

Life course pathways to business start-up

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We explore how socially embedded life courses of individuals within Britain affect the resources they have available and their capacity to apply those resources to start-up. We propose that there will be common pathways to entrepreneurship from privileged resource ownership and test our propositions by modelling a specific life course framework, based on class and gender. We operationalize our model employing 18 waves of the British Household Panel Survey and event history random effect logistic regression modelling. Our hypotheses receive broad support. Business start-up in Britain is primarily made from privileged class backgrounds that enable resource acquisition and are a means of reproducing or defending prosperity. The poor avoid entrepreneurship except when low household income threatens further downward mobility and entrepreneurship is a more attractive option. We find that gendered childcare responsibilities disrupt class-based pathways to entrepreneurship. We interpret the implications of this study for understanding entrepreneurship and society and suggest research directions.

Keywords: life course; nascent entrepreneurship; resources; gender; social embedding; class; family

1. Introduction

The study of nascent entrepreneurship has been advancing and recent contributions using panel studies have been particularly influential (e.g. Gartner and Shaver 2012). Nevertheless, methodological, empirical and theoretical problems mean that we have limited understanding of the process of business creation, its antecedents and outcomes, but there has been a growing use of panel studies to research the subject (Davidsson and Gordon 2012). Primarily, current panel studies of nascent entrepreneurship focus on gestation activities just prior to and through start-up (Liao, Welsch, and Tan 2005; Honig and Samuelsson 2012; Van Gelderen, Thurik, and Patel 2011); individual characteristics and motivation (Hechavarria, Renko, and Matthews 2012; Renko, Kroeck, and Bullough 2012); human and social capital that supports the start-up process (Davidsson and Honig 2003; Kim, Aldrich, and Keister 2006); particular industries and contexts (Felina and Knudsenb 2012; Mattare, Monahan, and Shah 2011) or a combination of two or more of these (Dimov 2010; Zanakis, Renko, and Bullough 2012). Most of these studies draw on data collected just prior to and through the start-up process (Gartner and Shaver 2012). Following a methodological critique, Davidsson and Gordon (2012) have argued that

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panel studies offer great potential as a means of researching the start-up process. However, advances are required to model the longitudinal element effectively.

While Davidsson and Gordon (2012) set out a particular methodological challenge to nascent entrepreneurship scholars, in this paper we argue that a somewhat overlooked priority within their agenda is a more thorough social and historical understanding of business creation. This follows multiple calls for a contextual explanation of entrepreneurship (Aldrich and Yang 2012; Welter 2011; Mungai and Velamuri 2011; Kloosterman 2010; Jack and Anderson 2002) and wider sociological theory that conceptualizes individual actions as arising from historical social processes (e.g. Bourdieu 1986). To date, few scholars set nascent entrepreneurship – and phenomena such as resource accrual, human behaviour and motivations – in a longer socio-historical process (Obschonka et al. 2011; Jayawarna, Jones, and Macpherson 2011). This is surprising given that social theorists, such as Bourdieu (1986), alert us to how forms of capital and human dispositions are accrued, gain value and are practiced in social contexts. It also contradicts the multiple calls for an understanding of entrepreneurship as a journey that starts during the formative years of childhood and adolescence (McClelland 1961; Schmitt-Rodermund 2007) and one that accounts for enduring social structures (e.g. Obschonka et al. 2011).

In this paper, we draw on this scholarship to propose that an individual's act of business creation emerges from their experience of socially structured relations that develop across their life course. The particular life course model we propose and test in this paper focuses on the effect of two intersecting social structures (Bradley 1996): class and gender. Our class analysis is influenced by Bourdieu's (1986) forms of capital and his concept of habitus. It focuses on how the process of accruing skills, know-how and wealth, from childhood, affects capacity to start a business later in life. It is our proposition that the socio-economic position of the family that a person is born into affects both their childhood and adulthood resources and that this, in turn, affects their capacity to found a business. To test our proposition that business creation is affected by intersecting social relations, we analyse how a gender division reinforces or disrupts the class-structured pathways to entrepreneurship identified in our primary analysis. Specifically, we model how childcare – a form of household (HH) labour that is widely gender divided (Bradley 2003) – mediates capacity to apply resources gathered over class-based pathways to business creation. To demonstrate the utility of a life course approach, we model the effect of intersecting class and gender relations, as they are experienced across individual and HH life courses, on business start-up. We employ random effect¹ logistic regression on 18 waves (1991–2008) of the British Household Panel Survey (BHPS) and a specific life course framework to guide our analysis. Our findings have implications for understanding of both entrepreneurship and society. Our framework and methodology create important new directions for international research.

In the following sections, we review existing approaches to panel study analysis of nascent entrepreneurship and explore the potential contribution of a life course approach. We then examine knowledge about how business start-up is related to the ownership of two key resources (financial and human capital) and specific life circumstances (career and HH position and role within HH divisions of labour). We employ this literature and social theory to hypothesize class-structured and gender-mediated life course pathways to business start-up. Our primary contribution is to demonstrate the value of a life course framework, operationalized through sophisticated longitudinal modelling of robust panel data, as a means of interpreting the social processes through which business creation emerges. We also make an empirical contribution by proposing and testing a specific life course pathway to business creation formed via the intersecting structures of class and

gender. Fundamentally, we contradict the traditional claims that there are no socio-economic barriers to entrepreneurship. Rather we demonstrate how both class and gender shape entrepreneurial opportunities.

2. Nascent entrepreneurship

Nascent entrepreneurship is widely understood as the resourcing of opportunity that results in business creation (Davidsson and Gordon 2012). This may be within a rational process of drawing on resources to identify, develop and exploit opportunities (Shane and Venkataraman 2000), or a more effectual process of constructing a business out of available resources (Sarasvathy 2001; Keating, Geiger, and McLoughlin 2013). Empirical tests suggest that venture creation can emerge from either or both processes (see Davidsson and Gordon 2012). We know that potential entrepreneurs limit their resource investments creatively by bootstrapping (Jones and Jayawarna 2010). Nevertheless, business start-up is associated with the command of financial (De Clercq, Lim, and Oh 2013), human (Cetindamar et al. 2012) and social capital (e.g. Lee et al. 2011). Tendency to apply resources to business start-up depends on entrepreneurial inclination and wider life or institutional circumstances (Kalantaridis and Fletcher 2012; Jayawarna, Jones, and Macpherson 2011; Kloosterman 2010; Zanakis, Renko, and Bullough 2012).

Start-up results in a variety of forms of activities and contexts and, so, a universal account of business creation is unlikely (Gartner and Shaver 2012). Davidsson and Gordon (2012) reviewed panel studies and found they primarily focus on individual activities and outcomes. The focus has been on the individual traits such as ‘opportunity confidence’ (Dimov 2010), motivation (Renko, Kroeck, and Bullough 2012) or human capital (Kessler and Frank 2009). Studies attempt to isolate gestation activity that explains how some people are successful in navigating the start-up process over time. Dimov (2010) established that ‘opportunity confidence’ is an emerging and evolving judgement that reflects an entrepreneur’s changing appreciation of the likelihood that their efforts would succeed. Resources that the nascent entrepreneur brings to the venture are fundamental to the way in which they make sense and engage in the process (Davidsson and Honig 2003; Kim, Aldrich, and Keister 2006): to develop and implement business plans (Honig and Samuelsson 2012; Van Gelderen, Thurik, and Patel 2011), to manage emerging problems (Kessler and Frank 2009) or to understand, navigate and get support from institutional and social environments (Zanakis, Renko, and Bullough 2012). These findings, which rely on panel studies, confirm the idea that start-up is a complex and demanding endeavour involving a broad range of activities (Samuelsson and Davidsson 2009) that are resource intensive (Gartner and Shaver 2012). Only rarely do studies relying on panel studies tell us how individuals engage in social settings to accrue the resources necessary to engage in nascent entrepreneurship (Felina and Knudsen 2012).

The scarcity of research into the social antecedents of nascent entrepreneurship is at least partially influenced by the tendency to conceive of entrepreneurs as heroic individuals (Hughes et al. 2012; Ahl 2006) whose specific skills and abilities are individual capacities (Schumpeter 1934). Two methodological problems also contribute. First, there is uncertainty about the analytical methods that can support complex social analysis (Jack and Anderson 2002). Second, data in panel studies of nascent entrepreneurs do not capture, in time, the factors or contexts that led to nascent entrepreneurship. Contemporary studies *have* related regional or national rates of entrepreneurship to variations in institutions (Coomes, Fernandez, and Gohmann 2013; Linan, Urbano, and Guerrero 2011; Gohman 2010; Naudé, Santos-Paulino, and McGillivray 2008). The effect that institutions have on

resource leverage at start-up is also being studied (Pathak, Xavier-Oliveira, and Laplume 2013; De Clercq, Lim, and Oh 2013). However, longitudinal analyses of the start-up process situated within broader historical social contexts are scarce (Hopp and Stephan 2012), and many fail to employ the longitudinal element effectively (Davidsson and Gordon 2012). The influence that social institutions have on individuals and entrepreneurial outcomes over time is not widely modelled.

