

THEY LIVED AND SAVED:  
EVIDENCE OF THE BEQUEST MOTIVE FOR SAVING AMONG SMALL  
SHOPKEEPERS IN LATE NINETEENTH CENTURY BRITAIN

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**Abstract:** I examine the wealth holding of nineteenth century Britain shopkeepers using data on census-linked probated decedents. Previous research indicates that the nineteenth century U.S. agricultural sector experienced a transition from bequest saving to life-cycle saving. I test the potential impact of bequest and life-cycle savings motives on wealth-holding and find that early nineteenth century British shopkeepers had not yet reached the transition stage between bequest and life-cycle saving, as shown by Roger Ransom and Richard Sutch for the case of the United States agricultural sector.

**Keywords:** wealth holding, bequest saving, life-cycle saving

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### 1. Introduction

During the nineteenth century the number of financial intermediaries grew substantially in most developing countries. At the same time bequest saving, a more traditional method of saving that involved economic transfers from producers to dependents, gave way to life-cycle saving, a new method of saving that involved investment in financial intermediaries. Social and economic historians claim that the transition from bequest to life-cycle saving represents a revolution in values that had larger implications for growth and industrialization.<sup>1</sup> This study considers mid-nineteenth century British shopkeepers and examines whether their wealth-holding exhibited a transition from bequest to life-cycle saving.

### 2. Existing Evidence of Bequest or Life -Cycle Motives

Bequest and life-cycle savings have been cited as two of the main motivations behind nineteenth century individual wealth accumulation.<sup>2</sup> A bequest motive exists if an individual accumulates assets during working years in order to provide his children with an inheritance. A nineteenth century British shop-keeping couple may have chosen bequest saving out of benevolence (concern for the welfare of their children), or for business reasons (providing an incentive—the proceeds from the sale of the business or the business itself—for their children to care for them in old age).<sup>3</sup> A nineteenth century shop-keeping couple might invest much of their wealth in a business that included living space above it, and by doing so they would “invest in their children and expect old age support from them, reducing the amount held in other assets” (DiMatteo, 1997: 924). Thus, studies of bequest savings have used the total number of children to measure the extent of the

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<sup>1</sup> The importance of saving to economic growth at the macro-level is well established in the literature. See Carter, Ransom and Sutch (2004), Alter, Goldin, and Rotella (1994), Sutch (1991), and Ransom and Sutch (1986).

<sup>2</sup> For a general interpretation of the bequest motive, see Di Matteo (1997), Sundstrom and David (1988), and Bernheim, Shleifer, and Summers (1985). Other important studies include Modigliani (1988), Ransom and Sutch (1986), Nugent (1985), and Henretta (1978).

<sup>3</sup> See Di Matteo (1997), Sundstrom and David (1988), Ransom and Sutch (1986), and Bernheim, Shleifer, and Summers (1985).

bequest motive, citing a positive relationship between total wealth and the number of children as evidence of bequest savings, particularly if impartible settlements were not the norm.<sup>4</sup>

A life cycle motive exists if an individual accumulates assets during her employment in the labor market in order to finance her consumption during retirement, or any period of reduced labor market earnings. For a nineteenth century shop-keeping couple the rationale for a life cycle motive would have been to accumulate assets during their years running the shop in order to finance consumption (live off of their savings) during retirement. Specifically, a shop-keeping couple may build up wealth-holding early in their lives by relying on markets and investing in financial assets, with a plan to live off their savings at retirement (Di Matteo 1997: 924). Wealth-holding, then, could show evidence of life-cycle saving if there is a concave relationship between age and total wealth (Modigliani 1966).

In their study of savings trends, Ransom and Sutch (1986) find that America made the transition from bequest to life-cycle saving in the mid-nineteenth century; parents began to save from current income during peak earning years in order to draw on those savings in old age, rather than depend on their children for old age support. Moreover, their findings suggest that life cycle saving was more conducive to economic growth than bequest saving (Ransom and Sutch 1986). In addition, a study of late-nineteenth century Canadian wealth-holding finds evidence to support the existence of both life-cycle and bequest saving, which indicates that Canada was in the midst of a transition at the end of the nineteenth century (DiMatteo 1997).

