and contextual factors included in the regression including industry, health, ethnicity, country of birth, religion, father and mother's education, number of siblings, family back ground home tenure, present household type, health of other householders, human capital of other householders, number of householders presently working, rural/urban, region and year.

Table A3: Quantile Regression Estimates (IHS Wealth)

VARIABLES	1st Percentile		10th Percentile		25th Percentile		Median		75th Percentile		90th Percentile		95th Percentile		99th Percentile	
	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted	Unweighted
Entrepreneurial household	-0.323**	-0.414	-0.086	-0.054	0.020	0.020	-0.033	0.005	-0.028	0.028	0.069***	0.089**	0.073*	0.081	0.129*	0.183
(0 = otherwise)	(0.152)	(0.319)	(0.056)	(0.070)	(0.050)	(0.047)	(0.032)	(0.033)	(0.034)	(0.034)	(0.024)	(0.038)	(0.042)	(0.056)	(0.073)	(0.115)
HRP father entrepreneur	-0.537***	-0.552	0.027	0.028	-0.008	0.048	-0.014	0.015	0.015	0.003	0.062	0.063	0.157**	0.119**	0.299***	0.141
(0 = otherwise)	(0.189)	(0.339)	(0.059)	(0.075)	(0.048)	(0.050)	(0.033)	(0.035)	(0.032)	(0.036)	(0.038)	(0.040)	(0.064)	(0.060)	(0.082)	(0.122)
HRP mother entrepreneur	-0.605*	0.636	0.056	0.067	0.081	0.015	0.122	0.071	0.137***	0.111*	0.037	0.127**	0.108	0.126	0.111	0.307
(0 = otherwise)	(0.325)	(0.532)	(0.083)	(0.117)	(0.072)	(0.079)	(0.080)	(0.055)	(0.049)	(0.057)	(0.038)	(0.063)	(0.110)	(0.094)	(0.236)	(0.192)
HRP age (yrs)	0.329***	0.292***	0.213***	0.227***	0.208***	0.223***	0.210***	0.214***	0.230***	0.223***	0.211***	0.194***	0.183***	0.180***	0.135***	0.180***
	(0.051)	(0.104)	(0.017)	(0.023)	(0.014)	(0.015)	(0.010)	(0.011)	(0.008)	(0.011)	(0.008)	(0.012)	(0.013)	(0.018)	(0.027)	(0.037)
HRP age squared	-0.003***	-0.002*	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
HRP Female (0 = Male)	-0.196	-0.232	-0.289***	-0.290***	-0.141***	-0.135***	-0.115***	-0.116***	-0.116***	-0.110***	-0.147***	-0.110***	-0.127***	-0.106**	-0.007	-0.073
	(0.134)	(0.269)	(0.041)	(0.059)	(0.038)	(0.040)	(0.027)	(0.028)	(0.022)	(0.029)	(0.019)	(0.032)	(0.031)	(0.048)	(0.088)	(0.097)
HRP Qualification; 0=No Quals																
HRP other qualifications	0.313	0.411	0.300***	0.439***	0.368***	0.497***	0.296***	0.322***	0.264***	0.283***	0.180***	0.233***	0.203***	0.252***	-0.164	-0.267*
	(0.231)	(0.433)	(0.100)	(0.095)	(0.074)	(0.064)	(0.047)	(0.045)	(0.049)	(0.047)	(0.043)	(0.052)	(0.041)	(0.077)	(0.186)	(0.156)
HRP Degree qualifications	1.195***	1.301***	0.914***	1.047***	0.902***	1.052***	0.733***	0.776***	0.653***	0.674***	0.549***	0.620***	0.611***	0.654***	0.413**	0.218
	(0.263)	(0.477)	(0.105)	(0.105)	(0.078)	(0.071)	(0.050)	(0.049)	(0.051)	(0.051)	(0.044)	(0.057)	(0.050)	(0.084)	(0.198)	(0.172)
HRP Industry; 0 = Agri/primary																
Manufacturing	-0.083	-0.448	0.292***	0.288	0.125	0.128	0.286	0.280	0.219	0.289	0.393***	0.368*	0.335**	0.377	0.163	0.185
	(0.977)	(1.699)	(0.108)	(0.375)	(0.116)	(0.252)	(0.215)	(0.175)	(0.135)	(0.183)	(0.090)	(0.202)	(0.144)	(0.301)	(0.727)	(0.614)
