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Examining Bridge Employment from a Self-employment Perspective – Evidence from the  
Health and Retirement Study

by

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Health and Retirement Study

Abstract

This study examines bridge employment decision-making from a self-employment perspective using three prominent retirement theories, the life course perspective, continuity theory and role theory. Focusing on self-employment extends the current theoretical understanding of bridge employment and offers interesting implications for retirement policy-making. Specifically, using longitudinal data from the Health and Retirement Study ( $n = 2080$ ), we conducted multinomial regression analysis to examine who were more/less likely to fully retire, enter bridge employment in the wage-and-salary form, or enter bridge employment in the self-employment form. Furthermore, we examined the role of pre-retirement self-employment status, to provide us with more information on the very much understudied retirement process of entrepreneurs and self-employed workforce. Our findings indicated that self-employment can be considered as an independent form of bridge employment, apart from bridge employment in wage-and-salary jobs. Furthermore, the decision to enter different forms of bridge employment, including self-employment, may stem from a variety of antecedents. Practical implications of this study are also discussed.

*Keywords:* Bridge employment, retirement, self-employment, aging, wage-and-salary employees.

Retirement is becoming an increasingly dynamic process today, as people transition into full retirement through different pathways (Beehr & Bennett, 2015; Wang & Shi, 2014). Indeed, instead of withdrawing from working life immediately after official retirement (e.g., when an individual starts to collect pension benefits), as many as half of the older employees have in recent years chosen to remain active in the workplace by entering bridge employment (Cahill, Giandrea, & Quinn, 2015). Bridge employment has been defined as the transitioning employment status after career employment ends (that is, when a person starts collecting retirement benefits) and before complete work withdrawal begins (Dingemans, Henkens, & van Solinge, 2015; Feldman, 1994; Shultz, 2003; Wang & Shultz, 2010). In order to better understand the dynamic retirement process, it is essential to understand the context within which the transition will take place, as well as the drivers behind the bridge employment decision making.

Older individuals can find post-retirement jobs in various fields and organizations. According to a typology presented by Beehr and Bennet (2015), there can be as many as 16 types of bridge jobs, depending on whether the individual continues in his/her career in the same or different field, with or without delay, in a steady position or a limited-term contract position, and in the self-employed or non-self-employed form. Empirical studies on bridge employment have mainly categorized the forms of bridge employment based on the working field of bridge employees (i.e., bridge employment in one's career field or in a different field; Gobeski & Beehr, 2009; Wang, Zhan, Liu, & Shultz, 2008), or the employer of bridge employees (i.e., bridge employment with the same employer as pre-retirement job or with a different employer; Kim & Feldman, 2000; Zhan, Wang, & Yao, 2013). These studies have exclusively focused on bridge employment in the regular wage-and-salary form while the self-employment option of bridge employment has not been vigorously studied (Wang & Shi, 2014; Zhan & Wang, 2015).

In the last decades, the prevalence of self-employment among older Americans, as a fraction of those working, has increased substantially. According to U.S. Bureau of Labor Statistics, self-employment continues to be an important source of jobs in the United States. Of total U.S. employment in 2015, over 10% (15 million people) were self-employed, either in incorporated or unincorporated businesses. Self-employed are typically men (65% vs. women 35%), working in occupations such as construction and extraction (U.S. Bureau of Labor Statistics, 2014). Furthermore, the portion of self-employed individuals has been the highest among those aged 65 and older, compared to younger age groups (Hipple & Hammond, 2016; Karoly & Zissimopoulos, 2004). Hence, self-employment is likely to play an important role in the retirement transitions of older Americans (Cahill, Giandrea, & Quinn, 2013). It may not only serve as a way for older workers to retire gradually from the labor force, but also provide the flexibility in hours and type of work that older employees typically desire (Quinn, 1999). Therefore, the main purpose of the current research is to examine the factors that relate to workers' transition into full retirement vs. entering bridge employment in wage-and-salary jobs or in self-employment.

Despite the importance of the self-employed individuals to the economy, little is known about their retirement pathways (Kerr & Armstrong-Stassen, 2011; Zissimopoulos & Karoly, 2009). Prior studies have often viewed retirees as one internally cohesive population while neglected the possible differences between retirees who retire from regular wage-and-salary employment positions and those who retire from self-employment. It is possible that these two subpopulations of retirees transition into full retirement in different ways. Previous findings from three HRS cohorts have indicated that those who were self-employed were less likely to exit the labor force at any age, compared to wage-and-salary employees (Cahill, et al., 2013; Zissimopoulos & Karoly, 2009). However, we know little regarding the characteristics of self-employed individuals that make them more or less likely to stay self-

employed or choose a different retirement pathway. For example, although van Solinge (2014) examined predictors of bridge employment in the forms of wage-providing jobs or self-employment as compared to full retirement, her study did not distinguish retirees based on the form of their pre-retirement jobs (i.e., wage-and-salary jobs vs. self-employment). As such, the second purpose of the current research is to provide information on how the association between different antecedents and bridge employment decision making differs according to pre-retirement employment form (i.e., self-employment vs. wage-and-salary employment).

To address the research gaps presented above, we have used longitudinal data from Health and Retirement Study (HRS; Juster & Suzman, 1995) to examine bridge employment decision making (i.e., full retirement, bridge employment in wage-and-salary form, and bridge employment in self-employed form). We draw on life course perspective, continuity theory and role theory in studying the effects of potential individual attributes (age, gender, education, perceived health, marital status), job- and family-related variables (job stress, pre-retirement employment form, marital status, health insurance coverage in retirement) in associating with bridge employment decision making. Specifically, we aim to examine who were more/less likely to fully retire, enter bridge employment in the wage-and-salary form, or enter bridge employment in the self-employment form. By answering this question, we contribute to the accumulation of evidence on the role of self-employment as an opportunity for employees to engage in bridge employment before exiting the working life permanently. Furthermore, we examine how the pre-retirement employment form moderates the associations between aforementioned antecedents and bridge employment decision making. Given the lack of existing theoretical or empirical work, we formulate one hypothesis and raise a couple of research questions for the moderating role of pre-retirement employment form. By doing so, we aim to provide preliminary evidence for the potential differences in the

retirement process between wage-and-salary employees and entrepreneurs/self-employed workforce.

### **Adjustment to Retirement and Self-employment**

Retirement can be conceptualized as an adjustment process during which workers transition from active employment status to full workforce exit status through adjusting their psychological identity, daily life pattern and activity, and social connections (Szinovacz, 2003; Wang & Shultz, 2010). During the adjustment process of retirement, whether to take bridge employment is a decision that many retirees need to make (Feldman, 1994).

Knowledge on the antecedents and predictors of bridge employment has accumulated in the last decades (Beehr & Bennet, 2015). The variables affecting older workers as they begin their transition to retirement have been classified in at least three categories or levels of predictors: (a) Individual level variables, such as health, (b) variables that arise from the job or organization, such as compensation, or family-related factors, and (c) societal influences, such as the economy (Beehr & Bennet, 2015; Fisher, Chaffee, & Sonnegg, 2016; Wang & Shi, 2014). Bridge employment is generally believed to have positive impacts on smoothening the retirement process, because it helps retirees maintain their work role identity and prevent the potential loss due to retirement (e.g., physical activities, social interactions, meanings of work, etc.). Existing research has provided some evidence for these beneficial effects such that taking bridge employment is associated with better retiree health and well-being (Kim & Feldman, 2000; Zhan, Wang, Liu, & Shultz, 2009).

While some retirees may choose to engage in bridge employment to maintain health and well-being and facilitate their retirement adjustment process, others may feel they have to take a job after retiring for financial reasons. Among different motives of working, financial needs play an important role in older adults' decision to seek employment (Mor-Barak, 1995). Also, accumulating financial resources may be particularly important for older adults



because of the expected decline in their workability and expected increase in health care related needs (Quinn & Cahill, 2016).

