

IT'S NEVER TOO LATE: ELDERLY ENTREPRENEURSHIP IN THE AGING ECONOMY¹
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ABSTRACT

With an aging population, this study focuses on exploring old-age effect on entrepreneurship propensity, sources of seniors' entrepreneurship, and the economic, fiscal, and labor impacts of elderly entrepreneurship. After reviewing current theories and literature, four hypotheses are tested through two binomial logit models, an extended log-linear growth model with spatial and sensitivity analysis, and a path analysis model. This dissertation builds on the utility maximization theory, economic growth theories, and social theories of aging. The empirical tests find out that seniors are more likely to be entrepreneurs, tax policies and social tolerance level matter to elderly entrepreneurship, and elderly entrepreneurship has positive impacts on regional economic growth, labor force size, and the amount of Social Security Fund surplus. This dissertation concludes with policy implications.

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EXECUTIVE SUMMARY

The U.S. population is aging and consequently, so is its labor force. This has the potential to result in a labor force shortage and Social Security funds exhaustion. While seniors are said to be a possible source of these problems, they could alternatively help to ameliorate the labor force and Social Security crisis. Seniors could provide a valuable source of human capital through their participation in the labor force as entrepreneurs and have a positive impact on the economy. This situation relates to the economic background. This dissertation offers theoretical and empirical evidence to support this notion.

The “knowledge economy” is a fertile environment for elderly entrepreneurship. The “knowledge economy” is centered around knowledge, innovation, and entrepreneurship. The occupations that are said to characterize the new economy are generally less physically demanding than those in the “Fordist” economy. It is in the setting of the “knowledge economy” that elderly entrepreneurship has become more possible than before. Seniors have a variety of skills that are well suited for knowledge-based occupations: they have years of cumulated job experience, know-how, and valuable business ties. This dissertation recognizes the role of elderly entrepreneurship in the “knowledge economy” and finds that elderly entrepreneurship contributes to regional growth in the “knowledge economy”.

Encouraging more elderly entrepreneurship could also help to improve social attitudes toward seniors and enhance seniors’ life satisfaction. As the population ages, the well being of seniors is a rising social concern. Recognition of the value that seniors provide to the economy and society could help to mitigate social discrimination against seniors, provide greater confidence to seniors who would like to re-enter or continue working through their retirement years, and overall, enhance the well being of seniors. In this background, this dissertation focuses on testing four major hypotheses. The following sections summarize the research hypotheses, methodology, major findings, policy implication, and major contributions of this dissertation.

HYPOTHESES

- (1) Older age is a significant factor that positively affects a person's probability of being an entrepreneur. There is a higher self-employment rate in senior labor force than that among the younger labor force, particularly in the knowledge-based sectors. Seniors are more likely to be entrepreneurs than the younger persons in general.
- (2) Policy indicators, such as R & D environment, tax policies, and social tolerance level are among the factors affecting elderly self-employment rate, as well as some personal factors.
- (3) Elderly entrepreneurship is positively related to regional economic growth. The more elderly entrepreneurs a region has in its labor force, there is an evidently higher regional economic growth rate, *ceteris paribus*.
- (4) Elderly entrepreneurship has a statistically significant and positive impact on increasing labor force size and Social Security Fund contribution and hence helps alleviate prognostic aging-related labor shortage and Social Security Fund exhaustion.

METHODOLOGY

The analysis builds on utility theory, economic growth theories, and social gerontology theories and uses descriptive statistics, two binomial logit models, an extended log-linear growth model with sensitivity and spatial analysis, and a path analysis model to test the above research hypotheses. The use of logit models to measure the propensity of being entrepreneurs follows the previous literature (such as Quinn 1980, Bruce et. al. 2000). This dissertation modified the log-linear Solow growth model used by Audretsch and Keilbach (2004) after indicating its limitations and extended it with spatial and sensitivity analysis. The path analysis is an exploratory model with spatial econometric analysis. Data sources for the analysis in this dissertation include the Census Public Use Microdata Samples (PUMS), Bureau of Economic Analysis (BEA), American Community Survey (ACS), and Social Security Bureau (SSB).