Utilities	0.758	-0.525	0.509**	0.666	0.347*	0.331	0.429**	0.435**	0.245	0.426**	0.443***	0.479**	0.281*	0.430	0.203	0.526
	(1.013)	(1.887)	(0.207)	(0.416)	(0.187)	(0.280)	(0.218)	(0.194)	(0.165)	(0.203)	(0.092)	(0.225)	(0.155)	(0.334)	(0.752)	(0.682)
Construction	-0.572	-0.917	0.152	0.223	0.095	0.108	0.221	0.222	0.066	0.114	0.274***	0.204	0.212	0.277	0.190	0.110
	(0.982)	(1.709)	(0.113)	(0.377)	(0.119)	(0.253)	(0.216)	(0.176)	(0.136)	(0.184)	(0.088)	(0.203)	(0.150)	(0.303)	(0.728)	(0.618)
Retails, repairs and storage	-0.447	-0.950	0.061	0.151	-0.048	-0.034	0.165	0.141	0.043	0.126	0.244***	0.192	0.165	0.220	0.145	-0.005
	(0.972)	(1.694)	(0.122)	(0.373)	(0.120)	(0.251)	(0.215)	(0.174)	(0.135)	(0.182)	(0.089)	(0.202)	(0.143)	(0.300)	(0.728)	(0.612)
Hospitality	-1.672*	-2.026	-0.782***	-0.438	-0.638***	-0.531**	-0.172	-0.202	-0.248*	-0.140	-0.103	-0.000	-0.154	0.089	-0.202	-0.180
	(1.000)	(1.817)	(0.146)	(0.400)	(0.187)	(0.269)	(0.235)	(0.187)	(0.137)	(0.195)	(0.171)	(0.216)	(0.199)	(0.322)	(0.773)	(0.656)
ICT	-0.378	-0.482	0.497***	0.525	0.396***	0.333	0.511**	0.455**	0.459***	0.481**	0.501***	0.432**	0.398***	0.409	0.222	0.324
	(1.028)	(1.743)	(0.117)	(0.384)	(0.118)	(0.258)	(0.222)	(0.179)	(0.141)	(0.187)	(0.089)	(0.207)	(0.153)	(0.309)	(0.731)	(0.630)
Finance and other prof servces	-0.333	-0.504	0.345***	0.343	0.163	0.196	0.411*	0.389**	0.362***	0.421**	0.581***	0.536***	0.491***	0.562*	0.305	0.240
	(0.961)	(1.696)	(0.106)	(0.374)	(0.119)	(0.251)	(0.214)	(0.175)	(0.136)	(0.182)	(0.090)	(0.202)	(0.144)	(0.300)	(0.727)	(0.613)
Govt, education and health	0.090	-0.222	0.656***	0.659*	0.389***	0.340	0.527**	0.482***	0.401***	0.421**	0.542***	0.457**	0.451***	0.477	0.353	0.307
	(0.961)	(1.693)	(0.103)	(0.373)	(0.118)	(0.251)	(0.214)	(0.174)	(0.133)	(0.182)	(0.089)	(0.202)	(0.144)	(0.300)	(0.728)	(0.612)
Arts and entertainment	-0.556	-0.443	0.579***	0.479	0.297**	0.140	0.408*	0.352*	0.280*	0.349*	0.402***	0.294	0.232	0.343	0.304	0.509

	(0.982)	(1.827)	(0.213)	(0.403)	(0.131)	(0.271)	(0.237)	(0.188)	(0.164)	(0.196)	(0.090)	(0.217)	(0.171)	(0.324)	(0.800)	(0.660)
Other services	-1.114	-2.001	0.071	0.160	-0.205	-0.214	0.194	0.115	0.115	0.097	0.335**	0.202	0.142	0.293	-0.088	-0.244
	(0.992)	(1.806)	(0.274)	(0.398)	(0.171)	(0.268)	(0.241)	(0.186)	(0.150)	(0.194)	(0.157)	(0.215)	(0.152)	(0.320)	(0.771)	(0.652)
Long-term illness; 0 = Never																
Previously long-ill	0.738	0.779	-0.056	-0.097	-0.050	0.012	-0.082	-0.137*	-0.148**	-0.139	-0.092*	-0.130	-0.156***	-0.016	0.164	0.492*
	(0.793)	(0.798)	(0.118)	(0.176)	(0.072)	(0.118)	(0.072)	(0.082)	(0.063)	(0.086)	(0.048)	(0.095)	(0.051)	(0.141)	(0.133)	(0.288)
Presently long-ill	-0.313*	-0.106	-0.160***	-0.192***	-0.118***	-0.129***	-0.081***	-0.079***	-0.038	-0.051*	-0.082***	-0.115***	-0.096***	-0.111**	-0.245***	-0.129
	(0.178)	(0.280)	(0.047)	(0.062)	(0.032)	(0.042)	(0.029)	(0.029)	(0.027)	(0.030)	(0.020)	(0.033)	(0.026)	(0.050)	(0.061)	(0.101)
HRP ethnicity; 0 = White British																
White other	-1.020**	-1.498*	-0.602***	-0.441**	-0.361***	-0.375***	-0.269**	-0.256***	-0.227**	-0.135	0.065	-0.006	0.027	-0.017	-0.082	0.133
