Systematic Earnings Risk

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Abstract

We use administrative data on earnings to estimate how aggregate risk exposure to GDP and stock returns varies across gender, age, earnings level, and industry. Aggregate risk exposure is U-shaped with respect to the earnings level. In the middle of the earnings distribution, males, younger individuals, and those in construction and durable manufacturing are more exposed to aggregate risk. At the top of the earnings distribution, older individuals and those in finance are more exposed to aggregate risk. We then extend the analysis to study how individuals' earnings covary jointly with average industry wage, average firm wage, in addition to GDP and find interesting variation across the population and firms with different characteristics. We discuss some implications of our findings for macroeconomics and finance. (*JEL* G11, D14)

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I. Introduction

Using annual panel data on earnings from the Social Security Administration, we estimate how the aggregate risk exposure of earnings varies across gender, age, earnings level, and industry. Our main empirical approach is a pooled ordinary least squares (OLS) regression of real earnings growth on either real gross domestic product (GDP) growth or real stock returns. By using "big data", we can estimate GDP and stock return beta more accurately and at a more granular level than previous studies, resulting in a clearer picture of how aggregate income risk is distributed across the population. Our main findings are as follows:

1. Aggregate risk exposure is U-shaped with respect to the earnings level.
2. Males are more exposed to aggregate risk than females.
3. Younger individuals are more exposed to aggregate risk than older individuals, except at the top of the earnings distribution where older individuals are more exposed.
4. In the middle of the earnings distribution, males, younger individuals and those in construction and durable manufacturing have the highest aggregate risk exposure. At the top of the earnings distribution, those in finance have the highest aggregate risk exposure. Individuals in health and education have the lowest aggregate risk exposure throughout the earnings distribution.

Our measurement exercise has important implications for several literatures in macroeconomics and finance. First, a leading theory in macroeconomics implies that social security improves welfare through intergenerational risk sharing (Allen and Gale 1997, Ball and Mankiw 2007). In an overlapping generations economy, an important source of market incompleteness arises from the inability of generations that live in different periods to insure aggregate risk through financial markets. A government can improve welfare through a fully funded social security system that transfers income from lucky to unlucky generations. This transfer system could be improved with better knowledge of how aggregate income risk is distributed across the population.

Another literature interprets differences in the aggregate risk embedded in individual incomes as a form of insurance in itself. (Schulhofer-Wohl 2011) and (Mazzocco and

Saini 2012) observe that when some people are more risk averse than others, it is efficient for those who are more risk averse to bear less aggregate consumption risk, and that one mechanism that could help accomplish this risk-sharing is for those who are more risk averse to have *incomes* that are less correlated with aggregate shocks. In conjunction with estimates of risk aversion, for example from survey data, our estimates of individuals' aggregate income risks could be used to more precisely test this theory by measuring the relationship between risk preferences and aggregate income risk.

Second, the same logic of intertemporal smoothing applied to a higher frequency implies that a government can potentially improve welfare by smoothing aggregate shocks, through monetary or fiscal policy. Our findings imply that the cost of business cycles is borne asymmetrically across the population depending on gender, age, earnings level, and industry. Therefore, stabilization policies would also have asymmetric effects across these groups.

Third, the theory of portfolio choice in the presence of risky labor income implies that the optimal allocation to stocks depends critically on the covariance of income growth with stock returns. More specifically, the formula for the optimal portfolio share in stocks is a weighted average of the mean-variance portfolio and hedging demand (Campbell and Viceira 2002, equation 6.11). Hedging demand implies that the optimal portfolio share in stocks decreases with stock return beta, which is exactly what we estimate in this paper. Therefore, our estimates of stock return beta could be used for normative advice on how investors with different labor income risk should tilt their allocation to stocks. Similarly our estimates can be used in conjunction with data on portfolio investments, for testing whether investors follow the theory of hedging demand in practice.

The same idea described above for aggregate income risk can be extended to study how industry-level and firm-level risk is transmitted to different workers. In other words, we can ask, how are the fortunes of a worker linked to the fortunes of her industry, her employer/firm, and the aggregate economy? We are especially interested in understanding how this exposure to various sources of risk varies by demographics (gender, age, industry), the income level of the worker, and the size of her employer. One of the main findings of this analysis is that individuals working for larger employers are less exposed to aggregate risk, but they are more exposed to a common factor in employer-level earnings, especially at the top of the earnings distribution. Thus, fluctuations in an employer's fortunes, here measured as fluctuations in their wage bill, causes larger fluctuations in the earnings of top-paid employees relative to low-paid employees. This

outcome is consistent with models of insurance within firms to the extent that lower-paid workers are in more need of insurance (perhaps because of their limited self-insurance opportunities or higher dislike for risk if a larger fraction of their expenditures is on necessities).

The remainder of this paper is organized as follows. Section II describes the earnings data from the Social Security Administration's Master Earnings File. Section III discusses our main facts on the aggregate risk exposure of earnings. Section IV examines how earnings are exposed to common factors at the employer and industry levels. A separate online appendix contains additional tables and figures, which we reference in the main text.

II. Administrative Data on Earnings

Our annual panel data on earnings are from the Master Earnings File of the Social Security Administration from 1978 to 2013. These administrative data are representative, complete, and free of measurement error because they are based on all employer filings of Form W-2 for all U.S. workers with a Social Security number. Importantly, the earnings data are not top coded and include all wages, salaries, bonuses, and exercised stock options as reported in Box 1 of Form W-2.[1] For each individual, we aggregate earnings across all his/her employers in a given year. We deflate earnings to 2009 real dollars using the GDP implicit price deflator. In addition to earnings, we use demographic information from the Master Earnings File including gender, year of birth (or age), and the Standard Industrial Classification (SIC) code of the primary employer.

Because of computing resource constraints, our analysis is based on a 10 percent random sample of the Master Earnings File. To construct our sample, we randomly draw 10 percent of Social Security numbers existing in 1978. In each subsequent year from 1979 to 2013, we add a 10 percent random sample of newly issued Social Security numbers. Individuals that die leave our sample. We further limit our sample to individuals that are in their prime working years from age 26 to 65.

We compute real earnings growth as the difference in log real earnings between year t and $t-1$. As a proxy for "permanent income," we also compute average real earnings

[1] In addition to W-2 wages, the Master Earnings File contains self-employment income. However, we do not use self-employment income in our analysis because they were top coded prior to 1994.

over five years from year $t-6$ to $t-2$. When five years of earnings history are not available for an individual, we use the longest consecutive period (between one to four years) that is available. We emphasize that there is no overlap between the period over which earnings growth is computed (i.e., year $t-1$ to t) and the period over which average earnings are computed (i.e., year $t-6$ to $t-2$). This ensures that there is no mechanical correlation between our measures of earnings growth and average earnings. The data requirements for computing earnings growth and average earnings imply that to enter our sample, an individual must have positive earnings in years t, $t-1$, and at least one year between $t-6$ and $t-2$.

In each year, we group our sample into four age groups: 26–35, 36–45, 46–55, and 56–65. We also group our sample into 12 earnings percentiles (i.e., 10th to 90th, 99th, and 99.9th) conditional on gender and age group, based on average earnings that we described above. Finally, we group our sample into 10 industries based on the four-digit SIC code of the primary employer: construction (1521–1799), nondurable manufacturing (111–1499, 2011–2399, 2611–3199, and 3951–3999), durable manufacturing (2411–2599 and 3211–3949), transportation (4011–4971), retail and wholesale (5012–5999), finance (6011–6799), services (7011–7999, 8111, and 8322–8999), health and education (8011–8099 and 8211–8299), and other industries (9111–9999 and missing SIC code).

Table I summarizes our sample by gender and age. An advantage of our administrative data is that our sample is much larger than in typical studies of household finance that are based on surveys. For example, we have 5.073 million observations of males aged 36–45 who fall between the 50th and 60th percentiles in the earnings distribution. The median earnings for this group is \$45,000. We also have 457,000 observations of males aged 36–45 that fall between the 99th and 99.9th percentiles in the earnings distribution, where median earnings is \$333,000. We even have 51,000 observations above the 99.9th percentile, where median earnings is \$1.073 million.