### **3. New Evidence of Bequest or Life-Cycle Motives**

I consider evidence of bequest or life-cycle motives for saving in Britain using wealth-holding data on a sample of 332 census-linked probated decedents.<sup>5</sup> The data was collected from the Death Duty and Succession Duty Registers (hereafter registers) for England and Wales.<sup>6</sup> Data on British shopkeepers is the best household

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<sup>4</sup> An impartible settlement is one in which one principle heir is favored to the exclusion of all other claimants. For a discussion of impartible settlements and life-cycle savings, see Di Matteo and George (1998: 26-7), Di Matteo (1997: 915 note 36), Hurd (1987), and Gagan (1976: 129).

<sup>5</sup> All individuals in the sample were married before the 1870 Married Women's Property Act was passed.

<sup>6</sup> The registers consist of handwritten entries covering all duties levied on a deceased person's estate. For tax collection purposes it was necessary for Inland Revenue officers to determine whether a bequest was absolute, conditional, or an annuity in order to distinguish between property that was an individual's legal property to bequeath and the property that merely "passed through them" as bequeathed by others. This allows me to distinguish the property that legally belonged to an individual regardless of whether he or she wrote a will. The records are located at the Public Record Office, Kew, Richmond, Surrey TW9 4DU, United Kingdom: Death Duty, Succession Duty, and Estate Duty Registers, Class IR26,

level data available for examining evidence of savings motives in nineteenth century Britain.<sup>7</sup> Each register entry lists the occupation of a decedent, and shopkeepers typically earn enough to be captured in these records; the registers cover all estates worth over £20 from 1796 to 1881, and subsequently all those over £100, regardless of whether a will was written.

In addition to the life-cycle and bequest motives discussed above, other socio-economic factors may have had an impact on wealth-holding. To determine which factors had the greatest impact on wealth-holding, I use a method that follows DiMatteo (1997) and Pope (1989), who outline a determinants approach and categorize the data into choice and non-choice variables, with the remaining variation in wealth-holding decisions being a function of random forces.<sup>8</sup> Choice variables are socio-economic characteristics that an individual could attempt to alter (DiMatteo 1997, 917). For nineteenth century shopkeepers, choice variables include the total number of children, the number of non-family members in the household, such as boarders, and marital status. Non-choice variables are fixed characteristics that an individual would not be able to alter, such as age and gender. The British Census for the years 1871, 1881, and 1891 provided information on household composition that makes it possible to examine the relationship between wealth, choice, and non-choice variables. Descriptions of the variables and data on variable means are provided in Table 1. I use the data collected on household composition to identify which household characteristics, if any, have the greatest impact on the total wealth of individuals. Similar data are not available in modern public records due to privacy restrictions.

I estimated total wealth with weighted least squares regression, where the weighting variable used in the analysis is the inverse of the age-specific mortality rate.<sup>9</sup> The weight was applied so that younger individuals, because of their lower mortality rate, would receive a heavier weight in the regression than older individuals. The weighting procedure therefore allows the data to better reflect the age composition of the population of

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Volumes for last names beginning with C or D: 1850-1903; Residuary Accounts, Class IR19, Boxes 95-226. Unfortunately, the post-1903 registers do not survive.

<sup>7</sup> W.D. Rubenstein (1971) used these same records to examine the property and occupations of British millionaires, but few others have used the death duty registers, and no one else has linked the information on wealth at death to the census.

<sup>8</sup> Di Matteo (1997: 916-17) and Pope (1989: 152-58).