MAJOR FINDINGS

The descriptive analysis reveals that seniors have higher self-employment rates than their younger cohorts and that these rates for seniors are generally highest in knowledge-based sectors. The higher self-employment rates among seniors than among the younger working-age people were consistent for all of the major occupations. The elderly self-employed also tend to concentrate in knowledge-based occupations (measured by the “creative class”), with the exception of two sectors, *computer and math* and *arts and entertainment*. This conclusion supports the argument that the “knowledge-based” economy is a fertile ground for seniors’ entrepreneurship.

Another important finding from the descriptive analysis is that elderly self-employers tend to have a lower retirement rate than elderly wage-and-salary employees. Therefore, promoting self-employment among the elderly could help retain seniors in the labor force for a longer period.

Several individual level factors were also found to increase a senior’s propensity to be an entrepreneur. The propensity is higher for those who are men, of Caucasian or Asian decent, highly educated, married, and less responsible for grandchildren. This suggests that public policy should support mechanisms that can help to encourage females and minorities (such as Blacks and Natives) to be involved in entrepreneurial activities.

Social factors were also found to have a significant impact on a senior’s propensity to be an entrepreneur. The analysis specifically examined the influence of tax policies, R & D performance and culture openness or racial/ethnic diversity. Seniors who live in areas with lower taxes and higher levels of cultural openness were found to be more likely to be entrepreneurs. Both of these factors contribute to the entrepreneurial milieu. Tax policies offer a necessary institutional stimulant, while cultural openness and diversity spur more intercultural exchange and enlightenment. Lower corporate and personal income tax rates increase a senior’s propensity for entrepreneurship, although this factor has a smaller impact than the social tolerance level (or cultural openness and diversity).

Elderly entrepreneurship was also found to be a significant and positive factor driving regional economic growth. This economic impact of elderly entrepreneurship seems to be stronger than other factors that are widely accepted in previous literature (i.e. physical capital and knowledge capital) and also stronger than entrepreneurship of the young. In this context, enhancing elderly entrepreneurship could help to boost regional economic growth. Encouraging elderly entrepreneurship through various social and individual factors addressed in Chapter 5 could be an effective economic development tool. When budgets are tight, the priority could be given to implementing policies to foster elderly entrepreneurship. The focus of the Small Business Administration and many local enterprise incubation efforts should incorporate elderly entrepreneurship. Investing in the elderly is not just a welfare strategy; it could also be an effective strategy to help the economy to grow.

Elderly entrepreneurship was also found to affect the size of labor force and the Social Security fund. The path analysis provided in Chapter 7 found a strong association between elderly entrepreneurship and labor force participation rate and between elderly entrepreneurship and Social Security fund surplus. To mitigate the labor force and Social Security crises, implementing policies to encourage elderly entrepreneurship could be an effective strategy. The results of the path analysis, conducted in Chapter 7, support this notion. Developing elderly entrepreneurship can not only sustain our economy better, but also provide a stronger Social Security guarantee for our seniors in next many decades.

POLICY IMPLICATIONS

The above findings suggest the necessity to foster more elderly entrepreneurship. To build a stronger elderly entrepreneurship milieu, there are three possible approaches. First, it is critical to retain entrepreneurs with their continued entrepreneurship after average retirement age (the age of 62). As argued in this dissertation, seniors have valuable human capital that is crucial to the knowledge-based economy, such as accumulated working experience, mature interpersonal skills, and well-established business network. Seniors' entrepreneurship has been tested to positively

associate with regional economic growth and to help mitigate aging-resulted labor shortage and Social Security fund exhaustion. In this case, entrepreneurs who have been involved with entrepreneurial activities would continue to contribute to the economy and generate crucial economic externalities. For many elderly entrepreneurs, their continued entrepreneurship helps satisfy their continued need to be active and to be of control or for more income; on the other hand, their continued entrepreneurial activities are often not as overwhelming as when they started up. That partially explains why self-employed seniors tend to retire much more gradually than seniors in wage-and-salary employment.