Table I: Summary of the Sample by Gender and Age

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
Panel A. Observations (thousands)								
0	5,567	5,073	3,997	2,333	4,758	4,472	3,709	2,088
10	5,567	5,073	3,997	2,333	4,758	4,472	3,709	2,088
20	5,567	5,073	3,997	2,333	4,758	4,472	3,709	2,088
30	5,567	5,073	3,997	2,333	4,758	4,472	3,709	2,088
40	5,567	5,073	3,997	2,333	4,758	4,472	3,709	2,088
50	5,567	5,073	3,997	2,333	4,758	4,472	3,709	2,088
60	5,567	5,073	3,997	2,333	4,758	4,472	3,709	2,088
70	5,567	5,073	3,997	2,333	4,758	4,472	3,709	2,088
80	5,567	5,073	3,997	2,333	4,758	4,472	3,709	2,088
90	5,011	4,566	3,597	2,100	4,282	4,025	3,339	1,879
99	501	457	360	210	428	402	334	188
99.9	56	51	40	23	48	45	37	21
Panel B. Median earnings (thousands of 2009 dollars)								
0	3	6	7	6	2	2	3	3
10	9	16	20	19	5	6	9	9
20	14	25	29	28	9	11	15	15
30	18	31	37	35	13	16	20	20
40	22	38	45	43	16	21	26	25
50	27	45	53	51	20	26	32	30
60	32	53	62	61	24	32	38	37
70	39	62	74	74	29	39	46	45
80	48	78	94	95	36	50	58	56
90	68	118	150	155	51	72	81	79
99	137	333	504	546	98	159	186	169
99.9	349	1,073	1,714	2,062	192	397	526	480[b]

III. Aggregate Risk Exposure of Earnings

A. GDP Beta

Let $\Delta y_{n,t}$ be the log real earnings growth of individual n in year t, and let Δy_t be the log real GDP growth in year t. Our main empirical specification is

$$\Delta y_{n,t} = \alpha_g + \beta_g \Delta y_t + \epsilon_{n,t}. \tag{1}$$

We estimate the coefficients α_g and β_g by pooled OLS, separately by gender, four age groups, and 12 earnings percentiles. The assumption, for example, is that males aged 36–45 whose earnings fall between the 50th and 60th percentiles have the same GDP beta β_g.

Figure 1 reports GDP beta across the earnings distribution at age 36–45 by gender. For both males and females, GDP beta is U-shaped in the earnings level. That is, individuals at the tails of the the earnings distribution have the highest aggregate risk exposure. In particular, males at the 99.9th percentile of the earnings distribution have a GDP beta of 3.70. Parker and Vissing-Jorgensen (2009) also find that income is most cyclical at the top of the earnings distribution. Throughout the earnings distribution, males have higher GDP beta than females. For example, males at the 50th percentile of the earnings distribution have a GDP beta of 1.09, compared with 0.69 for females.

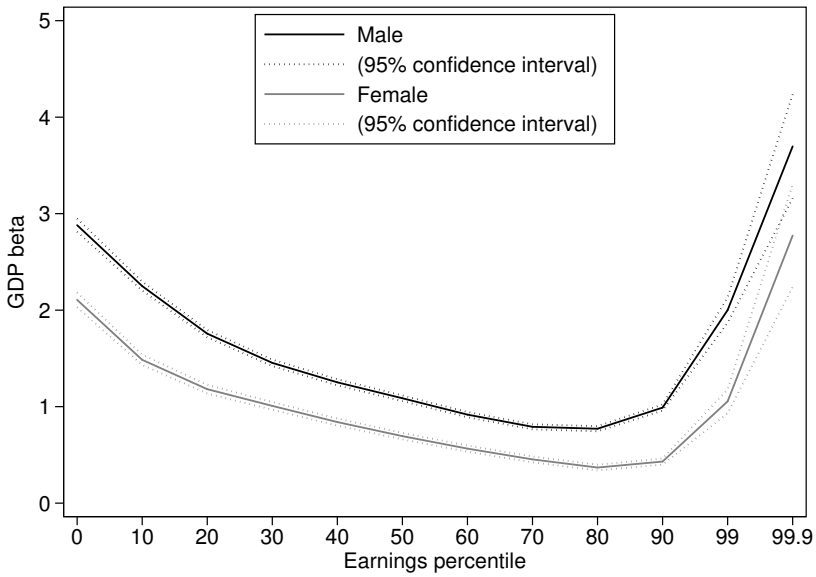

Figure 1: GDP Beta at Age 36–45 by Gender

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t.

Figure 2 reports GDP beta across the earnings distribution for males by age group. Within each age group, GDP beta is U-shaped in the earnings level. Below the 90th percentile of the earnings distribution, younger males have higher GDP beta than older males. For example, males aged 26–35 at the 50th percentile of the earnings distribution have a GDP beta of 1.55, compared with 0.30 for males aged 56–65. Above the 90th

percentile of the earnings distribution, however, this relation reverses so that older males have higher GDP beta than younger males. For example, males aged 56–65 at the 99.9th percentile of the earnings distribution have a GDP beta of 4.23, compared with 2.90 for males aged 26–35.

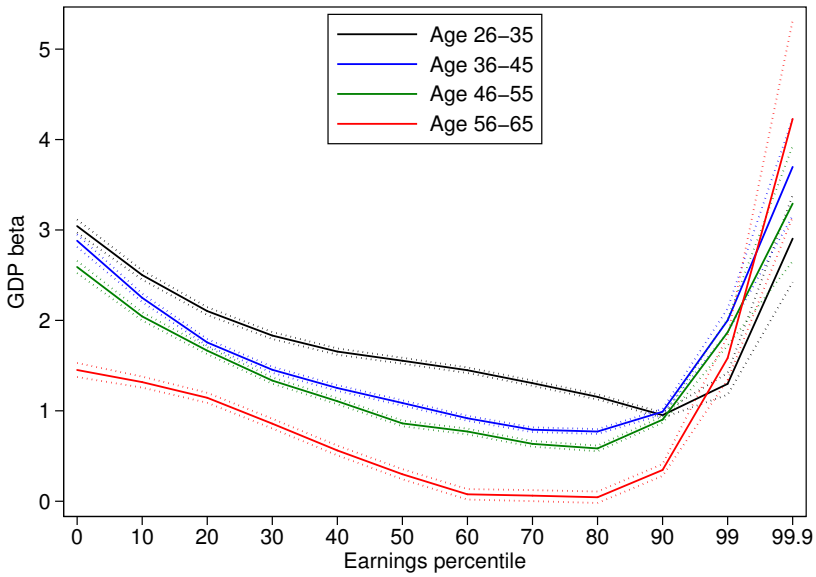

Figure 2: GDP Beta for Males by Age Group

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. The dotted lines represent the 95 percent confidence interval.

Figure 3 reports GDP beta across the earnings distribution for males aged 36–45 by industry. There are significant differences in GDP beta across industries. At the 50th percentile of the earnings distribution, the industries (and corresponding GDP beta) ranked from the most to least cyclical are construction (2.31), durable manufacturing (1.97), services (1.17), retail and wholesale (1.05), nondurable manufacturing (0.88), finance (0.87), transportation (0.47), and health and education (0.23). This ranking is not surprising, except for the fact that finance is one of the less cyclical industries. However, the cyclicality of earnings in the finance industry is highly dependent on the earnings level. At the 99th percentile of the earnings distribution, finance is actually the most cyclical industry with a GDP beta of 3.05.