<sup>9</sup> The estimation method used here follows Di Matteo (1997: 916-19).

shopkeepers at large.<sup>10</sup> As in Di Matteo's study of wealth and asset holding in nineteenth century Canada, the weighted regression technique used here is applied as if the adjusted data were replicated data from a sample survey.<sup>11</sup> The mortality rates used are based on age-specific mortality tables for nineteenth century England obtained from Woods and Hinde (1987).<sup>12</sup>

The results from the estimation of total wealth, which are provided in Table 2, support the bequest motive. As noted earlier, evidence of a bequest motive is thought to exist if there is a positive relationship between total wealth and the number of children, and if impartible settlements are not typical. The coefficient for the total children variable is significant at the one percent level, and indicates that for every extra child, total household wealth increased by 17%. Moreover, of the 332 decedents studied here, only 12 of the estates where the decedent was testate could be classified as impartible; most of the testators studied here left their property to their spouse "for life or until marriage" and then directed it to be divided "equally among all children" after the death or remarriage of the spouse.<sup>13</sup> These results also support the findings of historians, who have argued that shopkeepers resisted the transition from bequest to life-cycle savings, mainly because they depended on their children's labor in the shop: "the small shopkeeper continued to survive by relying on unpaid family help, his wife running the business for much of the day assisted by the children at peak periods" (Winstanley, 1983: 67).

The argument that total wealth may change with age does not seem to be supported by the data: The coefficients for age and age-squared do not provide evidence that life-cycle motives impacted wealth-holding. Additional support for the econometric results comes in the way of data collected on the retirement status of these individuals.<sup>14</sup> While retirement was not unheard of in late nineteenth century Britain, the results from the data collected on British shopkeepers indicate that only thirteen men in the sample were listed as retired

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<sup>10</sup> Di Matteo (1997: 907, 916-19). For references on weighted regression, see Magee, Robb, and Burbridge (1998) and Maddala (1997: 169-172). Anderson (1997) shows that the national average age at death for all occupations was 55 for females and 52 for males.

<sup>11</sup> As Di Matteo (1997: 917, note 46) explains, "suppose the initial model is  $W_i = Z_i'B + v_i$  where  $W_i$  is wealth,  $Z_i$  is the independent variable,  $B$  is the coefficient to be estimated and  $v_i$  is the error term. If the inverse of the mortality rate is defined as a multiplier  $M_i$ , then each observation  $W_i, Z_i$  is replicated  $M_i$  times. The weighted least squares estimator is obtained by applying OLS to the transformed model:  $M_i^{1/2} W_i = M_i^{1/2} Z_i'B + v_i$ ."

<sup>12</sup> Woods and Hinde (1987: 33, Table 1).

<sup>13</sup> Public Record Office Death Duty Registers class IR26.

<sup>14</sup> In their research on the nineteenth century United States, Ransom and Sutch (1986) found that full retirement from the labor force was more common than previously believed. Kotlikoff (1988) notes that the motivation behind life cycle saving

tradespersons in the census or at the time of death; thus, about 91.6 percent of the men in the sample still had some connection to the business until death.<sup>15</sup> In addition, 48.5 percent of the women in the sample either bequeathed business property or had business property “pass through them” to children as directed by the wills of their husbands. These women had either established their own businesses or they had been given the power to run the family business after the death of the husband. The other 51.5 percent of women in the sample either lived off an annuity or other property provided by the will of someone other than the husband (and thus had property to leave to the husband) or they lived off of an annuity provided by the sale of the family business as directed by the will of the husband.

That many of the wives in the sample, after the death of the husband, either ran the family business or were supported by an annuity (typically provided for them from the sale of the family business after the death of the husband) lends further support to the claim that at least one spouse in a shop-keeping household did not retire but rather worked almost until the day one of the spouses died. Moreover, in the majority of the cases where the wife had only a life interest in the sale of the property, she therefore could not consume more than the annuity allowed (she could not sell or give away the principal or dissave). Last, results from a study of the residuary accounts reveal that fewer than one-percent of the accounts show any indication of reinvestment of dividends during widowhood; the individuals studied here supported themselves, not through dissaving, but with the interest earned on their investments.<sup>16</sup> Retirement and dissaving are standard signals for a life cycle motive for saving (Kotlikoff, 1988). Most of the individuals studied here did not retire and did not dissave.