Bridge employment has the potential to serve as a new career stage for retirees. This is especially true for people who want to pursue work goals that cannot be reached in their pre-retirement career work. An example that reflects the role of bridge employment as a new career stage is when older adults transition from one employment form to another (e.g., from wage-and-salary employment into self-employment or vice versa) after retiring. Moreover, research shows that self-employment may provide individuals with a sense of achievement, self-efficacy, and autonomy, and opportunities of innovation (Rauch & Frese, 2007).

However, while many are self-employed by choice, this is not always the case. Specifically, a recent study using data collected among German and Dutch self-employed individuals, found that a quarter of the self-employed were forced into self-employment and that they were less prepared for retirement compared to those who were self-employed because of their own choice (Hersey, van Dalen, Conen, & Henkens, 2017). In this study, we pay special attention to self-employment by examining it as a form of pre-retirement employment, as well as a form of bridge employment.

### **Theoretical Framework and Hypotheses Development**

The three most widely used theories that are capable of rationalizing the antecedents of bridge employment are the life course perspective, continuity theory and role theory (Beehr & Bennett, 2015; Wang & Shultz, 2010). The life course perspective (Elder, 1995) focuses on retirement as a life transition in an ongoing trajectory, emphasizing the roles of timing and the social context of this transition. As such, the life course perspective can provide the overarching framework for identifying antecedents in our study. According to this theory, the process via which people retire, including whether they choose to work after retiring, might be influenced by people's personal attributes and context (e.g., gender,

education background, health condition, and financial conditions; Laitner & Sonnega, 2013; Quick & Moen, 1998; von Bonsdorff, Shultz, Leskinen, & Tansky, 2009; Wang et al., 2008), previous work-related experience (e.g., pre-retirement employment status, pre-retirement job attitudes, job characteristics, and career standings; Wang, 2007; Wang et al. 2008; Zhan et al., 2013), as well as social context (e.g., social network, family structure, and marital life; Szinovacz & Davey, 2004; Wang, 2007; Wang & Shi, 2014). Thus, individual attributes and experiences as well as the contexts of the retirement transition can influence the pathways people take to accomplish this transition (e.g., bridge employment).

Adjustment to retirement can also be understood through the continuity theory (Atchley, 1989, 1999), in which retirement is not viewed as a stressful disruption but rather as an opportunity to maintain a certain lifestyle and social contacts (Quick & Moen, 1998). The theory suggests that individuals during life transitions tend to sustain their daily routines by participating in activities which they value highly. Moreover, individuals who have been highly committed to their jobs are more likely to seek continuity through the participation in working life in a similar form as pre-retirement employment (Atchley, 1989). The similarity of post- versus pre-retirement work environment offers a natural way to maintain daily routines and engage in social interaction with colleagues, supervisors, and clients. For some individuals, maintaining these networks can influence the decision to continue at work instead of retiring early. Bridge employment might offer an opportunity to keep up these social contacts and networks after full-time employment.

Role theory (Ashforth, 2001; Moen, Dempster-McClein, & Williams, 1992) conceptualizes retirement as role transition embedded in the retirement process. It may include simultaneous losing or weakening of work roles, and strengthening the family and community member roles (Barnes-Farrell, 2003). Role theory argues that the role transition can lead to either positive or negative adjustment consequences, depending on whether the

role transition is desirable or matches the individual's values and goals (e.g., Adams, Prescher, Beehr, & Lepisto, 2002; Wang, 2007). Role theory emphasizes the influence of job-related psychological factors in retirement-related decision making, including bridge employment (Barnes-Farrell, 2003). Hence, those individuals who retire from unpleasant jobs, characterized by excessive job strain, high workload, low salary, and a stressful relationship with the supervisor and/or co-workers, might be pleased with the complete loss of the undesirable work role or the establishment of a new and positive work role. For example, for salary-and-wage employees, transitioning into full retirement or entering bridge employment as self-employed may serve as means to exit an unpleasant work role.

In the following section, drawing on these theoretical perspectives, we present hypotheses for the antecedents of bridge employment participation (i.e., wage-and-salary bridge employment, self-employed bridge employment, and full retirement). Furthermore, where appropriate, we present specific hypotheses for those who were in wage-and-salary employment and/or those who were self-employed prior to retirement.

### **Pre-retirement Employment Form**

As transitioning into retirement grows closer, individuals need to make a decision on whether to continue working after retirement (Wang et al., 2008; Zhan & Wang, 2015). We propose that individuals who enter bridge employment tend to work in the same form of employment (i.e., in a wage-and-salary form or in a self-employed form) as their pre-retirement employment rather than switching to a different form. According to the life course perspective, retirement transition is contingent on older individuals' employment history and job-associated statuses and roles (Wang, 2007). Retiring from wage-and-salary jobs or self-employment provides important circumstances for decision making regarding which form of bridge job a retiree may choose. Further, continuity theory maintains that individuals' general tendency is to maintain consistency in life patterns over time and to accommodate transitions

without the experience of disruption (Atchley, 1989, 1999). Therefore, bridge employment can be viewed as means to maintain and continue social relationships and lifestyle patterns into retirement. Working in the same form of employment through the retirement transition may enhance the sense of continuity. Based on these theoretical perspectives, we expected that individuals would likely continue in the form of employment as their pre-retirement jobs.

**Hypothesis 1:** Among workers who enter bridge employment, those retiring from wage-and-salary jobs are more likely to participate in bridge employment in wage-and-salary form, and those retiring from self-employment are more likely to work in self-employed form after retiring.

### **Demographic Factors**

The role of chronological age in the transition into retirement can be understood in the context of life course perspective and continuity theory. Previous literature has typically found a negative association between age and the intention to engage in bridge employment (Kim & Feldman, 2000; Wang & Shi, 2014). The older the employee becomes, the less likely s/he is to achieve continuity in life through work, due to health limitations. Even if age per se does not serve as a proxy for health, both physical and mental capacities tend to decline as individuals age (Jex, Wang, & Zarubin, 2007). Both wage-and-salary employees and self-employed are likely suffer from these capacity declines. While the retirement process may differ between employees with wage-and-salary jobs and self-employed, it is likely that as individuals age, both types of individuals are more likely to initiate the complete retirement process rather than entering bridge employment.

**Hypothesis 2:** Regardless of individuals' pre-retirement employment status, age will be negatively associated with engaging in any form of bridge employment versus full retirement, such that older workers will be more likely to retire.

According to the life course perspective (Quick & Moen, 1998; Wang 2007), family is an important context within which the life transitions occur (Szinovacz, 2003; Wang & Shi, 2014). This view has also been supported by the continuity theory, as Kim and Feldman (2000) found empirical evidence that unmarried retirees were more likely to engage in bridge employment because of its critical role in maintaining social contact with others. Different findings were presented by Wang et al. (2008), who reported that marital status or quality of marriage were not predictive in differentiating full retirement and bridge employment. Thus, the role of marital status in the retirement decision making merits further research (Wang & Shi, 2014). For example, having a spouse in the labor force might either encourage expectations of an earlier retirement, given the security of a partner's income, or it may delay retirement expectations in order to be "in sync" with a partner who is continuing to work for pay (Moen, Kojola, Kelly, & Karakaya, 2016). One possible explanation for these mixed findings may be that the effect of marital status varies between men and women.

Previous literature, especially studies with a life course perspective, has found that the retirement process is gendered (Moen et al., 2016). Until recently, women have typically had higher levels of family orientation, and only few have had a career to retire from (Quick & Moen, 1998). These traditional gender roles may explain some of the differences in participating in bridge employment (Bennett, Beehr, & Lepisto, 2016; Zhan, Wang, & Shi, 2015). Traditionally, women's jobs were considered less important than those of men. Even today, a wife's job is usually perceived to be economically less important than her husband's, in case she earns less money compared to the spouse. Compared to men, women who belong to the baby-boom generation are especially more likely to be pulled out from work by family-related factors, such as wanting to spend more time with family (Moen, 2016). Therefore, we expect that married women are less likely to engage in any form of bridge employment than to enter full retirement, compared to unmarried women. Men, however, may feel more

obligated to be a breadwinner of the household and remain employed even in old age (Bennett et al., 2016). Compared to unmarried men who usually only support themselves thus have less financial burden, married men are more likely to engage in bridge employment rather than to fully retire. Therefore, we expect that regardless of workers' pre-retirement employment status, gender and marital status will be interactively associated with bridge employment decisions.

