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Understanding Gendered Variations in Business Growth Intentions Across the Life Course

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This article investigates differences in growth intentions of men and women entrepreneurs. Using data from the U.S. Panel Study of Entrepreneurial Dynamics I and II, we test hypotheses informed by life course theory regarding the influence of career stage and family status on high growth intentions of men and women entrepreneurs. Results show that young men are especially likely to express high growth intentions, while mothers expressed high growth intentions more frequently than did other women.

Introduction

Because small businesses represent over 99% of all employer firms and provide jobs to roughly half of private-sector employees in the United States (Acs, Parsons, & Tracy, 2008), the growth intentions of a new venture founder are of much more than academic interest. "High-impact" firms, defined as businesses with sales and employment that double in size over the most recent 4-year period, exist in all industry sectors and account for nearly all of the employment growth in the U.S. economy. Although the typical high-impact firm is not a startup, it once was. Consequently, some of today's startups will become the high-impact firms of the future.

Both researchers and policy makers seek an understanding of circumstances that might make a current startup likely to become high impact in the future. While vagaries of the marketplace might result in significant expansion regardless of the original intent of the founder, more often, a chief contributor to the future growth of a firm would be the growth intentions of its founder(s). As argued by Brush, Carter, Gatewood, Greene, and Hart (2004) in *Clearing the Hurdles*, the founders' intentions for growth influence their decisions regarding the sharing of ownership and control, resource acquisition, and team formation, all of which consequently influence the fledgling new firms' capacity for

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growth. Thus, understanding entrepreneurs' intentions to increase the scale of their businesses is important to understanding high-growth entrepreneurship.

Better understanding women's participation in high-growth businesses has become a target of entrepreneurship research and a goal of organizations like the Diana International collaborative and the Center for Women's Business Research (de Bruin, Brush, & Welter, 2006, 2007). To the extent that women start fewer high-growth businesses than men, the overall rate of innovation and job growth is constrained. This article builds on life course theory (Elder, 1994) to better understand how men and women desire to pursue high-growth entrepreneurship at different points in their careers. Rather than seeking to understand whether and why women have lower growth intentions than men, this article follows the recommendations of Jennings and McDougald (2007) by investigating how the relationships among entrepreneurship and family evolve for men and women over the life course. The article (1) reviews existing research on gender differences and entrepreneurial growth; (2) reviews life course theory and puts forth relevant hypotheses; (3) describes the data and analytical techniques; (4) reports the statistical findings and empirical support for hypotheses; and (5) concludes with theoretical and practical implications.

Theoretical Development

Before applying the particulars of the life course perspective, this article first reviews previous research on the growth differences among businesses founded by men and women. Women-owned businesses tend to have lower levels of growth and remain smaller than men-owned businesses. Some growth differences may stem from differential access to resources, such as debt and equity capital needed to propel business growth (Alsos, Isaksen, & Ljunggren, 2006; Brush et al., 2004; Manolova, Carter, Manev, & Gyoshev, 2007; Marlow & Patton, 2005). However, growth differences may also emerge from differences between men and women regarding the intentions for their businesses before they are founded. For example, if women, on average, have a lower tolerance for risk than do men (for review, see Langowitz & Minniti, 2007), then they may wish to put upper limits on the maximum desirable size of their business (Cliff, 1998).

Research thus far on the growth intentions of nascent entrepreneurs has produced mixed results regarding empirical differences between men and women. For example, in a study of opportunity costs and intended venture growth, Cassar (2006) found that women in the first U.S. Panel Study of Entrepreneurial Dynamics (PSED I) had lower estimates of future revenues than did men. Alternatively, in research using the Canadian equivalent of the PSED, Menzies, Diochon, and Gasse (2004) found no statistically significant differences between women and men in their expressed preferences for unrestrained growth. Still other studies of growth intentions based on PSED I focused on different issues and did not distinguish between women and men (e.g., Cassar, 2007; Edelman, Brush, Manolova, & Greene, 2010; Singh & Lucas, 2005). Nonetheless, the size differences among businesses formed by men and women lead to the hypothesis that:

> Hypothesis 1: An individual's intentions for high-growth entrepreneurship will differ by gender, such that women are less likely than men to express intentions for high growth.

Implicit in much of the past research on growth intentions is a critical assumption: entrepreneurial goals are unchanging regardless of the life circumstances of the nascent entrepreneur. To be sure, past research has illustrated that the available human capital, social capital, and financial capital (Manolova et al., 2007; Menzies et al., 2004; Williams,

2004a) all influence business formation and growth. But a nascent entrepreneur is more than an accumulation of experience, contacts, and financial wherewithal. This article builds on life course theory (Becker & Moen, 1999; Elder, 1994; Elder & Giele, 2009) to argue that the *other* things going on in the nascent entrepreneur's life also influence growth intentions.