	(0.472)	(0.779)	(0.112)	(0.172)	(0.120)	(0.116)	(0.105)	(0.080)	(0.106)	(0.084)	(0.081)	(0.093)	(0.068)	(0.138)	(0.195)	(0.281)
Mixed	-0.166	0.115	-0.233	-0.369	-0.448***	-0.398**	-0.289**	-0.340***	-0.170	-0.285**	-0.420***	-0.362**	-0.410***	-0.258	-0.647**	-0.777*
	(1.113)	(1.242)	(0.207)	(0.274)	(0.082)	(0.184)	(0.118)	(0.128)	(0.144)	(0.133)	(0.054)	(0.148)	(0.143)	(0.220)	(0.276)	(0.449)
Indian	-1.333	0.661	-0.477**	-0.422	0.172	0.166	0.124	0.168	0.231	0.226	0.085	0.066	-0.010	0.095	-0.225	-0.632
	(2.384)	(1.536)	(0.192)	(0.338)	(0.331)	(0.228)	(0.134)	(0.158)	(0.216)	(0.165)	(0.302)	(0.183)	(0.329)	(0.272)	(1.547)	(0.555)
Pakistani	0.984	1.393	-0.212	0.025	-0.419	0.223	-0.133	0.006	-0.161	-0.158	-0.330	-0.076	-0.932***	-0.817**	-1.510	-0.635
	(1.787)	(1.892)	(0.490)	(0.417)	(0.303)	(0.281)	(0.141)	(0.195)	(0.196)	(0.203)	(0.502)	(0.225)	(0.219)	(0.335)	(1.268)	(0.684)
Bangladeshi	1.048	2.915	1.078	0.794	0.465	0.336	-0.259	0.354	-0.055	-0.078	0.172	0.378	-0.522	0.078	-0.690	-0.062
	(2.888)	(2.950)	(1.029)	(0.650)	(0.530)	(0.437)	(0.219)	(0.304)	(0.218)	(0.317)	(2.091)	(0.351)	(0.377)	(0.523)	(1.362)	(1.066)
Other Asian	-0.174	0.456	-1.442***	-1.417***	-0.327	-0.728***	-0.364***	-0.330**	0.030	-0.078	-0.220	0.048	-0.184	-0.046	0.245	0.106
	(1.239)	(1.533)	(0.430)	(0.338)	(0.379)	(0.227)	(0.113)	(0.158)	(0.185)	(0.165)	(0.243)	(0.183)	(0.175)	(0.272)	(1.582)	(0.554)
Black Caribbean	-1.499	-3.025***	-0.270**	-0.302	-0.075	-0.367**	-0.151	-0.296***	-0.124	-0.288**	-0.116**	-0.188	-0.099	-0.227	-0.354	-0.739*
	(1.569)	(1.097)	(0.135)	(0.242)	(0.124)	(0.163)	(0.134)	(0.113)	(0.123)	(0.118)	(0.051)	(0.131)	(0.181)	(0.194)	(0.217)	(0.396)
Black African	-1.816*	-2.054	-1.069*	-1.151***	-0.692***	-0.996***	-0.844***	-0.911***	-0.830***	-0.810***	-0.512	-0.554***	-0.307	0.011	0.228	0.280
	(1.038)	(1.310)	(0.620)	(0.289)	(0.216)	(0.194)	(0.208)	(0.135)	(0.086)	(0.141)	(0.480)	(0.156)	(0.739)	(0.232)	(0.493)	(0.473)
Other black	-0.291	0.722	-1.661	-0.595	-1.931	-1.557**	-1.639	-1.923***	-0.560	-0.762*	0.767	0.351	0.620	0.311	-0.125	-0.703
	(5.688)	(4.166)	(0.000)	(0.918)	(1.240)	(0.618)	(1.224)	(0.429)	(5.221)	(0.448)	(1.491)	(0.496)	(0.864)	(0.738)	(0.000)	(1.505)
Chinese	1.381	0.910	0.895***	0.625	1.085***	0.198	0.555	0.677***	0.380**	0.562**	0.333	0.353	0.028	0.672*	0.613	0.626
	(4.148)	(2.289)	(0.249)	(0.504)	(0.314)	(0.339)	(0.549)	(0.236)	(0.169)	(0.246)	(0.618)	(0.272)	(0.281)	(0.405)	(0.701)	(0.827)
Other ethnicity	-0.224	-0.041	-0.511	-0.546	-0.121	-0.390*	-0.294**	-0.286*	-0.390	-0.302*	-0.338**	-0.261	-0.231*	-0.182	-0.722	0.629
	(0.944)	(1.532)	(0.474)	(0.338)	(0.300)	(0.227)	(0.122)	(0.158)	(0.756)	(0.165)	(0.147)	(0.182)	(0.133)	(0.271)	(0.918)	(0.553)
HRP Country of birth; 0 = UK																
Other Anglo-saxon countries	1.173**	0.815	0.606***	0.326	0.461***	0.356**	0.318***	0.186*	0.410***	0.305***	0.240***	0.190	0.076	0.169	0.345	0.269
	(0.583)	(0.984)	(0.085)	(0.217)	(0.053)	(0.146)	(0.123)	(0.101)	(0.050)	(0.106)	(0.063)	(0.117)	(0.100)	(0.174)	(0.333)	(0.355)
Europe	-0.417	-0.501	-0.479***	-0.689***	-0.779***	-0.579***	-0.550***	-0.374***	-0.265**	-0.152*	-0.192***	-0.107	-0.307***	-0.215	-0.246	-0.610**