**Hypothesis 3:** Regardless of workers' pre-retirement employment status, gender and marital status will have an interaction effect on bridge employment decisions. Specifically, a) compared to single/unmarried men, married men will be more likely to engage in any form of bridge employment versus full retirement; and b) compared to single/unmarried women, married women will be less likely engage in any form of bridge employment versus full retirement.

The level of education is associated with individuals' skills and their ability to perform at work, as well as their postretirement activities. Consistent with continuity theory, individuals who have obtained high levels of education, resulting in greater professional knowledge and/or skills, are more likely to have the capacity and options to maintain their life patterns (Wang & Shi, 2014). Thus, they may have more opportunities to continue to work in their career field by engaging in consulting or other entrepreneurial roles (Ekerdt, Kosloski, & DeViney, 2000; Wang & Shultz, 2010). A study by Wang et al. (2008) found that a higher level of education was associated with employees' desire to engage in bridge employment (also see Kim & DeVaney, 2005; von Bonsdorff et al. 2009). Higher levels of education, however, did not predict engagement in career bridge employment - on the contrary, it was associated with bridge employment in a different field (Wang et al., 2008). This might suggest that retirees with higher levels of education have more bridge

employment opportunities outside their career field, and they have more autonomy in choosing bridge employment jobs.

A study by Zissimopoulos and Karoly (2009) showed that higher level of education was positively associated with transitioning into self-employment at older ages. Interestingly, as Social Security, pension, financial, and housing wealth were controlled for in their study, it seemed that education was picking up an effect independent of wealth. This might suggest that the effect of education relate to highly educated individuals' greater managerial abilities and their ability to identify self-employment opportunities (Zissimopoulos & Karoly, 2009). Such findings are also supported by findings from a European study, which found that higher education was positively associated with entering bridge employment as self-employed compared to full retirement (van Solinge, 2014).

We expect these findings to be applied to individuals transitioning into bridge employment. In particular, it is likely that higher level of education is predictive of individuals entering or continuing in self-employment after retirement. It may be that higher education represents a form of human capital which is important for operating a business independently, thus facilitating individuals to enter or continue self-employment rather than participate in wage-and-salary employment as their forms of bridge employment.

**Hypothesis 4a:** Regardless of workers' pre-retirement employment status, level of education will be positively associated with engaging in any form of bridge employment versus full retirement.

**Hypothesis 4b:** Regardless of their pre-retirement employment status, level of education will be positively associated with engaging in bridge employment as self-employed versus bridge employment in wage-and-salary form.

### **Job-related Factors**

Work-related psychological factors, such as job stress, are significant in shaping the late career of older employees. The role of the pre-retirement job in bridge employment decisions may be understood in light of role theory. More specifically, if an individual considers her career job to be highly stressful, she/he tends to exit the job earlier in order to escape an unpleasant work role (van den Berg, Elder, & Burdorf, 2010). Conversely, greater job autonomy and higher job satisfaction are typically found among those individuals who have long work careers (Moen et al., 2016). Organizational level studies have recently found that the quality of the work experience, such as flexibility and meaningful work, may encourage older workers to remain in their jobs and in the workforce longer, while demanding and rigid work conditions and unaccommodating supervisors may facilitate intentions to retire early (Bamberger & Bacharach, 2013; Kojola & Moen, 2016). Therefore, we expect that older workers who perceive their career job to be more (versus less) stressful will be more likely to withdraw from work completely.

Furthermore, for the same reason, for individuals who decide to enter bridge employment, high levels of pre-retirement job stress will likely push them toward a different form of employment than their career employment. By entering a different form of employment, these individuals may expect less stressful work environment associated with their new work role identity. Accordingly, we expect the effect of pre-retirement job stress to associate with different bridge employment forms for retirees retiring from wage-and-salary jobs versus self-employed jobs. Specifically, wage-and-salary employees who retire from jobs with high versus low levels of stress are likely to enter bridge employment as self-employed, while self-employed individuals who retire from jobs with high versus low levels of stress are likely to switch to wage-and-salary bridge employment positions.



**Hypothesis 5a:** Regardless of workers' pre-retirement employment status, higher levels of pre-retirement job stress will be negatively associated with engaging in any form of bridge employment versus full retirement.

**Hypothesis 5b:** Pre-retirement job stress interacts with pre-retirement employment form in associating with bridge employment. For wage-and-salary workers who enter bridge employment, those with higher levels of job stress will be more likely to enter bridge employment as self-employed instead of wage-and-salary form. For self-employed individuals who enter bridge employment, those with higher levels of job stress will be more likely to enter bridge employment in wage-and-salary form instead of self-employed.

### **Financial Factors**

Financial aspects are closely tied to retirement decisions among employees. According to Shultz (2003), financial constraint may facilitate bridge employment. Older individuals may have to take bridge work, in order to afford their daily expenditures and support their basic daily life (Adams & Rau, 2004). Although the role of financial necessity in bridge employment decision has received mixed evidence (Beehr & Bennett, 2015; Bennett et al., 2016; von Bonsdorff et al. 2009; Wang et al. 2008), we propose that workers with more financial resources are less likely to participate in bridge employment while more likely to fully retire.

The role of wealth and earnings in entering self-employment is not well understood, and should therefore be a subject of additional research (Zissimopoulos & Karoly, 2007). However, preliminary findings indicate that financial liquidity may be of primary importance in becoming self-employed (Evans & Jovanovic, 1989; Singh & DeNoble, 2003). A few studies have found that financial resources predict bridge employment as self-employed instead of wage-and-salary employment (Kerr & Armstrong-Stassen, 2011; van Solinge, 2014; Zissimopoulos & Karoly, 2007). This finding is consistent with the hypothesis that

limited access to financial resources (i.e. liquidity constraints) may compromise the propensity to start a business or become self-employed (Zissimopoulos & Karoly, 2009; Tervo, 2014).

**Hypothesis 6a:** Regardless of workers' pre-retirement employment status, financial resource will be negatively associated with engaging in any form of bridge employment versus full retirement.

**Hypothesis 6b:** Regardless of their pre-retirement employment status, financial resources will be positively associated with engaging in bridge employment as self-employed versus bridge employment in wage-and-salary form.

### **Health Factors**

Several studies have found that older workers' health is one of the most powerful factors influencing the decision to retire instead of entering bridge employment (Feldman, 1994; Kim & Feldman, 2000; Wang et al., 2008). Employees experiencing severe health problems, such as lung disease, are likely to consider early retirement (Shultz & Wang, 2007). As Kim and Feldman (2000) have stated, even if employees with serious health problems could perform on their jobs, they may want to spend the limited time they have available with family and friends. Supporting this statement, Kerr and Armstrong-Stassen (2011) found that older adults who were in good health were significantly more likely to engage in post-career bridge employment (in wage-and-salary employment or as self-employed), than those in poor health. Thus, we propose that health-related problems are likely to cause interruptions in employees' lives in terms of continuity (Atchley, 1989).

Further, health is likely to affect self-employed bridge employment decisions. Compared to being an employee in a wage-and-salary position, being self-employed usually means more autonomy and flexibility in terms of work locations and schedules. This could be especially beneficial for individuals with health issues. For instance, location and schedule

flexibility helps ease work commuting demands and allow self-employed individuals to pace themselves depending on their health condition. Accordingly, it may be easier for people to adapt to health-related challenges in the work environment when self-employed compared to being an employee. Consistent with this argument, Zissimopoulos and Karoly (2009) estimated that workers with work-limiting health conditions are more likely to move to self-employment after age 51. Although the empirical evidence on the role of health in entering self-employment instead of full retirement has been unclear (e.g., Cahill et al., 2013; Fuchs, 1982), we expect a negative relationship between health and self-employment, such that retirees with poor health will be more likely to engage in self-employment instead of wage-and-salary employment for bridge employment.