Life Course Theory

The life course theory considers the influence of history, family formation, and age to enhance understanding of social phenomena, including career dynamics (Elder, 1994; Elder & Giele, 2009). Elder (1999, pp. 7–15, emphasis added) described the principles of the life course theory as follows:

1. "Human development and aging are life-long processes."
2. "The developmental antecedents and consequences of life transitions, events, and behavior patterns vary according to the *timing* in a person's life."
3. "Lives are lived *interdependently* and social-historical influences are expressed through this network of shared relationships."
4. "The life course of individuals is embedded in and shaped by the *historical* times and places they experience over their lifetime."
5. "Individuals construct their own life course through the choices and actions they take within the opportunities and constraints of history and social circumstances."

The first three of these basic principles provide a framework within which to consider why nascent entrepreneurs might choose unrestrained growth for their ventures. As noted earlier, when adults age, they frequently acquire more skills, experience, knowledge, and capital. From a life course perspective, age changes are also associated with changes in the centrality of career, the sense of self-efficacy, and personal work values (Gecas, 2004; Lorence & Mortimer, 1985; Loscocco & Kalleberg, 1988; Moen, 2004.)

Rather than considering age as a continuous variable, life course theory would predict that entrepreneurial growth intentions can best be examined by considering discrete age-related career stages that connote not only chronological age, but norms associated with family and career transitions. Becker and Moen (1999) identified four stages of the career life course in middle-class, dual-earner couples and noted that career strategies differed by career stage and gender. The age-related career categories they identified were anticipatory, launching, establishment, and shifting gears.

First, in the *anticipatory* stage, individuals are often finishing their education, gaining employment experience, and in some instances, becoming married and/or parents. The age norm deadlines for finishing school, entering full-time work, marrying, and entering parenthood all occur between the ages of 20 and 29 (Settersten, 2004).[1] The anticipatory or young adult stage is considered a "demographically dense" time when individuals make many important decisions about their careers and families (Roberts, Robins, Trzesniewski, & Caspi, 2004). Second, in the *launching* stage, individuals are expected to have settled in their careers, become married, and become parents (Settersten). Next, the *establishment* stage of the career is associated with the highest level of career achievement and involvement (Settersten). Finally, the *shifting gears* stage (also referred to as

1. However, 2009 data from the U.S. Bureau of the Census (2010a) demonstrate that the majority of U.S. residents in their 20s have never been married.

midcourse by Moen, 2004) is associated with a decreased emphasis on career development, career changes, and eventually retirement. Like the anticipatory stage, shifting gears is a demographically dense stage in which many career transitions occur (Gee, Pavalko, & Long, 2007; Moen; Settersten).

According to life course theory, antecedents and consequences of life transitions will vary according to the timing in a person's life. Examples of such transitions include enrolling in college after working in the labor force, enlisting in the military, or becoming unemployed. Becoming an entrepreneur would be another significant life transition. Not only would the reasons (or antecedents) for experiencing a career transition vary depending on whether the person is 20 or 60, the consequences of the career transition would vary by career stage as well (see Elder, Johnson, & Crosnoe, 2004; MacLean & Elder, 2007). Just as one would expect the reasons for enrolling in college to differ for a recent high school graduate and an individual with 20 years of work experience, one would also expect the likelihood of intending to start a high-growth business to vary depending on the life stage of the person starting the business. Indeed, Carroll and Masonoski (1987) studied employees and self-employed persons in Germany and found that the predictors of entry into self-employment as a first job differed from the factors predicting self-employment entries at later stages of individuals' careers.

However, the nature of the relationship between age and entrepreneurial behavior is not entirely settled. For example, Lévesque and Minniti (2006) argued that as individuals age, their propensity to become entrepreneurs declines because they will have less time to enjoy future earnings generated by their businesses. Additionally, Manolova et al. (2007) found that age affected the growth expectations of women entrepreneurs in Bulgaria, with younger women having higher growth expectancies than older women. However, Ruef's (2010) review of empirical work demonstrated that age tends to have a curvilinear relationship with entry into entrepreneurship. Although the matter is not settled, the recognition by life course theory that there are significant differences in career orientation across the four life course stages leads to the second hypothesis:

> Hypothesis 2: An individual's desire for high-growth entrepreneurship will differ across career stages.

