Health Matters in Social Security Disability Insurance Participation: Panel Study of Income Dynamics

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Abstract

This paper investigates the independent roles of health deterioration and employment status in determining future enrollment in Social Security Disability Insurance (SSDI). Using longitudinal data from the Panel Study of Income Dynamics (PSID, 2005–2019), this research introduces the frailty index—an objective health measure that aggregates cumulative deficits across physical, cognitive, and social dimensions—to overcome limitations associated with self-reported health metrics. Employing a fixed-effects panel regression model, the analysis reveals that higher frailty scores significantly increase the likelihood of transitioning to SSDI within two years. Employment status further modulates this effect, with temporarily disabled, laid-off, and individuals keeping house exhibiting heightened vulnerability due to pre-existing health impairments and economic instability. Subgroup analyses indicate substantial variation in effects by education, gender, and race, underscoring the interplay between health status, employment vulnerability, and systemic inequalities. Robustness checks confirm the consistency of these findings. These results highlight the necessity of targeted early-intervention health strategies and policies addressing employment instability to mitigate premature reliance on disability benefits.

Keywords: Social Security Disability Insurance; Frailty Index; Employment Status; Panel Data; Health Inequality

JEL Codes: I10, I18, J14, J28

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1 Introduction

Social Security Disability Insurance (SSDI) serves as a crucial safety net for individuals who can no longer participate in the labor force due to severe health impairments. Understanding the pathways leading to SSDI enrollment is essential for developing policies that support labor market participation and minimize premature dependency on disability benefits. While extensive research has explored the roles of non-health factors and demographic characteristics in SSDI enrollments, limited attention has been given to the independent contributions of objective health measures like the frailty index and employment status in SSDI transitions. Additionally, existing literature commonly relies on the aggregate-level data which often overlooks specific characteristics and behaviors of potential program participants. This study aims to address these gaps by examining how these factors independently influence SSDI enrollment among non-beneficiaries, utilising rich individual-level longitudinal data.

Health deterioration is a key driver of SSDI applications, as it directly constrains work capacity and increases reliance on social safety nets. Traditional studies often rely on self-reported health measures to quantify this relationship, but such metrics are subjective and prone to reporting biases (Bound, 1991; Akashi-Ronquest et al., 2011). To address this limitation, this study introduces the frailty index, a multidimensional measure of health that aggregates cumulative deficits across physical, cognitive, and social domains (Rockwood and Mitnitski, 2007). Widely applied in gerontology and public health research, the frailty index has been shown to predict adverse outcomes such as mortality (Mitnitski et al., 2013). Incorporating the frailty index into SSDI research offers a more objective and comprehensive understanding of the health-related determinants of disability benefit participation.

Employment instability represents another critical pathway, especially when intersecting with health deterioration. Job loss and prolonged unemployment not only directly reduce individual incomes but also cause financial stress and uncertainty, conditions known to exacerbate existing health conditions (Autor and Duggan, 2003). Furthermore, demographic

characteristics—age, education, gender, and race—also critically influence SSDI participation. For example, older workers with fewer educational qualifications face disproportionate barriers to employment, and systemic labor-market inequalities further increase vulnerability to disability dependency among minority populations (Duggan and Imberman, 2009; Maestas et al., 2015).

Using a fixed-effects panel regression approach with longitudinal data from the Panel Study of Income Dynamics (PSID), this paper explicitly addresses unobserved individual heterogeneity and simultaneity concerns by leveraging lagged health and employment statuses. Specifically, this study provides two main contributions to the literature. First, it introduces and validates the frailty index as a superior, objective health measure for SSDI research. Second, it offers robust empirical evidence demonstrating the independent and joint roles of health deterioration and employment instability in predicting future transitions to SSDI participation, highlighting critical areas for policy intervention aimed at reducing premature dependence on disability insurance.

The remainder of this paper is structured as follows: Section 2 details the data and methodology, Section 3 presents the empirical results, and Section 4 discusses the findings and their implications for policy and future research.

2 Data and Identification

This study uses longitudinal panel data from the Panel Study of Income Dynamics (PSID), which provides detailed information on health, employment, and demographic characteristics of household heads and spouses. The dataset spans the period from 2005 to 2019,[1] capturing a nationally representative sample of working-age adults. For the purposes of this study, we focus on non-SSDI beneficiaries at baseline, tracking their health and employment trajectories over time to assess the probability of SSDI enrollment within a two-year window.

