

# Marriage, Working Spouses, and Male Wage Volatility

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*This paper examines whether the recent increase in male wage volatility varies by marital status and spousal work status. Using the Panel Study of Income Dynamics (PSID), we estimate separately a standard residual wage process for all men, married men, and married men with a working spouse over the 1967-2010 period. We find that all three groups of men shared similar trends in the variances of both persistent and transitory wage shocks. Married men, including those with a working wife, experienced a smaller increase in their wage volatility compared to all men, yet the differences between the two groups are small.*

JEL Classification: D31, J12, J31

Keywords: Wage Volatility, Marital Status, Working Spouse

## I. Introduction

A large literature has documented sharp increases in male wage volatility over the past few decades in the U.S. (Gottschalk and Moffitt, 1994; Gottschalk and Moffitt, 2012; Heathcote, Storesletten, and Violante, 2010). However, little attention has been paid to whether the rise in male wage volatility varies by marital status.

Marriage tends to involve large consumption commitments, which make married men more risk averse.<sup>1</sup> This implies that men with more stable wage prospects are more likely to marry and that married men tend to choose jobs associated with lower wage volatility. Both effects may reduce the increase in wage volatility of

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<sup>1</sup> Chetty and Szeidl (2007) use the term “consumption commitments” for goods that are costly to adjust in response to bad shocks and show that the degree of risk aversion can be amplified in the presence of consumption commitments. Children are an important part of marriage and married couples tend to incur fixed costs for feeding and educating their children. Thus, we relate marriage to consumption commitments in this paper, as Santos and Weiss (2016) and Sommer (2016) do.

married men, compared to all men. The quantitative effect of this channel may vary by spousal work status. A working wife can provide the husband with insurance against the husband's wage risk, unless the couple's wages are highly positively correlated (Kotlikoff and Spivak, 1981; Rosenzweig and Stark, 1989; Hess, 2004; Attanasio, Low, and Sánchez-Marcos, 2005). Thus, married men with a working wife can bear a larger rise in wage volatility than other married men.

This paper explores the link between wage volatility and marriage by estimating the wage processes of three groups of men based on their marital status and spousal work status. Specifically, we decompose the male log residual wages into a persistent and a transitory component with time-varying variances. We then estimate separately the variances of both types of shocks for all men, married men, and married men with a working spouse, using the Panel Study of Income Dynamics (PSID) over the 1967 to 2010 period. By comparing the changes in the variances of both types of wage shocks, we determine whether empirical evidence supports theories about the relation between marriage and wage volatility.

The results imply that U.S. men experienced significant increases in their wage volatility regardless of marital status and work status of spouses. The estimated variances of both persistent and transitory wage shocks show similar trends for all three groups of men. Married men faced a smaller rise in transitory variances compared to both all men and married men with a working spouse, consistent with the consumption commitment arguments and intra-household risk sharing mechanism. However, married men with a working spouse experienced a smaller increase in the variances of persistent wage shocks compared to other married men, which requires an explanation beyond the within-household risk-sharing hypothesis.<sup>2</sup> Nonetheless, the differences in the estimated trends in both types of shocks across groups are modest.

This paper is in line with many previous studies that document the increasing wage and earnings volatility in the past few decades in the U.S., such as Gottschalk and Moffitt (1994), Gottschalk and Moffitt (2012), and Heathcote, Storesletten, and Violante (2010). Using a standard estimation strategy in these papers, we estimate the time-varying variances of wage shocks for all men, married men, and married men with a working spouse. Our study is also related to recent papers on the connection between income volatility and family. Santos and Weiss (2016) explore the effect of labor income volatility on the timing of marriage in the presence of consumption commitments. Sommer (2016) studies how an increase in uninsurable

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<sup>2</sup> A larger bargaining power of a working wife compared to a non-working wife could be a potential explanation. Knowles (2013) examines the link between the wife's wages and the husband's labor supply through bargaining over time allocation within household. He finds that increasing bargaining power of wives associated with a narrowing gender wage gap contributed to an increase in married men's labor supply in the U.S. for the past few decades. It is conceivable that a wife's bargaining power affects her husband's choice of wage opportunities.

idiosyncratic earnings affects family sizes and the timing of childbearing. These studies employ a structural model to explore the mechanism through which income risks affect fertility and marriage decision. Unlike them, we compare the estimated wage processes of different male samples based on their marital status and spousal work status and relate them to theories about wage volatility and marriage supported in the literature.