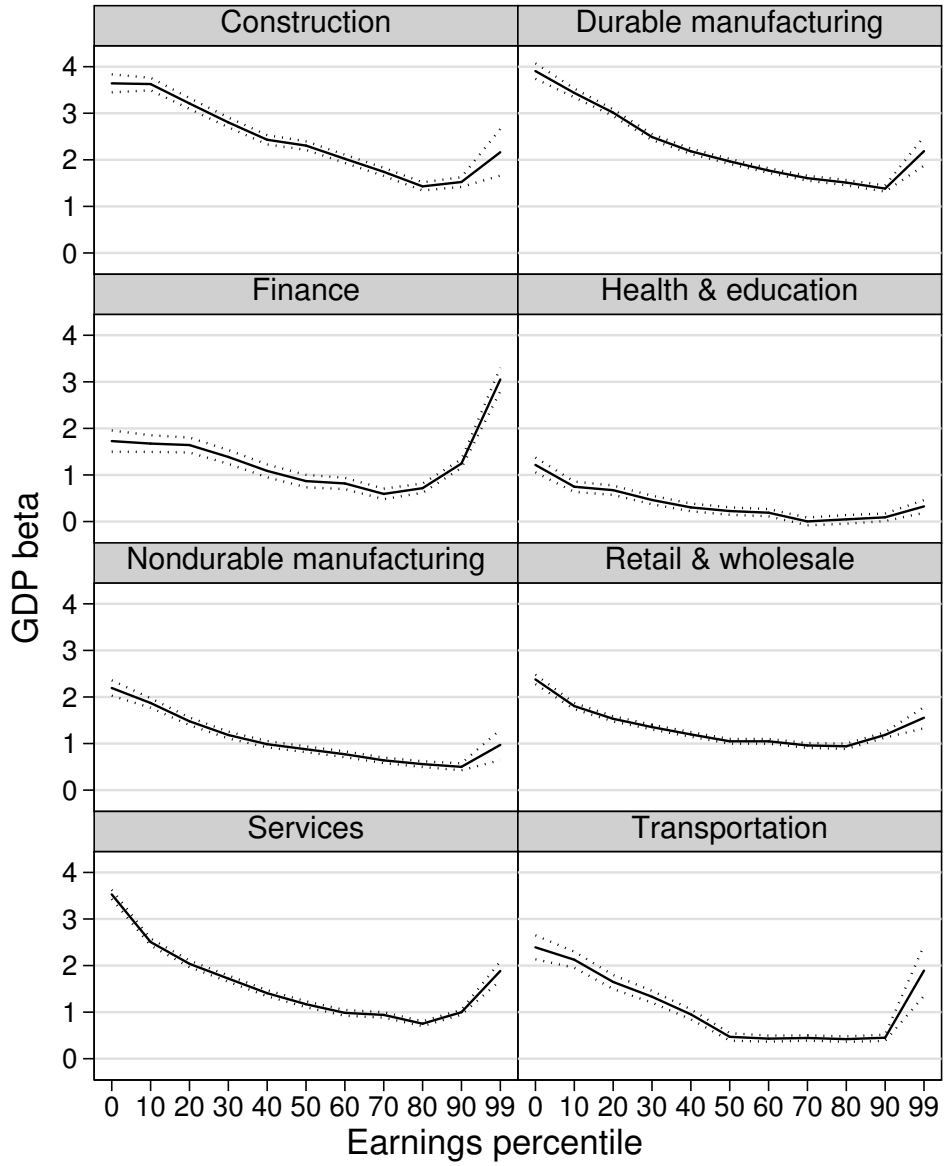

Figure 3: GDP Beta for Males by Industry

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. The dotted lines represent the 95 percent confidence interval.

B. Stock Return Beta

We now repeat regression (1) with real stock returns instead of real GDP growth as the explanatory variable. Real stock returns are the Center for Research in Security Prices

value-weighted index deflated by the GDP implicit price deflator. In aligning earnings growth with stock returns, we use the beginning-of-period timing convention following Campbell (2003), which leads to a higher correlation between GDP growth and stock returns than the end-of-period timing convention. That is, we align earnings growth from year $t-1$ to t with stock returns during year $t-1$.

Figures A.1, A.2, and A.3 report results that are analogous to Figures 1, 2, and 3 for stock returns. In our sample from 1980 to 2013, the correlation between real stock returns and real GDP growth is 0.59. Therefore, it should not be surprising that our main findings for stock return beta are similar to those for GDP beta.

IV. Employer and Industry Factors in Earnings

Variation in earnings growth that remains after taking out the aggregate exposure to GDP growth need not be purely idiosyncratic. In particular, earnings growth could be correlated across workers within the same employer or industry. To examine the importance of factor structure in earnings growth at the employer and industry levels, we modify regression (1) to include employer- and industry-level factors.

Let $\Delta y_{e\backslash n,t}$ be the log real growth rate of average earnings for individual n's employer (defined by the Employer Identification Number) in year t, where we exclude individual n in computing average earnings.[2] By excluding individual n from the average, we avoid any mechanical correlation in earnings growth between the individual and the employer. Similarly, let $\Delta y_{i\backslash n,t}$ be the log real growth rate of average earnings for individual n's industry in year t, where we again exclude individual n from the average. Our empirical specification is

$$\Delta y_{n,t} = \alpha_e + \beta_g \Delta y_t + \beta_{g,e} \Delta y_{e\backslash n,t} + \beta_{g,i} \Delta y_{i\backslash n,t} + \nu_{n,t}, \tag{2}$$

where α_e are employer fixed effects.

To isolate meaningful factors in employer-level earnings, we limit our sample to employers with at least 10 observations in our sample. In each year, we group our sample into employer-size quartiles, which correspond to median employer sizes of 13, 31, 154,

[2]This average earnings measure is computed with data from our 10% sample and is therefore an estimate, rather than being an exact measure, which would require the 100% population data on workers.

and 1,210 observations in our sample. Because we start with a 10 percent random sample, these employers on average have 130, 310, 1,540, and 12,100 workers. To estimate regression (2), we first take out the employer fixed effects by cross-sectionally demeaning. We then estimate the coefficients β_g, $\beta_{g,e}$, and $\beta_{g,i}$ by pooled OLS, separately by gender, employer-size quartiles, and 12 earnings percentiles.

Figure 4 reports GDP, employer, and industry beta across the earnings distribution for males by employer-size quartiles. Three key facts emerge. The first fact is that GDP beta decreases in employer size, while employer beta increases in employer size. There is no systematic pattern in the industry beta. Second, at the 50th percentile of the earnings distribution, GDP beta decreases from 1.13, 0.83, 0.68, to 0.31 by employer-size quartile. At the same time, employer beta increases from 0.37, 0.45, 0.48, to 0.53 by employer-size quartile. The third fact is that employer beta increases in the earnings level. This means that within an employer, more highly compensated workers absorb a higher share of the employer-level risk.

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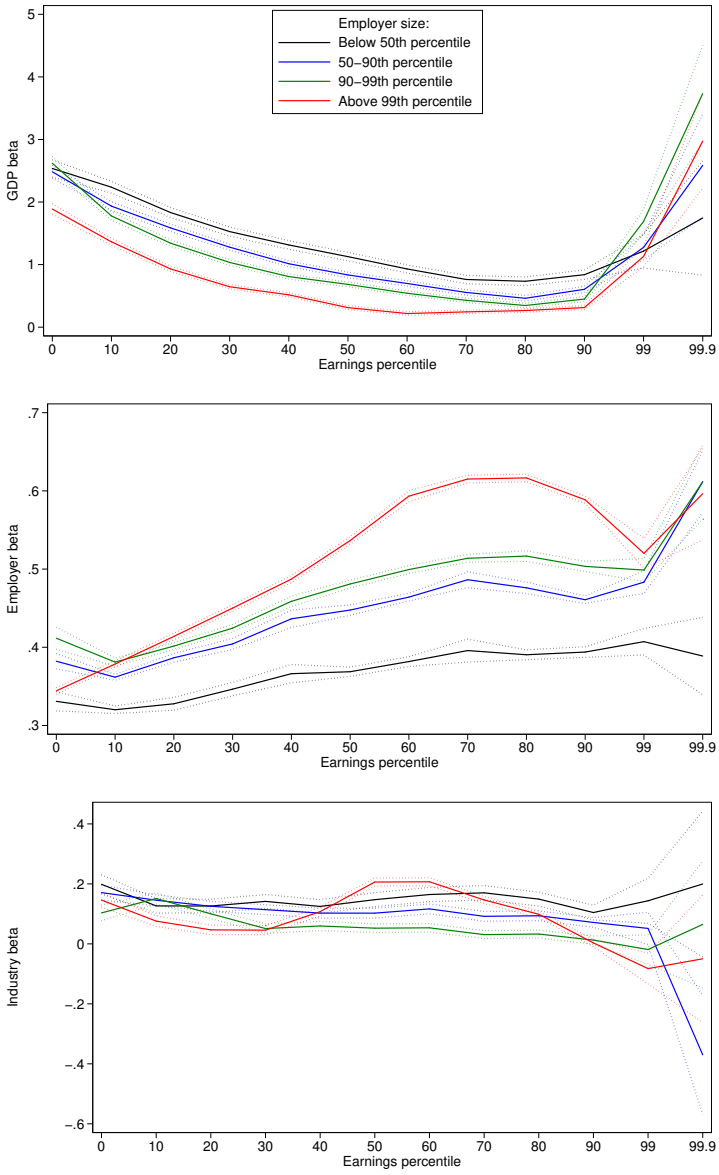

Figure 4: GDP, Employer, and Industry Beta for Males

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP, employer, and industry beta is from year $t-1$ to t. The dotted lines represent the 95 percent confidence interval.

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Supplemental Online Appendix

A. GDP Beta

Table A.1: GDP Beta by Gender and Age

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	3.04	2.88	2.59	1.45	2.32	2.11	1.45	1.11
	(0.04)	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
10	2.50	2.25	2.04	1.32	1.61	1.49	1.11	0.68
	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
20	2.10	1.76	1.67	1.14	1.34	1.18	0.89	0.54
	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)
30	1.83	1.45	1.33	0.86	1.09	1.01	0.77	0.47
	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
40	1.66	1.25	1.11	0.56	0.91	0.84	0.69	0.30
	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
50	1.55	1.09	0.86	0.30	0.80	0.69	0.60	0.20
	(0.02)	(0.01)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
60	1.45	0.92	0.77	0.08	0.67	0.57	0.45	0.11
	(0.02)	(0.01)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
70	1.31	0.79	0.63	0.06	0.53	0.45	0.36	-0.04
	(0.01)	(0.01)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
80	1.15	0.77	0.58	0.04	0.41	0.37	0.29	-0.06
	(0.01)	(0.01)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
90	0.95	0.99	0.90	0.35	0.37	0.43	0.30	-0.24
	(0.01)	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.03)
99	1.30	2.00	1.87	1.58	0.73	1.05	1.09	0.22
	(0.06)	(0.07)	(0.08)	(0.12)	(0.07)	(0.06)	(0.07)	(0.11)
99.9	2.90	3.70	3.29	4.23	2.26	2.77	2.79	3.09
	(0.25)	(0.28)	(0.33)	(0.55)	(0.21)	(0.27)	(0.26)	(0.47)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A.2: GDP Beta by Gender and Age: Construction