[1]This specific timeframe was selected because it marks the start of comprehensive health data collection for household heads and spouses, and it ends before the onset of the COVID-19 pandemic.

2.1 Sample Selection

The sample is restricted to individuals aged 25 to 61 who are non-SSDI beneficiaries at baseline. Observations with missing data on key variables, such as health, employment status, or demographic characteristics, are excluded. The final analytical sample comprises 47,114 observations across eight survey waves.

2.2 Weighting Scheme

Probability weights based on the variable *"weights"* are applied to ensure the representativeness of the sample, accounting for potential biases introduced by survey design or non-random attrition. These weights adjust for oversampling and ensure that findings can be generalized to the broader population.

2.3 Descriptive Statistics

The primary outcome variable, $D_{i,t+2}$, is a binary indicator that equals 1 if an individual who was a non-SSDI beneficiary at time t transitions into SSDI benefits within the subsequent two years $(t+2)$. This measure is based on self-reported benefit receipt and activity status.[2]

The key independent variable is the frailty index, a composite health measure that captures the proportion of accumulated health deficits across physical, cognitive, and social domains. Constructed following the approach by Rockwood and Mitnitski (2007) and Searle et al. (2008), it ranges from 0 (no deficits) to 1 (all possible deficits present). The index is detailed in Appendix A.1.

Employment status is classified into five mutually exclusive categories: (i) working now, (ii) temporarily laid off or on leave, (iii) unemployed and seeking work, (iv) disabled (tem-

[2]We combine responses to two PSID questions: (1) *Did you (HEAD or anyone else in the family) receive any income from Social Security, such as disability, retirement, or survivor's benefits?* and (2) *What are you doing now—working, looking for work, retired, keeping house, a student, or something else?* Respondents are categorized as SSDI beneficiaries if they report receiving Social Security income and identify themselves as "permanently disabled."

porary or permanent), and (v) keeping house. Additional covariates include age (and its square), years of schooling, race, gender, and year fixed effects.

Table 1: Descriptive statistics

	Non-SSDI beneficiaries	SSDI beneficiaries	Overall
sex: female	0.509	0.546	0.511
race: non-white	0.215	0.355	0.219
age	43.13	48.49	43.30
	(10.421)	(9.488)	(10.435)
schooling	13.86	12.11	13.80
	(2.590)	(2.375)	(2.601)
employment status (%):			
employed	84.5	14.3	82.3
temporarily laid-off	0.7	0.4	0.6
unemployed	5.7	6.2	5.7
disabled	2.0	73.6	4.3
keeping house	7.2	5.6	7.1
total	100.0	100.0	100.0
frailty index	0.081	0.256	0.086
	(0.072)	(0.158)	(0.082)
frailty index by employment status:			
employed	0.074	0.189	0.075
temporarily laid-off	0.109	0.215	0.111
unemployed	0.086	0.140	0.087
disabled	0.280	0.283	0.282
keeping house	0.097	0.232	0.100
proportions	96.9%	3.1%	100.0%
observations		47,235	
frequency		1,512,275	

Source: Authors' calculations using PSIDs 2005-2019.

Table 1 summarizes sample characteristics by SSDI status. SSDI beneficiaries tend to be older (average age 48.5), less educated (12.1 years of schooling), and more likely to be non-white and female compared to non-beneficiaries. Notably, 73.6% of SSDI recipients are classified as "disabled," while 14.3% report being employed—suggesting limited labor force

attachment, possibly through part-time or low-wage jobs that meet SSDI eligibility criteria. However, the proportion of individuals in other employment categories (unemployed, keeping house, temporarily laid off) is similar across groups.

Frailty scores vary meaningfully by SSDI status and employment. On average, SSDI beneficiaries have a frailty index of 0.256—over three times higher than non-beneficiaries (0.081). Among employment types, those currently working exhibit the lowest frailty (0.075), while those reporting disability status have the highest scores (0.282). These patterns underscore the importance of using objective health metrics: despite PSID respondents self-identifying as unemployed or keeping house, their high frailty scores suggest underlying health limitations that may drive SSDI participation, potentially obscured by stigma or misreporting.

The final sample includes 47,235 observations. These descriptive patterns highlight the intertwined roles of health, employment, and demographics in SSDI transitions, motivating the need for a robust empirical strategy presented in the next section.