The second possible approach to strengthen the elderly entrepreneurial milieu is to attract to entrepreneurial activities those seniors who are retired or with a wage-and-salary job but would like to become an entrepreneur. Many seniors are managers or executives who have had years of entrepreneurship-related working experience. At the retirement age, they might want to continue staying in the labor force, but various factors discourage them to continue staying in their wage-and-salary employment and thus make self-employment a more attractive option. Those discouraging factors include seniority principle for salary distribution, certain pension penalty for working after certain age, difficult bosses, and age discrimination, as was delineated in Chapter 2. Many other seniors who have had the thoughts of running their own business for years or even had their own businesses before would like to try entrepreneurship when they approach retirement age. Many seniors also tend to have more assets than their younger counterparts, which makes entrepreneurship after retirement age more possible. All the above helps to explain why seniors have a much higher self-employment rate than the younger ones.

The third possible approach to obtain a stronger elderly entrepreneurship is to encourage younger entrepreneurship and help those businesses established by younger entrepreneurs to succeed. Entrepreneurs with successful businesses would naturally tend to stay in their entrepreneurial activities, even after retirement age. This would help to build a larger pool of

elderly entrepreneurs who retire more gradually than wage-and-salary employment. This would eventually enlarge the labor force participation rate and mitigate the Social Security fund exhaustion.

The above approaches suggest the following policy implications. First, public attention to entrepreneurship should not just focus on the young. The elderly should be included as the new focus and priority for entrepreneurship initiatives, particularly in this aging era. For example, mass media could report new elderly entrepreneurs or entrepreneur who are seniors as new stars; enterprise incubators can help entrepreneurs who are approaching retirement age retain with their entrepreneurship, can target their markets to include retired seniors who have the skills and interest to start businesses, and can also help younger entrepreneurs to succeed. Enterprise incubating efforts could also try to motivate other seniors to identify their special market value and start their own business for more financial freedom and elevated social value and respect. Successful elderly entrepreneurs, including both seniors who have just established their own businesses and who have been entrepreneurs since younger ages, can also be invited to seminars for programs of community development, entrepreneurship, and aging studies. It is very important to foster an entrepreneurial milieu for seniors so that seniors as well as other social members are aware of, respect, and encourage elderly entrepreneurship. The public efforts to promote such a milieu could extent to various aspects of our social life.

Second, government economic investment should give priority to developing elderly entrepreneurship because elderly entrepreneurship has a stronger impact on regional economic growth than physical capital, knowledge capital, and younger entrepreneurship. The U.S. government has various tax policies to reduce small business owners' tax burden. Certain level of tax incentive could be preferred to the elderly entrepreneurs to encourage entrepreneurs to retain in the labor force and to encourage other seniors to be involved in more entrepreneurial activities. In addition, government agencies, such as U.S. Administration on Aging and Small Business

Administration, could design some social programs that relieve seniors from various social barriers (such as social discrimination and difficult working environment) to become entrepreneurs so that entrepreneurs after retirement age are more likely to remain entrepreneurs and other seniors who are interested in being an entrepreneur could be more possible to jump in. Government agencies could also design low cost or even free entrepreneurship training and forum programs to the elderly. For those who are senior and skilled in entrepreneurship, the programs can set them as examples; for those who have ideas but do not have enough knowledge, skills, or access to starting a business, necessary trainings on writing business plans, learning financial management, familiarizing with business starting procedures, and referring to the correct network would be very helpful.

Third, females and minority seniors (such as Blacks and Natives) deserve more attention in policies that are intended to encourage elderly entrepreneurship. Females and minorities have been a general rising focus on entrepreneurship development, but these efforts do not typically address elderly females or elderly minorities. For the traditionally underpowered groups, female and minority seniors in particular, more social concern and encouragement would be helpful. One way to empower them is through organizing unions and connecting them to appropriate network. Policy programs that help them to identify and market their own uniqueness would be extremely enlightening. This effort could benefit both younger and elderly underrepresented entrepreneurial groups, i.e. female and minority entrepreneurs.