The remainder of this paper is organized as follows. Section 2 introduces a statistical model of wages and section 3 describes the data and estimation strategy. We report the main results in section 4 and conclude in section 5.

## II. Model

This section describes our wage specification used for estimation in this paper. We consider a statistical model of wages similar to one in Heathcote, Storesletten, and Violante (2010). According to the specification, log hourly wages depend on year-specific effects, time-varying college premium, years of potential experience (age minus years of schooling minus 5), and idiosyncratic shocks as follows:

$$\ln w_{it} = \beta_t + \gamma_t Col_i + f(a - S_i - 5) + y_{it}, \quad (1)$$

where  $w_{it}$  is the hourly wage of individual  $i$ , aged  $a$  at time  $t$ ,  $\beta_t$  is a year dummy,  $\gamma_t$  is a year dummy interacted with a college dummy,  $Col_i$  is a college dummy which takes 1 if  $i$  graduated college and takes 0 otherwise,  $f$  is a cubic polynomial of potential experience,  $S_i$  is years of schooling, and  $y_{it}$  is the log wage residual. The log wage residual  $y_{it}$ , subject to a traditional measurement error  $\theta_{it} \sim (0, \lambda^\theta)$ , is assumed to consist of a persistent and a transitory component,  $\mu_{it}$  and  $v_{it}$ , respectively:<sup>3</sup>

$$y_{it} = \mu_{it} + v_{it} + \theta_{it}.$$

We assume that the persistent component  $\mu_{it}$  follows an AR(1) process:

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<sup>3</sup> The persistent-transitory decomposition has been widely adopted in the related literature including Gottschalk and Moffitt (1994), Gottschalk and Moffitt (2012), and Blundell, Pistaferri, and Preston (2008). This decomposition is very helpful in understanding many important economic questions because individual responses of labor supply and consumption to a wage shock vary significantly by its persistence. Persistent wage shocks affect the permanent income and are more difficult to insure against compared to transitory wage shocks. Thus, persistent wage shocks have much larger effects on consumption and wealth inequality and welfare, compared to transitory wage shocks.

$$\mu_{it} = \rho\mu_{it-1} + \eta_{it},$$

where  $\rho$  is the persistence,  $\eta_{it}$  is a persistent wage shock, and the persistent component is initially drawn from a time-invariant distribution  $\mu_0 \sim (0, \lambda^\mu)$ . In order to address the trends in wage volatility observed in the data, we allow the variances of the persistent and transitory wage shocks to vary over time, that is,  $\eta_{it} \sim (0, \lambda_t^\eta)$  and  $\nu_{it} \sim (0, \lambda_t^\nu)$ . We further assume that variables  $\nu_{it}$ ,  $\theta_{it}$ ,  $\eta_{it}$ , and  $\mu_0$  are orthogonal to each other.

### III. Data and Estimation

In order to estimate the wage process described in the previous section, we use data from PSID surveys 1968 through 2011. The PSID tracked a representative sample of the U.S. households in 1968 annually until 1997 when it became biennial, so we use a total of 37 surveys. We exploit the main sample of the Survey Research Center (SRC) and exclude any households in oversamples.

We use a sample of men ages 25 through 59 who are heads of households with reported marital status, education, hours worked and labor income. Hours worked include total hours worked on main jobs, overtime, and all extra jobs in the past year, while labor income is total labor income including wages and salaries, any bonuses, overtime pays, tips, commissions, income from professional practice or trade, and any additional labor income in the last year. By dividing the total labor income by the annual hours worked, we obtain our measure of hourly wages. Since it is difficult to distinguish the contribution of labor from that of capital in self-employed men's income, we exclude self-employed men from our sample. We also drop men who worked less than 260 hours in the past calendar year in order to focus on men who actively participated in the labor market. Finally, in order to discard any outliers, we exclude men who earned less than half the federal minimum wage per hour. A married man is considered to have a working spouse if the wife has positive labor income. We estimate the wage process for all men, married men, and married men with a working spouse, separately. If an individual experiences a change in his marital status or his spouse's work status, we treat him as a new individual with his wage observations after the change.