**Hypothesis 7a:** Regardless of workers' pre-retirement employment status, perceived health will be positively associated with engaging in any form of bridge employment versus full retirement.

**Hypothesis 7b:** Regardless of workers' pre-retirement employment status, perceived health will be negatively associated with engaging in self-employment instead of wage-and-salary employment for bridge employment.

Securing access to health insurance coverage during retirement has important implications for retirees' financial and physical well-being. Furthermore, the onset of chronic diseases may hinder older employees to achieve continuity in their lives through continued participation in working life (Atchley, 1989). Retirees need to plan their insurance coverage carefully, in order to avoid financial difficulties as a result of both acute and chronic health conditions (Mortensen & Villani, 2013). There are several ways to secure access to health insurance coverage in retirement in the US. The social public insurance program, Medicare, provides health insurance coverage for those U.S. citizens and legal permanent residents aged 65 and over (Iglehart, 1999). It covers nearly all eligible Americans, as only about 1.5% of

individuals over age 65 lacks Medicare coverage (Schiff, 2002). For those who retire before age 65, they may obtain health insurance from their previous employers (i.e., as a part of the retirement benefit package) or their spouses' employers. The rest of retirees (i.e., those who are not eligible to Medicare and do not have employer-sponsor coverages) have to either purchase health insurance by their own or enter bridge employment to obtain employer-sponsored health insurance.

Studies based on the HRS have reported on health insurance coverage in retirement and bridge employment, but not specifically considering the self-employment aspect. Findings presented by Cahill et al. (2015) indicated that movement to a bridge job was generally highest among those individuals with no employer provided health insurance coverage. Furthermore, movement to a bridge job was generally higher among those who had coverage, but would lose it if they retired. This could suggest a desire to maintain coverage via some new jobs after the transition. Nevertheless, it is likely that individuals with health insurance coverage are more likely to retire instead of continuing to participate in working life.

Evidence regarding the association between health insurance coverage in retirement and self-employed bridge job participation, as well as bridge employment among self-employed is scarce. Research conducted by Zissimopoulos and Karoly (2009) found that men who were covered by employer or retiree health insurance were less likely to transition into self-employment at older age. Similar finding were reported in a study based on the Massachusetts Federal Affordable Care Act. This Act was passed to delink health insurance and employment by expanding Medicaid and merging the individual and small-group insurance markets, thus expanding the state-funded health insurance to cover more residents of Massachusetts (Heim & Lurie, 2014). According to the findings, participating in self-employment decreased after the Act was implemented. In other words, it appears that

sufficient health care coverage during retirement provided either by the employer or the state decreases the need to continue working after retirement.

**Hypothesis 8:** Regardless of workers' pre-retirement employment status, compared to those without employer provided health insurance coverage during retirement, those with health insurance coverage will be more likely to engage in full retirement versus any forms of bridge employment.

In addition to the hypotheses described above, we studied the role of pre-retirement employment status by exploring two research questions. Some theoretical perspectives, such as continuity theory (Atchley, 1989) and the understanding of liquidity constraints (Singh & DeNoble, 2003), seem to indicate that both education and income may interact with the pre-retirement employment status in predicting bridge employment decisions. Nevertheless, we decided to explore these relationships cautiously by formulating research questions instead of specific hypotheses. First, consistent with continuity theory, individuals with higher levels of education are more likely to have the capacity and options to maintain their life patterns (Wang & Shi, 2014). Conversely, it may especially be the case that employees with lower levels of education retiring from wage-and-salary employment have less capacity to start self-employment and thus are more likely to continue in wage-and-salary employment.

Second, the role of financial resources (e.g. total wealth) has been linked with older individuals moving into self-employment (Singh & DeNoble, 2003). Findings indicating that limited access to financial resources (i.e. liquidity constraints) may compromise the propensity to start a business or become self-employed (Zissimopoulos & Karoly, 2009; Tervo, 2014), suggest that moving into self-employment after retirement would require more wealth and other financial resources for those retiring from wage-and-salary employment, compared to those retiring from self-employment. This view is also endorsed by microeconomists (Evans & Jovanovic, 1989; Singh & DeNoble, 2003). Therefore, it is likely

that the positive relationship between financial resources and engaging in bridge employment as self-employed is stronger for those who retire from wage-and-salary employment than for those who retire from self-employment.

**Research Questions:** Do the effects of (a) years of education and (b) total income on bridge employment vary across people who retire from wage-and-salary employment and people who retire from self-employment?

## **Method**

### **Participants and Procedure**

Data for this study come from Waves 1 to 11 (i.e. 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, and 2012) of the Health and Retirement Study (HRS). HRS is a nationally-representative, biennial longitudinal panel study among older Americans, conducted by the Social Research Institute at the University of Michigan and supported by the National Institute of Aging. The first Wave of this survey, conducted in 1992, included a sample of the noninstitutional population 51–61 years of age (born between January 1, 1931 and December 31, 1941) and their spouses of any age ( $N = 12,562$ ; Juster & Suzman, 1995). After the baseline survey in 1992, the same participants were revisited and interviewed face-to-face every 2 years. The HRS is widely considered as the most representative and comprehensive data available to those who study bridge employment in a retirement context from a longitudinal framework (Wang et al., 2008).

In order to maintain representativeness, new cohorts have been added to the HRS over time. Assets and Health Dynamics of the Oldest Old (AHEAD) sample collected among people aged 70 and older in 1993, 1995 and 1998 was merged into the HRS. In 1998 two additional cohorts were added to the core HRS; the Children of the Depression Era (CODA) sample (born 1924-30), and the War Babies sample (born 1942-47). Furthermore, the Early Baby Boomers cohort, born 1948-53, was added in 2004 and the Mid Baby Boomers cohort,

born 1954-59, was added in 2010. The last cohort added to the HRS was the Late Baby Boomers, born 1960-65. We used data from all of these six cohorts to test our hypotheses.

For each older worker included in our study, we used data collected in three consecutive waves. Specifically, we used the question regarding receiving pension income to locate the wave of retirement for participants (i.e., the first time that the participants reported that they received pension income) across Waves 2 to 10. We did not consider disability benefits as a type of pension income to determine retirement status. Once we had located the wave of retirement, we determined participants' bridge employment participation status (i.e., whether a respondent entered wage-and-salary bridge employment, self-employed bridge employment, or full retirement) based on retirees' responses to both the questions regarding respondents' general work status (i.e., "Are you currently working for pay?") and self-employment status (i.e., "Are you currently self-employed in your main jobs?") measured in the following wave. This approach of operationalizing bridge employment by matching receiving pension income and post-retirement work status has been used in previous studies. For instance, the operationalization of bridge employment we used in the current study is consistent with that used by Dingemans et al. (2015).

The antecedent variables as well as the pre-retirement employment form (i.e., employed in the wage-and-salary form or self-employed) were from the wave immediately prior to the wave when a respondent reported transition to retirement. For example, if a respondent reported that s/he started collecting retirement pension income in Wave  $T$ , her/his bridge employment status was measured in Wave  $T+1$ , and the antecedents of bridge employment status were measured in Wave  $T-1$ . An exception to this was health insurance coverage in retirement, which was measured at retirement (Wave  $T$ ). Selecting measures in this way enables us to put the variables of the current study into corresponding time sequences and helps strengthen the causal inferences of the current findings.

During the follow-up (i.e. between waves 2 and 10), 21106 persons retired and had provided data on their post-retirement work status. Out of these retirees, we selected those who had information about the main independent variables at T-1 ( $n = 1,0767$ ). Of them, 7,272 (67.5%) transitioned into full retirement (mean age = 61.4,  $SD = 5.1$  years, 42.9% women), 2,485 (23.1%) entered bridge employment in wage-and-salary employment (mean age = 60.0,  $SD = 4.7$  years, 50.1 % women), and 1,010 (9.4%) entered bridge employment as self-employed (mean age = 61.3,  $SD = 4.1$  years, 64.4% women). Listwise deletion across all studied variables was used to handle missing values. Therefore, the sample size used for testing the hypotheses was 2,080.