2.1. Life course frameworks and pathways to entrepreneurship

When entrepreneurs accrue and apply resources to a perceived opportunity, or create an opportunity from available resources, they act from a social position that is governed (but not determined) by multiple and intersecting social divisions (Bradley 1996). Knowledge about appropriate actions and available opportunities is embedded in our habitual understanding of ourselves (Bourdieu 1986). Even when decisions become more reflexive they are taken with (fallible) cognizance of social and personal consequences (Brandstater and Lerner 1999; Archer 2000). The complexity of the structure-agency problem means that sociologists must take a holistic approach to studying human behaviour, observing how social roles are constituted through social structures and associated institutional mechanisms, and how humans navigate multiple and dynamic social roles (Vondracek and Profeli 2002). Life course studies enable us to frame research in models that explore how individual actions are influenced by the context of multiple social factors, over time (Heinz 2002; Mayer 2009; Reynolds 1991). By understanding an individual's behaviour as emergent across multiple domains, such as family and work (Moen and Sweet 2002), and across time, we can identify the action frames (Heinz 2002) from which individuals risk business creation. Life course analysis has been widely employed in the social sciences (Mayer 2009; Chen and Korinek 2010) to explore work biographies (Heckhausen and Schulz 1999), transitions (Halaby 2004) and vocational behaviour and development (Vondracek, Lerner, and Schulenberg 1986). Like much of the recent research on nascent entrepreneurship, life course analysis is often operationalized by modelling panel data (Obschonka, Silbereisen, and Wasilewski 2012; Kessler and Frank 2009).

In proposing a life course framework to explore nascent entrepreneurship, we thus expand the time frame and factors to be considered when understanding the process. We also join a small, but growing cohort of entrepreneurship scholars who argue that life course analysis offers a framework for researching the social embeddedness of entrepreneurship (Obschonka et al. 2011; Schoon and Duckworth 2012; Davis and Shaver 2012; Jayawarna and Rouse 2012; Jayawarna, Rouse, and Kitching 2013). For example, studies have demonstrated that childhood and adolescence are important times for developing entrepreneurial competence (Schmitt-Rodermund 2007), and early adolescent competence contributes to entrepreneurial success (Obschonka, Silbereisen, and Wasilewski 2012). Through life course analysis, the embeddedness of entrepreneur motivations for sustaining business ownership in career and HH life courses has also been demonstrated (Jayawarna, Rouse, and Kitching 2013). By developing life course frameworks we can examine the effect of historical and intersecting social processes on an individual's capacity to draw on resources to start a business. Life course frameworks encourage us to draw our analysis together so that we can define pathways to particular entrepreneurial outcomes and identify their social antecedents. It enables us to comment on the nature of wider society, and the effect of entrepreneurship on this, as well as about entrepreneurship itself. We cannot capture the complexity of pathways into, and through,

entrepreneurship in one study and, so, different life course frameworks could (and should) be developed and modelled.

2.2. The effect of class and gender on business creation: a life course framework

A number of researchers have argued that parental resource capacities influence entrepreneurial destinations (Aldrich, Renzulli, and Langton 1998; Jack and Anderson 2002). Quantitative assessments of the relationship between resource ownership and start-up have, however, only studied the effect of resource ownership at the point of start-up (e.g. Cetindamar et al. 2012; Hanlon and Saunders 2007; Davidsson and Honig 2003). The notable exception focuses exclusively on start-up by young people (Schoon and Duckworth 2012). Other research analyses later phases in the business life course and models outcomes such as business growth and earnings, rather than start-up (Davis and Shaver 2012; Jayawarna and Rouse 2012; Jayawarna, Jones, and Macpherson 2011). Thus, a research gap remains in understanding the life course pathways through which people accrue the resources necessary to start a venture.

In this study, we employ a strong definition of business start-up: transition to business ownership as a primary job. This is distinct from individuals dreaming of, or taking early actions towards, owning their own businesses. It is also different from team or firm-level resources and transitions that represent a different (and interesting) level of analysis (Davidsson and Gordon 2012). Our aim is to move beyond understanding who becomes an entrepreneur to explore how social processes, as they are experienced across life courses, influence some individuals (and not others) to have the resources and motivation to be involved in creating a business that becomes their main source of income.

We particularly focus on the effect of class and gender on pathways to entrepreneurship. Our concept of class relies on the scholarship of Bourdieu (1986). He significantly advanced sociological theory by showing how a person's early environment (their habitus) influences their dispositions and their related awareness of how to conduct themselves to 'play the game' in adult life. He also demonstrated how habitus are class divided (Sayer 2011). Bourdieu argued that the capital we accrue in childhood is appropriate to reproduce our position within the environment to which we are born. Parents with higher socio-economic status transfer tangible and intangible resources that form a habitus that will attract prosperous future returns when children come to form careers in professional fields and seek marriage partners from similar backgrounds. In contrast, parents from lower socio-economic backgrounds transfer the habitus of non-professional employment; this has currency within lower class occupations and marriage markets, but does not enable displays of credibility in higher class contexts. Thus, the capacity of families to transfer resources to the next generation (inter-generational transfer) depends on their own socio-economic status and life chances (Roberts 2001). Bourdieu's theory helps us to see that the resources accrued in childhood have life long and cumulative effects. Bourdieu conceptualized several forms of capital that are accrued and transferred. However, data limitations mean that in this study we focus on two forms of capital in our framework of class-structured life course pathways to entrepreneurship. These are human capital (knowledge and skills) and financial capital (monetary resources).

As social structures are intersecting (Bradley 1996), our life course framework proposes that the effect of class inheritance on business creation is mediated by gender relations. In particular, our framework proposes that gendered divisions of HH labour will affect capacity to apply class-structured privilege to entrepreneurship. Gendered

divisions of HH labour tend to cast men as primary breadwinners and women as primary carers (Bradley 2003). This tends to resource men with more time and spatial mobility to commit to entrepreneurship than women (Ekinsmyth 2013) and to promote greater economic motivation among men (Jayawarna, Rouse, and Kitching 2013). We propose that breadwinners will have greater capacity to apply their class and gender privileges to business start-up while carers will be discouraged from doing so. We attribute this effect theoretically to gendered divisions of labour and, so, argue that gender intersects with class processes to create mediated outcomes. Such complex analysis is necessary to understand business start-up as situated simultaneously in the life courses of careers and families (Davis and Shaver 2012). Below we review related evidence and form hypotheses.

2.2.1. Parental influence on childhood accrual of resources

Sociologists have established, through theoretical argument and empirical observation, that parents tend to invest in their children by passing on their knowledge, values, networks and wealth to create childhood opportunities and to form adults with particular social positions and cultural orientations (Bourdieu 1986; Roberts 2001). A parent's capacity to transfer privilege depends on the resources they have already accrued, or can access. This capacity depends on the social structures that have governed their own life courses (Roberts 2001; Anderson and Miller 2003). In our life course framework we treat parental resources as potential childhood resources and analyse childhood resources as the beginning of class-structured pathways to entrepreneurship. We model the effect on business start-up of three forms of childhood resources: parental occupational status, family wealth and childhood education.

Parents in business pass valuable experiences, confidence and other elements of managerial human capital to their offspring, increasing the likelihood that they will pursue entrepreneurial careers (Zellweger et al. 2012; Laspita et al. 2012). This intergenerational link is important because it is widely reported that the children of entrepreneurs have a greater likelihood of start-up than their contemporaries (see Schoon and Duckworth 2012; Kim, Aldrich, and Keister 2006). Growing-up in a family that owns a business is a particularly strong predictor of entrepreneurship through business creation or joining a family business (Niittykangas and Tervo 2005). This transition effect may be particularly strong for the young (Mungai and Velamuri 2011; Greene, Han, and Marlow 2013). Although it is not fully understood (Aldrich and Kim 2007; Aldrich, Renzulli, and Langton 1998; Dunn and Holtz-Eakin 1996), researchers propose that parents in business pass role modelling, experience and confidence that support entrepreneurship (Laspita et al. 2012; Zellweger et al. 2012; Greene, Han, and Marlow 2013). This has a material effect on start-up behaviour, creating a different pattern of start-up activities among the children of entrepreneurs (Barnir and McLaughlin 2011). Less well understood are the effects of parents' employee occupations on future entrepreneurship. However, parents in successful careers are likely to encourage their children to gain credentials and transmit positive attitudes about employment to their children (Mortimer, Lorence, and Kumka 1986). According to Bourdieu's (1986) notion of habitus, they also transmit embodied knowledge about appropriate ways of behaving and strategically orientating yourself in higher yielding professional environments. We can therefore assume that parents in higher socio-economic occupations will pass on knowledge, dispositions and network capacities useful to entrepreneurship. Thus, we expect that:

H1a: A parent's higher occupational class, or entrepreneurial status, is positively associated with higher propensity to start a business in adulthood.