The theory's principle that lives are lived interdependently with key others (Elder's third principle) has direct bearing on entrepreneurship. As noted by Carter (2011) entrepreneurs are often embedded in households and thus do not make decisions in isolation for solely individual benefit. Put another way, economic activity, including entrepreneurship, is embedded in social relationships (Granovetter, 1985). The presence of a spouse or one or more children can affect an entrepreneur's approach to the business through several possible mechanisms. First, the addition of family members through marriage or parenthood can mean the addition of financial dependents. As a result, marriage or parenthood may increase an entrepreneur's perception of the minimum acceptable financial performance of a new venture and thus increase one's intentions for firm growth. Second, marriage and sometimes parenthood can provide additional resources for the business, including family members' labor or expertise and additional financial cushion provided by family members' participation in wage and salary work (Aldrich & Cliff, 2003). Third, both marriage and parenthood can increase role conflict to the extent that the expectations of being a spouse or parent are incompatible with the expectations of being an entrepreneur. Manolova et al. (2007) found that men who expressed conflicts between their business and family responsibilities had lowered growth expectancies.

The effects of interdependence are not experienced identically by women and men. The increased financial and growth expectations for a business brought about by the addition of dependents is more often experienced by men, who are more likely to assume the role of financial provider for the family (Orser & Dyke, 2009; Orser, Riding, & Manley, 2006). Not surprisingly, marriage and parenthood are often positively associated with men's career achievement, particularly if their spouses do not work outside of the home (Pavalko & Elder, 1993; Wolfinger, Mason, & Goulden, 2009). By contrast, the roles of mother and entrepreneur create more role conflict than do the roles of father and entrepreneur. Many researchers have shown empirical evidence of a motherhood penalty among employees (Budig & Hodges, 2010; Fuller, 2008; Williams, 2004b). Both marriage and parenthood can reduce the amount of attention women devote to firm creation (Buttner & Moore, 1997; Reynolds & Renzulli, 2005). Indeed, there is reason to believe that mothers may pursue entrepreneurship not to grow a business but to pursue a more favorable and flexible balance between work and nonwork life (Arai, 2000; DeMartino & Barbato, 2003). This line of reasoning leads to the third and fourth hypotheses:

Hypothesis 3: Career stage differences in intentions for high-growth entrepreneurship will themselves vary by gender.

Hypothesis 4: Family status differences (marital and parental status) in desire for high-growth entrepreneurship will vary by gender.

Methods

The hypotheses were tested using data from Wave 1 of the two PSED data sets (PSED I and PSED II). Each data set began with random digit dialing screening ($N = 64{,}622$ for PSED I; 31,845 for PSED II). In this screening, those contacted were asked if they were currently in the process of starting a business, either alone or with others (the exact questions differed from PSED I to PSED II, and can be found in Reynolds & Curtin, 2008, p. 6). Respondents who answered affirmatively were subsequently interviewed by a university-based survey research center (University of Wisconsin, then University of Michigan for PSED I; University of Michigan for all of PSED II). Screening and Wave 1 interviews were completed between July 1998 and January 2000, for PSED I, and between October 2005 and January 2006, for PSED II.

The PSED I data set consisted of 1,261 individuals, some of whom were in the process of starting businesses, and some of whom were not (the latter was the Comparison Group). The "kscleans" Statistical Package for the Social Sciences syntax file (Shaver, 2006) was used to eliminate (1) new businesses; (2) businesses to be owned 51% or more by a business entity; and (3) comparison group respondents with any startup activity. The result was 1,216 individuals, 715 of whom were fully autonomous starts, 102 of whom had minority involvement by a business, and 399 of whom were in the comparison group. The PSED I data were collected with a combination of telephone interviews and mail surveys, but many of the questions of interest in this research were in the mail survey, completed by 553 nascent entrepreneurs.

The PSED II data set consisted of 1,214 individuals, interviewed exclusively by telephone. Despite more careful attention to the selection criteria, there were still eight respondents whose enterprises had majority ownership by another business, so these respondents were eliminated. Thus the combined Wave 1 data set contains 1,656 (691 women, 965 men) people who had no missing values for variables of interest. As is customary in research involving the PSED, post-stratification weights were used to create

a nationally representative sample. Whenever subsamples were created, these weights were renormalized within subsamples. In the present research, the result was three different weights: one for the overall sample and different weights for men and women.

Independent Variables

Gender. Respondents indicated whether they were a man or a woman. As stated earlier, the combined PSED I and II have complete data on 691 women and 965 men.