Table 1 presents descriptive statistics of our PSID sample by marital status and spousal work status. Married men are, on average, older than non-married men, but younger men are more likely to have a working spouse among married men. As for the average years of schooling, there is little difference between married and non-married men. However, married men with a working spouse are positively selected with slightly more educational attainments than other married men. In the labor

market, married men tend to work more hours and earn more per hour, in comparison with non-married men. The difference is smaller if we narrow our attention to married men with a working spouse. However, these differences are fairly small, so all three groups of men are very similar in terms of age, education, and labor market outcome.<sup>4</sup>

[Table 1] Descriptive Statistics

	All	Non-Married	Married		
				Non-Working Wife	Working Wife
Mean Age	38.81	36.48	39.28	40.22	38.95
Mean Years of Schooling	13.08	13.11	13.08	12.72	13.20
Mean Weekly Hours	42.32	39.97	42.79	43.60	42.52
Mean Hourly Wage (2000 USD)	22.13	18.07	22.94	25.62	22.03
Number of Observations	65,617	10,929	54,681	13,913	40,768

Notes: (i) Data are from the PSID over the 1967-2010 period. (ii) The statistics are based on the SRC sample, which requires no sampling weights.

With the resulting sample, we first run an Ordinary Least Squares (OLS) regression of log hourly wages on a time dummy, an interaction of a time dummy and a college dummy, and a cubic polynomial of potential experience, as in Equation (1). Using the residuals from this first-stage OLS regression, we estimate separately the variances of persistent and transitory wage shocks for all men, married men, and married men with a working wife.<sup>5</sup> Note that the measurement error is not separately identified from the transitory component in our model, so we use an estimated variance of the measurement error in French (2004).

For the second stage regression, we calculate autocovariances of the log wage residual  $y_{it}$  of all possible orders for every 10-year age group in each year, and construct the empirical autocovariance vector by stacking them. For instance, consider men ages 25 to 34 in year 1967 (1968 survey). Note that based on the selection criteria described above, the last year to which we can relate wage

<sup>4</sup> If one is interested in accounting for the wage differentials between married and non-married men, or between married men with and without a working spouse, Oaxaca and Choe (2016) propose a variety of methods for panel data wage decompositions.

<sup>5</sup> A pairwise comparison of the estimates between married and non-married men (or between married men with and without a working spouse) would be more straightforward. However, given the large number of parameters to estimate, the relatively small sample sizes of non-married men and married men with a non-working spouse reduce the precision of the estimates significantly. Thus, we estimate the parameters separately for all men, married men, and married men with a working spouse and compare their estimates.

observations of this age group in 1967 is 1992 when 34 year old men in 1967 turn 59 (maximum age in our sample). Thus, we multiply their log wage residuals in 1967 by those in years 1967 through 1992, and take their averages to compute autocovariances of order 0 through 26 for this age group in 1967. We calculate autocovariances for other age groups in 1967 in the same way, and repeat this process for all remaining years.

On the other hand, the model specified in the previous section allows us to write the autocovariances of all possible orders for each age group as functions of a set of model parameters  $\Phi = \{\rho, \lambda^\mu, \lambda_i^\eta, \lambda_i^\nu, \lambda^\theta\}$ . For the variances of persistent wage shocks in the missing years, we use the averages of the variances in their two adjacent years. We estimate the model parameters by minimizing the distance between the sample autocovariances and their model counterparts. Let  $s_{im}$  denote an  $m$ th element of the empirical autocovariance vector, where  $i = 1, \dots, I_m$ ,  $m = 1, \dots, M$  and let  $d_m(\Phi)$  denote the corresponding model autocovariance.<sup>6</sup> We define  $g(\Phi) = [\bar{s}_1 - d_1(\Phi), \dots, \bar{s}_M - d_M(\Phi)]'$ , where  $\bar{s} = \sum_{i=1}^{I_m} s_{im}$ . Following the recommendations by Altonji and Segal (1996), we use an identity matrix as a weighting matrix, so our estimator is a solution to

$$\min_{\Phi} g(\Phi)' I g(\Phi).$$

## IV. Results

This section reports our estimates of the variances of persistent and transitory wage shocks and relevant test statistics. In Table 2, we present the estimated persistence of the persistent wage component and the variance of the initial wages of the three groups of men. Log residual wages are highly persistent: given the persistence parameter estimates, more than two thirds of a persistent wage shock in  $t$  remains effective in 20 years for all three groups of men. The initial variance of wages for our youngest men in the sample declines as we consider more homogeneous samples.