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	3.37	3.61	3.58	3.52	3.64	1.95	2.91	2.38
	(0.18)	(0.17)	(0.19)	(0.29)	(0.10)	(0.64)	(0.54)	(0.43)
10	1.87	2.58	3.46	3.46	3.59	3.63	3.63	2.24
	(0.47)	(0.27)	(0.13)	(0.12)	(0.12)	(0.19)	(0.07)	(0.43)
20	2.40	2.29	2.33	2.50	3.04	3.12	3.28	2.80
	(0.34)	(0.31)	(0.38)	(0.19)	(0.11)	(0.10)	(0.10)	(0.17)
30	3.21	2.05	2.55	1.97	1.53	2.25	2.75	2.62
	(0.06)	(0.37)	(0.30)	(0.30)	(0.39)	(0.17)	(0.10)	(0.09)
40	2.83	2.44	2.80	2.28	1.81	2.18	2.23	2.23
	(0.10)	(0.15)	(0.05)	(0.34)	(0.25)	(0.26)	(0.38)	(0.15)
50	2.35	2.26	2.52	2.17	2.43	1.83	1.97	1.54
	(0.09)	(0.09)	(0.10)	(0.15)	(0.05)	(0.30)	(0.27)	(0.23)
60	1.38	1.81	2.46	2.13	2.16	1.83	2.31	0.93
	(0.33)	(0.14)	(0.09)	(0.08)	(0.09)	(0.14)	(0.05)	(0.26)
70	1.72	1.33	1.37	1.41	2.25	1.76	1.94	1.52
	(0.22)	(0.21)	(0.30)	(0.12)	(0.08)	(0.07)	(0.08)	(0.14)
80	2.02	1.36	1.61	1.41	0.99	1.44	2.08	1.61
	(0.04)	(0.24)	(0.21)	(0.21)	(0.29)	(0.12)	(0.08)	(0.07)
90	1.41	1.21	1.74	1.41	1.31	0.99	1.05	1.25
	(0.08)	(0.14)	(0.04)	(0.23)	(0.22)	(0.21)	(0.33)	(0.12)
99	1.70	1.40	1.13	0.61	1.43	0.82	1.38	1.22
	(0.07)	(0.07)	(0.09)	(0.17)	(0.04)	(0.24)	(0.22)	(0.24)
99.9	1.56	1.20	1.44	1.42	1.72	1.34	1.52	0.88
	(0.36)	(0.13)	(0.07)	(0.11)	(0.13)	(0.19)	(0.05)	(0.32)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A.3: GDP Beta by Gender and Age: Nondurable Manufacturing

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	2.26	2.08	2.13	1.37	2.19	2.63	2.26	1.70
	(0.16)	(0.15)	(0.15)	(0.21)	(0.08)	(0.22)	(0.24)	(0.23)
10	1.12	2.29	2.32	1.69	1.53	1.10	1.87	1.70
	(0.27)	(0.12)	(0.11)	(0.09)	(0.09)	(0.12)	(0.05)	(0.14)
20	1.72	1.66	1.17	1.73	1.92	1.33	1.13	0.83
	(0.14)	(0.14)	(0.18)	(0.08)	(0.09)	(0.07)	(0.07)	(0.10)
30	1.48	1.60	1.34	1.15	1.11	1.43	1.49	1.14
	(0.04)	(0.12)	(0.11)	(0.11)	(0.14)	(0.06)	(0.08)	(0.06)
40	0.97	0.53	1.18	1.30	1.25	1.15	1.02	1.26
	(0.07)	(0.10)	(0.04)	(0.10)	(0.09)	(0.08)	(0.11)	(0.05)
50	1.26	0.93	0.86	0.29	0.99	1.10	1.03	1.00
	(0.07)	(0.06)	(0.05)	(0.10)	(0.03)	(0.09)	(0.07)	(0.07)
60	0.55	1.01	1.21	0.76	0.72	0.20	0.88	0.99
	(0.10)	(0.04)	(0.06)	(0.05)	(0.05)	(0.10)	(0.03)	(0.08)
70	0.89	0.84	0.45	0.88	0.93	0.72	0.72	0.08
	(0.07)	(0.07)	(0.10)	(0.04)	(0.06)	(0.05)	(0.06)	(0.11)
80	0.77	0.89	0.70	0.62	0.23	0.70	0.88	0.49
	(0.03)	(0.08)	(0.07)	(0.07)	(0.11)	(0.04)	(0.05)	(0.05)
90	0.53	-0.06	0.64	0.57	0.54	0.45	0.13	0.50
	(0.06)	(0.11)	(0.03)	(0.09)	(0.07)	(0.08)	(0.12)	(0.04)
99	0.76	0.46	0.45	-0.20	0.56	0.39	0.34	0.32
	(0.05)	(0.05)	(0.06)	(0.12)	(0.03)	(0.08)	(0.07)	(0.08)
99.9	0.04	0.33	0.42	0.57	0.46	0.05	0.50	0.38
	(0.14)	(0.04)	(0.05)	(0.07)	(0.09)	(0.14)	(0.04)	(0.08)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A.4: GDP Beta by Gender and Age: Durable Manufacturing

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	3.73	3.84	3.83	2.90	3.91	3.96	3.64	3.11
	(0.16)	(0.15)	(0.16)	(0.22)	(0.08)	(0.33)	(0.35)	(0.32)
10	2.44	3.84	3.50	3.45	3.09	2.80	3.44	3.19
	(0.48)	(0.18)	(0.10)	(0.08)	(0.08)	(0.12)	(0.05)	(0.19)
20	3.30	3.22	2.85	3.42	3.34	2.92	2.60	2.38
	(0.20)	(0.20)	(0.34)	(0.11)	(0.08)	(0.06)	(0.06)	(0.09)
30	3.01	2.90	2.97	3.08	2.47	3.12	3.01	2.39
	(0.04)	(0.16)	(0.14)	(0.15)	(0.20)	(0.08)	(0.07)	(0.05)
40	2.06	1.73	2.49	2.52	2.50	2.25	2.11	2.55
	(0.06)	(0.09)	(0.03)	(0.13)	(0.11)	(0.11)	(0.16)	(0.06)
50	2.79	2.07	1.78	1.27	2.18	2.41	2.10	1.92
	(0.06)	(0.05)	(0.05)	(0.08)	(0.03)	(0.12)	(0.09)	(0.09)
60	1.66	2.18	2.61	1.85	1.45	0.98	1.97	1.94
	(0.13)	(0.05)	(0.05)	(0.05)	(0.05)	(0.08)	(0.03)	(0.10)
70	1.71	1.70	1.42	1.81	2.48	1.62	1.23	0.61
	(0.09)	(0.08)	(0.12)	(0.05)	(0.05)	(0.04)	(0.05)	(0.09)
80	1.77	1.80	1.67	1.44	0.87	1.57	2.34	1.46
	(0.03)	(0.09)	(0.07)	(0.08)	(0.13)	(0.04)	(0.04)	(0.04)
90	1.02	0.37	1.61	1.51	1.35	1.12	0.69	1.28
	(0.05)	(0.09)	(0.03)	(0.09)	(0.07)	(0.08)	(0.14)	(0.05)
99	2.29	1.35	0.95	0.14	1.51	1.41	1.24	1.09
	(0.04)	(0.05)	(0.06)	(0.10)	(0.03)	(0.08)	(0.09)	(0.08)
99.9	0.74	1.21	1.72	1.15	1.25	0.76	1.38	1.26
	(0.16)	(0.05)	(0.05)	(0.06)	(0.07)	(0.11)	(0.03)	(0.09)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A.5: GDP Beta by Gender and Age: Transportation