	(0.411)	(0.840)	(0.104)	(0.185)	(0.226)	(0.125)	(0.114)	(0.086)	(0.116)	(0.090)	(0.037)	(0.100)	(0.119)	(0.149)	(0.621)	(0.304)
Commonwealth countries	-0.036	-1.109	-0.659***	-0.710***	-0.649***	-0.416***	-0.333***	-0.273***	-0.224**	-0.138*	-0.134*	-0.058	-0.208**	-0.160	-0.042	0.033
	(1.018)	(0.765)	(0.105)	(0.169)	(0.110)	(0.113)	(0.091)	(0.079)	(0.092)	(0.082)	(0.071)	(0.091)	(0.096)	(0.135)	(0.170)	(0.276)
Rest of the world	0.655	0.098	-0.611***	-0.571***	-0.970***	-0.645***	-0.467***	-0.484***	-0.304*	-0.304***	-0.122	-0.253**	-0.289***	-0.280*	-0.123	-0.226
	(0.780)	(0.898)	(0.149)	(0.198)	(0.202)	(0.133)	(0.078)	(0.092)	(0.168)	(0.097)	(0.080)	(0.107)	(0.063)	(0.159)	(0.568)	(0.324)
HRP Religion; 0=Practising Christian																
Non-practising Christian	-0.025	0.171	0.089***	0.036	0.014	-0.001	0.023	-0.015	0.016	0.008	-0.016	-0.021	0.035	0.001	0.021	-0.048
	(0.164)	(0.281)	(0.033)	(0.062)	(0.036)	(0.042)	(0.031)	(0.029)	(0.028)	(0.030)	(0.016)	(0.033)	(0.028)	(0.050)	(0.060)	(0.102)

Muslim	-0.472	0.224	-0.024	-0.096	0.100	-0.159	-0.098	-0.201	-0.124	-0.144	-0.047	-0.215	0.658***	0.540**	0.712	0.257
	(1.617)	(1.392)	(0.315)	(0.307)	(0.283)	(0.206)	(0.105)	(0.143)	(0.185)	(0.150)	(0.420)	(0.166)	(0.169)	(0.247)	(1.294)	(0.503)
Jewish	1.091**	0.698	-0.012	0.172	0.360	0.307	0.174	0.236	0.243	0.206	0.240*	0.050	0.118	0.015	0.075	-0.101
	(0.430)	(1.398)	(0.116)	(0.308)	(0.359)	(0.207)	(0.116)	(0.144)	(0.378)	(0.150)	(0.141)	(0.166)	(0.142)	(0.248)	(1.289)	(0.505)
Hindu/ Sikh	0.529	-1.104	0.378*	0.377	0.125	0.087	-0.151	-0.242	-0.173	-0.279*	-0.105	-0.181	0.077	0.082	-0.009	0.504
	(1.733)	(1.513)	(0.204)	(0.333)	(0.319)	(0.224)	(0.140)	(0.156)	(0.174)	(0.163)	(0.301)	(0.180)	(0.262)	(0.268)	(1.519)	(0.546)
Buddhist/ Other	-1.323*	-1.292	-0.302	-0.367	-0.381**	-0.286*	-0.565***	-0.433***	-0.422***	-0.380***	-0.384	-0.486***	0.004	-0.210	-0.494	-0.484
	(0.787)	(1.071)	(0.451)	(0.236)	(0.191)	(0.159)	(0.056)	(0.110)	(0.120)	(0.115)	(0.267)	(0.127)	(0.099)	(0.190)	(0.312)	(0.387)
No religion	-0.379**	-0.253	-0.246***	-0.215***	-0.080*	-0.113**	-0.064*	-0.104***	-0.088***	-0.085**	-0.141***	-0.118***	-0.013	-0.049	-0.128*	-0.201
	(0.185)	(0.346)	(0.062)	(0.076)	(0.042)	(0.051)	(0.039)	(0.036)	(0.032)	(0.037)	(0.025)	(0.041)	(0.034)	(0.061)	(0.070)	(0.125)
HRP/Partner received inherit	0.239**	0.418	0.314***	0.317***	0.165***	0.196***	0.195***	0.187***	0.170***	0.145***	0.131***	0.147***	0.145***	0.140***	0.053	0.051
(0=Never)	(0.118)	(0.266)	(0.046)	(0.059)	(0.030)	(0.039)	(0.026)	(0.027)	(0.022)	(0.029)	(0.020)	(0.032)	(0.029)	(0.047)	(0.059)	(0.096)
HRP/Partner received lumpsm	-0.090	-0.065	0.213***	0.142**	0.120***	0.106**	0.117***	0.071**	0.084***	0.043	0.021	0.039	0.033	0.024	0.146**	-0.001
(0=Never)	(0.207)	(0.285)	(0.039)	(0.063)	(0.038)	(0.042)	(0.031)	(0.029)	(0.026)	(0.031)	(0.019)	(0.034)	(0.036)	(0.051)	(0.064)	(0.103)
HRP father qualifications; 0= Degree																
Further Quals	-0.209	0.269	0.074	0.017	0.029	0.051	-0.068	-0.011	-0.072*	-0.063	-0.151***	-0.190***	-0.261***	-0.220**	-0.323***	-0.451**