Career Stages. Career stages were operationalized using age ranges that correspond to Becker and Moen's (1999) framework. The *anticipatory* stage included respondents from 18 to 29, *launching* included individuals from 30–39, *establishment* ranged from 40–49, and *shifting gears* was 50 and above. Although the latter category included people below and above the U.S. full retirement age, the results were not materially affected by either including or excluding the 60 respondents above retirement age (weighted frequency of 40.6). Establishment is the omitted or reference category to which coefficients are compared.

Family Variables. To measure marital and parental status, the models included indicators of whether the respondents were married and whether the respondents had children under the age of 18 living in their home.[2] Note that "not married" could include cohabiting couples, single persons, and persons that were once but are no longer married. Similarly, by asking how many children were in the home, researchers cannot distinguish a nascent entrepreneur's dependent children from other minors living in the same household (such as younger siblings). In addition, the data did not allow for distinctions to be made among those who had never been parents, those who were parents to minors who lived elsewhere at the time of the survey, and those who had children who became adults before the time of the surveys.

Dependent Variable: Growth Intentions

Three items common to both PSED I and PSED II arguably deal with the respondent's plan for growth of the business. The first is "Which of the two following statements best describes your preference for the future size of this business? (1) I want the business to be as large as possible, or (2) I want a size I can manage myself or with a few key employees." This item is Q322 in PSED I and AT1 in PSED II. The second and third common items deal with the respondent's expectations for the size of the business 5 years hence, respectively measured by expected sales (Q317a, AT3) and expected number of employees (Q318, AT5).

Delmar and Wiklund (2008) have argued that the employment and sales projections may not be appropriate as measures of growth intentions. Not only are they more like aspirations than intentions, they also assume that future market forces will play a negligible role in the outcome for the business. As a result, many researchers (e.g., Cassar,

2. Marriage and parenthood are self-reported. A few individuals reported same sex marriages, but too few to analyze separately. In addition, the analysis does not assume marriage and parenthood are tightly coupled. However, the small number of unmarried parents in PSED I and II prevents further investigation of interaction effects such as single parenthood.

2007; Edelman et al., 2010; Hechavarria, Schenkel, & Matthews, 2009; Manolova, Brush, Edelman, & Shaver, 2012) have settled on the first item mentioned earlier (preference for future size) as the measure of choice for growth intentions within the PSED studies. This precedent is followed in this article.

Hypothesis 2 proposed that career stages had a stair-step relationship to the odds of expressing growth intentions, with flat slopes within each career stage category and different odds of high growth intentions among categories. However, age often has a curvilinear relationship with many career-related outcomes. Before analyzing the age categories, a preliminary analysis was conducted to be sure that age did not have a linear or curvilinear relationship to growth intentions. There were no such relationships, with a Pearson's correlation coefficient of less than .1 for both age and age-squared and growth intentions.

A second preliminary analysis was conducted to determine whether there was a linear relationship between age and growth intentions within a particular age category (such as 21-year-olds having a higher odds of expressing high growth intentions than 29-year-olds). No such relationships between age and growth intentions within career stages were found. For example, within the anticipatory stage, the average age for those desiring controlled growth was 24.9 and the average age for those desiring high growth was 24.5.

Controls

Human Capital. Although hypotheses were not proposed for human capital characteristics, the models included indicators for whether respondents had at least a bachelor's degree, prior industry experience, or prior startup experience (Manolova et al., 2007). Each of these variables was represented as 1 for having the particular form of human capital and 0 otherwise. Although it is not "human capital," a measure of whether someone in the respondent's household owned the home (=1) or not (=0) was also included because of its correlations with family formation and age norms.

Startup Industry. Two measures of startup industry were included in the analysis: (1) Was the new startup in the service or retail industries? (2) Could the new startup be considered a high technology business? Following Allen and Stearns (2004), the high technology scale was based on the responses to three questions: (1) was the product or service available 5 years ago? (negative answer indicates high tech); (2) will there be major investment in research and development?; and (3) is the business considered high tech?

Data Source. Events of historical significance that occurred between early 2000 and the middle of 2004 might have affected the growth intentions of nascent entrepreneurs (Elder's fourth principle). Moreover, variables of interest in this study were measured in a mail survey for PSED I, but in telephone interviews for PSED II. Consequently, the analysis included a control for data source (PSED I = 1; PSED II = 0).

Two measures of personal preferences were included in the analysis to account for Elder's fifth principle, individual choices that entrepreneurs employ when making decisions about their startups. These measures were entrepreneurial intensity and career reasons. The definitions for personal preference items as well as the results for factor loadings are shown in the Appendix.