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	2.95	2.30	2.05	1.29	2.39	3.24	3.28	2.63
	(0.29)	(0.26)	(0.24)	(0.25)	(0.13)	(0.39)	(0.41)	(0.35)
10	0.99	3.14	2.22	2.26	1.89	1.19	2.13	2.08
	(0.39)	(0.20)	(0.19)	(0.15)	(0.16)	(0.20)	(0.09)	(0.25)
20	1.94	0.87	0.91	1.82	1.95	1.52	1.38	0.81
	(0.24)	(0.21)	(0.30)	(0.13)	(0.15)	(0.13)	(0.13)	(0.23)
30	1.65	1.89	1.56	1.10	0.70	1.63	1.84	1.08
	(0.08)	(0.21)	(0.18)	(0.21)	(0.29)	(0.11)	(0.13)	(0.10)
40	1.09	0.58	1.33	1.34	1.51	1.57	0.98	1.56
	(0.11)	(0.22)	(0.06)	(0.18)	(0.16)	(0.18)	(0.40)	(0.10)
50	1.41	1.23	0.50	0.15	0.95	1.27	1.37	1.16
	(0.11)	(0.10)	(0.09)	(0.16)	(0.05)	(0.15)	(0.17)	(0.16)
60	-0.16	1.31	1.17	0.80	-0.17	-0.32	0.47	0.94
	(0.27)	(0.09)	(0.09)	(0.07)	(0.06)	(0.12)	(0.04)	(0.13)
70	0.82	0.59	0.30	0.90	0.98	0.19	0.05	-0.35
	(0.13)	(0.18)	(0.25)	(0.08)	(0.07)	(0.05)	(0.05)	(0.11)
80	0.43	0.74	0.63	0.52	0.32	0.78	0.94	0.18
	(0.03)	(0.11)	(0.13)	(0.12)	(0.24)	(0.07)	(0.07)	(0.04)
90	-0.05	-0.53	0.45	0.59	0.24	-0.30	-0.16	0.36
	(0.04)	(0.10)	(0.03)	(0.10)	(0.08)	(0.10)	(0.18)	(0.05)
99	0.73	0.19	0.08	-0.63	0.42	0.41	-0.15	-0.09
	(0.06)	(0.04)	(0.04)	(0.12)	(0.03)	(0.07)	(0.06)	(0.06)
99.9	0.06	0.20	0.38	0.57	0.39	-0.31	0.45	0.14
	(0.13)	(0.04)	(0.04)	(0.06)	(0.09)	(0.19)	(0.03)	(0.05)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A.6: GDP Beta by Gender and Age: Retail and Wholesale

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	2.62	2.44	2.02	1.33	2.38	2.26	2.29	1.59
	(0.10)	(0.10)	(0.09)	(0.11)	(0.05)	(0.12)	(0.12)	(0.10)
10	1.41	2.10	2.23	1.76	1.42	0.90	1.80	1.70
	(0.12)	(0.06)	(0.07)	(0.06)	(0.06)	(0.07)	(0.03)	(0.08)
20	1.34	1.01	0.82	1.38	1.95	1.38	1.19	0.75
	(0.08)	(0.07)	(0.08)	(0.04)	(0.06)	(0.05)	(0.05)	(0.07)
30	1.53	1.40	1.20	0.99	0.59	1.18	1.74	1.29
	(0.03)	(0.08)	(0.07)	(0.06)	(0.07)	(0.04)	(0.05)	(0.05)
40	0.93	0.62	1.35	1.16	0.90	0.67	0.51	0.90
	(0.05)	(0.07)	(0.03)	(0.07)	(0.06)	(0.05)	(0.07)	(0.03)
50	1.59	1.01	0.85	0.49	1.20	0.90	0.84	0.66
	(0.05)	(0.04)	(0.05)	(0.07)	(0.03)	(0.07)	(0.06)	(0.06)
60	0.33	0.76	1.27	0.90	0.79	0.38	1.05	0.83
	(0.07)	(0.03)	(0.04)	(0.04)	(0.05)	(0.08)	(0.03)	(0.07)
70	0.76	0.75	0.40	0.75	1.28	0.90	0.72	0.32
	(0.06)	(0.06)	(0.08)	(0.03)	(0.04)	(0.05)	(0.06)	(0.09)
80	1.05	0.76	0.61	0.44	0.23	0.59	1.05	0.90
	(0.03)	(0.07)	(0.06)	(0.06)	(0.09)	(0.03)	(0.04)	(0.05)
90	0.82	0.22	0.96	0.73	0.56	0.52	0.03	0.55
	(0.06)	(0.10)	(0.03)	(0.07)	(0.07)	(0.07)	(0.11)	(0.04)
99	0.91	0.98	0.89	0.34	0.94	0.54	0.59	0.20
	(0.04)	(0.05)	(0.06)	(0.10)	(0.03)	(0.07)	(0.08)	(0.08)
99.9	0.31	0.46	1.02	1.26	1.14	0.98	1.19	0.53
	(0.13)	(0.04)	(0.05)	(0.05)	(0.06)	(0.09)	(0.03)	(0.08)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A.7: GDP Beta by Gender and Age: Finance

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	2.31	1.71	1.22	0.32	1.73	2.87	2.05	1.45
	(0.26)	(0.27)	(0.22)	(0.19)	(0.12)	(0.30)	(0.29)	(0.23)
10	0.34	2.23	1.98	1.68	1.50	-0.01	1.67	1.50
	(0.20)	(0.13)	(0.18)	(0.18)	(0.17)	(0.20)	(0.09)	(0.20)
20	1.60	1.52	-0.09	1.61	1.99	1.32	1.32	0.33
	(0.18)	(0.17)	(0.20)	(0.09)	(0.14)	(0.15)	(0.16)	(0.21)
30	1.64	1.68	1.47	1.06	0.47	1.57	1.95	1.04
	(0.08)	(0.15)	(0.15)	(0.14)	(0.21)	(0.08)	(0.14)	(0.13)
40	1.05	0.28	1.39	1.39	1.30	0.96	0.29	1.36
	(0.15)	(0.21)	(0.08)	(0.13)	(0.12)	(0.12)	(0.19)	(0.07)
50	1.71	1.00	0.57	-0.09	1.09	0.90	0.82	0.81
	(0.12)	(0.12)	(0.14)	(0.20)	(0.07)	(0.10)	(0.10)	(0.10)
60	0.06	0.93	1.49	0.65	0.30	0.00	0.87	0.75
	(0.16)	(0.05)	(0.11)	(0.12)	(0.13)	(0.22)	(0.07)	(0.08)
70	0.82	0.54	0.15	0.78	1.42	0.69	0.36	-0.27
	(0.08)	(0.09)	(0.14)	(0.05)	(0.10)	(0.10)	(0.12)	(0.21)
80	0.82	0.80	0.84	0.46	0.11	0.76	1.23	0.46
	(0.06)	(0.07)	(0.07)	(0.07)	(0.13)	(0.04)	(0.10)	(0.09)
90	0.29	-0.75	0.59	0.52	0.73	0.43	0.05	0.59
	(0.10)	(0.20)	(0.06)	(0.06)	(0.06)	(0.07)	(0.13)	(0.04)
99	1.21	0.65	0.43	-0.22	0.72	0.71	0.49	0.31
	(0.09)	(0.08)	(0.09)	(0.17)	(0.05)	(0.06)	(0.06)	(0.07)
99.9	-0.14	0.54	1.03	1.42	1.33	0.80	1.25	0.63
	(0.14)	(0.04)	(0.09)	(0.08)	(0.08)	(0.16)	(0.05)	(0.07)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A.8: GDP Beta by Gender and Age: Services

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	3.71	3.71	3.58	1.87	3.53	2.71	2.19	1.81
	(0.10)	(0.10)	(0.09)	(0.11)	(0.05)	(0.11)	(0.10)	(0.09)
10	1.38	2.26	2.76	2.55	2.33	1.37	2.51	1.85
	(0.10)	(0.05)	(0.07)	(0.07)	(0.07)	(0.08)	(0.04)	(0.08)
20	1.80	1.47	0.82	1.70	2.30	2.00	1.75	1.11
	(0.07)	(0.07)	(0.08)	(0.04)	(0.07)	(0.07)	(0.07)	(0.08)
30	2.04	1.50	1.47	1.12	0.71	1.38	2.01	1.62
	(0.04)	(0.07)	(0.07)	(0.06)	(0.08)	(0.04)	(0.06)	(0.06)
40	1.41	0.86	1.72	1.33	1.22	0.98	0.54	1.18
	(0.06)	(0.09)	(0.03)	(0.07)	(0.06)	(0.06)	(0.08)	(0.04)
50	1.84	1.30	0.94	0.42	1.41	1.00	0.93	0.83
	(0.06)	(0.06)	(0.07)	(0.09)	(0.03)	(0.07)	(0.06)	(0.06)
60	0.40	0.92	1.67	1.10	0.59	-0.04	1.17	0.92
	(0.08)	(0.03)	(0.06)	(0.06)	(0.06)	(0.10)	(0.03)	(0.06)
70	0.78	0.64	0.20	0.77	1.41	0.95	0.61	-0.39
	(0.06)	(0.06)	(0.08)	(0.03)	(0.05)	(0.05)	(0.06)	(0.11)
80	0.98	0.67	0.68	0.42	0.15	0.60	1.29	0.95
	(0.03)	(0.06)	(0.06)	(0.06)	(0.08)	(0.03)	(0.05)	(0.05)
90	0.59	-0.21	0.94	0.53	0.44	0.20	-0.13	0.39
	(0.06)	(0.10)	(0.03)	(0.06)	(0.06)	(0.06)	(0.09)	(0.03)
99	1.08	0.84	0.43	-0.33	0.75	0.41	0.33	0.17
	(0.05)	(0.04)	(0.05)	(0.09)	(0.03)	(0.05)	(0.05)	(0.06)
99.9	-0.41	0.29	1.02	1.14	0.94	0.08	1.00	0.32
	(0.09)	(0.03)	(0.05)	(0.05)	(0.05)	(0.08)	(0.03)	(0.06)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A.9: GDP Beta by Gender and Age: Health and Education