Parents also transfer their wealth and this is a vital entrepreneurial resource (Cassar 2004). Liquidity constraints mean that private finance is the most commonly used and, often, the primary source of finance at start-up (De Clercq, Lim, and Oh 2013; Kim, Aldrich, and Keister 2006; Fraser 2004). The wealthy have most ready access to personal finance and, consequently, their start-up rates are higher (Cetindamar et al. 2012), regardless of the condition of local financial institutions (De Clercq, Lim, and Oh 2013). This seems to reinforce the argument that entrepreneurship is heavily reliant on resources at hand (see Keating, Geiger, and McLoughlin 2013). For men at least, receiving a windfall such as an inheritance can trigger start-up (Georgellis, Sessions, and Tsitsianis 2005; Burke, FitzRoy, and Nolan 2002). The impact of wealth and windfalls decreases with greater wealth accrued (Georgellis, Sessions, and Tsitsianis 2005; Burke, FitzRoy, and Nolan 2002). This is probably because the wealthy favour investment to the effort of business ownership (Kim, Aldrich, and Keister 2006). However, parents may fund businesses if children are threatened with downward mobility due to low academic achievement (Ram et al. 2001; Western and Wright 1994), or to continue a family tradition of business ownership (Dunn and Holtz-Eakin 1996). Most business starters do not report direct mobilization of an inheritance (Aldrich, Renzulli, and Langton 1998), but family transfers can take the form of savings, property or investments accrued via gifts, soft loans or investments. Schoon and Duckworth (2012) found that family transfers are particularly important in tipping young women into self-employment. Therefore, it is our proposition that:

H1b: Higher levels of family wealth in childhood are associated with higher propensity to start a business in adulthood.

Parents with higher occupational status also transfer knowledge and learning behaviours that support educational achievement (Roberts 2001). They consequently affect human capital, which is the knowledge and skills acquired through formal and informal learning (education and work/life experience) that resides within individuals (Becker 1964). Early childhood education sets the foundation for productive education in later childhood (see Cunha et al. 2006) and engagement in continuous adult learning (Obschonka, Silbereisen, and Wasilewski 2012). Although relatively little is known about how entrepreneurial skills develop from childhood (Obschonka, Silbereisen, and Wasilewski 2012), Cetindamar et al. (2012) found that young people are more likely to start-up if they have a good basic education (Cetindamar et al. 2012). Schoon and Duckworth (2012) found that boys with low educational attainment at age 10 have greater entrepreneurial intention, but no significantly higher rate of business creation at age 34. Thus, entrepreneurship as a way of compensating for low-levels of human capital does not seem to be effective. Rather, we expect that business start-up requires basic literacy, numeracy and reasoning skills to make sense of opportunity and engage in activities such as winning work, attracting funding and complying with regulation. We, therefore, propose that:

H1c: Completing a basic school education is positively associated with higher propensity to start a business in adulthood.

2.2.2. *Adulthood accrual of resources*

Sociological theory (e.g. Bourdieu 1986; Roberts 2001) and evidence (e.g. Hebson 2009; Naylor, Smith, and McKnight 2002) suggest that an individual's ability to continually

accrue resources in adulthood is affected by the class of the family of origin. Class pathways are created by a family's socially situated ability to directly transfer financial and social resources to their adult children. More indirectly, it relates to the skills, dispositions and credentials inculcated in childhood that are mobilized during adulthood in the labour market (Falck, Heblisch, and Luedemann 2012). Therefore, it seems sensible to assume that money, knowledge and skills accrued within adulthood are at least partly the result of life course pathways from childhood privilege.

It is already argued that people with better education and experience have greater entrepreneurial intention (Kim, Aldrich, and Keister 2006). Higher levels of education develop the critical thinking, effective communication and sound decision-making skills (Gupta and York 2008) needed for complex, innovative or ambitious business formation (see Davidsson and Gordon 2012). When parents socialize children to achieve in education, they are also developing attributes useful to start-up, such as ambition, perseverance and drive for achievement (Kim, Aldrich, and Keister 2006).

Educational credentials are not simple determinants of entrepreneurial competence (Nahapiet 2011). There are claims that start-up is more likely from a low human capital base (Henley 2007), although evidence is inconsistent (see Davidsson and Honig 2003; Kim, Aldrich, and Keister 2006). Since the educated face a higher opportunity cost for foregoing employment (Petrova 2012), they may only start businesses with high earning prospects (Cassar 2006). This has a confounding effect on the statistical relationship between education and entrepreneurial entry (Davidsson and Gordon 2012; Unger et al. 2011). Despite this, we expect that higher levels of education will have a generally positive association with business start-up. Moreover, when education is allied to work experience, it creates 'experience corridors' (Doyle Corner and Ho 2010) that are valuable when applied to related businesses (Zanakis, Renko, and Bullough 2012). Relevant work experience supports opportunity recognition, speed of development and progression in the start-up process (see Marvel 2013; Dimov 2010; Capelleras et al. 2010). Education and experience may, more generally, support entrepreneurial practice in understanding resources and shaping opportunity under conditions of uncertainty (see Keating, Geiger, and McLoughlin 2013). It may also support the key start-up processes of building resources, creating marketing and service capability, and continuous learning (Zhao, Song, and Storm 2013). Thus, we expect that skills and experience gained in work will support business creation. This leads to our hypothesis that:

H2a: The accrual of higher levels of education and work-related human capital in adulthood is positively associated with higher propensity to start a business some years later.

We expect that wealth accrued in adulthood, through family transfers and higher occupational careers, is an important means of funding the infrastructure and working capital of a new business. Indeed, we know that business starters are so dependent on personal finance that they rarely even approach a bank for funding (Campbell and De Nardi 2009; Cassar 2009). The positive relationship between self-employment and rising house prices (Saridakis, Marlow, and Storey 2014) reflects dependence on personal wealth. We thus propose that:

H2b: Acquiring wealth in adulthood is positively associated with starting a business some years later.

2.2.3. *The mediating effect of labour market opportunities and returns*

Drawing on wider social theory (e.g. Bourdieu 1986) and empirical evidence (e.g. Naylor, Smith, and McKnight 2002), we argue that the class process of transmitting resources inter-generationally in childhood and adulthood creates the resources that fuel higher labour market positions. Thus, our life course framework proposes that greater labour market opportunities and returns in later adulthood emerge from and reinforce pathways of privilege from childhood.

Our proposition that entrepreneurship is strongest from cumulative class pathways is supported by evidence that start-up is most commonly made by people satisfied with their jobs (Schjoedt and Shaver 2007; Henley 2007). Thus, in a non-recessionary period, four times as many Americans started ventures for life-enhancing opportunities rather than low employment prospects (Minniti and Bygrave 2004). Employment or self-employment experience involves exposure to niche business ideas and the accumulation of resources needed to exploit opportunity (Rauch, Frese, and Utsch 2005; Burke, FitzRoy, and Nolan 2002). Labour market success may also create wealth that supports business investment and funds HH expenses while a business is established. So, even though employment success creates a potential opportunity cost, it also creates a firm foundation for start-up (Cassar 2006) and will promote business creation. In our life course framework we propose that positive experience in the labour market in the 2 years prior to start-up will mediate class effects on entrepreneurial pathways:

- H3a: The class effects of childhood resources on entrepreneurial pathways are positively mediated by higher labour market opportunities and returns 2 years prior to start-up.
- H3b: The class effects of adulthood resources on entrepreneurial pathways are positively mediated by higher labour market opportunities and returns 2 years prior to start-up.