In order to present the main estimation results in a concise way, we compute the mean of the estimated variances for the first ten and the last ten years of the sample period by groups and report them in Table 3.<sup>7</sup> All three groups of men experienced large increases in their wage volatility through both persistent and transitory wage

<sup>6</sup> Since our sample is an unbalanced sample, data moments are computed based on different numbers of observations represented by  $I_m$ .

<sup>7</sup> The full set of the estimated variances of persistent and transitory wage shocks are reported in the Appendix.

**[Table 2]** Estimates of the Persistence and Initial Variance

	All		Married		Married with a Working Wife	
	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.
$\rho$	0.9850	0.0032	0.9873	0.0034	0.9805	0.0035
$\lambda^n$	0.1414	0.0065	0.1348	0.0062	0.1174	0.0066

Note: Standard errors are computed based on block bootstrapping of 200 replications. For each replication, we resample the same number of individuals as in the original sample with replacement.

**[Table 3]** Changes in the Estimated Variances of Wage Shocks

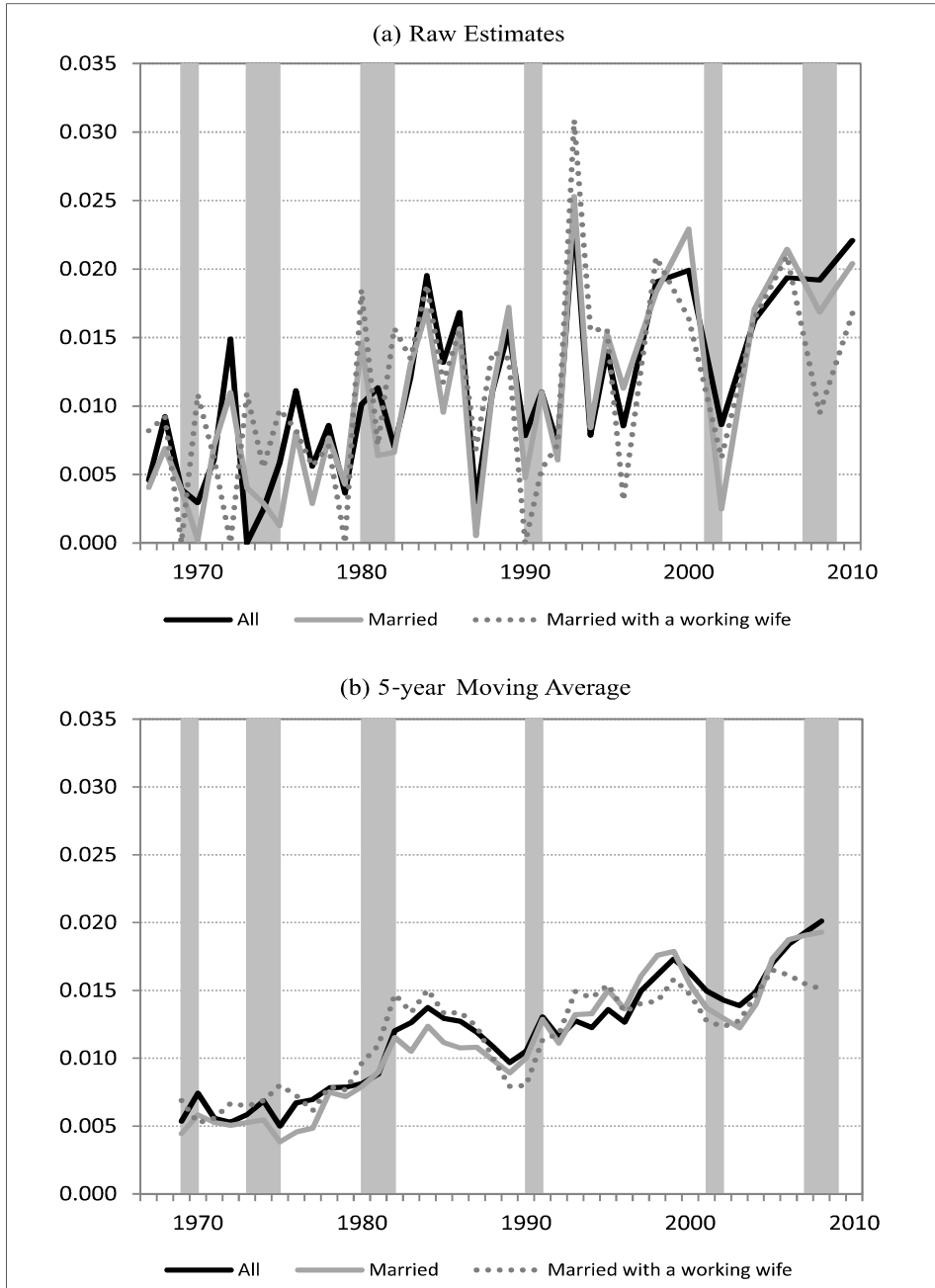
Year	All	Married	Married with a Working Wife
Persistent Shocks			
1967-1976	0.0061	0.0050	0.0069
2001-2010	0.0170	0.0158	0.0139
Change	0.0109	0.0108	0.0070
Transitory Shocks			
1967-1976	0.0231	0.0216	0.0193
2001-2010	0.0786	0.0623	0.0715
Change	0.0555	0.0407	0.0522