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	1.40	0.98	0.73	0.64	1.22	1.24	1.20	0.67
	(0.15)	(0.17)	(0.15)	(0.16)	(0.08)	(0.13)	(0.09)	(0.08)
10	0.60	1.21	0.96	0.55	0.49	0.20	0.75	0.73
	(0.11)	(0.05)	(0.12)	(0.11)	(0.09)	(0.11)	(0.06)	(0.09)
20	0.74	0.40	-0.02	0.71	0.78	0.61	0.60	0.10
	(0.06)	(0.05)	(0.08)	(0.04)	(0.11)	(0.10)	(0.09)	(0.11)
30	0.67	0.58	0.43	0.30	-0.09	0.49	0.64	0.28
	(0.05)	(0.08)	(0.06)	(0.05)	(0.07)	(0.03)	(0.11)	(0.08)
40	0.40	-0.00	0.46	0.35	0.35	0.13	0.00	0.36
	(0.08)	(0.12)	(0.05)	(0.07)	(0.05)	(0.04)	(0.07)	(0.03)
50	0.53	0.19	0.22	-0.26	0.30	0.34	0.22	0.12
	(0.10)	(0.07)	(0.07)	(0.11)	(0.04)	(0.06)	(0.05)	(0.04)
60	-0.24	0.26	0.50	0.12	0.10	-0.42	0.23	0.10
	(0.07)	(0.03)	(0.10)	(0.06)	(0.06)	(0.11)	(0.04)	(0.06)
70	0.01	0.11	-0.39	0.09	0.51	0.10	-0.01	-0.45
	(0.05)	(0.04)	(0.07)	(0.03)	(0.09)	(0.06)	(0.06)	(0.11)
80	0.19	0.01	-0.09	-0.01	-0.38	0.01	0.23	-0.01
	(0.04)	(0.05)	(0.04)	(0.04)	(0.07)	(0.02)	(0.09)	(0.07)
90	-0.02	-0.61	0.00	-0.16	-0.08	0.04	-0.41	-0.01
	(0.07)	(0.12)	(0.04)	(0.05)	(0.04)	(0.04)	(0.07)	(0.02)
99	0.26	-0.08	-0.04	-0.21	0.05	-0.34	-0.04	0.01
	(0.09)	(0.08)	(0.08)	(0.12)	(0.05)	(0.05)	(0.04)	(0.03)
99.9	-0.18	0.01	0.23	0.12	0.03	-0.32	0.09	-0.48
	(0.07)	(0.02)	(0.12)	(0.08)	(0.06)	(0.09)	(0.04)	(0.06)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

Table A.10: GDP Beta by Gender and Age: Other Industries

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	3.06	2.79	2.47	1.39	2.72	2.30	2.24	1.47
	(0.05)	(0.05)	(0.05)	(0.05)	(0.03)	(0.06)	(0.06)	(0.05)
10	1.09	2.04	2.47	2.21	2.07	1.37	2.26	1.64
	(0.06)	(0.03)	(0.04)	(0.03)	(0.03)	(0.05)	(0.02)	(0.04)
20	1.54	1.16	0.77	1.49	1.97	1.66	1.65	1.19
	(0.04)	(0.04)	(0.05)	(0.02)	(0.03)	(0.03)	(0.03)	(0.04)
30	1.79	1.34	1.18	0.88	0.56	1.18	1.68	1.37
	(0.02)	(0.04)	(0.03)	(0.03)	(0.04)	(0.02)	(0.03)	(0.02)
40	1.30	0.84	1.47	1.07	1.02	0.79	0.43	0.99
	(0.03)	(0.04)	(0.01)	(0.03)	(0.03)	(0.03)	(0.04)	(0.02)
50	1.52	1.21	1.12	0.56	1.30	0.91	0.86	0.69
	(0.02)	(0.02)	(0.02)	(0.04)	(0.01)	(0.03)	(0.03)	(0.03)
60	0.34	0.84	1.47	1.08	0.94	0.31	1.16	0.85
	(0.04)	(0.01)	(0.02)	(0.02)	(0.02)	(0.04)	(0.01)	(0.03)
70	0.73	0.60	0.22	0.73	1.40	0.91	0.83	0.05
	(0.02)	(0.02)	(0.04)	(0.01)	(0.02)	(0.02)	(0.02)	(0.04)
80	1.02	0.70	0.58	0.49	0.16	0.60	1.28	0.78
	(0.01)	(0.02)	(0.02)	(0.02)	(0.04)	(0.01)	(0.02)	(0.02)
90	0.70	0.15	0.93	0.57	0.51	0.44	0.04	0.51
	(0.02)	(0.05)	(0.01)	(0.02)	(0.02)	(0.02)	(0.04)	(0.01)
99	1.13	0.77	0.63	0.15	0.87	0.45	0.43	0.39
	(0.02)	(0.02)	(0.02)	(0.05)	(0.01)	(0.02)	(0.02)	(0.02)
99.9	-0.04	0.43	0.94	0.95	0.89	0.25	0.94	0.41
	(0.04)	(0.01)	(0.02)	(0.02)	(0.03)	(0.05)	(0.01)	(0.02)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate GDP beta is from year $t-1$ to t. Heteroskedasticity-robust standard errors are reported in parentheses.

B. Stock Return Beta

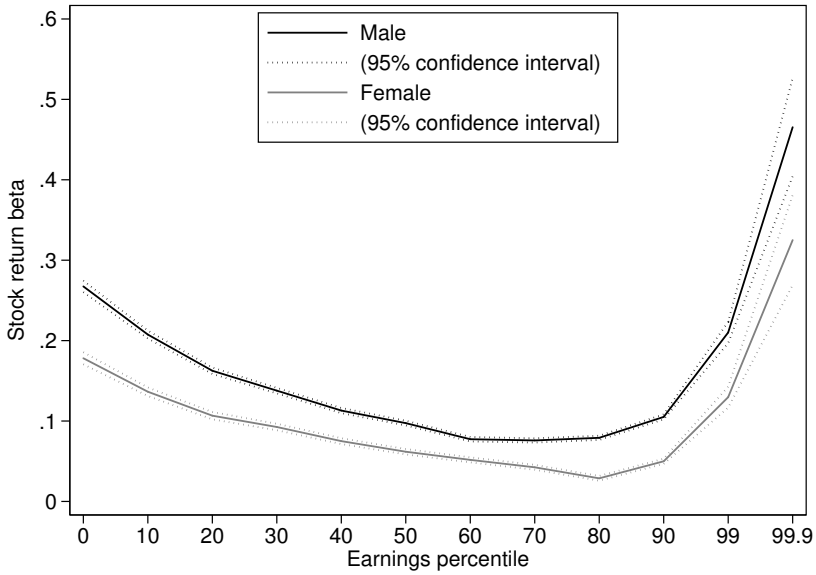

Figure A.1: Stock Return Beta at Age 36–45 by Gender

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t.

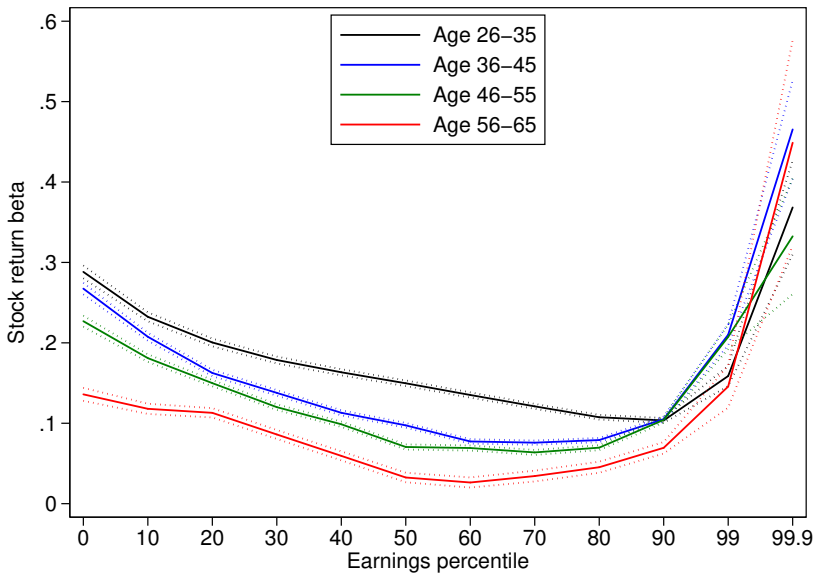

Figure A.2: Stock Return Beta for Males by Age Group

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. The dotted lines represent the 95 percent confidence interval.