2.2.4. *The mediating effect of HH resources and roles*

The entrepreneurship literature has been widely criticized for constructing the entrepreneur as an individualized ‘mythical hero’ (Ahl 2006) when, in fact, entrepreneurship is a social phenomena (Dodd and Anderson 2007) embedded in the family (Davis and Shaver 2012; Saridakis, Marlow, and Storey 2014; Jayawarna, Jones, and Macpherson 2011; Jennings and McDougald 2007; Aldrich and Cliff 2003). In the sociological literature, it is well established that ‘households of destination’ affect individual resource availability (see Bihagen 2008). However, life course models of business start-up have not yet modelled how HHs formed in adulthood might extend, or interrupt, the resources that were available from individual’s families of birth, suggesting a significant research gap.

HH resources vary widely and there is a particular division between dual career, occupationally privileged couples and work-poor HHs. These extremes are relatively common because people tend to partner with individuals of a similar social background (Bonney 2007). When this occurs, class divisions caused by inter-generational transmission processes are reproduced and extended (Roberts 2001). In small business, we know that the resources of HHs and new ventures are commonly intermingled (see Werbel and Danes 2010) and that personal finance is crucial at start-up. Kim, Aldrich, and Keister (2006) found that, in the USA, HH financial capital was unrelated to start-up. This may be due to high availability of external finance, and willingness to risk borrowing, in

pre-recession America (Cetindamar et al. 2012). In the UK we know that HHs with low incomes feel they have fewer resources to start-up (Rouse and Jayawarna 2011). Thus, we expect that adult HH circumstances will affect motivation to apply resources to business start-up and so have a mediating effect on individual class pathways to entrepreneurship. We expect that HH wealth is emergent from privileged individual class pathways and will reproduce and extend these pathways to business start-up. However, when this process is disrupted, and HH incomes are low, we expect that individual class-based pathways to entrepreneurship will be disrupted. Thus, we propose that:

H4a: Lower HH income negatively mediates the effect of class resources accrued in childhood on entrepreneurial pathways.

H4b: Lower HH income negatively mediates the effect of class resources accrued in adulthood on entrepreneurial pathways.

An individual's HH role is also likely to affect capacity to apply resources to business start-up. It is well established that gendering processes create sexual divisions of labour in HHs. Men and women are socialized to accept different HH and labour market roles and institutions reward and support their labour differently, creating a sexual division of labour (Bradley 2003). Heavy domestic roles tend to reduce women's entrepreneur labour capacity at particular points in the life course, while light domestic duties facilitate men's availability for entrepreneurial labour (Forson 2013; Jayawarna, Jones, and Macpherson 2011; Rouse and Kitching 2006). This effect varies within individual lives and across HH life courses (Ekinsmyth 2013; Saridakis, Marlow, and Storey 2014). Complicating this effect, both men and women in Western cultures are driven by economic imperatives (Saridakis, Marlow, and Storey 2014). Davis and Shaver (2012) found that, in the USA, nascent entrepreneurs who are mothers have a high growth intention. This may reflect a low social security net (see Saridakis, Marlow, and Storey 2014) and mothers' entrepreneurial practice may still be hampered by gendering processes that increase domestic demands (Ekinsmyth 2013; Forson 2013). Schoon and Duckworth (2012) found that girls' educational achievement at 10 is negatively associated with start-up early in the life course. There may be a confounding effect here if educated women in their childbearing years favour employment due to its greater provision of maternity and childcare protection (Klyver, Neilsen, and Evald 2013). Thus far, there has been no systematic attempt to test how HH roles affect the application of resources built up through privileged class pathways (in both childhood and adulthood) to business start-up. This is despite evidence that gendered family responsibilities play a significant mediating role in institutional careers (Castelman, Coulthard, and Reed 2005; Hostetler, Sweet, and Moen 2007). To begin to test this effect, we propose that more childcare responsibilities will negatively affect class-based pathways to business start-up.

H4c: Higher childcare responsibilities prior to start-up negatively mediate the effect of class resources accrued in childhood on entrepreneurial pathways.

H4d: Higher childcare responsibilities prior to start-up negatively mediate the effect of class resources accrued in adulthood on entrepreneurial pathways.

3. Research framework

Panel studies bring methodological advantages. These include reduced survivor, hindsight and memory decay bias. Also, improved tests of causality are enabled by

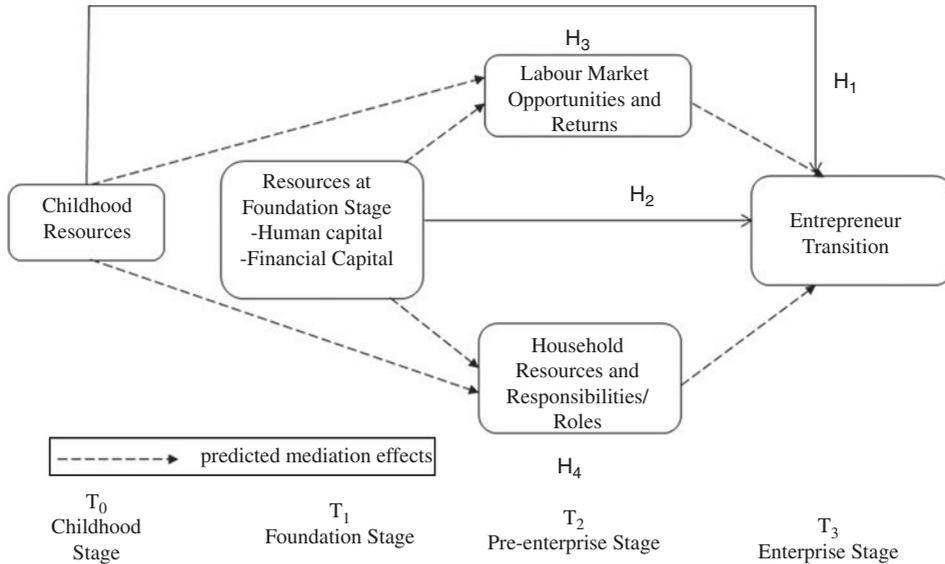


Figure 1. Resource-based life course model of entrepreneur transition.

separation in time of dependent and independent variables and time variance of independent variables (see Davidsson and Gordon 2012). Such time variance is particularly important when modelling the ‘slipperiness’ of context and human capital (Saridakis, Marlow, and Storey 2014). We have designed our model to operationalize our life course framework regarding the effect of two social divisions on the business start-up process: class structuring caused by inter-generational transmission of resources and the gender effect of divisions of domestic labour (Figure 1). First, we predict that resource accrual in childhood (T_0) and at an adulthood ‘foundation stage’ (T_1)² are embedded in class-structured pathways and predict business founding (T_3)³ (our dependent variable). We also propose that, at a ‘pre-enterprise stage’ (T_2)⁴, three displacement factors – pre-enterprise labour market opportunities and returns, HH income and childcare responsibilities – affect capacity to apply class-structured resources to start-up. They, thus, act as mediators to the individual resource pathways. We conceptualize how two of the mediators (labour market opportunities and returns and HH income) reinforce class-structured pathways of privilege. We argue that childcare responsibilities are embedded in divisions of domestic labour that are structured by gender relations that intersect with, and extend or disrupt, class pathways. Our integrated life course framework creates a greater contribution than our hypotheses in isolation: we propose that entrepreneurship emerges from experience of the intersecting effect of class-structured pathways and a disruptive gender effect.

4. Research design

We test our research framework employing longitudinal analysis drawing on a secondary data source, the BHPS. HH panel data enable rigorous exploration of the contextually sensitive questions raised by life course studies (Halaby 2004). The BHPS

employed stratified random cluster sampling to develop its initial sample to be representative of British HHs. In its first year (wave 1) a total of 10,264 were interviewed, covering 5505 HHs. Each year, the original sample and new members of the original sample HHs are questioned via a telephone or postal questionnaire. Sample attrition rates in the BHPS are low (Uhrig 2008); for more information see <http://www.iser.essex.ac.uk/bhps>.

We take our data from waves 1 to 18 of the BHPS, covering 1991–2008. Our sample is selected on five criteria. First, we excluded booster samples employed periodically within the BHPS to promote complete data across waves. Second, we removed proxy interviews to avoid a large amount of missing data. This leaves a starting sample of 9613 cases. Third, we included only individuals of working age (aged 18–65 in wave 12), but not retired by 2008. This reduces the sample by 28.5%, leaving 6874 cases. Fourth, to ensure business founding is compared with employment careers, individuals with no economic activity during Time 3 are excluded, reducing the sample size to 5157. Fifth, we excluded the 365 respondents in business 2 years prior to first reporting entrepreneurship in the observed career period to ensure modelling of business start-up. The final sample size is 4801.