	(0.305)	(0.522)	(0.079)	(0.115)	(0.066)	(0.077)	(0.048)	(0.054)	(0.042)	(0.056)	(0.037)	(0.062)	(0.093)	(0.092)	(0.119)	(0.189)
Left 17 or 18	-0.622	-0.195	0.035	-0.038	0.071	0.027	-0.051	-0.011	-0.046	-0.021	-0.039	-0.086	-0.109	0.008	-0.058	-0.174
	(0.400)	(0.618)	(0.090)	(0.136)	(0.066)	(0.092)	(0.062)	(0.064)	(0.056)	(0.066)	(0.046)	(0.074)	(0.112)	(0.109)	(0.325)	(0.223)
Left 15 or 16	-0.275	0.232	0.003	-0.014	-0.041	-0.011	-0.127**	-0.090	-0.094**	-0.079	-0.159***	-0.214***	-0.244***	-0.210**	-0.362***	-0.487**
	(0.265)	(0.530)	(0.074)	(0.117)	(0.068)	(0.079)	(0.051)	(0.055)	(0.042)	(0.057)	(0.038)	(0.063)	(0.092)	(0.094)	(0.134)	(0.192)
Left before 15	-0.566**	0.013	-0.045	-0.096	-0.047	-0.048	-0.121**	-0.087	-0.138***	-0.124**	-0.177***	-0.234***	-0.238**	-0.221**	-0.349**	-0.513***
	(0.269)	(0.543)	(0.078)	(0.120)	(0.069)	(0.081)	(0.049)	(0.056)	(0.043)	(0.058)	(0.038)	(0.065)	(0.093)	(0.096)	(0.136)	(0.196)
Father no school	-0.503	0.510	-0.480	0.118	-0.313**	-0.100	-0.232**	-0.092	-0.106	-0.232*	-0.356***	-0.119	-0.197	-0.120	0.251	-0.338
	(1.242)	(1.306)	(0.360)	(0.288)	(0.123)	(0.194)	(0.100)	(0.134)	(0.067)	(0.140)	(0.083)	(0.155)	(0.227)	(0.231)	(0.290)	(0.472)
HRP no father growing up	-1.154***	-0.155	-0.224***	-0.264**	-0.165**	-0.140	-0.211***	-0.167***	-0.189***	-0.169***	-0.181***	-0.211***	-0.249***	-0.216**	-0.481***	-0.660***
	(0.294)	(0.578)	(0.077)	(0.127)	(0.079)	(0.086)	(0.062)	(0.059)	(0.052)	(0.062)	(0.046)	(0.069)	(0.093)	(0.102)	(0.133)	(0.209)
HRP mother qualifications; 0= Degree																
Further Quals	1.176**	-0.658	0.123	0.132	0.001	-0.013	0.041	-0.004	-0.031	-0.074	0.125**	0.077	0.142*	0.071	0.096	0.118
	(0.543)	(0.637)	(0.092)	(0.140)	(0.095)	(0.094)	(0.062)	(0.066)	(0.069)	(0.069)	(0.051)	(0.076)	(0.081)	(0.113)	(0.143)	(0.230)
Left 17 or 18	1.372**	0.302	-0.003	0.132	0.027	0.028	0.052	-0.007	0.002	-0.081	0.022	0.077	0.043	0.072	0.125	0.201
	(0.578)	(0.679)	(0.095)	(0.150)	(0.096)	(0.101)	(0.067)	(0.070)	(0.072)	(0.073)	(0.054)	(0.081)	(0.088)	(0.120)	(0.178)	(0.245)
Left 15 or 16	1.669***	-0.048	-0.116	-0.022	-0.108	-0.082	-0.019	-0.052	-0.083	-0.180***	0.035	0.014	0.065	0.032	0.193	0.183
	(0.545)	(0.619)	(0.088)	(0.137)	(0.093)	(0.092)	(0.063)	(0.064)	(0.068)	(0.067)	(0.049)	(0.074)	(0.074)	(0.110)	(0.153)	(0.224)
Left before 15	1.534***	-0.247	-0.084	0.013	-0.094	-0.095	-0.035	-0.094	-0.063	-0.172**	0.057	0.014	0.074	0.054	0.150	0.228
	(0.545)	(0.644)	(0.093)	(0.142)	(0.094)	(0.095)	(0.066)	(0.066)	(0.069)	(0.069)	(0.049)	(0.077)	(0.078)	(0.114)	(0.155)	(0.233)
Mother no school	2.356*	0.400	0.297	0.154	0.321*	0.011	0.194**	-0.021	0.099	-0.053	0.154	-0.102	0.186*	-0.090	-0.060	0.055
	(1.233)	(1.248)	(0.271)	(0.275)	(0.173)	(0.185)	(0.080)	(0.128)	(0.138)	(0.134)	(0.134)	(0.149)	(0.113)	(0.221)	(0.278)	(0.451)
HRP no mother growing up	1.905***	0.257	-0.368**	-0.355*	-0.380***	-0.363***	-0.191**	-0.192**	-0.122	-0.185**	-0.010	-0.037	0.088	0.047	0.299	0.389
	(0.599)	(0.824)	(0.171)	(0.182)	(0.141)	(0.122)	(0.094)	(0.085)	(0.091)	(0.089)	(0.079)	(0.098)	(0.112)	(0.146)	(0.187)	(0.298)