Note: The variances in the table are the means of the point estimates over 10 years. For instance, the variance of persistent shocks for all men over the 1967-1976 period is the mean of the estimated variances for years 1967 through 1976.

shocks. The variance of persistent wage shocks more than doubled for all three groups over the sample period, while the variance of transitory shocks almost tripled. Among the three groups, married men with a working wife experienced the smallest increase in the estimated variance of persistent wage shocks. However, they faced a larger rise in the transitory wage variance than other married men.

Figure 1 depicts the raw estimates and their five-year moving averages. The results show that all three groups of men experienced substantial increases in wage volatility through persistent wage shocks and they shared similar trends. All three groups of men experienced a sharp increase in the variance of persistent wage shocks about a decade after the mid-1970s. The increasing pace reversed in the latter half of the 1980s, yet the variance of persistent wage shocks began to increase again in the early 1990s. These changes in the estimated variances of persistent wage shocks appear independent of business cycles. Among these three groups, married men with a working spouse faced a somewhat smaller increase in the variance of persistent wage shocks compared to other men, due to a drop in the variance after 2004. The variance of persistent wage shocks has more than doubled for married men with a working spouse, while that for all men and married men more than tripled over the sample period.

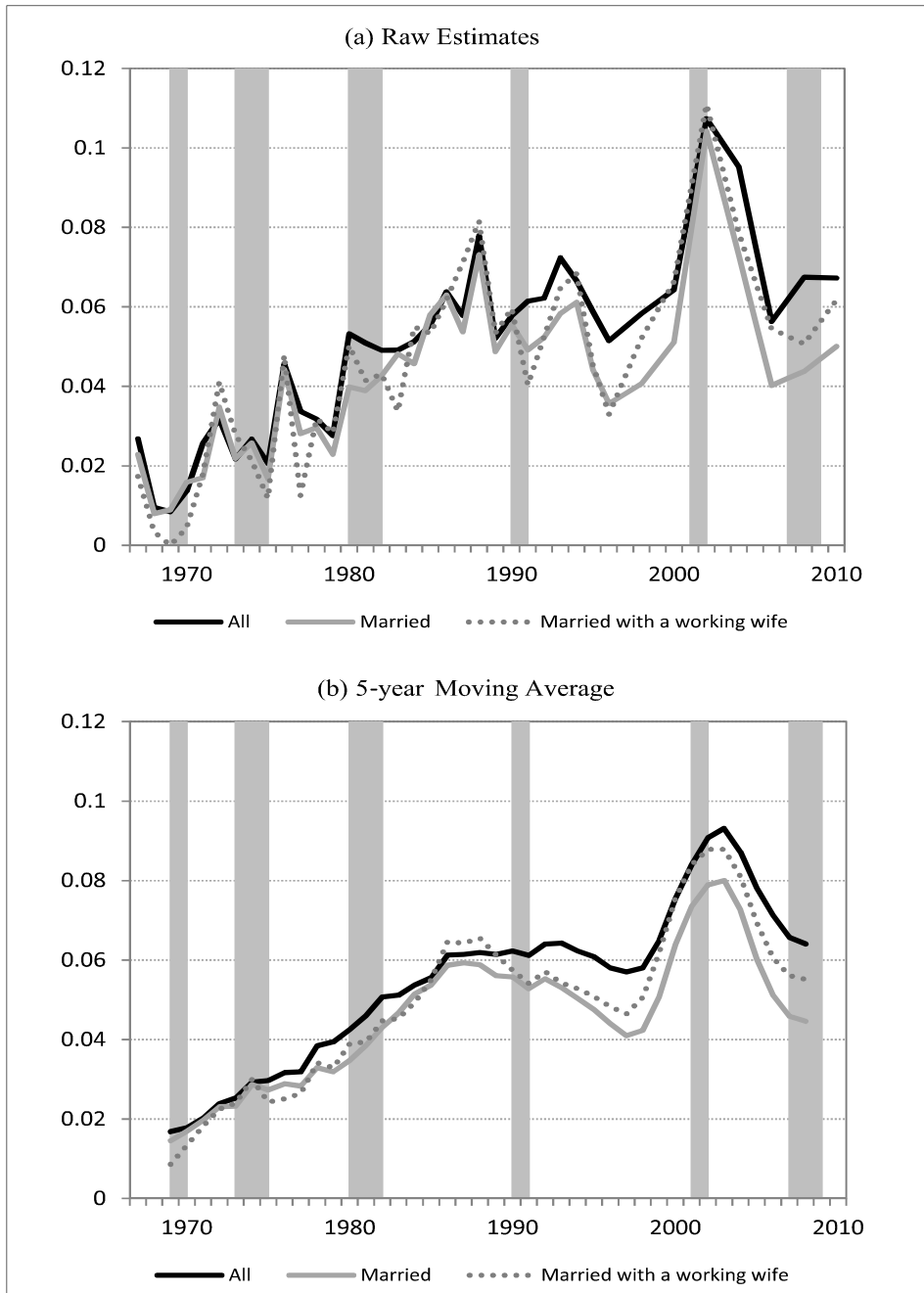
[Figure 1] Trends in the Variances of Persistent Wage Shocks