4.1. Model estimation

We used event history analysis in its discrete time version (Allison 1984) to estimate the direct and mediating effects of resources and displacement factors on the probability of business start-up. The logistic specification follows the principles of random intercept modelling that accounts for unobserved heterogeneity at the individual level. The model estimation used Full-Information Maximum Likelihood Method, as implemented in the package STATA 11, using Gaussian quadrature with the number of evaluation points in the Hermite integration formula set to 30⁵ (Butler and Moffitt 1982). The data were reorganized to change the unit of analysis from person to person-years.⁶ The data-set included both time constant and time-varying variables. We used Baron and Kenny's (1986) recommended conditions to establish mediation. The underlying model in its general specification can be written as follows:

$$\log \left[\frac{Y_{it}}{1 - Y_{it}} \right] = \alpha + \sum_{g=1}^G \beta_g \cdot X_{it} + \sum_{k=1}^K \gamma_k \cdot z_{it} + \sigma \cdot Q_i + \varphi \cdot R_i + \omega_i,$$

Y_{it} is the conditional probability of an individual entering into entrepreneurship at time (in years) $t = 1 \dots, T$ for the individual $i = 1 \dots N$, α is a constant, X is a vector (size G) of time-varying and static resource variables measured at T_0 and/or T_1 for individual i at time t , Z is a vector (size K) of time-varying and static labour market return variables and/or HH resource and responsibility variables measured at T_2 for individual i at time t . To manage unobserved heterogeneity, variables for age (Q) (time invariant measured at the beginning of T_2) and sex (R) (a dummy variable) were included as controls for every individual i . β , γ , σ and φ are the parameter estimates for the impact of the relevant explanatory variables on the probability of being a business founder. ω_i is the individual level random residual to measure the unobserved heterogeneity which is assumed to be iid⁷ according to a multivariate normal distribution with $E(\alpha_i) = 0$; $\text{Var}(\alpha_i) = \tau^2$ and independent of all other explanatory variables in the model.

4.2. Model design and operationalization

We have focused on variables most frequently cited in the literature. Since we relied on a secondary source, ideal measures and scales were not always available. We used some single item measures (relating to control variables and entrepreneur status) and a number of reflective multi-item measures (relating to human capital, financial capital, labour market returns, HH income and childcare responsibilities). In general, the variables were structured such that higher scores indicate greater amounts of human and financial capital, labour market returns and HH income, and care responsibilities thought to be more favourable to running a business (i.e. higher HH income and few or no childcare responsibilities).

4.3. Measures

4.3.1. Dependent variable

Our dependent variable is business start-up. We studied career trajectories of every individual in the selected sample for over 5 years (2004–2008) to detect business start-up. We coded those whose main job had transitioned from employment to business ownership during the 5-year period as 1, and 0 otherwise.

4.3.2. Independent variables

Childhood resources were measured using three indicators: parental socio economic status, type of school attended as a child and school level education. *Parent occupational status* was measured using a reduced version of the Goldthorpe scale (Vandecasteele 2011) with six categories: higher professional managerial, lower professional managerial, routine non-manual, skilled manual, unskilled manual and self-employed. The measure related to the father's occupational status, as is the convention, but we used the mother when the father was absent. We used the *type of school the child attended* as a proxy for the financial resources in childhood. Here a nine category variable was recoded to create a dummy variable with 1, fee paying school; 0, otherwise. *School level education* was measured using two indicators: 'school leaving age' and 'possession of a listed school qualification' (1, yes; 0, no). These two indicators were used as proxies to measure parental influence to achieve basic school level education.

Most measures relating to the foundation and pre-enterprise phases were collected annually during the determined 5-year periods and, so, vary with time.⁸ The measure for human capital at T_1 included three indicators: highest academic qualification, on-going training and work experience. To measure *highest academic qualification*, the eight-category BHPS question was re-coded into three categories following Vandecasteele (2011): (1) no/low formal education (including lower secondary education) (2) medium education (including higher secondary education), (3) high level of education (university degree/higher degree). Receipt of *on-going training* was a binary measure (1, yes) in the BHPS which asked whether respondents received any training (job related or other). We measured *work experience* by aggregating the number of years in employment (including self-employment) and calculating this as a percentage of total years in T_1 (5 years if no missing values).

We measured financial capital at T_1 using three indicators: savings, income and home ownership. *Savings* was a dummy variable relating to whether the respondent made savings. We measured *total income* by summing a number of income sources measured in the BHPS. The value was log transformed to induce normality. *Home ownership* was a

categorical measure indicating type of accommodation: rented, mortgaged and owned outright.

To measure pre-enterprise labour market returns, we used two indicators: labour income and economic activity. We generated a *labour income* variable through log transformation of total labour income. *Economic activity* was measured using the BHPS question ‘current economic activity’. We treated those who reported being in paid employment or in self-employment⁹ as economically active for that year and others as inactive.

HH resources and responsibilities were measured using two indicators: HH income and freedom from childcare. We developed a *HH wealth* measure by calculating HH income per adult. This measure was log transformed to induce normality. *Freedom from childcare* was measured employing a BHPS question that asked ‘who is responsible for childcare?’ with possible responses of 1 – mainly responsible to 4 – someone else is responsible. From this we developed three categories: (1) respondent takes the main childcare responsibility, (2) share responsibility and (3) someone else take responsibility/no children. Gender (male, 0; female, 1) and age (in years) were used as controls.

5. Results

We report results from the random effect logistic regression specifications (see Table 1) used to measure direct and mediation effects proposed in Figure 1. Models 1 and 2 test the effect of resources in childhood (T_0) and at the foundation stage (T_1), respectively, on business founding at T_3 .¹⁰ Models 3–8 incorporate the mediation effect of labour market returns, HH income and childcare responsibilities at T_2 on the effect that childhood resources at T_0 (models 3–5) and adult resources at T_1 (models 6–8) have on business founding at T_3 .¹¹

According to model 1, business start-up is significantly related (at least at $p < 0.01$) to all measures of human and financial resources at childhood. Having parents with higher professional managerial occupations is positively associated with business founding. The lower a parents’ occupational status, the lower the chance of starting a business. Respondents with self-employed parents, however, are more likely to enter entrepreneurship than children with parents from any other occupational group. These results provide strong support for H1a. As predicted in H1b, a higher level of wealth in childhood, measured in terms of funding private school fees, is also a strong and significant ($p < 0.000$) predictor of business ownership in adulthood. Both school level education measures – having a school qualification and higher school leaving age – are also highly significant determinants of start-up ($p < 0.000$) giving strong support for H1c.

Adulthood occupational status at T_1 (model 2) is, like childhood parental occupational status, positively associated with business founding; each rung up the occupational level increases the chance of start-up. Prior entrepreneur experience is even more strongly related to new business founding¹² ($p < 0.000$). Of the other three human capital variables studied, only one measure – work experience – is a significant determinant of start-up; having higher qualifications and receiving on-going training is unrelated to business founding. These together provide partial support for H2a. Ownership of all forms of wealth acquired in adulthood is positively associated with business entry: high income ($p < 0.01$), being a saver ($p < 0.01$) and outright home ownership ($p < 0.05$). Thus, H2b is fully supported.

Models 3–8 test the mediation effect of labour market returns, HH income and childcare responsibilities 2 years prior to start-up on the relationships between resources at

Table 1. Random effect logistic regression models for the effect of resource, labour market returns and HH resources and responsibilities.