Entrepreneurial intensity was measured with two items: (1) giving maximum effort and (2) "doing whatever it takes" to establish the new business. So that larger numbers

would represent greater intensity, the PSED II versions were reverse-scored. In the combined data set, the two items showed a Cronbach's alpha of .71.

Career Reasons. There were 18 career reasons items in PSED I, factor analyzed by Carter, Gartner, Shaver, and Gatewood (2003) into six conceptually meaningful dimensions consistent with prior research. Four of the items were dropped in PSED II. The present eigenvalue criterion principal components analysis of the 14 items in the combined data set (with weights normalized by the combination of data source * gender * autonomy) produced a single factor that involved all 14 items, accounted for 67.7% of the variance, and had an alpha of .85. This single factor measures the strength of reasons expressed by the respondents for founding their businesses.

Teams. Finally, the models included controls for another key network in which entrepreneurs act interdependently (Elder's third principle): startup teams. Respondents indicated whether they were starting their business as a member of a team and whether any member of their team was their spouse. The models included two indicator variables, one for non-spouse team (=1, 0 otherwise) and one for spouse team (=1, 0 otherwise), with solo entrepreneur as the reference category. Therefore, coefficients for spouse team and non-spouse team are compared with entrepreneurs starting businesses without any partners.

Means and standard deviations for variables used in the analysis are presented in Table 1. Significant differences between men and women are identified with asterisks.

Descriptive Analysis

Descriptive analyses on career stage, gender, and growth intentions were conducted prior to multivariate analysis. Figure 1 displays the proportion of entrepreneurs expressing high growth intentions within each gender and career stage. The figure illustrates that young men had the highest propensity to report high growth intentions. For men, the percent declined in the launching stage, increased again at the establishment stage, and reduced slightly at the shifting gears stage. These results support the notion that age does not necessarily have a linear or curvilinear relationship with growth aspirations—rather, distinct career stages were associated with differing propensities for expressing high growth intentions. For women, the expression of high growth intentions occurred most often at young ages and declined at career stage. Women's overall tendency to express high growth aspirations was lower than men's. Analysis of variance indicated that the main effects of career stage ($F = 8.50$***, degrees of freedom [df] = 3) and gender ($F = 10.96$***, df = 1) were significant, as was the interaction of career stage * gender ($F = 2.99$*, df = 3).

Confirming hypothesis 1, the results showed that men were more likely than women to indicate high growth intentions for their businesses, and career stage had a higher association with men's stated high growth intentions than women's. Whereas men's expressions of high growth intentions fluctuated between 37.5 and 18.2%, women's expressions of high growth intentions only varied between 21.8 and 11.8%. Interestingly for men, the lowest rate of expressing high growth aspirations occurred at the launching stage of the career, whereas for women it occurred at the shifting gears stage. Given that the launching stage is associated with large increases in marriage, parenthood, and home ownership (Dye, 2010; U.S. Bureau of the Census, 2010a, 2010b), the results suggest that these transitions appear to be negatively related to the growth intentions of men.

Table 1

Means and Standard Deviations of Variables by Gender

	Full sample	Women	Men	
Control variables				
Bachelor's degree	.36	.38	.34	
	(.48)	(.49)	(.47)	
Startup experience	.41	.4	.42	
	(.49)	(.49)	(.49)	
Industry experience	.76	.72	.78	**
	(.43)	(.45)	(.42)	
Service or retail	.67	.77	.61	***
	(.47)	(.42)	(.49)	
High technology	.78	.62	.87	***
	(.89)	(.78)	(.94)	
Panel Study of Entrepreneurial Dynamics I	.31	.32	.3	
	(.46)	(.47)	(.46)	
Own home	.66	.68	.66	
	(.47)	(.47)	(.48)	
Intensity	4.02	4.02	4.03	
	(.88)	(.86)	(.90)	
Career motivations	2.92	2.88	2.97	*
	(.76)	(.77)	(.76)	
Non-spouse team	.24	.17	.28	***
	(.43)	(.37)	(.45)	
Spouse team	.26	.29	.23	**
	(.44)	(.46)	(.42)	
Independent variables				
Anticipatory	.26	.24	.28	
	(.44)	(.43)	(.45)	
Launching	.28	.28	.28	
	(.45)	(.45)	(.45)	
Establishment	.24	.27	.22	*
	(.43)	(.45)	(.42)	
Shifting gears	.22	.21	.22	
	(.41)	(.41)	(.42)	
Married	.51	.56	.48	**
	(.50)	(.50)	(.50)	
Parent	.62	.67	.58	***
	(.49)	(.47)	(.49)	
Dependent variable				
Growth intentions	.22	.18	.25	***
	(.42)	(.38)	(.43)	
N	1656	691	965	