2.4 Identification Strategy

The identification strategy leverages lagged health and employment status variables to address simultaneity bias and endogeneity issue, as current SSDI enrollment may influence health and employment status. By using fixed-effect model, it controls for time-invariant unobservable characteristics that could confound the relationship between health, employment, and SSDI transitions. The empirical model is as follow:

$$D_{i,t+2} = \alpha f_{i,t} + \beta e_{i,t} + \zeta X_{i,t} + \varsigma_i + \varsigma_t + \varepsilon_{i,t} \tag{1}$$

where $D_{i,t+2}$ is a probability of engaging in disability benefits within the next two years for individual i, $f_{i,t}$ is a frailty index of individual i in year t, $e_{i,t}$ is employment status, $X_{i,t}$ represents demographic characteristics, involving age (linear and quadratic terms) and years of schooling, ς_i and ς_t respectively represent individual fixed-effects and year effects.

3 Empirical Results

This section provides a comprehensive analysis of the relationship between frailty index, employment status, and future SSDI enrollment probability. To validate the findings, several robustness analyses were conducted. These included (*i*) incorporating interaction terms between frailty and employment status in alternative specifications; (*ii*) testing non-linear effects of frailty by including quadratic terms; and (*iii*) conducting subgroup/heterogenous analyses for key demographic groups (e.g., by education, gender, race). These robustness/heterogeneity checks confirmed the stability of the results and the appropriateness of the chosen model specification.

3.1 Overall Sample

This section analyzes the statistical influence of the frailty index and employment status in year t on the probability of engaging in the SSDI program by year $t+2$, controlling for demographic characteristics including age, schooling, and individual fixed effects and year effects.

The empirical results reveal that the frailty index ($f_{i,t}$) is a strong predictor of future SSDI enrollment. Specifically, a 1 point increase in the frailty index in year t increases the probability of future SSDI enrollment by 15.8 percentage points by year $t+2$, significant at the 1 percent level. This finding underscores the critical role of health in the transition to SSDI (please see column 1 of Table 3).

Regarding employment status in year t, different categories show varying impacts on the likelihood of future SSDI enrollment. Compared to the *employed*, individuals only temporarily laid off, on sick leave, or maternity leave are 3.7% more likely to enroll in SSDI by year $t+2$, with this increase significant at the 5 percent level. The *unemployed* experience a modest but significant 0.9% increase in the probability of SSDI enrollment, significant at the 10 percent level. Those categorized as *keeping house* are found to be 1.9% more likely to enroll,

significant at the 1 percent level. The most substantial effect is observed for individuals classified as *temporarily disabled*,[3] where there is an increase of 23.5% in SSDI enrollment probability, significant at the 1 percent level.

3.2 Explanation of Effects

Exploring the underlying mechanisms and causal pathways is essential for understanding the influence of certain employment statuses on future SSDI enrollment.

Table 2: Frailty index $f_{i,t}$ by employment status among new beneficiaries in year $t+2$

employment status	mean	std. dev.	freq.
employed	0.1568	0.1091	3,102
only temporarily laid off	0.2207	0.0751	135
unemployed	0.1327	0.0944	1,140
disabled	0.2862	0.1613	11,627
keeping house	0.2130	0.1225	1,106
overall	0.2473	0.1577	17,110

This table highlights the health disparities among different employment statuses in year t among new SSDI beneficiaries by time $t+2$. Notably, individuals who were keeping house, temporarily laid off or classified as disabled exhibited significantly higher frailty index scores ($>$0.20), indicating poorer health compared to other groups. This observation points to a pre-existing vulnerability in health for these groups, which is a pivotal factor in their subsequent enrollment in the SSDI program. Such patterns reinforce the importance of health status in year t as a predictor for SSDI attendance in year $t+2$, affirming that compromised health conditions precede future SSDI enrollment.

Causal pathways for temporarily laid off or on sick/maternity leave: Individuals who are only temporarily laid off or on sick/maternity leave often face financial instability and uncertainty about their employment future. This insecurity can increase stress and potentially worsen health conditions, leading to a higher likelihood of future SSDI enrollment. The absence of steady income during extended unemployment may compel these individuals to

[3]Those classified as temporarily disabled have not received SSDI benefits in year t.

seek SSDI benefits as financial support.

Mechanisms for those classified as temporarily disabled: For individuals, not yet commenced SSDI benefits, classified as temporarily disabled in year t, the pathway to SSDI enrollment is generally more direct. These individuals have likely experienced significant health impairments that severely limit their ability to work. Often, these individuals are merely awaiting confirmation of their SSDI eligibility, marking an almost certain transition to SSDI enrollment.