HRP number of siblings; 0 = Lone child																

1-4 siblings	-0.065	0.068	-0.008	-0.008	-0.113***	-0.108**	-0.046	-0.070**	-0.076**	-0.077**	-0.121***	-0.127***	-0.089**	-0.126**	-0.088	-0.045
	(0.180)	(0.331)	(0.054)	(0.073)	(0.031)	(0.049)	(0.035)	(0.034)	(0.032)	(0.036)	(0.025)	(0.039)	(0.045)	(0.059)	(0.077)	(0.120)
5-9 siblings	-1.365***	-1.404**	-0.377***	-0.499***	-0.456***	-0.450***	-0.357***	-0.338***	-0.258***	-0.287***	-0.329***	-0.272***	-0.262***	-0.262***	-0.518***	-0.526***
	(0.503)	(0.545)	(0.064)	(0.120)	(0.059)	(0.081)	(0.060)	(0.056)	(0.051)	(0.059)	(0.054)	(0.065)	(0.064)	(0.097)	(0.094)	(0.197)
10+/ Non-family home	-1.758**	-2.000	0.131	-1.096***	-0.330***	-0.257	-0.648***	-0.561***	-0.461**	-0.458***	-0.084	-0.035	0.183*	0.094	-0.196	-0.199
	(0.763)	(1.590)	(0.789)	(0.350)	(0.103)	(0.236)	(0.160)	(0.164)	(0.196)	(0.171)	(0.832)	(0.189)	(0.106)	(0.282)	(0.538)	(0.574)
HRP growing up home tenure; 0 = Fully owned																
Mortgage	0.119	0.103	0.143***	0.103	0.093**	0.053	0.054*	0.008	0.052**	0.005	-0.014	-0.065*	-0.043	-0.076	-0.014	-0.060
	(0.157)	(0.292)	(0.044)	(0.064)	(0.037)	(0.043)	(0.030)	(0.030)	(0.024)	(0.031)	(0.021)	(0.035)	(0.042)	(0.052)	(0.075)	(0.105)
Renting	-0.328**	-0.442	-0.195***	-0.260***	-0.167***	-0.246***	-0.161***	-0.234***	-0.169***	-0.175***	-0.183***	-0.226***	-0.229***	-0.289***	-0.237***	-0.220*
	(0.147)	(0.319)	(0.051)	(0.070)	(0.043)	(0.047)	(0.033)	(0.033)	(0.031)	(0.034)	(0.024)	(0.038)	(0.041)	(0.057)	(0.084)	(0.115)
Free housing/foster/inst/other	-0.396	-0.293	-0.190**	-0.191	-0.071	-0.244**	-0.063	-0.237***	-0.138**	-0.227***	-0.154*	-0.185**	-0.127**	-0.264**	-0.367**	-0.355
	(0.285)	(0.695)	(0.079)	(0.153)	(0.089)	(0.103)	(0.079)	(0.071)	(0.061)	(0.075)	(0.086)	(0.083)	(0.059)	(0.123)	(0.144)	(0.251)
Present household type; 0 = Single under SPA																
Couple under SPA, no kids	0.859***	0.942	0.914***	0.851***	0.567***	0.551***	0.540***	0.509***	0.549***	0.472***	0.449***	0.366***	0.317***	0.349***	0.453**	0.287
	(0.307)	(0.685)	(0.117)	(0.151)	(0.098)	(0.102)	(0.076)	(0.071)	(0.068)	(0.074)	(0.064)	(0.082)	(0.078)	(0.121)	(0.192)	(0.248)
Couple, 1 under SPA, no kids	1.935***	1.424*	1.053***	0.962***	0.616***	0.574***	0.565***	0.493***	0.573***	0.456***	0.297***	0.154	0.110	0.087	0.400*	0.111
	(0.342)	(0.847)	(0.122)	(0.187)	(0.100)	(0.126)	(0.087)	(0.087)	(0.077)	(0.091)	(0.066)	(0.101)	(0.080)	(0.150)	(0.209)	(0.306)
Couple under SPA, dep kids	0.762***	0.944	0.965***	0.888***	0.574***	0.567***	0.551***	0.507***	0.574***	0.485***	0.424***	0.375***	0.242***	0.272**	0.330*	0.039
	(0.257)	(0.715)	(0.125)	(0.158)	(0.103)	(0.106)	(0.080)	(0.074)	(0.074)	(0.077)	(0.069)	(0.085)	(0.086)	(0.127)	(0.195)	(0.258)
Couple under SPA, non-dep kids	1.160***	1.207	0.911***	0.850***	0.570***	0.523***	0.575***	0.483***	0.510***	0.383***	0.329***	0.204*	0.014	0.028	-0.057	-0.245
	(0.294)	(0.927)	(0.145)	(0.204)	(0.116)	(0.137)	(0.100)	(0.095)	(0.093)	(0.100)	(0.086)	(0.110)	(0.103)	(0.164)	(0.244)	(0.335)
Lone parent, dep kids	-0.042	0.477	-0.014	-0.112	-0.388***	-0.413***	-0.367***	-0.331***	-0.261***	-0.275***	-0.250***	-0.219***	-0.225***	-0.248***	-0.296**	-0.379**