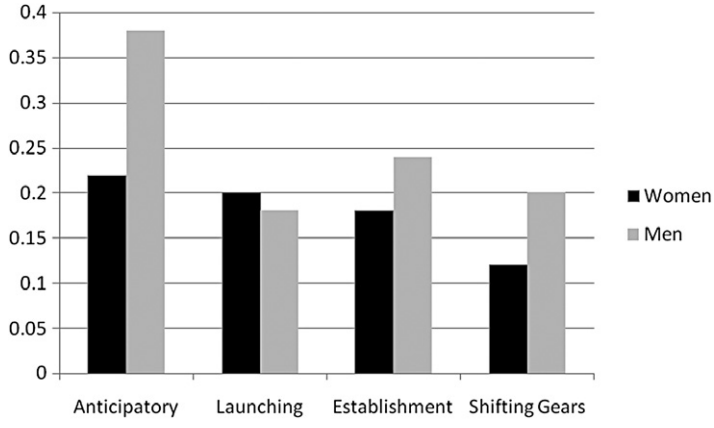
Standard deviations in parentheses.
* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Multivariate Analysis

As a further test of hypothesis 1, and to test hypotheses 2–4, weighted logistic regression analyses were conducted to determine how gender, life course, personal preferences, human capital, and industry characteristics influenced the odds of expressing

Figure 1

Proportion of Respondents With High Growth Intentions by Gender and Career Stage



R^2 = .0327; Woman F = 10.96 (p < .001); Career stage F = 8.50 (p < .001); Woman* career stage F = 2.99 (p < .05).

high growth intentions. Logistic regression analyses are appropriate when a dependent variable has only two possible values. Both a control model and a full model were computed to determine whether the addition of hypothesized variables improved the fit of the data. Because the logistic regression analyses were weighted, recommended Wald χ^2 tests were used, rather than likelihood ratio tests, to determine the significance of nested models. These Wald χ^2 tests were calculated in STATA. For the full model, a Wald χ^2 was presented for the entire model and then a Wald χ^2 comparing the full model with the control model.

In an analysis of the entire sample, the results of the control model showed several significant relationships between control variables and growth intentions. Industry experience and PSED I were associated with a reduction in the odds of expressing high growth intentions. Bachelor's degree, high technology, the strength of career reasons, and being on a non-spouse team were associated with an increase in the odds of expressing high growth intentions. The model was highly significant (Wald $\chi^2 = 74.62^{***}$, df = 11).

In the full model for the entire sample, gender, the anticipatory career stage, and parental status were significantly associated with the odds of expressing high growth intentions. Consistent with hypothesis 1, women were less likely to express high growth intentions compared with men (p < .05). Hypothesis 2 was also supported; those in the anticipatory stage are more likely to express high growth intentions than those in the establishment stage (p < .05). However, the odds of expressing high growth intentions among those in the launching and shifting gears stages were not significantly different from those in the establishment stage. The full model was highly significant and produced a significantly better fit of the data than did the control model ($\chi^2 = 19.58^{**}$, df = 6). (See Table 2.)

To test whether the effects of career stage and family characteristics on growth intentions would be moderated by gender, separate analyses were modeled for men and women. To test for group differences among two weighted logistic regressions, a Wald

Table 2

Weighted Logistic Regression Analysis

Dependent variable: growth intentions				
	Control		Full	
Control				
Bachelor's degree	.31	*	.4	*
Startup experience	.15		.28	
Industry experience	–.58	***	–.5	**
Service or retail	.07		.12	
High technology	.3	***	.28	***
Panel Study of Entrepreneurial Dynamics I	–.33	*	–.42	*
Own home	.00		.08	
Intensity	.13		.15	
Career reasons	.52	***	.47	***
Non-spouse team	.49	**	.39	*
Spouse team	–.2		–.17	
Independent variables				
Woman			–.35	*
Anticipatory			.47	*
Launching			–.17	
Shifting gears			–.15	
Married			–.08	
Parent			.37	*
Constant	–3.41	***	–3.55	***
N	1656		1656	
Wald χ^2	74.62	***	94.88	***
df	11		17	
Pseudo R^2	.0656		.0834	
Nested model Wald χ^2			19.8	**
df			6	

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$
df, degrees of freedom.