Notes: (i) Panel (a) depicts the raw estimates of the variances of persistent wage shocks of three groups of men for the sample period. For the missing years, we take the averages of the estimates in their two adjacent years. (ii) Panel (b) presents the five-year moving averages of the estimated variances of persistent wage shocks. (iii) The shaded areas indicate recessions.



[Figure 2] Trends in the Variances of Transitory Wage Shocks



Notes: (i) Panel (a) depicts the raw estimates of the variances of transitory wage shocks of three groups of men for the sample period. (ii) Panel (b) presents the five-year moving averages of the estimated variances of persistent wage shocks. (iii) The shaded areas indicate recessions.

Figure 2 presents the estimated variances of transitory wage shocks by group. As was the case for persistent wage shocks, all three groups of men experienced similar trends in the transitory shocks. They all faced a sharp increase in the variance of transitory shocks until the mid-1980s, when the transitory variances began to stagnate. For about a decade following the late 1980s, married men faced a decline in their wage volatility through transitory wage shocks, whereas all men experienced little changes in the transitory variances. All three groups of men were hit again by a significant rise in transitory wage volatility in the early 2000s, which almost tripled the variances of transitory wage shocks of all three groups, compared to their initial levels. In contrast with persistent wage shocks, we find that the variances of transitory wage shocks tend to increase sharply during the recessions over the sample period. Particularly, the large increase in the transitory variances during the early 2000s coincides with the economic downturn that occurred during this period.

[Figure 3] The Share of Transitory Wage Shocks in the Variance of Log Residual Wages



Note: Each line indicates the share of transitory wage variance in the sum of transitory and persistent wage variances.

To better understand the relative importance of persistent vs. transitory wage shocks in the increased wage volatility better, we compute the share of the variance of log residual wages attributed to transitory wage shocks. Figure 3 displays this share. The share of transitory wage shocks in the total variance of log residual wages rose over time for all three groups of men, with the rise mostly occurring in the 1970s and 1980s. During the 1990s, the share of persistent wage variances increased and the share of transitory variances bounced back in the early 2000s. Among these

three groups, married men with a working spouse experienced the greatest rise in the share of transitory wage shocks. Comparing married men with all men and married men with a working spouse implies that married men with a non-working spouse faced an increase in their wage volatility more through persistent wage shocks relative to other men.

All in all, the three groups of men experienced similar changes in wage volatility period by period, although the magnitude of changes varies slightly by groups. Married men with a working spouse faced a smaller increase in the variance of persistent wage shocks than did other men, as opposed to the implications of within-household risk sharing. This result hints that a working wife may have a larger bargaining power, forcing her husband to choose more stable jobs to reduce household income volatility, similar to a mechanism presented in Knowles (2013).