Causal pathways for those keeping house: Individuals who are primarily engaged in household duties often lack access to employer-provided health insurance or other benefits, making them more susceptible to both financial and health crises. Similarly, those who are temporarily laid off or on sick/maternity leave also face the absence of a steady income and potential social isolation. These combined factors can contribute to health deterioration, ultimately increasing the likelihood of future SSDI enrollment.

In sum, these findings underscore that future SSDI enrollment is not primarily driven by employment status itself. Instead, employment status reflects and sometimes contributes to an underlying trajectory of declining health. The observed transitions into SSDI are largely health-driven, with certain employment categories acting as early indicators of vulnerability.

3.3 Heterogeneity analysis

To further understand the variation in SSDI enrollment probability, we explore subgroup differences by education, gender, and race, providing insights into the mechanisms driving these variations (please see Table 3).

Education differences: Differences in the impact of the frailty index and employment status across educational levels can be attributed to several factors. Individuals with more than 12 years of schooling typically have better access to health resources and are more likely to engage in health-promoting behaviors than those with fewer years of education. This access and engagement can mitigate the impact of health impairments on their ability

to work, thus reducing the likelihood of SSDI enrollment. Conversely, individuals with less education may face compounded challenges: poorer general health, fewer resources for managing health issues, and jobs that are more physically demanding and less accommodating of health problems. These factors make frailty a more significant predictor of SSDI enrollment for this group, as their employment options are severely limited by health declines.

Gender differences: The variance in the effects of health and employment status between males and females can largely be explained by differences in occupational exposure and social roles. Men are often employed in more physically demanding jobs, making health a more critical factor in their ability to remain in the workforce. Moreover, societal expectations and gender roles can influence the likelihood of seeking and receiving SSDI benefits, with women potentially facing greater hurdles due to caregiving responsibilities or biases in the medical evaluation process of SSDI claims.

Racial differences: Racial disparities in SSDI enrollment probabilities highlight the intersection of health, employment, and systemic inequalities. Non-white individuals often have lower access to preventive healthcare services and are more likely to be employed in precarious, low-wage jobs that offer little security and health benefits. These conditions exacerbate the impact of poor health on their employment status, making frailty a more potent determinant of SSDI enrollment. In contrast, white individuals might have relatively better health and employment conditions, which buffer the impact of health on SSDI enrollment.

The heterogeneity analysis reveals that the interplay between health, employment status, and demographic factors is complex and influenced by broader social, economic, and cultural dynamics. The frailty index proves to be a critical determinant of SSDI enrollment across all subgroups, but its impact is modulated by socio-economic status, access to healthcare, occupational hazards, and systemic disparities. This nuanced understanding underscores the need for targeted policy interventions that consider these diverse pathways to SSDI enrollment.

Table 3: Estimation results on the probability of engaging in disability benefits within the next two years, ($D_{i,t+2}$)

	(1) overall	(2) more educated	(3) less educated	(4) male	(5) female	(6) non-white	(7) white
frailty index ($f_{i,t}$)	0.158***	0.0935**	0.210***	0.184***	0.136***	0.158***	0.148*
	(0.0393)	(0.0453)	(0.0630)	(0.0602)	(0.0515)	(0.0439)	(0.0864)
employment status, $e_{i,t}$ (baseline: working now)							
only temporarily laid off	0.0371**	0.0330	0.0388	0.0613*	0.0177	0.0459*	0.00939
	(0.0186)	(0.0258)	(0.0265)	(0.0358)	(0.0160)	(0.0245)	(0.0112)
unemployed	0.00982*	0.00962	0.0107	0.0169**	0.000604	0.00485	0.0212*
	(0.00505)	(0.00782)	(0.00656)	(0.00816)	(0.00554)	(0.00459)	(0.0123)
disabled	0.235***	0.250***	0.221***	0.205***	0.260***	0.244***	0.220***
	(0.0331)	(0.0535)	(0.0418)	(0.0514)	(0.0425)	(0.0438)	(0.0490)
keeping house	0.0192***	0.00486	0.0318***	0.0111	0.0204***	0.0151***	0.0364***
	(0.00475)	(0.00346)	(0.00916)	(0.0157)	(0.00487)	(0.00488)	(0.0138)
Observations	35,160	20,787	14,373	16,109	19,051	19,986	15,174
R-squared	0.112	0.013	0.094	0.037	0.127	0.105	0.117
Number of individual IDs	8,907	5,474	4,105	4,120	4,787	4,957	3,950
Demographic effects	yes	yes	yes	yes	yes	yes	yes
Year effects	yes	yes	yes	yes	yes	yes	yes

Note: The overall sample consists of household heads and their spouses in PSIDs 2005-2019. The less educated have 12 or less years of schooling, while the more educated have more than 12. In terms of race subsample, if a survey participant is not white, he/she belongs to non-white subsample, including black, hispanic, asian, and so forth.