χ^2 test rather than a Chow test, used in linear regression, is appropriate (Chow, 1960; Manolova et al., 2007). The χ^2 tests revealed that the models for men and women were significantly different from one another ($\chi^2 = 29.28$*, df = 17). Indeed, only two predictors were shared among men and women: both high technology and the strength of career reasons were associated with a significant increase in the odds of expressing high growth intentions. The remaining significant predictors were only significant for either men or women. Hypothesis 3 was supported in that the anticipatory stage was only associated with an increase in the odds of expressing high growth intentions for men. Recall that Figure 1 showed that young men had an especially high frequency of reporting high growth intentions relative to the rest of the sample. Hypothesis 4 was supported in that parental status was associated with an increase in the odds of expressing high growth intentions for women. The positive association between parenthood and growth intentions for women is contrary to the notion that mothers seek to form microenterprises as a way to manage work and family. Instead, the results suggest that children can facilitate business growth intentions for women, perhaps by dependents

Table 3

Weighted Logistic Regression Analysis by Gender

Dependent variable: growth intentions	Women		Men	
Control variables				
Bachelor's degree	.58	*	.33	
Startup experience	.12		.35	
Industry experience	–.45		–.59	**
Service or retail	.16		.08	
High technology	.35	*	.24	*
Panel Study of Entrepreneurial Dynamics I	–.77	**	–.21	
Own home	.18		.05	
Intensity	.38	*	.07	
Career reasons	.72	***	.35	*
Non-spouse team	.58		.31	
Spouse team	.22		–.36	
Independent variables				
Anticipatory	–.06		.67	**
Launching	.03		–.31	
Shifting gears	–.11		–.19	
Married	–.49		.14	
Parent	.93	**	.13	
Constant	–6.06	***	–2.77	***
N	691		965	
Wald χ^2	61.19	***	52.78	***
df	16		16	
Pseudo R^2	.1356		.0723	
Wald χ^2 for group difference			29.28	*
df			17	

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$
df, degrees of freedom.

providing support and labor assistance or through the mothers' desire to support dependents through the business's income. Marriage did not have a significant relationship with the odds of expressing high growth intentions for women or men. The Wald χ^2s for both models were statistically significant ($\chi^2 = 61.19$ *** for women, $\chi^2 = 52.78$*** for men, df = 16). (See Table 3.)

Discussion

The results of this study demonstrated how the understanding of entrepreneurial behavior can be enhanced by considering the life course. The findings provided support for two of the arguments made by Elder and colleagues. First, Principle #2 stated that the antecedents of behavior patterns vary according to their timing within the life course (see also hypotheses 2 and 3). In other words, starting a new business is a significant career

transition and whether individuals become entrepreneurs in the beginning or later stages of their careers influences their intentions for their businesses. In this study, differences in growth intentions were observed across four discrete age categories and the manner in which high growth intentions varied across the career stages differed by gender. Both men and women are most likely to express high growth intentions early in their career development, a time associated with low levels of human capital but also lower levels of familial obligations.

Second, Principle #3 stated that lives are lived interdependently with different constraints and opportunities embedded in different sets of relationships (see also hypothesis 4). This principle was most clearly demonstrated by the positive relationship between parenthood and women's growth intentions. Future research is required to determine if the effect of motherhood varies depending on the age of the mother, the age of the children, and the number of children. Although the multivariate analysis did not show any significant relationships between the family status of men and their growth intentions, the descriptive analysis suggested that family formation may have a role in the comparatively low growth intentions of men in the launching stage. Compared with anticipatory men, 22% more launching men are married and 15% more are parents. These findings regarding the relationships between gender, family, and growth intentions warrant further investigation. Therefore, in addition to recognizing that entrepreneurs are embedded in families (Aldrich & Cliff, 2003), researchers should consider that entrepreneurial activity is embedded in an individual's career. Employment, educational, and family experiences that occur before transitioning to entrepreneurship influence individuals' entrepreneurial intentions and behavior.

This study also advances the understanding of the differences between men and women in their choice to pursue high-growth entrepreneurship. The main effect of gender in the multivariate analysis initially suggested that women were overall less likely to express high growth intentions for their ventures than men. However, subsequent analysis from the life course perspective revealed instead that the gender difference was largely driven by young men's very high propensity to express high growth intentions relative to the rest of the sample. In other words, women in launching, establishment, and shifting gears stages did not have significantly lower growth intentions than men in those stages. The results thus revealed that women and men differed not so much in their overall intent to pursue high-growth entrepreneurship; rather, the life course correlates for predicting high growth intentions differed greatly for men and women, with each being pulled into pursuing high-growth entrepreneurship by a different set of factors.