## Measures

**Bridge employment.** Bridge employment was measured by asking respondents work status and the form of bridge work in the wave immediately following the one when retirement was reported (see also Wang et al., 2008). First, respondents were asked: “Are you currently working for pay?” The responses were coded into a yes/no indicator and for missing values. Second, respondents were asked whether they were currently self-employed in their main jobs, with interviewers instructed to classify respondents who work in businesses they own as self-employed. The responses were also coded into a yes/no indicator. Specifically, respondents who responded these two questions with “no” and “no” respectively were coded as fully retired, respondents who responded these two questions with “yes” and “no” were coded as bridge employed in wage-and-salary form, and those who answered the second question with “yes” were coded as self-employed in bridge employment.

**Pre-retirement employment form.** We used the question regarding self-employment to determine respondents’ pre-retirement employment form at Wave T-1). Employees were asked whether they were currently self-employed in their main jobs (0 = employed in wage-and-salary form, 1 = self-employed).



**Demographic information.** Participants were asked to report various demographic information including age, gender, marital status, and education. Age in years is the integer portion of the number of the months old divided by 12. Information on gender was taken from the Tracker file and it was coded as a dichotomous variable (0) male and (1) female. Marital status was measured with a variable created using current marital status reported for each wave. Response categories included “married/with partner” (spouse/partner present), “married” (spouse absent), “living with someone”, “separated/divorced”, “widowed”, and “never married”. The variable was recoded into (0) not married, i.e. married with absent spouse, divorced, widowed, and never married and (1) married/living with partner (with spouse/partner present). Level of education was measured by respondent’s self-reported years of education as a continuous variable, ranging between (0) 0 years to (17) 17 and more years.

**Pre-retirement job stress.** Perceived job stress was measured by asking respondents to rate the extent to which they agree with the statement: “My job involves lots of stress”. The responses to this item were coded into a Likert-type scale (1) strongly agree, (2) agree, (3) disagree, and (4) strongly disagree. Responses were re-coded in the current study, so that the higher values indicate higher levels of pre-retirement job stress.

**Total income.** We used respondents’ total income to assess their pre-retirement financial status. This variable is the sum of respondent’s wage/salary income, bonuses/overtime pay/commissions/tips, 2nd job or military reserve earnings, professional practice or trade income, reported in nominal dollars. Respondents were generally asked about income from the last calendar year. We divided the income value with 1,000 for the regression analysis.

**Self-perceived health.** Perceived health was measured by a single self-report general health item (i.e., “Would you say your health is excellent, very good, good, fair, or poor?”). The responses to this item were coded into a 5-point Likert-type scale (1) excellent, (2) very

good, (3) good, (4) fair, and (5) poor. Responses were re-coded in the current study, so that the higher values indicate better health status.

**Health insurance coverage during retirement.** The summary variable on plan-specific employer-provided health insurance at retirement (Wave *T*) was used to indicate whether the respondent was covered in retirement under any plan through own or spouses. If the respondent was self-employed, health insurance provided by her/his business was considered employer-provided. The responses were categorized into (0) “no health insurance coverage in retirement” and (1) “some coverage” (i.e. were covered until age 65 and those who answered that they were covered until age 65 and were unsure about the coverage after age 65, those who had health insurance coverage to and over 65 or for waves 1 and 2 who had indicated that they were covered during retirement).

**Control variables.** Entry cohort to the study were used as control variables in the analyses, as they have been linked with retirement decisions in previous literature (Cahill et al., 2015; Wang & Shi, 2014; Wang et al., 2008). The year of entry cohort to the HRS was numbered 1 to 6, where 1 indicated the oldest birth cohort and 6 the youngest. Following Cahill et al. (2015), entry cohort was dummy coded into (1) core (included AHEAD, HRS and CODA) vs. (0) others and (1) war babies (WB) vs. (0) others. Using these two dummy variables means that “Boomers”, including early and mid-baby boomers, were set as the reference group. In addition to entry cohort, we also had information available about the year of first retirement (1993, 1994, 1995, 1996, 1998, 2000, 2002, 2004, 2006, 2008, and 2010).

### **Analytic Strategy**

Given that the dependent variable consisted of three categories (i.e., bridge employment in wage-and-salary form, bridge employment as self-employed, and full retirement), we used multinomial logistic regression analysis to examine the hypotheses. Similar to previous studies (Wang et al. 2008; von Bonsdorff et al. 2009), we estimated the

predictive effects on the dependent variable comparing every two categories of bridge employment participation. In other words, we examined the antecedents for bridge employment in wage-and-salary form against full retirement, for bridge employment as self-employed against full retirement, and for bridge employment as self-employed against bridge employment in wage-and-salary form. To achieve such comparisons, we set the categories of full retirement and bridge employment in wage-and-salary form as reference groups in separate multinomial logistical regression models.

In the multinomial logistic regression analysis, we first entered two dummy variables of cohort, gender, and marital status as control variables. Entering both cohort of entry and year of retirement did not alter the results. Therefore, year of retirement was not included in the analyses.

In the second step, we entered pre-retirement employment form, age, years of education, pre-retirement job stress, total income, self-perceived health, and health insurance coverage in retirement as predictors of retirement decisions. In addition to the hypothesized interactions terms regarding gender x marital status, pre-retirement employment form x pre-retirement job stress, we explored the role of pre-retirement employment form to answer the research questions by testing the interactions between pre-retirement employment form x years of education and pre-retirement employment form x total income in the third step. Pseudo  $R^2$  effect size estimates, Chi-square test results, logistic regression coefficients, and corresponding odds ratios (ORs) are all reported in the Results section.

## **Results**

Table 1 present means, standard deviations, and correlations among the focal variables. The results of the multinomial logistic regression models are presented in Table 2. The chi-square tests for the model comparing the three different forms of bridge employment decisions indicated that the antecedents as a set predicted older workers' bridge employment

decisions [ $\chi^2$  (22, N = 2080) = 433.74,  $p < 0.001$ , Cox and Snell pseudo  $R^2 = .19$ ]. For the model containing the interactions, corresponding estimates were [ $\chi^2$  (30, N = 2080) = 454.96,  $p < 0.001$ , Cox and Snell pseudo  $R^2 = .20$ ]. In the following sections, we report the predictive effects of these hypothesized antecedents for each paired comparison of bridge employment decisions.

As shown in Table 2, whether or not retirees were self-employed before retirement was positively and significantly associated with engaging in bridge employment as self-employed against engaging in bridge employment in wage-and-salary form ( $B = 3.77$ ,  $p < .01$ , OR = 43.32), indicating that individuals retiring from self-employment were 43.32 times more likely to engage in bridge employment as self-employed instead of bridge employment in wage-and-salary form. Therefore, Hypothesis 1 was supported.

Age was negatively and significantly associated with engaging in bridge employment in wage-and-salary form against full retirement ( $B = -.10$ ,  $p < .01$ , OR = .90), indicating that workers who were 1 year older were .90 times less likely to engage in bridge employment in wage-and-salary form instead of full retirement. However, age was not significantly associated with engaging in bridge employment as self-employed against full retirement ( $B = -.02$ ,  $p > .05$ , OR = .98). Therefore, Hypothesis 2 was supported only in predicting wage-and-salary bridge employment.

The interaction term between gender and marital status had a positive and significant effect in predicting bridge employment in wage-and-salary form against full retirement ( $B = .79$ ,  $p < .01$ , OR = 2.19), but had a non-significant effect in predicting bridge employment as self-employed against full retirement ( $B = -.23$ ,  $p > .05$ , OR = .80). In other words, marital status had different effects in predicting bridge employment in wage-and-salary form against full retirement for men and women, but had similar effects in predicting bridge employment as self-employed against full retirement for men and women. Specifically, we found that the

married women were .69 times less likely to engage in bridge employment in wage-and-salary form against full retirement compared to single/unmarried women ( $B = -.37, p < .05, OR = .69$ ). However, married men were 1.49 times more likely to engage in bridge employment in wage-and-salary form against full retirement compared to single/unmarried men ( $B = .40, p < .05, OR = 1.49$ ). As such, Hypothesis 3 was supported in predicting wage-and-salary bridge employment.