Socio-economic variables that appear to have had an impact on total wealth include the number of daughters at home and the number of boarders at home. The results indicate that for every additional daughter living at home, total wealth decreased by 17%. Daughters living at home after younger siblings had already left

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is that “people save to prepare for retirement when they must dissave and consume. Without periods of retirement, or at least, significant decreased labor earnings at the end of life there is no life cycle motive for saving.”

<sup>15</sup> For example, William Clark was a retired draper (IR 26/8499/289), Austin Dibb was a retired butcher (RG 12/4478/85); and Samuel Dudley was a retired grocer and butcher (IR 26/8510/1587). One interesting exception was Mary Ann Draper, who is listed as a grocer at the time of her death in 1903 (IR 26/8499/272), but whose husband David was listed as a retired grocer in both the 1881 and 1891 census (RG 11/1392/70).

<sup>16</sup> Public Record Office Residuary Accounts, Class IR19, Boxes 19-226.

home may have been considered an economic liability. Boarders, however, increased total wealth; for every additional boarder in the home, total wealth increased by 17%.

#### 4. Conclusion

The results presented here support the bequest motive for saving among nineteenth century British shopkeepers. The life-cycle motive for saving, however, is not supported by the data. That individuals in the sample did not dissave provides further evidence for the bequest and not the life cycle motive. The results indicate that the shopkeepers studied here lived and saved in much the same way as Alfred Marshall had described, “seldom spend[ing], after they have retired from work, more than the income that comes in from their savings, preferring to leave their stored up wealth intact for their families.”<sup>17</sup> These results suggest that nineteenth century British shopkeepers had not yet reached the transition stage between bequest and life-cycle saving, as shown for the case of the United States agricultural sector by Ransom and Sutch.

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<sup>17</sup> Marshall (1920: 228); cited in Menchik and David (1983). For a survey of studies with similar findings with regard to a lack of dissaving in old age, see Di Matteo and George (1998), Kessler and Masson (1989), Kotlikoff (1988), Modigliani (1988), Ransom and Sutch (1986), and King (1985).

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Table 1: Variable Definitions and Summary Statistics

Variable	Definition	Mean
WEALTH	Total Wealth at Death	£1,276.00
LWEALTH	Log of Wealth	6.55
AGE	Age at death in years	61.00
AGE SQUARED	Age at death squared	3,884.00
TOTAL CHILDREN IN/OUT HOME	Total number of children, living inside and outside of home	3.27
NUMBER OF SONS HOME	Number of sons living at home	1.10
NUMBER OF DAUGHTERS HOME	Number of daughters living at home	1.10
NUMBER OF BOARDERS	Number of boarders living in household	0.17
MARRIED OR WIDOWED	1 if married, 0 if widowed	0.47
GENDER	1 if female, 0 if male	0.53

Table 2: Evidence of a Bequest Motive in the Total Wealth of Mid-Nineteenth Century Shopkeepers

The Estimate of Total Wealth was obtained with weighted least squares estimation, where the weighting variable used in the analysis is the inverse of the age-specific mortality rate. The dependent variable is the log of total wealth. Number of observations = 332. Of these 156 are men and 176 are women; 173 are married and 159 are widowed. Adjusted  $R^2 = 0.54$ .

<u>Variable</u>	<u>Coefficient</u>
Constant	2.00 ( 3.58)*
AGE	-0.04 (-1.36)
AGE SQUARED	0.00 ( 0.75)
TOTAL CHILDREN IN/OUT HOME	0.17 ( 4.45)***
NUMBER SONS HOME	-0.07 (-1.08)
NUMBER DAUGHTERS HOME	-0.17 (-2.57)***
NUMBER BOARDERS HOME	0.17 ( 2.13)**
MARRIED/WIDOWED	0.28 ( 1.71)*
GENDER	-0.15 (-0.94)

\* = significant at the 10 percent level

\*\* = significant at the 5 percent level

\*\*\* = significant a the 1 percent level