3.4 Robustness Analysis

To validate the findings from the main model, two alternative specifications are tested: (1) a model incorporating interaction terms between lagged health (frailty index) and employment status, and (2) a model including a non-linear term (quadratic frailty) to capture potential non-linearities in the health-SSDI relationship. Table 4 summarizes the results across these models.

The results from Table 4 demonstrate the stability of the main findings:

- **Lagged health ($f_{i,t}$)** remains a significant predictor of SSDI participation across all models. In the main model (1), the coefficient for $f_{i,t}$ is 0.158 (p<0.01), confirming its strong and positive relationship with SSDI transitions. This effect persists in the non-linear model (3), albeit slightly reduced ($\beta = 0.0932$, p<0.10). In the interaction model (2), the effect of lagged health is disaggregated across five employment subgroups, with the coefficient for lagged frailty index now capturing the interaction effect for "employed" status.

- **Interaction terms (Model 2)** indicate limited significance for most employment-health interactions. The interaction term for "disabled" employment status ($disabled \times f_{i,t}$) is positive and significant ($\beta = 0.487$, p<0.01), suggesting that health exerts a compounding effect for individuals already classified as disabled. This finding highlights that individuals in this category, with higher frailty, are more likely to have already decided to enroll in disability benefits in the near future. However, other interaction terms are statistically insignificant, reinforcing the decision to exclude them from the main model.

- **Non-linear effects (Model 3)**: The quadratic term for $f_{i,t}$ is not statistically significant ($\beta = 0.162$, p=0.160), indicating no evidence of non-linear relationships between frailty and SSDI participation. This finding supports the linear assumption in the main model.

Table 4: Robustness Check Results: Interaction and Non-linear effects

	main (1)	interaction (2)	non-linear (3)
lagged frailty index ($f_{i,t}$)	0.1580***	0.0553	0.0932*
	(0.0393)	(0.0352)	(0.0525)
employment status, $e_{i,t}$ (baseline: employed)			
only temporarily laid off	0.0371**	-0.0146	0.0373**
	(0.0186)	(0.0240)	(0.0186)
unemployed	0.0098*	0.0042	0.0097*
	(0.0051)	(0.0061)	(0.0051)
temporarily disabled	0.2350***	0.1250**	0.2320***
	(0.0331)	(0.0501)	(0.0333)
keeping house	0.0192***	0.0053	0.0194***
	(0.0047)	(0.0069)	(0.0047)
Interaction term (2)			
only temporarily laid off × $f_{i,t}$	—	0.5370	—
	—	(0.3490)	—
unemployed × $f_{i,t}$	—	0.0710	—
	—	(0.0806)	—
disabled × $f_{i,t}$	—	0.4870***	—
	—	(0.1660)	—
keeping house × $f_{i,t}$	—	0.1680*	—
	—	(0.0886)	—
Non-linear terms (3)			
$f_{i,t}^2$	—	—	0.162
	—	—	(0.160)
Constant	0.135	0.144	0.137
	(0.105)	(0.104)	(0.105)
Observations	35,160	35,160	35,160
R-squared	0.112	0.108	0.112
Number of indID	8,907	8,907	8,907
Demographic effects	yes	yes	yes
Year effects	yes	yes	yes

Notes: Standard errors are reported in parentheses. *p<0.10, **p<0.05, ***p<0.01. Model (2) includes interaction terms between lagged health and employment status. Model (3) includes a quadratic frailty term to capture non-linear effects.

These robustness checks confirm that the main model accurately captures the independent effects of lagged health and employment status on SSDI transitions. The consistency of coefficients and R-squared values across models further validates the stability of the results.

4 Discussion and Conclusion

This study provides critical insights into the role of health, as measured by the frailty index—a robust and objective measure—in determining SSDI enrollment. Leveraging rich, large longitudinal microdata, our research transcends much of the existing literature that often relies on aggregate-level data. This granular data allows for a more nuanced understanding of the individual-level characteristics and behaviors of SSDI program participants.