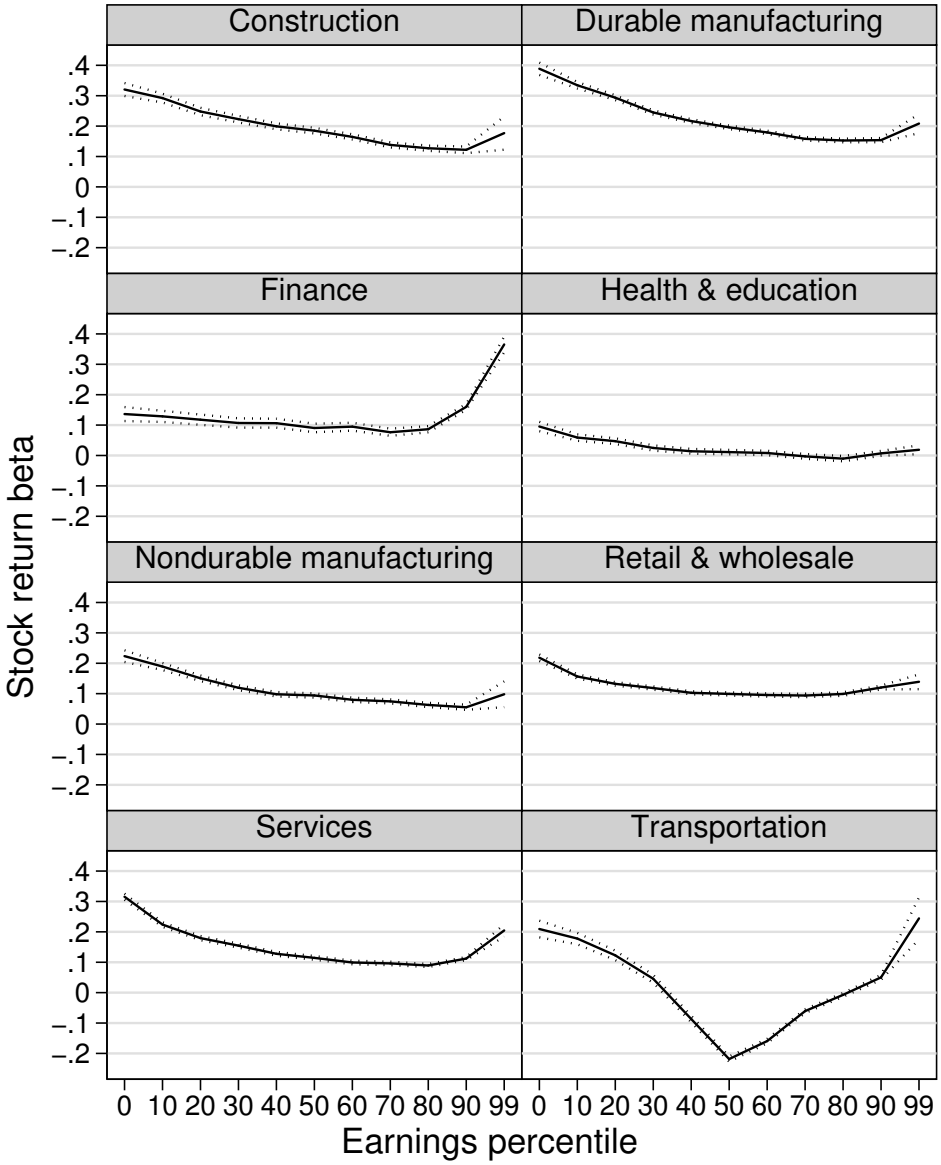

Figure A.3: Stock Return Beta for Males by Industry

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. The dotted lines represent the 95 percent confidence interval.

Table A.1: Stock Return Beta by Gender and Age

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.29	0.27	0.23	0.14	0.21	0.18	0.12	0.09
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
10	0.23	0.21	0.18	0.12	0.16	0.14	0.10	0.06
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
20	0.20	0.16	0.15	0.11	0.13	0.11	0.07	0.04
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
30	0.18	0.14	0.12	0.09	0.10	0.09	0.07	0.04
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
40	0.16	0.11	0.10	0.06	0.09	0.08	0.06	0.03
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
50	0.15	0.10	0.07	0.03	0.08	0.06	0.05	0.03
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
60	0.14	0.08	0.07	0.03	0.07	0.05	0.04	0.02
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
70	0.12	0.08	0.06	0.03	0.06	0.04	0.02	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
80	0.11	0.08	0.07	0.05	0.05	0.03	0.03	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
90	0.10	0.11	0.10	0.07	0.05	0.05	0.04	0.01
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
99	0.16	0.21	0.21	0.15	0.11	0.13	0.12	0.05
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
99.9	0.37	0.47	0.33	0.45	0.29	0.33	0.28	0.32
	(0.03)	(0.03)	(0.04)	(0.07)	(0.02)	(0.03)	(0.03)	(0.05)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.

Table A.2: Stock Return Beta by Gender and Age: Construction

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.34	0.31	0.29	0.27	0.32	0.17	0.20	0.22
	(0.02)	(0.02)	(0.02)	(0.03)	(0.01)	(0.07)	(0.05)	(0.04)
10	0.17	0.22	0.29	0.27	0.30	0.30	0.29	0.20
	(0.05)	(0.03)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.05)
20	0.20	0.24	0.19	0.22	0.24	0.23	0.25	0.23
	(0.04)	(0.03)	(0.04)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)
30	0.25	0.24	0.21	0.16	0.11	0.20	0.22	0.21
	(0.01)	(0.04)	(0.03)	(0.03)	(0.04)	(0.02)	(0.01)	(0.01)
40	0.22	0.19	0.22	0.15	0.16	0.16	0.21	0.17
	(0.01)	(0.02)	(0.01)	(0.04)	(0.03)	(0.03)	(0.04)	(0.02)
50	0.20	0.18	0.21	0.17	0.20	0.18	0.15	0.12
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.03)	(0.03)	(0.02)
60	0.09	0.15	0.19	0.18	0.18	0.15	0.19	0.08
	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.03)
70	0.14	0.09	0.11	0.11	0.18	0.14	0.16	0.14
	(0.02)	(0.02)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
80	0.16	0.17	0.15	0.13	0.06	0.14	0.17	0.13
	(0.00)	(0.03)	(0.02)	(0.02)	(0.03)	(0.01)	(0.01)	(0.01)
90	0.11	0.10	0.14	0.15	0.16	0.11	0.10	0.14
	(0.01)	(0.02)	(0.00)	(0.02)	(0.02)	(0.02)	(0.04)	(0.01)
99	0.15	0.11	0.10	0.08	0.13	0.06	0.12	0.10
	(0.01)	(0.01)	(0.01)	(0.02)	(0.00)	(0.03)	(0.02)	(0.02)
99.9	0.08	0.09	0.13	0.11	0.13	0.09	0.12	0.08
	(0.04)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.03)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.

Table A.3: Stock Return Beta by Gender and Age: Nondurable Manufacturing

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.24	0.20	0.22	0.14	0.22	0.23	0.21	0.18
	(0.02)	(0.02)	(0.02)	(0.03)	(0.01)	(0.03)	(0.03)	(0.02)
10	0.14	0.21	0.24	0.16	0.16	0.12	0.19	0.18
	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
20	0.17	0.15	0.11	0.17	0.19	0.14	0.11	0.11
	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
30	0.15	0.18	0.13	0.11	0.11	0.14	0.15	0.12
	(0.00)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
40	0.10	0.06	0.12	0.14	0.13	0.10	0.08	0.12
	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
50	0.13	0.09	0.09	0.04	0.10	0.13	0.10	0.09
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
60	0.06	0.11	0.13	0.08	0.08	0.04	0.09	0.11
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
70	0.08	0.09	0.04	0.09	0.10	0.07	0.08	0.03
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
80	0.08	0.11	0.08	0.07	0.01	0.08	0.10	0.06
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)
90	0.06	0.03	0.07	0.05	0.06	0.05	0.02	0.05
	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
99	0.08	0.05	0.05	0.01	0.06	0.07	0.02	0.03
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
99.9	-0.03	0.03	0.05	0.05	0.06	0.02	0.06	0.05
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.00)	(0.01)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.