Fourth, to develop elderly entrepreneurship, policies should center around increasing cultural openness and racial diversity in a region, lowering corporate income tax rates and personal income tax rates for seniors, fostering a better education and marriage environment, and relieving seniors from involuntary responsibility for grandchildren. Reducing social segregation and zoning is a direct way to increase culture openness and diversity. It is also important to promote intercultural communication. Cultural training and organizing cultural events would be helpful to promote a more tolerant society in general. Many senior centers have put efforts to provide

training, education, and even dating services. These efforts would provoke more communication and thus more knowledge spillover, and therefore could be helpful to developing elderly entrepreneurship. Offering low-cost day care services for children or connecting day care needs and demands through an organized network could help liberate both seniors and females from their involuntary responsibility for taking care of children.

Fifth, developing elderly entrepreneurship should be treated as a national strategy to effectively mitigate the labor and fiscal crises resulted from an aging population. It is the time to seriously consider elderly entrepreneurship as a national strategy for our long-run economy. Efforts could start with treating elderly entrepreneurship as a variable in data collection and forecast projection for Bureau of Labor Statistics, Bureau of Economic Analysis, Social Security Administration, and U.S. Census Bureau.

Last, more public attention should be drawn to elderly entrepreneurship and it should be elevated as an important research topic for further studies and practice. Essentially, more research on the topic of elderly entrepreneurship would be the immediate academic efforts to promote elderly entrepreneurship. Research grants, fellowship, conferences, and journal focuses should be directed to this direction to foster more interest and studies. This will fundamentally help to build the elderly entrepreneurial milieu and result in various public attention and policy initiatives.

CONTRIBUTIONS

This dissertation provides several contributions to the fields of public policy, economics, geography and social gerontology. It addresses and empirically explores the economic, labor, and fiscal roles of elderly entrepreneurship in the “knowledge economy”, topics that have to date only been scantily addressed, if have ever been addressed, in the literature. It recognizes the elevating economic role of seniors’ human capital and interprets this changing role in the setting of the “knowledge economy”. It challenges the conventional notion that entrepreneurship is a privilege of only the young and examines the effect that people’s age has on their propensity to be

entrepreneurs. It looks at and controls for other individual level variables and explores the impact of social and policy factors on the entrepreneurial propensity of an individual. The analysis also tests the impact of elderly entrepreneurship on regional economic growth. This is done by extending the Solow growth model so that it includes elderly entrepreneurship as an input and captures spatial spillovers. It also provides a set of other empirical models that can be used to better understand senior's propensity to be entrepreneurs and the impact that their participation in the labor force as entrepreneurs could have on the economy and society.

This dissertation integrates theories across three fields: economic growth theories, social gerontology theories, and utility maximization theory, and elements from each set that relate to entrepreneurship. Endogenous growth theory and other related economic theories characterize the "knowledge economy" and claim that entrepreneurship is a driving factor behind regional economic growth. Social gerontology theories talk about the controversial role of seniors in the economic society. The utility maximization theory outlines and interprets how seniors choose entrepreneurship to maximize their utility.

CONCLUSION

This dissertation has shown through empirical and theoretical analysis that seniors are valuable asset to the economy, not a burden on the society. The elderly not only deserve respect from the younger generation after contributing their own heart and soul to our economy and society for many years, they are also an increasingly valuable source of cumulated human capital that contributes to the growth of the "knowledge economy". They are valuable not just through mentoring and enlightening the young, but also directly contributing to our economy. Although seniors may suffer more physical difficulties than the younger ones and their working process might be slower at certain ages, it does not necessarily mean they are less productive. Seniors can offer value through their cumulated wisdom, experience, and business ties, and outstanding language and interpersonal skills. This dissertation research has empirically shown that entrepreneurship occurs more often to the

elderly, as long as they are active in the labor force. Seniors' entrepreneurship not only has significant impact on the regional economic growth, this impact is even stronger than that from the young. Elderly entrepreneurship also helps to mitigate the labor shortage and fiscal crises associated with the aging society. Developing elderly entrepreneurship would not just benefit the society, it would benefit seniors themselves. Health and flexible arrangement permitted, many seniors appear to be interested in being more involved in the society.

Elderly entrepreneurship has not been paid much attention to, though the U.S. society, as well as many other societies, has already been experiencing an aging economy. However, it is never too late. The sooner that the notion of elderly entrepreneurship can be recognized by the general public, the earlier the positive impacts of developing elderly entrepreneurship would show up and the more positive externalities would be generated to our society.