Our results showed that the profile of a nascent entrepreneur choosing high growth varied depending on whether the individual was a man or a woman. Both men and women starting high technology businesses with strongly expressed career reasons were more likely to intend high growth for their startups. However, the profile of a woman choosing to pursue high-growth entrepreneurship was a highly educated parent with high levels of entrepreneurial intensity and the profile of a man choosing to pursue high-growth entrepreneurship was a young person with no experience in the business's industry. These two profiles represent starkly different entrepreneurs with varying needs, strengths, and weaknesses. In addition, these profiles call attention to entrepreneurs who less often desire high growth for their ventures, such as women that are not parents, but may be well-positioned to start high-impact firms. Programs directed at identifying and cultivating high-growth entrepreneurs should be attuned to these differences to both maximize the impact of their limited resources as well as best serve the needs of entrepreneurs. More importantly, the results show how erroneous it would be to assume that women entrepreneurs desire high

growth less often than men, as the initial findings suggested. By better understanding men's and women's growth intentions throughout the life course, such programs can more effectively help women desiring high growth to acquire resources necessary for creating businesses of scale.

Limitations and Future Research

As discussed in Davidsson, Achtenhagen, and Naldi (2010), growth cannot be equated with success. Rather, they recommended using "growth as an intermediary variable that influences more fundamental goals in ways that should be carefully examined rather than assumed" (p. 70). Reynolds and Curtin (2008) found no significant differences in the odds of establishing an operational business in PSED I and II at the time of the first follow-up according to growth intentions (see also Reynolds, 2007). The approach employed in this article suggests that further research should be conducted to determine if the likelihood of firm birth varies by gender and career stage, especially now that there are 4 years' worth of data in PSED I and 6 years' worth of data in PSED II. In addition, future research should consider how life course characteristics influence the behaviors nascent entrepreneurs exhibit when creating their startups.

Although only a control variable, the negative effect of industry experience on men's growth intentions also warrants further research. It is possible that, as was the case for individuals in Becker and Moen's (1999) research, individuals with prior industry experience chose entrepreneurship as a way to achieve goals that were not possible to them in a large, corporate setting. Therefore, they may wish to control the growth of their business in an effort to avoid repeating negative aspects they observed in their prior experiences as employees. Because industry experience has positive associations with firm performance, more research should be conducted to determine how entrepreneurs more experienced in an industry form businesses in ways that are different from novices (Reynolds, 2007).

In addition, the PSED I versus PSED II result suggests the importance of historical changes on entrepreneurial growth intentions. High-quality, longitudinal, representative data on nascent entrepreneurs from multiple birth cohorts need to be collected and updated to determine how relationships between variables of interest change when historical conditions shift.

Ideally, the effects of family formation on growth intentions need to be studied with data that more precisely measure family *transitions* as opposed to cross-sectional family status, including dates of marriage, children's ages, spousal employment, and marriage dissolution. In addition, the effects of life course on growth intentions should be examined in countries outside of the United States to determine if the trends found in this study appear in other countries or if the gendered effects of career stage and family status on growth intentions are country specific.

In conclusion, this study provides enhanced insights into the diversity of men and women with high growth intentions. The research demonstrated that the life course is indeed associated with differences in the high growth intentions for men and women, but often in unexpected ways.

Appendix

Personal Preference Variables

Item	PSED I	PSED II
Entrepreneurial Intensity		
There is no limit as to how long I would give maximum effort to establish this new business	QL1e	AY9
My personal philosophy is to "do whatever it takes" to establish my own business	QL1f	AY10

Career reasons			Loading
To have a chance to build great wealth or a very high income	QG1n	AW12	.89
To give yourself, your spouse, and your children financial security	QG1g	AW6	.88
To fulfill a personal vision	QG1o	AW13	.88
To earn a larger personal income	QG1k	AW9	.85
To have greater flexibility for your personal and family life	QG1b	AW2	.85
To achieve something and get recognition for it	QG1l	AW10	.84
To have considerable freedom to adapt your own approach to work	QG1f	AW5	.83
To achieve a higher position in society	QG1a	AW1	.83
To build a business your children can inherit	QG1j	AW8	.83
To have the power to greatly influence an organization	QG1q	AW14	.82
To be respected by your friends	QG1e	AW4	.79
To follow the example of a person you admire	QG1i	AW7	.76
To develop an idea for a product	QG1m	AW11	.75
To continue a family tradition	QG1d	AW3	.70

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