	(0.248)	(0.516)	(0.103)	(0.114)	(0.087)	(0.077)	(0.078)	(0.053)	(0.058)	(0.056)	(0.050)	(0.061)	(0.060)	(0.091)	(0.139)	(0.187)
Lone parent, non-dep kids	-0.291	-0.397	-0.415*	-0.415**	-0.257	-0.184	-0.153*	-0.240***	-0.157	-0.196**	-0.141*	-0.216**	-0.296***	-0.195	-0.256	-0.539*
	(0.463)	(0.892)	(0.236)	(0.197)	(0.170)	(0.132)	(0.091)	(0.092)	(0.097)	(0.096)	(0.085)	(0.106)	(0.097)	(0.158)	(0.362)	(0.322)
2+ Families/other hsehold	0.197	0.481	0.368**	0.427**	0.391***	0.400***	0.415***	0.332***	0.450***	0.322***	0.402***	0.217**	0.139	0.132	0.337	0.077
	(0.348)	(0.873)	(0.151)	(0.192)	(0.131)	(0.129)	(0.092)	(0.090)	(0.098)	(0.094)	(0.085)	(0.104)	(0.112)	(0.155)	(0.249)	(0.315)
Non HRP Human capital (edu yrs)	-0.020	0.014	0.004	0.007	0.005	0.007	-0.003	0.003	-0.003	0.004	0.001	0.010*	0.017***	0.018*	0.019	0.040**
	(0.015)	(0.051)	(0.008)	(0.011)	(0.007)	(0.008)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.009)	(0.016)	(0.018)
Non HRP Human capital squared	0.000	-0.000	0.000	0.000	0.000	-0.000	0.000	0.000	0.000	0.000	0.000*	-0.000	-0.000	-0.000	-0.000	-0.001*
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Number of jobs in the household; 0=1 job																
2 jobs	0.878***	0.566*	0.309***	0.214***	0.213***	0.137***	0.118***	0.078**	0.064**	0.004	0.036	-0.006	0.011	-0.017	-0.061	-0.125
	(0.180)	(0.299)	(0.057)	(0.066)	(0.038)	(0.044)	(0.032)	(0.031)	(0.031)	(0.032)	(0.022)	(0.036)	(0.039)	(0.053)	(0.076)	(0.108)
3+ jobs	1.358***	0.622	0.232***	0.109	0.076	-0.020	0.007	-0.017	0.015	-0.051	-0.138***	-0.161**	-0.167***	-0.106	-0.196	-0.198
	(0.257)	(0.583)	(0.087)	(0.128)	(0.065)	(0.086)	(0.054)	(0.060)	(0.048)	(0.063)	(0.038)	(0.069)	(0.054)	(0.103)	(0.139)	(0.210)
Non-HRP long-term																

illness; 0 = none																
Non-HRP previously long-ill	0.170	-0.544	0.008	0.056	0.059	-0.005	-0.056	-0.032	-0.167*	0.108	0.277	0.357***	0.315***	0.323*	0.186	0.336
	(0.588)	(0.992)	(0.202)	(0.219)	(0.054)	(0.147)	(0.139)	(0.102)	(0.099)	(0.107)	(0.362)	(0.118)	(0.072)	(0.176)	(0.214)	(0.358)
Non-HRP presently long-ill	-0.428***	-0.285	-0.180***	-0.193***	-0.156***	-0.160***	-0.107***	-0.073**	-0.064**	-0.065*	-0.077***	-0.034	-0.056**	-0.099*	-0.125	-0.132
	(0.161)	(0.316)	(0.048)	(0.070)	(0.036)	(0.047)	(0.031)	(0.032)	(0.028)	(0.034)	(0.021)	(0.038)	(0.027)	(0.056)	(0.076)	(0.114)
Rural (0= Urban)	0.368**	0.302	0.244***	0.239***	0.139***	0.138***	0.106***	0.118***	0.173***	0.172***	0.172***	0.177***	0.138***	0.131***	-0.020	0.019
	(0.157)	(0.279)	(0.040)	(0.061)	(0.031)	(0.041)	(0.030)	(0.029)	(0.028)	(0.030)	(0.021)	(0.033)	(0.031)	(0.049)	(0.069)	(0.101)
Region																
Wales	0.107	0.145	0.028	0.122	0.033	0.068	0.001	0.032	0.008	0.039	0.084	0.048	0.102	0.124	0.612***	0.289
	(0.260)	(0.591)	(0.099)	(0.130)	(0.085)	(0.088)	(0.076)	(0.061)	(0.054)	(0.064)	(0.072)	(0.070)	(0.069)	(0.105)	(0.181)	(0.214)
South West	-0.465*	-0.089	0.012	0.050	0.076	0.038	0.020	0.052	-0.038	0.043	0.052	0.064	0.090	0.075	0.274*	0.054