Variables	Main effect models				Mediation effect models			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Control variables								
Age	0.088***		.101***	0.104***	0.084**	0.087***	0.102***	0.091***
Sex	-2.814***		-2.474***	-2.996***	-2.849	-1.741***	-2.193***	-2.150***
Explanatory variables								
<i>Resources at childhood (T_0)</i>								
Parental occupational status - T_0 (ref: high professional managerial)	-0.333		-0.215	-0.367	-0.285			
Routine non-manual	-0.939*		-1.124*	-0.927*	-1.033*			
Skilled manual	-1.045**		-1.142**	-0.984**	-1.087**			
Unskilled manual	-1.685***		-1.782***	-1.544***	-1.762***			
Self-employed	1.198*		1.037 \wedge	1.266*	1.017 \wedge			
Fee paying school	1.828***		1.752***	1.849***	1.751***			
Financial resources - T_0	0.085**		0.071*	0.066*	0.057*			
School leaving age - T_0	1.176***		1.241***	0.858**	1.192***			
Listed school qualifications - T_0								
<i>Resources at foundation stage (T_1)</i>								
Highest academic qualifications - T_1 (ref: high)		-0.278				-0.221	-0.276	-0.321
Low		-0.604				-0.701	-0.701 \wedge	-0.668
Medium		-0.043				-0.187	-0.058	-.125
High		0.127*				0.108 \wedge	0.113 \wedge	0.122 \wedge
Low professional managerial		-0.146				-0.042	-0.052	-0.163
Routine non-manual		-0.979**				-1.314**	-0.953*	-1.060**
Skilled manual		-1.112**				-1.512***	-0.989*	-1.052*
Unskilled manual		-1.276***				-1.687***	-1.216**	-1.139**
Self-employed		3.488***				3.402***	3.256***	3.900***

T_0 and T_1 on business founding. For this, we followed the conditions of mediation suggested by Baron and Kenny (1986). Condition 1 is largely supported for all childhood resources (model 1) and most resources held in the foundation stage, as outlined above. Condition 2 is also strongly supported by significant relationships between most resource variables and the mediators (results are not shown). Condition 3 is supported by significant relationships between mediating variables (labour market opportunities and returns, HH income and childcare responsibilities) and business start-up. Higher labour income ($p < 0.01$) and economic activity ($p < 0.01$) are strongly related to business founding in models 3 and 6. Having higher HH income ($p < 0.05$) is negatively related to start-up in models 5 and 8. Relative freedom from childcare responsibilities is significantly ($p < 0.01$) and positively related to business entry in models 4 and 7.

Condition 4 depends on comparing model 1 with models 3–5 and model 2 with models 6–8. This indicates that only some childhood resources are mediated by labour market and HH conditions prior to start-up; thus H3a, H4a and H4c are partially supported. Having a parent with a higher occupational status and wealth is strongly related to business founding in T_3 , irrespective of the influence of pre-enterprise labour market returns, HH income and childcare responsibilities ($p < 0.01$). The only mediation effect present is partial and relates to the influence that pre-enterprise labour market returns have on parental self-employment status. Positive labour market experiences, low HH income and relative freedom from childcare reduce coefficients for school leaving age, suggesting they mediate the relationship between higher school leaving age and start-up. The effect of having a school qualification is also partially mediated by relative freedom from childcare. High labour market returns and low HH income partially mediate the association between having self-employed parents and business entry. Overall, the results suggest that childhood financial resources and parental occupational status have a direct effect on business founding in T_3 ; the only exception is that the effect of parental self-employment is partially mediated by pre-enterprise conditions. The effect of childhood human capital is partially mediated by pre-enterprise labour market returns, HH income and childcare responsibilities.

The effect of only some adulthood resources is altered by pre-enterprise conditions. HH conditions have a more consistent mediation effect than labour market conditions. Higher adulthood occupational status at T_1 is still positively associated with start-up, and the effect of work experience is only partially mediated by labour market opportunities and returns at T_2 . Taken together, the evidence does not provide support for H3b. As depicted in models 7 and 8, the effect of higher adulthood occupational status is partially mediated for some groups by relative freedom from childcare responsibilities and low HH income. The effect of work experience is also partially mediated by all HH conditions tested. The influence of adulthood wealth on start-up remains largely the same, but the positive effect of being a saver is partially mediated by childcare responsibilities. Thus, H4b and H4d receive partial support.

6. Discussion

Since people within a given society have common experiences of social structures (Bourdieu 1986; Bradley 2003), we argue that those complex intersecting social structures influence an individual's access to resources (Bradley 1996) and their capacity to apply those resources to create a business. Fundamentally, we argue that there are likely to be common life course pathways to business creation. In order to test our theoretical propositions, we proposed a specific life course model. In this model, the influence of two

specific social divisions on start-up is tested: class (the cumulative effect across the life course of inter-generational resource transmission) and gender (operating in terms of divisions in domestic labour). Of course, even when strong statistical associations exist, pathways do not represent the experience of all subjects. This reflects the complexity of environmental factors and peoples capabilities and capacities (Archer 2000), and we recognize that people's outcomes are not fully determined by their socialization. All eight models tested are significant ($p < 0.000$), and our proposition that life course modelling is powerful in explaining entrepreneurial behaviour is confirmed. One of our most significant contributions, then, is to point to the promise of a theoretical approach that supports a social understanding of the start-up process. Ultimately, we advance knowledge about the antecedents to nascent entrepreneurship and contribute to developing a contextualized understanding of the process (see Welter 2011).

6.1. The effect of class on business start-up

We proposed that a key antecedent of business start-up is class, through the positive inter-generational transmission of resources. First it is clear in our findings that children born to entrepreneurs, with parents higher up the occupational ladder, who are more wealthy as children, and who completed a basic level of childhood education, are more likely to start a business. Thus, the opportunities to start a business are significantly influenced by the traditional resources of education, family status and wealth. The strength and consistency of this evidence suggests a considerable inter-generational transmission, or class, effect. Schoon and Duckworth (2012) also modelled the effect of childhood resources on business start-up, but they focused exclusively on youth entrepreneurship (start-up by age 34). Some of our findings are congruent. Both studies found that having a parent involved in running a small enterprise during childhood is a powerful predictor of start-up. This is further evidence that entrepreneurship is established as a feasible life project early through role-modelling (Greene, Han, and Marlow 2013; Kim, Aldrich, and Keister 2006; Western and Wright 1994). Schoon and Duckworth (2012) also found a positive relationship with a father's occupational class. Similarly, we found that business entry is directly associated with a father's occupation and reduced by every step down the occupational ladder. Having a father in manual work particularly reduces the chance of start-up. Schoon and Duckworth also detected a significant relationship with HH income in childhood and start-up. Similarly, we found a significant relationship between funding private education (an elite practice in Britain) and start-up.

The third measure of childhood socio-economic status found to be significant by Schoon and Duckworth was parent's education. We modelled the transmission of skills and knowledge by parents in terms of children's own educational experience at school. Like Cetindamar et al. (2012), we found that achieving a solid school education (in terms of higher school-level qualifications and a higher school leaving age) is significantly related to start-up. We know that children's educational outcomes are strongly shaped by the knowledge, skills and dispositions passed on by parents (Roberts 2001), and this important start-up resource is influenced by existing class-based divisions. Schoon and Duckworth modelled the effect of academic ability early in childhood (age 10) on youth enterprise. They found complex and gendered effects. Boy's academic ability was negatively associated with entrepreneurial intention at 16. They suggest that entrepreneurial intention may destroy academic effort due to a presumption that start-up does not require credentials. Our findings suggest that start-up *is* contingent on a good standard of basic education; ignorance of this may represent the difficulty that the lower

classes have in understanding pathways to social mobility and the effect that this occlusion has on class reproduction. Overall, it seems that getting a good level of education early in life is fundamental for start-up. We did also find a positive relationship with higher school leaving age, but this may include vocational education (human capital specific to businesses) rather than general education. Our contribution to this emergent body of knowledge helps to untangle contradiction in the evidence base about the effect of education on business start-up (e.g. Kim, Aldrich, and Keister 2006; Henley 2007). A better childhood education seems to be an underlying condition of start-up, and its effects may be greater later in life (Jayawarna, Jones, and Macpherson 2014). For young men, scarce employment prospects, and institutional support for youth enterprise, may encourage start-up without a good basic education (MacDonald 1996).

Overall, the findings for our first set of hypotheses are unequivocal. In Britain, the chance of starting a business is much higher if your parents are of a higher social class and, so, can transmit tangible and intangible human and financial capital resources in terms of occupational status, financial wealth and a good basic education. A life course framework helps to identify these rudimentary class effects on business start-up.

Our second hypothesis drew on social theory (Bourdieu 1986; Roberts 2001) to argue that adults accrue human and financial resources at least partially by drawing on childhood pathways of privilege. This process occurs through direct transfer of resources from parents and more indirectly through the mobilization of the skills, credential and dispositions inculcated in childhood. We proposed that the accrual of adulthood resources would predict business start-up and this could be conceptualized, at least partially, as an extension of the class pathways to entrepreneurship established in hypothesis 1. This proposition is partially supported in our modelling. Mirroring the effect of parental occupation, adults' occupational status is positively related to start-up and manual workers are very significantly less likely to start-up than other groups. We also found that business start-up is significantly related to years of work experience. This supports the importance of related work experience to the process of business founding (Doyle Corner and Ho 2010; Zankis, Renko, and Bullough 2012).