Our findings reveal that health impairments significantly increase the likelihood of future SSDI participation, with employment status further moderating these effects. Specifically, a one-point increase in the frailty index in year t results in a 15.8% increase in the probability of SSDI enrollment by year $t+2$. This suggests that health had already deteriorated before engaging in SSDI.

Moreover, individuals who are temporarily laid off or on sick/maternity leave often face financial instability and uncertainty about their employment future, increasing stress and potentially exacerbating health conditions. This insecurity may compel these individuals to seek SSDI benefits as a form of financial support during periods of extended unemployment. Similarly, those classified as temporarily disabled typically experience significant health impairments that severely limit their work capacity and are often merely awaiting confirmation of their SSDI eligibility. This situation nearly guarantees their transition into SSDI enrollment, illustrating a clear link between temporary disability status and SSDI claims. For individuals primarily engaged in household duties, the absence of steady income and the potential for social isolation may also lead to mental health declines, further increasing the likelihood of SSDI enrollment.

The robustness analysis conducted confirms the validity of our findings, demonstrating minimal interaction between health and employment status, and non-linear health effects. This supports our focus on the independent contributions of health and employment status, underscoring the multifaceted nature of disability enrollment. Significant disparities across demographic groups—particularly in education, gender, and race—highlight the need for targeted interventions. Expanding access to healthcare and preventive services for vulnerable populations, such as those less-educated and non-white individuals, could mitigate health-related drivers of disability insurance claims. Moreover, policies aimed at enhancing job security and adapting workplace accommodations could help reduce unnecessary transitions into SSDI among at-risk workers.

Given the strong relationship between health deterioration and SSDI enrollment, policymakers should consider these implications when designing SSDI policies. Interventions aimed at early health maintenance and preventive care could potentially mitigate the progression of frailty, thereby reducing premature transitions into SSDI. Moreover, a deeper understanding of the differential impact of health across various demographic groups can aid in formulating targeted support measures that address specific needs and vulnerabilities.

Despite the advancements this study brings to our understanding of SSDI enrollment determinants, we must acknowledge its limitations. The reliance on the frailty index, while innovative, does not capture all dimensions of health, particularly mental health conditions, which may also influence disability risk. Future research should explore more comprehensive health metrics and employ experimental or quasi-experimental designs to strengthen causal inferences.

Furthermore, examining the effects of past living conditions, habits, and community support on later SSDI participation using representative panel surveys could yield additional insights. Variables such as socioeconomic status, residential area, housing stability, access to healthcare, lifestyle choices, and mental health history can significantly influence an individual's health trajectory and their eventual need for SSDI benefits.

This research underscores the potential of utilizing the frailty index as an objective health measure to better understand and predict future SSDI participation. By integrating such measures into SSDI research and policy planning, stakeholders can gain deeper insights into the health-related drivers of disability insurance enrollment and devise strategies that promote health equity and efficiency in the administration of disability benefits.

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A Appendix

A.1 The frailty index

The frailty index is a widely-used tool for assessing an individual's health status by measuring the accumulation of deficits in different areas, such as physical, cognitive, and psychosocial domains. The index is calculated by dividing the total number of deficits accumulated by an individual by the total number of deficits considered, which may include symptoms, signs, laboratory abnormalities, and disabilities.

The concept of the frailty index was first proposed by Mitnitski et al. (2001) and Mitnitski et al. (2002), and has since been widely applied in gerontology and public health research. The index provides a perspective on an individual's health status, as it takes into account multiple dimensions of health and captures the cumulative effect of age-related declines in various systems.

In this study, we apply the frailty index to a sample of household heads and their spouses in the Panel Study of Income Dynamics (PSID). We construct the index based on a set of variables that reflect physical and cognitive function and chronic diseases, following the guidelines proposed by Searle et al. (2008). The frailty index enables us to identify individuals who are at higher risk of adverse health outcomes. The list of health variables used to construct the frailty index is shown below.

Table A.1: List of health deficits recorded in the PSID

Difficulty with performing each of the following activities of daily living (ADL):		
• Bathing	• In/out of bed/chair	• Getting outside
• Eating	• Walking	• Using toilet
Difficulty with performing each of the following instrumental activities of daily living:		
• Preparing meals	• Managing money	• Light housework
• Shopping	• Heavy housework	
Past experience of the following diseases:		
• Stroke	• Asthma	• Memory loss
• Heart attack	• Lung disease	• Cancer
• Heart disease	• Diabetes	• Chronical conditions
• Hypertension	• Arthritis	• BMI ≥ 30

Notes: The responses to these questions are dichotomous (*i.e.*, "Yes/No").