	(0.266)	(0.508)	(0.097)	(0.112)	(0.061)	(0.075)	(0.063)	(0.052)	(0.043)	(0.055)	(0.039)	(0.060)	(0.063)	(0.090)	(0.145)	(0.183)
South East	0.014	0.185	0.212***	0.263***	0.135***	0.181***	0.181***	0.189***	0.191***	0.206***	0.226***	0.186***	0.252***	0.231***	0.323***	0.289*
	(0.242)	(0.445)	(0.066)	(0.098)	(0.045)	(0.066)	(0.059)	(0.046)	(0.037)	(0.048)	(0.035)	(0.053)	(0.064)	(0.079)	(0.096)	(0.161)
London	-0.119	-0.023	0.163**	0.161	0.174***	0.156**	0.212***	0.213***	0.233***	0.279***	0.332***	0.302***	0.273***	0.302***	0.365***	0.401**
	(0.278)	(0.511)	(0.078)	(0.113)	(0.059)	(0.076)	(0.059)	(0.053)	(0.048)	(0.055)	(0.042)	(0.061)	(0.057)	(0.091)	(0.110)	(0.185)
East of England	-0.617***	-0.312	0.120	0.160	0.166***	0.090	0.112**	0.037	0.074*	0.091*	0.126***	0.055	0.107**	0.123	0.497***	0.304*
	(0.219)	(0.480)	(0.084)	(0.106)	(0.064)	(0.071)	(0.056)	(0.049)	(0.041)	(0.052)	(0.032)	(0.057)	(0.053)	(0.085)	(0.122)	(0.174)
West Midlands	-0.348	0.061	0.182**	0.179	0.057	0.021	-0.005	0.014	0.011	0.066	0.044	0.029	0.134	0.084	0.385***	0.313*
	(0.245)	(0.497)	(0.074)	(0.110)	(0.049)	(0.074)	(0.063)	(0.051)	(0.041)	(0.053)	(0.041)	(0.059)	(0.082)	(0.088)	(0.140)	(0.180)
East Midlands	-0.661**	-0.482	0.024	0.036	-0.010	-0.022	0.060	0.028	-0.012	-0.006	0.024	-0.016	0.028	-0.019	0.389***	0.300
	(0.279)	(0.506)	(0.072)	(0.112)	(0.084)	(0.075)	(0.059)	(0.052)	(0.040)	(0.054)	(0.033)	(0.060)	(0.048)	(0.090)	(0.126)	(0.183)
Yorks and Humber	0.195	0.355	0.122	0.136	0.108**	0.029	0.047	-0.026	0.023	0.025	0.111***	0.039	0.043	0.042	0.166*	0.189
	(0.257)	(0.483)	(0.078)	(0.107)	(0.046)	(0.072)	(0.061)	(0.050)	(0.050)	(0.052)	(0.034)	(0.058)	(0.050)	(0.086)	(0.098)	(0.175)
North West	-0.687***	-0.693	-0.078	-0.041	-0.079	-0.096	-0.027	-0.070	0.014	0.009	0.072**	-0.012	0.024	-0.027	0.069	-0.002
	(0.254)	(0.466)	(0.060)	(0.103)	(0.056)	(0.069)	(0.060)	(0.048)	(0.046)	(0.050)	(0.031)	(0.055)	(0.049)	(0.082)	(0.120)	(0.168)
North East	0.126	0.041	-0.175**	-0.177	-0.097	-0.056	-0.053	-0.017	0.011	0.039	0.095*	0.029	0.039	0.025	0.263*	0.246
	(0.280)	(0.608)	(0.073)	(0.134)	(0.100)	(0.090)	(0.069)	(0.063)	(0.051)	(0.065)	(0.050)	(0.072)	(0.055)	(0.108)	(0.140)	(0.220)
Year; 0 = 2008																
Year 2009	-0.067	0.023	-0.148***	-0.105*	-0.075**	-0.080**	-0.074***	-0.078***	-0.040	-0.060**	-0.101***	-0.047	-0.054**	-0.018	-0.047	0.120
	(0.122)	(0.261)	(0.038)	(0.058)	(0.031)	(0.039)	(0.025)	(0.027)	(0.024)	(0.028)	(0.018)	(0.031)	(0.024)	(0.046)	(0.055)	(0.094)
Year 2010	-0.076	-0.049	-0.131***	-0.059	-0.084**	-0.101**	-0.090***	-0.109***	-0.046	-0.053	-0.056**	-0.023	-0.023	0.056	0.115	0.333***
	(0.170)	(0.303)	(0.050)	(0.067)	(0.036)	(0.045)	(0.032)	(0.031)	(0.029)	(0.033)	(0.022)	(0.036)	(0.038)	(0.054)	(0.076)	(0.109)
Constant	-9.786***	-8.620***	-5.229***	-5.543***	-3.648***	-3.922***	-2.887***	-2.776***	-2.526***	-2.239***	-1.590***	-1.130***	-0.706**	-0.640	0.913	0.457
	(1.440)	(2.870)	(0.407)	(0.633)	(0.347)	(0.426)	(0.312)	(0.295)	(0.233)	(0.308)	(0.205)	(0.342)	(0.349)	(0.508)	(0.960)	(1.037)
Observations	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064	9,064

Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1