Education was not significantly associated with engaging in bridge employment in wage-and-salary form against full retirement ( $B = .02, p > .05, OR = 1.02$ ). However, education was positively and significantly associated with engaging in bridge employment as self-employed against full retirement ( $B = .16, p < .01, OR = 1.17$ ), indicating that workers who had 1 more year of education were 1.17 times more likely to engage in bridge employment as self-employed instead of full retirement. As such, Hypothesis 4a was partly supported. In addition, level of education was positively and significantly associated with engaging in bridge employment as self-employed against bridge employment in wage-and-salary form ( $B = .14, p < .01, OR = 1.14$ ), indicating that workers who had 1 more year of education were 1.14 times more likely to engage in bridge employment as self-employed instead of in wage-and-salary form. Therefore, Hypothesis 4b was supported.

Pre-retirement job stress was negatively and significantly associated with engaging in bridge employment in wage-and-salary form against full retirement ( $B = -.18, p < .01, OR = .84$ ), indicating that workers with one-unit higher pre-retirement job stress ratings were .84 times less likely to engage in bridge employment in wage-and-salary form against full retirement. In addition, pre-retirement job stress was also negatively and significantly associated with engaging in bridge employment as self-employed against full retirement ( $B = -.30, p < .05, OR = .74$ ). This indicates that workers with one-unit higher pre-retirement job stress ratings were .74 times less likely to engage in bridge employment as self-employed

against full retirement. As such, Hypothesis 5a was supported. The interaction between pre-retirement employment form and pre-retirement job stress was not significantly associated with engaging in any form of bridge employment. Therefore, Hypothesis 5b was not supported.

Total income was negatively and significantly associated with engaging in bridge employment in wage-and-salary form against full retirement ( $B = -.06, p < .01, OR = .94$ ), indicating that workers who had 1,000 dollars more total income were .94 times less likely to engage in bridge employment in wage-and-salary form against full retirement. However, total income was positively and significantly associated with engaging in bridge employment as self-employed against full retirement ( $B = .09, p < .01, OR = 1.09$ ), indicating that workers who had 1,000 dollars more total income were 1.09 times more likely to engage in bridge employment as self-employed against full retirement. Therefore, Hypothesis 6a was partly supported. In addition, total income was positively and significantly associated with engaging in bridge employment as self-employed against bridge employment in wage-and-salary form ( $B = .15, p < .01, OR = 1.16$ ), indicating that workers who had 1,000 dollars more total income were 1.16 times more likely to engage in bridge employment as self-employed rather than in wage-and-salary form. As such, Hypothesis 6b was supported.

Self-perceived health was positively and significantly associated with engaging in bridge employment in wage-and-salary form against full retirement ( $B = .25, p < .01, OR = 1.28$ ), indicating that workers with one-unit higher self-perceived health ratings were 1.28 times more likely to engage in bridge employment in wage-and-salary form instead of full retirement. Self-perceived health was also positively and significantly associated with engaging in bridge employment as self-employed against full retirement ( $B = .25, p < .05, OR = 1.28$ ), indicating that workers with one-unit higher self-perceived health ratings were 1.28 times more likely to engage in bridge employment as self-employed instead of full

retirement. Therefore, Hypothesis 7a was supported. In addition, self-perceived health was not significantly associated with engaging in bridge employment as self-employed rather than bridge employment in wage-and-salary form against full retirement ( $B = -.00$ ,  $p > .05$ ,  $OR = 1.00$ ). Therefore, Hypothesis 7b was not supported.

Health insurance coverage in retirement was negatively associated with engaging in bridge employment in wage-and-salary form against full retirement ( $B = -.72$ ,  $p < .01$ ,  $OR = .49$ ). This indicates that workers with health insurance coverage in retirement were .48 times less likely to engage in bridge employment in wage-and-salary form instead of full retirement. However, health insurance coverage was not significantly associated with engaging in bridge employment as self-employed against full retirement ( $B = -.54$ ,  $p > .05$ ,  $OR = .59$ ). Therefore, Hypothesis 8 was only partly supported.

For exploratory purposes, we examined the interaction between pre-retirement employment form and education as well as the interaction between pre-retirement employment form and total income for exploratory purpose. By doing so, we explored whether the effects of education and financial resources vary across participants retiring from wage-and-salary jobs and participants retiring from self-employed jobs. Including these interaction terms did not change the significance of other antecedents. The analyses showed that the association between education or total income and bridge employment participation largely remained the same regardless of retirees' pre-retirement employment form. However, we observed a significant interaction between pre-retirement employment form and total income in predicting bridge employment as self-employed against wage-and-salary bridge employment ( $B = -.15$ ,  $p < .05$ ,  $OR = .86$ ), indicating that total income only significantly influenced bridge employment form for participants who retired from wage-and-salary jobs, while for participants retiring from self-employed jobs, their total income did not significantly influence which form of bridge employment they participated in after retiring.

### Discussion

The current study sought to examine bridge employment decision making from a self-employment perspective. Using longitudinal data, we examined who were more/less likely to fully retire, enter bridge employment in either the wage-and-salary or self-employment form. Furthermore, we examined the role of pre-retirement employment form (i.e., wage-and-salary form vs. self-employed form of employment) as an antecedent of bridge employment, which provided us with new information on the very much understudied retirement process of entrepreneurs and self-employed workforce.

Our findings offered support for the majority of the hypotheses. Specifically, we found that workers were more likely to enter bridge employment in the same form they retired from, instead of wage-and-salary employees switching to self-employment and vice-versa or entering full retirement. This supports the theoretical presumption that older individuals will be inclined to maintain continuity when they enter bridge employment (Atchley, 1989, 1999). Furthermore, we found that retirees who were younger, experienced less pre-retirement job stress, had lower total income, reported better health, and were not covered by health insurance were more likely to engage in bridge employment in the wage-and-salary form rather than full retirement.

We also found that retirees who were male, had more years of education, experienced less pre-retirement job stress, had higher total income, and reported better health were more likely to engage in bridge employment as self-employed rather than full retirement. Finally, retirees who were male, had more years of education, and had higher total income were more likely to engage in bridge employment as self-employed rather than in the wage-and-salary form. These results were largely consistent with existing findings in predicting bridge employment and full retirement (Kerr & Armstrong-Stassen, 2011; van Solinge, 2014; Wang et al., 2008; Zissimopoulos & Karoly, 2009). Meanwhile, these results also provided new evidence for



differentiating the two forms of bridge employment. In addition, we found that gender and marital status interacted in predicting bridge employment decision. Specifically, married women were less likely to engage in bridge employment in wage-and-salary form against full retirement compared to single/unmarried women. However, married men were more likely to engage in bridge employment in wage-and-salary form against full retirement compared to single/unmarried men. These findings support the view of gendered nature retirement in that those women with families and possible subsequent care responsibilities were more prone to withdrawing from working life, while men continued to fulfill their role as breadwinners by entering bridge employment (Bennett et al., 2016; Kim & Feldman, 2000; Moen et al., 2016).

### **Theoretical and Practical Contributions**

These findings contribute to the accumulation of the theoretical knowledge regarding bridge employment in relation to self-employment. Specifically, we answer to the call to better establish self-employment as a form of bridge employment (Zhan & Wang, 2015). Our results are consistent with the perception that bridge employment may take many forms, including career bridge employment, bridge employment in another field or bridge employment as self-employed (Szinovacz, 2013; Wang et al., 2008). Furthermore, current results indicate that the decision to enter these different types of bridge employment forms may stem from a variety of antecedents (Feldman, 1994; Wang et al., 2008). In the following, we will discuss in detail the theoretical implications of our main findings.