Table A.4: Stock Return Beta by Gender and Age: Durable Manufacturing

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.36	0.39	0.37	0.32	0.39	0.38	0.31	0.29
	(0.02)	(0.02)	(0.02)	(0.03)	(0.01)	(0.04)	(0.04)	(0.03)
10	0.26	0.35	0.31	0.34	0.31	0.28	0.33	0.31
	(0.05)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
20	0.32	0.32	0.30	0.33	0.33	0.27	0.26	0.26
	(0.02)	(0.02)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
30	0.29	0.32	0.30	0.30	0.24	0.32	0.29	0.23
	(0.00)	(0.02)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
40	0.21	0.21	0.24	0.29	0.26	0.23	0.25	0.27
	(0.01)	(0.01)	(0.00)	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)
50	0.28	0.19	0.19	0.17	0.22	0.27	0.21	0.18
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
60	0.19	0.22	0.25	0.17	0.17	0.13	0.20	0.23
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)
70	0.18	0.18	0.16	0.19	0.24	0.16	0.15	0.11
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)
80	0.18	0.21	0.18	0.16	0.12	0.18	0.21	0.14
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
90	0.13	0.09	0.16	0.18	0.14	0.13	0.09	0.15
	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
99	0.20	0.14	0.12	0.08	0.15	0.18	0.13	0.13
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
99.9	0.09	0.14	0.16	0.14	0.15	0.13	0.15	0.15
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.

Table A.5: Stock Return Beta by Gender and Age: Transportation

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.26	0.21	0.19	0.10	0.21	0.37	0.29	0.20
	(0.03)	(0.03)	(0.02)	(0.03)	(0.01)	(0.04)	(0.04)	(0.03)
10	0.09	0.28	0.18	0.17	0.17	0.10	0.18	0.22
	(0.04)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.03)
20	0.19	0.09	0.14	0.18	0.20	0.11	0.06	0.05
	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)	(0.01)	(0.01)	(0.02)
30	0.12	0.21	0.12	0.09	0.06	0.15	0.16	0.04
	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.01)	(0.01)	(0.01)
40	-0.05	-0.03	0.05	0.18	0.14	0.12	0.09	0.15
	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)	(0.01)
50	0.13	-0.03	-0.22	-0.25	-0.09	0.15	0.10	0.06
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)
60	0.01	0.11	0.11	-0.16	-0.34	-0.37	-0.22	0.08
	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
70	0.02	-0.00	0.01	0.04	0.05	-0.25	-0.18	-0.22
	(0.01)	(0.01)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
80	-0.16	0.06	-0.05	-0.05	-0.08	-0.01	-0.01	-0.11
	(0.00)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.00)
90	-0.07	-0.12	-0.06	0.03	-0.14	-0.28	-0.25	-0.16
	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
99	-0.07	-0.00	0.01	-0.07	-0.01	-0.04	-0.22	-0.16
	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
99.9	-0.17	-0.15	0.01	0.09	0.06	0.01	0.05	-0.06
	(0.02)	(0.00)	(0.00)	(0.01)	(0.01)	(0.02)	(0.00)	(0.01)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.

Table A.6: Stock Return Beta by Gender and Age: Retail and Wholesale

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.25	0.24	0.17	0.14	0.22	0.21	0.21	0.14
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
10	0.12	0.19	0.20	0.16	0.12	0.08	0.16	0.18
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
20	0.14	0.10	0.08	0.14	0.18	0.12	0.10	0.07
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)
30	0.13	0.14	0.12	0.09	0.06	0.11	0.16	0.11
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)
40	0.09	0.06	0.12	0.12	0.10	0.07	0.05	0.09
	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
50	0.14	0.09	0.08	0.05	0.10	0.11	0.08	0.07
	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
60	0.04	0.08	0.12	0.09	0.08	0.06	0.10	0.10
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)
70	0.08	0.07	0.04	0.08	0.11	0.09	0.08	0.05
	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
80	0.10	0.09	0.06	0.06	0.03	0.07	0.10	0.09
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
90	0.08	0.04	0.09	0.08	0.07	0.07	0.02	0.07
	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
99	0.09	0.09	0.09	0.08	0.10	0.09	0.08	0.06
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
99.9	0.04	0.07	0.11	0.12	0.12	0.10	0.12	0.08
	(0.02)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.

Table A.7: Stock Return Beta by Gender and Age: Finance

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.22	0.15	0.11	0.01	0.14	0.26	0.13	0.10
	(0.03)	(0.03)	(0.02)	(0.02)	(0.01)	(0.03)	(0.03)	(0.02)
10	-0.01	0.13	0.17	0.16	0.10	-0.01	0.13	0.16
	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)
20	0.12	0.12	0.02	0.13	0.16	0.10	0.09	0.02
	(0.02)	(0.02)	(0.02)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
30	0.12	0.16	0.13	0.08	0.02	0.12	0.14	0.10
	(0.01)	(0.02)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
40	0.09	0.01	0.11	0.14	0.11	0.06	0.01	0.11
	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
50	0.15	0.10	0.07	0.03	0.11	0.09	0.05	0.05
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
60	0.00	0.07	0.13	0.08	0.06	0.01	0.09	0.07
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
70	0.05	0.04	0.00	0.05	0.14	0.10	0.07	-0.01
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.02)
80	0.09	0.07	0.08	0.04	0.00	0.06	0.12	0.07
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)
90	0.07	-0.04	0.08	0.06	0.06	0.04	-0.01	0.05
	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
99	0.14	0.07	0.07	-0.01	0.09	0.09	0.05	0.04
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
99.9	-0.01	0.06	0.17	0.17	0.15	0.12	0.16	0.09
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.02)	(0.00)	(0.01)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.

Table A.8: Stock Return Beta by Gender and Age: Services

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.34	0.34	0.31	0.17	0.32	0.25	0.19	0.17
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
10	0.12	0.20	0.26	0.24	0.20	0.12	0.22	0.19
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
20	0.18	0.14	0.08	0.16	0.22	0.17	0.15	0.10
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
30	0.18	0.16	0.15	0.10	0.08	0.14	0.19	0.14
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)
40	0.12	0.08	0.15	0.13	0.12	0.10	0.05	0.11
	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
50	0.17	0.12	0.10	0.05	0.13	0.11	0.10	0.08
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
60	0.04	0.09	0.16	0.11	0.07	0.03	0.11	0.10
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
70	0.08	0.07	0.02	0.08	0.13	0.10	0.08	0.02
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
80	0.10	0.08	0.07	0.04	0.03	0.06	0.13	0.10
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)
90	0.07	0.02	0.10	0.08	0.07	0.03	0.01	0.06
	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
99	0.12	0.10	0.07	0.01	0.09	0.07	0.05	0.03
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
99.9	-0.01	0.04	0.12	0.13	0.11	0.04	0.11	0.06
	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.

Table A.9: Stock Return Beta by Gender and Age: Health and Education

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.12	0.08	0.07	0.05	0.10	0.14	0.11	0.05
	(0.02)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
10	0.04	0.10	0.07	0.07	0.04	0.01	0.06	0.08
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
20	0.06	0.03	-0.01	0.05	0.07	0.04	0.04	0.01
	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
30	0.05	0.04	0.04	0.02	-0.01	0.03	0.03	0.02
	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)
40	0.02	0.00	0.02	0.04	0.03	0.01	0.02	0.03
	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)
50	0.04	0.01	0.01	-0.02	0.01	0.03	0.02	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)	(0.00)
60	0.00	0.02	0.03	0.01	0.01	-0.03	0.01	0.02
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
70	0.00	-0.00	-0.02	0.00	0.03	-0.01	-0.00	-0.02
	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
80	0.01	0.00	-0.01	-0.00	-0.03	-0.00	0.01	-0.01
	(0.00)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)
90	-0.01	-0.03	-0.00	-0.01	-0.00	0.00	-0.02	0.00
	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
99	0.00	-0.03	-0.03	-0.01	-0.01	-0.02	-0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
99.9	-0.01	0.00	-0.02	0.02	0.01	-0.02	0.01	-0.02
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.

Table A.10: Stock Return Beta by Gender and Age: Other Industries

Earnings	Male				Female			
percentile	26–35	36–45	46–55	56–65	26–35	36–45	46–55	56–65
0	0.29	0.26	0.22	0.14	0.25	0.21	0.18	0.11
	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
10	0.09	0.16	0.24	0.21	0.19	0.13	0.21	0.15
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
20	0.13	0.09	0.06	0.12	0.20	0.17	0.16	0.12
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
30	0.17	0.12	0.10	0.07	0.04	0.09	0.18	0.14
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
40	0.12	0.09	0.15	0.10	0.09	0.06	0.03	0.08
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
50	0.16	0.12	0.12	0.08	0.13	0.08	0.07	0.06
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
60	0.03	0.07	0.15	0.11	0.10	0.07	0.12	0.08
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
70	0.06	0.05	0.03	0.07	0.14	0.10	0.09	0.05
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
80	0.11	0.07	0.05	0.05	0.03	0.06	0.13	0.09
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
90	0.08	0.06	0.10	0.06	0.05	0.04	0.02	0.05
	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
99	0.11	0.08	0.08	0.07	0.09	0.05	0.04	0.04
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
99.9	0.02	0.05	0.10	0.10	0.10	0.08	0.10	0.06
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)

Notes: Earnings percentiles (conditional on gender and age group) are based on average real earnings from year $t-6$ to $t-2$, while real earnings growth used to estimate stock return beta is from year $t-1$ to t. Heteroscedasticity-robust standard errors are reported in parentheses.