As we expected, general accrual of financial resources in adulthood is also strongly related to start-up. Our findings suggest that entrepreneurship is related to a longer term pattern of saving and wealth creation. Start-up is also related to having a higher income and home ownership in adulthood. However, there is no significance to having a mortgage verses renting. Home ownership may act as an asset in the start-up process, or reflect a lack of financial need that creates a cushion against risk taking. We did not detect any significant relationship between having higher levels of education or on-going training and start-up. Existing evidence tells us that the well educated and trained have good employment prospects that create an opportunity cost to business start-up (Petrova 2012). Entrepreneurship also involves skills that are not commonly developed in education (Nahapiet 2011). We expect that these two factors create confounding effects that mask any value that may come from a higher education. Further research is required to unravel the heterogeneity of pathways that may underlay our findings. In particular, research is necessary to identify the entrepreneurial competences that are not transmitted through formal education and training, and to research their antecedents from childhood (see also Obschonka, Silbereisen, and Wasilewski 2012).

There may be a pathway in which under-privileged children create businesses due to application of entrepreneurial competences developed from families and communities rather than education. If such businesses are successful, this may be a route of social mobility. We should, however, be cautious in making interpretations regarding social

mobility given evidence that poor business starters often have poor outcomes (Rouse and Jayawarna 2011; MacDonald 1996). A more likely pathway is entrepreneurship as middle class defence against downward mobility when their status is threatened by educational under-achievement that narrows employment prospects (see Roberts 2001). Our evidence shows that the middle classes are able to harness a range of inter-generational resources to business start-up and this may make business start-up an attractive option for those who do not convert their privilege to educational achievement. By modelling education at different levels and at different points in the life course, we have contributed by moving the literature on from relative confusion regarding the effect of education on start-up.

Overall, on testing hypothesis 2 has produced evidence that occupational and financial privilege in adulthood is a pathway to business start-up. The effect of higher education may be masked in our study by confounding effects. By relating this finding to a life course framework, we are able to conceptualize the association of adulthood resources with business start-up as emergent from the privileged childhood pathways to entrepreneurship identified in hypothesis 1 and as embedded in a class-structured pathway. This represents a significant advance in understanding the process of start-up as called for by Davidsson and Gordon (2012).

6.2. Continuation of class effects via later labour market and HH circumstances

Our third and fourth propositions consider how life circumstances affect the application of resources accrued through class-based pathways to business start-up. We conducted this analysis for two theoretical reasons. First, to build our understanding of whether start-up commonly occurs when class privilege built in childhood and adulthood is reproduced and extended through further career success and establishment of wealthy HHs, or, alternatively, whether start-up is more common when class pathways are disrupted by poor career performance and low HH income. Second, we sought to explore the intersecting nature of social structures by testing whether a gender division (in domestic labour) disrupts individual pathways to start-up which were built on class privileges. This mediation analysis is novel and represents an important innovation in researching start-up.

The effect of resource accrual in childhood and adulthood is largely unmediated by labour market circumstances prior to start-up. All financial resource pathways, and having a father with higher occupational status, are unaffected by personal performance in the labour market. Higher financial returns from the labour market and more constant economic activity in the 2 years prior to the study period are also *directly* related to start-up. By situating these findings together within a life course analysis, we can argue that there is an enduring and cumulative pathway to start-up that is structured by class privilege; this begins with direct inter-generational transmissions of resources and it continues throughout adulthood as privilege is mobilized in the labour market. It is clear that business start-up is strongly embedded in class privileged life course pathways. Our finding that parental self-employment is partially mediated by higher labour market returns suggests that positive labour market experience creates an opportunity cost to following a family tradition; hence, parental self-employment may have most influence on career paths for younger people (Mungai and Velamuri 2011; Greene, Han, and Marlow 2013). Future research should identify whether this effect is greater when parents experienced marginal self-employment, and whether it indicates critical reflection on opportunity by people with entrepreneurial inheritance similar to that made by people with entrepreneurial experience (Dimov 2010).

We did find that having an employment status and higher labour market income in later adulthood partially mediates the positive effect of work experience in earlier adulthood on start-up. It may be that people whose transition to employment is slow and disrupted, such as the young (Roberts 2001) and mothers (Bradley 2003), are able to start businesses later in life if they first manage to establish an employment career. As our wider findings suggest that start-up is resource intensive, it seems likely that these late bloomers are middle class and able to harness a range of resources to overcome career disruption and found businesses. The other possibility, that entrepreneurship is an available option to people who achieve social mobility in employment, should also be investigated.

Our findings on the effect of HH income on start-up reinforce the argument that start-up is most commonly made from class privileged life course pathways. First, we identified a significant relationship between HH income and start-up. This contradicts Kim, Aldrich, and Keister's (2006) finding that HH wealth does not affect start-up and reinforces the more general evidence that start-up depends heavily on personal finance (Saridakis, Marlow, and Storey 2014; De Clercq, Lim, and Oh 2013; Kim, Aldrich, and Keister 2006; Fraser 2004). We found that low HH income mediates the positive effect that a childhood resource (higher school leaving age) and adulthood resource (sustained work experience) have on business start-up. It also mediates the negative effect that being a skilled or unskilled manual labourer has on business creation. This reflects the push effect of poverty in motivating start-up (Rouse and Jayawarna 2011). However, the fact that most class resource measures are not mediated by poor HH income is significant. We propose that members of the higher classes are still more likely to start-up when HH income is low. This is probably because they can draw on financial and non-tangible resources transmitted from childhood to meet the resource challenges of start-up and thus offset potential downward social mobility (see Roberts 2001). Sample comparison is required to further test this proposition.

Having low HH income also partially mediates the positive effect of parental self-employment on chances of start-up. As with experienced business owners (Dimov 2010), people with entrepreneurial inheritance may be critical of opportunities and avoid necessity entrepreneurship. Transmission of entrepreneurship may also be disrupted by parent's poor business performance (Mungai and Velamuri 2011; Ram et al. 2001). Further research is required to model the specific pathways of children born to entrepreneur parents with different occupational standing and wealth. This would help us understand how and when the inter-generational transmission of entrepreneurial intention supports, or threatens, social mobility and influences the decision to start a business.

Overall, we find that the effects of class pathways are unmediated by later career circumstances. We propose that, in the UK at least, entrepreneurship is more likely from a continuous pathway of privilege; class inheritance in childhood is an enduring influence on the capacity to start a business in adulthood. We also detect minority exceptions worthy of further research. In particular, we note the possibility that entrepreneurship is a defence against downward mobility, and may provide the possibility of a pathway of social mobility to a minority.

6.3. *The intersection of class and gender*

Our proposition that class pathways to entrepreneurship will be intersected by gendered HH divisions of labour is fully supported. As predicted by theorizing about how entrepreneur labour capacity relates to HH divisions of labour (Ekinsmyth 2013; Forson 2013; Jayawarna, Jones, and Macpherson 2011; Rouse and Kitching 2006), freedom from

childcare responsibilities is strongly and positively associated with start-up. People sharing care responsibilities also have a higher chance of start-up than those with primary careering responsibilities. Clearly combining entrepreneurship with family responsibilities is challenging for most. This confirms that nascent entrepreneurship is influenced by family commitments (Jennings and McDougald 2007; Aldrich and Cliff 2003). Since typical sexual divisions in care labour in Britain cast women as primary carers (Bradley 2003), reducing the time they have to give to other activities (Ekinsmyth 2013), we propose that childcare is likely to provide a strong explanation of why women start-up businesses much less frequently than men. Group comparison is required to confirm our assumption that this is a gendered process. Variation in this effect across male and female life courses, and in relation to other contextual influences such as economic environments and growth intentions (Saridakis, Marlow, and Storey 2014; Davis and Shaver 2012), should also be modelled.

Lower class individuals, with access to fewer resources, a lower school leaving age, fewer adulthood qualifications, lower occupational status and work experience and who do not save are more likely to apply their resources to entrepreneurship if they have freedom, or relative freedom, from childcare. It is possible that they believe they can compensate for financial constraints by working long hours. If they are the male primary family breadwinner, their gendered HH role may facilitate such time investment (Rouse and Kitching 2006). However, for women, combining business creation with lower levels of resources and heavy childcare responsibilities may not be sustainable (Forson 2013; Rouse and Kitching 2006). ‘Mumpreneurship’, in which mothers engage in business creation in the time left over after caring, may be most viable for women from more wealthy HHs and resource-rich backgrounds (Ekinsmyth 2013). Future analyses should investigate gender differences in the incidence and effect of childcare responsibilities on class pathways to entrepreneurship across the HH life course. These findings will further develop an intersectional view of pathways to entrepreneurship and extend our understanding of male and female entrepreneurship as embedded in gendered family relations.