First and foremost, this study showed that pre-retirement employment form (i.e. wage-and-salary employment or self-employment) was a strong predictor of the type of bridge employment older individuals engaged in. This finding can be understood in the light of the life course perspective, which maintains that the retirement transition is contingent on pre-retirement job history and job-associated statuses and roles (Wang, 2007). The relationship between the form of pre-retirement job and the form of bridge employment can

also be understood in the light of continuity theory, according to which individuals' general tendency is to maintain consistency in life patterns over time and to accommodate transitions without the experience of disruption (Atchley, 1989, 1999).

Despite of the strong predictive effect of pre-retirement employment form, our analyses showed that pre-retirement employment form had only a limited impact on the effects of other antecedent factors of bridge employment. This indicates that with the exclusion of total income, pre-retirement employment form did not impact the other antecedents' likelihood in shaping retirees' bridge employment decision. In other words, entrepreneurs and employees tended to largely continue in the same form of bridge employment when they made bridge employment decisions. Further, personal and work-related factors, such as pre-retirement job stress and education played a similar role in their decision whether or not to enter bridge employment in either form.

As hypothesized, this study demonstrated a negative association between higher pre-retirement job stress and engaging in any type of bridge employment against full retirement (Bamberger & Bacharach, 2013; Kojola & Moen, 2016; Wang & Shi, 2014). While this finding highlights the importance of job-related psychological factors in entering bridge employment in the wage-and-salary form and as self-employed the retirement process, we did not find support for an interaction between pre-retirement employment form and job stress. In other words, the association between job stress and bridge employment decision making was not different for self-employed and wage-and-salary employees. This finding highlights the nature of job stress as a strong push-factor in the retirement process (Shultz, Morton, & Weckerle, 1998), which could not be simply countered by entering a different form of work. Similarly, those who retired from wage-and-salary employment did not see self-employment as a viable option to continue working, despite it potentially offers more decision latitude (Rauch & Frese, 2007). When comparing the current findings to those previously reported,

one has to take into account that some of the variations in these findings may have been caused by the differences in operationalizing retirement. In the current study we used a more objective measure (i.e. receiving pension income) to determine retirement status. Other studies have used more subjective indicators, such as self-reported retirement status (e.g., Wang et al., 2008). As such, our retiree sample might be in better financial situation than those who self-report being retired. In other words, our findings might be impacted by the restriction of range in retirement-related income.

Furthermore, one of the key findings of this study was the prediction of the likelihood of engaging in bridge employment as self-employed versus wage-and-salary bridge employment. Specifically, we found that higher earnings predicted engagement in bridge employment as self-employed against bridge employment in wage-and-salary form. As such, it speaks to the important role of financial resources (i.e. liquidity constraints) in starting a business or become self-employed in old age (Tervo, 2014; Zissimopoulos & Karoly, 2009). Given that the interaction between pre-retirement job status and total earnings indicated that higher income among wage-and salary employees predicted participation in self-employment against wage-and salary bridge employment, it is likely that liquidity constraints may explain older employees' willingness to become self-employed. From a theoretical perspective, considering bridge employment according to pre-retirement employment status allows us to gain more understanding of the features of entrepreneurship in the retirement process (Singh & DeNoble, 2003). Further, higher education was positively associated with bridge employment in the self-employed form against bridge employment in wage-and-salary form. This finding suggests that individuals who have obtained high levels of education (thus resulting in greater professional knowledge and/or skills) are more likely to have the capacity to work as self-employed or engage in entrepreneurial activities (Ekerdt, Kosloski, & DeViney, 2000; Wang & Shultz, 2010). Taken together, financial resources and level of

education played important roles in self-employment decision-making. Following the resource perspective in retirement literature (Kubicek, Korunka, Raymo, & Hoonakker, 2011; Wang, 2007; Wang, Henkens, & van Solinge, 2011; Wang & Shultz, 2010), our results suggest that retirees with more financial and cognitive resources are more likely to continue in or switch to self-employed jobs after retiring.

Last but not least, the interaction between gender and marital status in bridge employment decision-making suggests that gender roles may be intertwined with the social context as well as the historical timing of each cohort transitioning through retirement (Bennett et al. 2016; Kim & Feldman, 2000; Moen et al., 2016). In other words, the current findings should be interpreted in the context of traditional gender roles and the gendered nature of retirement. As expected, our results provide a possible explanation for the non-significant effect of marital status in prior bridge employment studies (e.g., Wang et al., 2008; Zhan et al., 2015). It is likely that family-related factors, such as marital status, function in a gendered manner in shaping older adults' retirement process such that men and women make retirement and bridge employment decisions depending on their different family roles. Therefore, future research should carefully incorporate the gender role perspective in examining family-related factors. Also, future studies with data from younger age-cohorts may provide us with new information regarding the bridge-employment process among women with less care and family responsibilities.

This study offers several practical implications. The aging of the population in Western countries, including North America has been among the concerns of policy makers, which is why the effort to identify viable means of increasing workforce participation and productivity is of importance (Quinn & Cahill, 2016). Developing practices aimed at supporting self-employment in older ages could certainly be a potential way to help alleviate the strains of an aging population. The latest evidence confirms that those who are self-

employed, on average, continue to work later than wage-and-salary workers and thereby continue to contribute to the economy (Cahill et al., 2013). According to the current results, in order to facilitate entrepreneurship after retirement, it is essential to secure sufficient economic resources for the older workers. Further, policy makers looking to expand the proportion of older individuals entering bridge employment after retirement, should aim in identifying potential retirees who could enter bridge employment as self-employed. These older workers are likely to be those who have been self-employed prior to their retirement. In addition, those older wage-and-salary employees with good health and sufficient financial resources to set up a business, may become self-employed after retirement.

### **Limitations and Future Directions**

This study has some potential limitations that need to be discussed. First, Due to the archival data at hand, some of the measures in this study are non-optimal (for further discussion, see Wang, 2007; Wang et al. 2008). For instance, job stress could be measured more effectively by using Quality of Working life Questionnaire (Centers of Disease Control and Prevention, 2011). Second, most variables in the current study, mainly job stress and self-rated health, were captured with single-item measures. Using single-item measures may introduce more measurement error and thus contribute to underestimating the relationship between the antecedents and bridge employment decision-making (Zickar & Gibby, 2003). As these are both single-item measures, internal consistencies of these measures could not be computed, although research suggests that single-item measures of variables such as job satisfaction are highly correlated with scale measures of overall job satisfaction (Wanous, Reichers, Hudy, 1997). Nevertheless, we suggest that future studies should replicate the current results by using well-established scales.

Third, the data did not contain measures of the job context or the information regarding companies operated by those who were self-employed. In order to better

understand and to catch the potential factors driving entrepreneurs' retirement process, including bridge-employment decision-making, issues such as the type of business, financial performance and the possibility for succession should be considered (Kerr & Armstrong-Stassen, 2011; Zissimopoulos & Karoly, 2009). Therefore, further studies should investigate the specific nature of and the drives behind the retirement process of self-employed and entrepreneurs.

Fourth, the HRS survey data were collected in two-year cycles (Juster & Suzman, 1995). It may be that this cycle is too long for capturing the dynamic nature of retirement (Wang et al., 2008). Specifically, by collecting longitudinal data with a shorter time interval, future studies may provide more observations about the bridge employment processes, especially the longitudinal change patterns of bridge employment (i.e., entering bridge employment as self-employed, switching from one bridge employment status to another, and exiting bridge employment). Finally, it must be noted that due to the substantial amount of missing data, mainly caused by the AHEAD and CODA cohorts, the current findings may not generalize to older cohorts. These cohorts were already retired when they enter into the study and were thus censored from the analyses.

### **Conclusions**

This study provides us with new insight on bridge employment decision-making from a self-employment perspective, by highlighting self-employment as an independent form of bridge employment. The research furthers the theoretical knowledge on bridge employment by showing that traditional gender roles and the gendered nature of retirement may be an underlying factor in bridge employment decision-making among both wage-and-salary employees and self-employed. Of both theoretical and practical significance is the finding that access to financial resources (i.e. liquidity constraints) is central in starting a business or becoming self-employed in old age.