7. Implications, limitations and conclusions

Our findings and interpretation support the theoretical proposition that entrepreneurship is a process of resourcing opportunity (Shane and Venkataraman 2000; Keating, Geiger, and McLoughlin 2013). More importantly, it extends this by theorizing and empirically demonstrating that nascent entrepreneurship is embedded in enduring class structures. Specifically, class pathways shape access to the resources needed to start a business and gender relations intersect with, and disrupt, these pathways. This contribution represents a significant advancement in our understanding of the start-up process. While the recent literature on nascent entrepreneurship has been heavily influenced by analysis of panel studies (Gartner and Shaver 2012), these have often failed to model the longitudinal element effectively (Davidsson and Gordon 2012) and have not sought to contextualize entrepreneurship or adopt a longer historical view. This study represents a significant advance by employing a life course framework that captures the effect of broad social structures on pathways to business creation.

Our findings contradict the claim that there is no socio-economic barrier to entrepreneurship (Kim, Aldrich, and Keister 2006). They undermine the popular myth that entrepreneurship is an arena of meritocracy in which hard work (i.e. unfettered agency) is more powerful than privilege in supporting business venturing (Scase 1992). Ultimately, our argument contradicts the discourse of enterprise as an open route of opportunity on

which neo-liberal policy depends (Rouse and Jayawarna 2011). Further life course analysis could usefully test and extend our arguments. If our critique is upheld, significant review of enterprise policy and its neo-liberal presumptions are warranted.

This type of study can contribute to a policy debate, particularly if we are attempting to understand the effectiveness of policies and their historical contribution to developing entrepreneurship (Down 2012). For example, policy-makers seeking to evaluate the effectiveness of policies that attempt to create enterprise inclusion (Rouse and Jayawarna 2011; Blackburn and Ram 2006) should respond to this type of evidence by considering how those policies tackle the causes of social inequality. For future policy, our findings would suggest that addressing class structures that create lifelong divisions in financial and human capital ownership might broaden access to entrepreneurship. Providing support with childcare to facilitate women with the class resources to start businesses to engage in start-up activity would seem to be important (Rouse and Kitching 2006). Our findings suggest that equalizing higher level educational opportunities may play a part in promoting social mobility through employment more than entrepreneurship, although a research question remains regarding the quality of businesses started from a lower educational base. 'Enterprise inclusion' policy-makers (Rouse and Jayawarna 2011) might be interested in the idea that business start-up is more likely to 'rehabilitate' the middle classes facing downward mobility than to create social mobility for the poor.

Working with secondary sources inevitably involves compromises because there is no opportunity to collect ideal data (Audas and Williams 2001). It is regrettable that our model could not include social capital, or control for sector due to data limitations. As the BHPS is not specifically designed to model entrepreneurship, we are also unable to model team entrepreneurship or distinguish the effect of individual and team pathways of resource accrual and application (see Davidsson and Gordon 2012; Dimov 2010). When teams are homophilous (Ruef, Aldrich, and Carter 2003), the multiplication of similar sets of resources may reinforce the social patterns we have identified. We have drawn on a national HH survey rather than a panel study of nascent entrepreneurship. A key advantage of our data-set is that it includes historical data about respondents that enable us to model the effect of childhood and early adulthood on start-up. Overall, the free availability of mass longitudinal data that are nationally representative and not subject to significant recall or attrition bias (Uhrig 2008) make panel and cohort studies rich sources for life course modelling. The logistic specification employed in this study follows the principle of random intercept modelling that accounts for unobserved heterogeneity at the individual level. It also tolerates modelling of inter-correlated factors within clusters. Our life course framework thus ensures that the longitudinal element is modelled effectively.

We encourage conceptualization and testing of multiple alternative life course pathways to, and through, entrepreneurship. Particularly to explore how start-up emerges from intersecting social relations (Bradley 1996; Reynolds 1991) as they are experienced across the life course of the individual, the HH and the business (Chen and Korinek 2010). We suggest that complex mediation and moderation tests would be useful, as are sub-sample comparisons (see Davidsson and Gordon 2012). As social relations vary spatially and temporally (Welter 2011), we also encourage comparative analyses utilizing longitudinal data available for different periods, countries and regions. Comparison between recessionary and non-recessionary periods will illuminate the effect of macro-economic forces; macro-economic climate might also act as proxy for market opportunity (see Saridakis, Marlow, and Storey 2014), which is otherwise difficult to model using HH panel surveys. Similarly, it would be interesting to compare our British results with other capitalist systems, such as the USA, and more highly governed societies, such as the

Nordic states (National Equality Panel 2010), where boundaries to capital ownership may be more or less permeable (Western and Wright 1994).

Variations in welfare institutions will also affect motivation to apply scarce resources to business start-up by affecting the wage paid to low-skill employment and the safety net provided by benefits (Saridakis, Marlow, and Storey 2014; Kloosterman 2010). There is already some evidence that institutions that support resource deficiencies can leverage human capital to business start-up (De Clercq, Lim, and Oh 2013). Countries such as Germany where vocational education is more developed may also have different education effects. Meanwhile, our evidence should not be dismissed as specific only to Britain. The hope that any American can make it in business has already been exposed as an illusion (Bates 1997) and poor outcomes from international micro-enterprise programmes (Jurik 2005; Karides 2005) point to the resource intensity, and socially constituted nature, of entrepreneurial opportunities internationally. Nevertheless, we would urge that other similar studies be conducted in other geographic and cultural contexts. Multiple dependent variables should also be modelled to test the effect of resources on different start-up outcomes. This would enable us to distinguish high potential start-ups from the 'modest majority' of new businesses destined to remain small (see Davidsson and Gordon 2012).

To explore, at a micro level, continual interactions between social agents and external social relations in business start-up, we encourage qualitative investigation of life course pathways to entrepreneurship as these relate to direct observation of resource investment – the 'black box' of business creation (see Davidsson and Gordon 2012). Core aspects of this challenge are to explore how opportunity identification or creation itself is embedded in resource-endowed life courses and to develop understanding of how resource application, as distinct from resource accrual, relates to social context and individual creativity. Greater consideration should also be paid to HH effects on business start-up and their variance across HH life courses. For example, Following Werbel and Danes (2010), we might model how spouses affect HH motivation to apply resources to business creation.

In summary, our research has shown that starting a business is embedded in class structures as well as HH gender relations. We offer a life course framework and methodology that can further unravel the multitude of relations that constitute entrepreneurship at the level of the individual and HH. We hope that this study might encourage others to test alternative life course models and to develop a more nuanced understanding of the emergent and socially embedded nature of entrepreneurship.

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Notes

1. A limitation of random effect modelling is the assumption that unmeasured characteristics of respondents are not correlated with measured characteristics. Despite this, we adopted random effect modelling because fixed effect modelling cannot estimate the effect of time invariant measures on the dependent variable important to this study (e.g. sex and education). A Hausman specification test (Allison 1984) suggested that, while fixed effect modelling generated better model fit ($p < 0.05$), individual parameter estimates for key variables are similar in both models.
2. The 'foundation stage' (T_1) starts 2 years prior to the end of the 'pre-enterprise stage' (T_2). This begins and ends variably between 1992 and 1996.

3. The 'enterprise stage' is the 5 year period in which careers were observed to detect entrepreneur transition (or not) (i.e. 2004–2008).
4. The 'pre-enterprise stage' (T_2) is the 5 year period that is 2–6 years prior to start-up for those who made a self-employment transition in the 5 year observed career period (2004–2008) (T_3); this begins and ends variably between 1998 and 2006. For the comparison group who remained in employment, the 'pre-enterprise stage' is the 2–6 years prior to 2004, the beginning of the observed career period (T_3).
5. The results presented are not sensitive to using fewer evaluation points (tested for 20 and 10).
6. Years = 5 for all measures.
7. iid – independently and identically distributed.
8. Highest academic qualification is time invariant. Employment experience is aggregated and treated as time invariant.
9. To model entrepreneur transition, respondents in business within 2 years of T_3 were excluded.
10. Preliminary analysis suggest some strong significant relationship between resources at T_0 and T_1 (T_1 measures are taken for individual years, results are not reported in order to conserve space). As a result, separate models (models 1 and 2) were created to avoid strong multicollinearity effects in the models.
11. Three further models were estimated to establish that mediation conditions are met (these results are not reported to conserve space). These established an association between labour market returns, HH income and freedom from childcare at T_2 and entrepreneur transition in T_3 .
12. Due to conditions imposed on sample selection, the number of respondents in entrepreneurship at the foundation stage is very low. This finding should, consequently, be treated with caution.

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