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Table 1

*Means, Standard Deviations, and Correlations for Study Variables*

Variables	<i>Means</i>	<i>SD</i>	1	2	3	4	5
1. Cohort of entry (Core)	.83	.38	--				
2. Cohort of entry (WB)	.13	.33	-.84**	--			
3. Gender (T-1)	.56	.50	.02	-.01	--		
4. Marital status (T-1)	.76	.43	.04	-.02	.26**	--	
5. Pre-retirement employment form (T-1)	.09	.29	.05*	-.06*	.11**	.06**	--
6. Age (T-1)	58.53	3.86	.22**	-.13**	.10**	.08**	.09**
7. Education (years) (T-1)	13.38	2.64	-.13**	.11**	-.04	-.03	.03
8. Pre-retirement job stress (T-1)	2.76	.83	-.03	.02	-.02	-.01	-.32**
9. Total income (T-1)	1.63	3.01	-.20**	.17**	.21**	.04	-.17**
10. Self-perceived health (T-1)	3.60	.98	.03	-.00	.00	.07**	.01
11. Health insurance coverage (T)	.89	.31	-.03	.02	.10**	.11**	.06**
12. Bridge employment in wage-and-salary form vs. other types (T+1)	.38	.47	-.05*	.01	.05*	-.03	-.15**
13. Bridge employment as self-employed vs. other types (T+1)	.08	.28	-.01	-.01	.11**	.01	.44**



Table 1 (*continued*)

Variables	6	7	8	9	10	11	12	13
1. Cohort of entry (Core)								
2. Cohort of entry (WB)								
3. Gender (T-1)								
4. Marital status (T-1)								
5. Pre-retirement employment form (T-1)								
6. Age (T-1)	--							
7. Education (years) (T-1)	-.12**	--						
8. Pre-retirement job stress (T-1)	-.04	-.01	--					
9. Total income (T-1)	-.12**	.32**	.08**	--				
10. Self-perceived health (T-1)	-.06**	.22**	-.05*	.09**	--			
11. Health insurance coverage (T)	.01	.09**	-.04	.10**	.07**	--		
12. Bridge employment in wage-and-salary form vs. other types (T+1)	-.19**	.01	.06**	-.03	.09**	-.11**	--	
13. Bridge employment as self-employed vs. other types (T+1)	.04	.10**	-.16**	.04	.06**	.03	-.24**	--

*Notes.* \*  $p < .05$ , \*\*  $p < .01$ .  $N = 2080$ . Listwise deletion was used to handle missing values. Gender was coded as "0 = female" and "1 = male". Marital status was coded as "0 = not married" and "1 = married/with partner". Pre-retirement employment form was coded as "0 = wage-and-salary job" and "1 = self-employed". Health insurance coverage was coded as "0 = No coverage" and "1 = At least have some coverage". The unit of total income is 1,000 dollars.

Table 2.

*Estimated Coefficients of Multinomial Regression of Antecedents on Bridge Employment Decisions*

	<i>Step 1</i>			<i>Step 2</i>			<i>Step3</i>		
	<i>Estimate</i>	<i>SE</i>	<i>OR</i>	<i>Estimate</i>	<i>SE</i>	<i>OR</i>	<i>Estimate</i>	<i>SE</i>	<i>OR</i>
<i>Bridge Employment in Wage-and-salary Form vs. Full Retirement</i>									
Intercept	-.77**	.13		6.02**	.83		6.34**	.83	
Cohort of entry (Core)	-.49**	.13	.61	-.59*	.24	.56	-.60*	.25	.55
Cohort of entry (WB)	-.29*	.14	.75	-.58*	.27	.56	-.58*	.27	.56
Gender (T-1)	.28**	.05	1.33	.10	.11	1.10	-.50*	.22	.61
Marital status (T-1)	.03	.06	1.03	-.08	.12	.93	-.37*	.15	.69
Pre-retirement employment form (T-1)				-.64**	.24	.53	-.67*	.29	.51
Age (T-1)				-.10**	.01	.91	-.10**	.01	.90
Education (years) (T-1)				.02	.02	1.02	.02	.02	1.02
Pre-retirement job stress (T-1)				-.17**	.06	.84	-.18**	.06	.84
Total income (T-1)				-.05*	.02	.95	-.06**	.02	.94
Self-perceived health (T-1)				.24**	.05	1.27	.25**	.05	1.28
Health insurance coverage (T)				-.74**	.16	.48	-.72**	.16	.49
Gender × Marital status							.79**	.25	2.19
Pre-retirement employment form × Pre- retirement job stress							.35	.29	1.41
Pre-retirement employment × Total income							.15*	.08	1.16
Pre-retirement employment × Education							.06	.09	1.06

Table 2 (*continued*)

<i>Bridge Employment as Self-employed vs. Full Retirement</i>									
Intercept	-2.77**	.24		-1.65	1.56		-1.80	1.57	
Cohort of entry (Core)	.24	.24	1.27	-.25	.46	.78	-.23	.46	.79
Cohort of entry (WB)	.41	.26	1.51	-.24	.51	.79	-.24	.51	.79
Gender (T-1)	.86**	.07	2.35	.64**	.21	1.90	.76*	.38	2.14
Marital status (T-1)	.11	.08	1.11	-.44	.23	.64	-.29	.35	.75
Pre-retirement employment form (T-1)				2.84**	.22	17.16	3.10**	.26	22.13
Age (T-1)				-.02	.03	.98	-.02	.03	.98
Education (years) (T-1)				.11**	.04	1.12	.16**	.05	1.17
Pre-retirement job stress (T-1)				-.24*	.12	.79	-.30*	.14	.74
Total income (T-1)				.08**	.03	1.09	.09**	.03	1.09
Self-perceived health (T-1)				.25*	.10	1.28	.25*	.10	1.28
Health insurance coverage (T)				-.54	.33	.59	-.54	.33	.59
Gender × Marital status							-.23	.45	.80
Pre-retirement employment form × Pre- retirement job stress							.22	.25	1.25
Pre-retirement employment × Total income							.00	.07	1.00
Pre-retirement employment × Education							-.09	.08	.92

Table 2 (continued)

		<i>Bridge Employment as Self-employed vs. Bridge Employment in Wage-and-salary Form</i>							
Intercept	-2.00**	.25		-7.67**	1.59		-8.14**	1.60	
Cohort of entry (core)	.73**	.25	2.07	.34	.46	1.40	.37	.46	1.45
Cohort of entry (WB)	.71**	.27	2.03	.36	.51	1.40	.34	.51	1.40
Gender (T-1)	.57**	.08	1.78	.54*	.22	1.72	1.26**	.40	3.53
Marital status (T-1)	.09	.09	1.09	-.36	.23	.70	.09	.35	1.09
Pre-retirement employment form (T-1)				3.48**	.27	32.52	3.77**	.33	43.32
Age (T-1)				.08**	.03	1.08	.08**	.03	1.08
Education (years) (T-1)				.09*	.04	1.10	.14**	.05	1.14
Pre-retirement job stress (T-1)				-.07	.12	.94	-.12	.14	.89
Total income (T-1)				.13**	.03	1.14	.15**	.03	1.16
Self-perceived health (T-1)				.01	.10	1.01	-.00	.10	1.00
Health insurance coverage (T)				.20	.33	1.22	.19	.33	1.21
Gender × Marital status							-1.01*	.47	.36
Pre-retirement employment form × Pre-retirement job stress							-.13	.30	.88
Pre-retirement employment × Total income							-.15*	.06	.86
Pre-retirement employment × Education							-.15	.10	.86
Chi-Square		206.72			433.74			454.96	
df		8			22			30	
Cox and Snell R-square		.02			.19			.20	
Sample size		10767			2080			2080	

Notes. \*  $p < .05$ , \*\*  $p < .01$ . OR = odds ratio. Gender was coded as "0 = female" and "1 = male". Marital status was coded as "0 = not married" and "1 = married". Pre-retirement employment form was coded as "0 = wage-and-salary jobs" and "1 = self-employed". Health insurance coverage was coded as "0 = No coverage" and "1 = At least have some coverage". The unit of total income is 1,000 dollars.