The variance of transitory wage shocks is more in line with the consumption commitment arguments and the intra-household risk sharing hypothesis. Married men experienced a smaller increase in transitory variances compared to all men, while married men with a working wife faced a slightly larger rise in transitory variances compared to married men. However, the differences in the estimated trends in the variances of both persistent and transitory wage shocks across groups are small. This implies that the rise in wage volatility was a universal phenomenon and hence shopping around for jobs with more stable income prospects was not very effective in reducing the rise in wage volatility.

## V. Conclusion

Over the past few decades, U.S. men have experienced substantial increases in their wage volatility. This paper explores whether marital status or the presence of a working spouse has influenced the changes in male wage volatility. We decompose male log residual wages into a persistent and a transitory component and estimate time-varying variances of both types of wage shocks for three groups of men (all men, married men, and married men with a working spouse), using the PSID over the 1967-2010 period.

We find that U.S. men experienced substantial increases in wage volatility regardless of marital status and work status of spouses. All three groups of men shared similar trends in the variances of both persistent and transitory wage shocks over the sample period. Married men experienced a smaller increase in transitory variances compared to all men and married men with a working wife, in line with the traditional theories. Married men with a working spouse faced a smaller rise in the variance of persistent wage shocks than did other married men, contrary to the implications of within-household risk sharing. However, the differences in the

estimated trends in the variances of both persistent and transitory wage shocks across groups are small.

This paper estimates a standard wage process separately for three groups of men classified by marital status and work status of spouses and does not elaborate on potential mechanisms behind the scene. Exploring the channels through which marriage and spousal characteristics affect work opportunities and labor income remains for future research.

## Appendix: Estimation Results

**[Table 1]** Estimates for the Variance of Persistent Wage Shocks

Year	All		Married		Married with a Working Wife	
	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.
1967	0.0046	0.0015	0.0041	0.0015	0.0082	0.0019
1968	0.0092	0.0067	0.0069	0.0061	0.0092	0.0077
1969	0.0039	0.0034	0.0039	0.0033	0.0000	0.0025
1970	0.0030	0.0038	0.0002	0.0032	0.0108	0.0069
1971	0.0061	0.0035	0.0071	0.0035	0.0062	0.0046
1972	0.0149	0.0055	0.0110	0.0049	0.0000	0.0030
1973	0.0000	0.0035	0.0040	0.0052	0.0109	0.0058
1974	0.0024	0.0026	0.0029	0.0027	0.0055	0.0050
1975	0.0058	0.0036	0.0013	0.0022	0.0098	0.0052
1976	0.0111	0.0049	0.0081	0.0042	0.0083	0.0062
1977	0.0056	0.0044	0.0029	0.0028	0.0056	0.0049
1978	0.0086	0.0042	0.0077	0.0042	0.0071	0.0056
1979	0.0037	0.0035	0.0043	0.0039	0.0000	0.0030
1980	0.0101	0.0047	0.0146	0.0049	0.0185	0.0046
1981	0.0113	0.0048	0.0064	0.0041	0.0071	0.0060
1982	0.0070	0.0051	0.0066	0.0046	0.0157	0.0058
1983	0.0121	0.0051	0.0130	0.0050	0.0135	0.0064
1984	0.0195	0.0055	0.0170	0.0047	0.0189	0.0057
1985	0.0132	0.0043	0.0096	0.0044	0.0117	0.0046
1986	0.0168	0.0054	0.0156	0.0051	0.0156	0.0052
1987	0.0030	0.0031	0.0005	0.0026	0.0069	0.0050
1988	0.0111	0.0040	0.0111	0.0039	0.0140	0.0058
1989	0.0155	0.0044	0.0172	0.0049	0.0135	0.0047
1990	0.0079	0.0043	0.0048	0.0041	0.0000	0.0021
1991	0.0110	0.0063	0.0110	0.0059	0.0054	0.0042
1992	0.0072	0.0053	0.0061	0.0053	0.0072	0.0047
1993	0.0237	0.0053	0.0253	0.0051	0.0309	0.0071
1994	0.0079	0.0045	0.0084	0.0046	0.0155	0.0077
1995	0.0140	0.0065	0.0153	0.0079	0.0157	0.0067
1996	0.0086	0.0055	0.0113	0.0066	0.0031	0.0054
1998	0.0191	0.0043	0.0183	0.0049	0.0209	0.0053
2000	0.0199	0.0056	0.0229	0.0071	0.0164	0.0054
2002	0.0087	0.0056	0.0025	0.0049	0.0062	0.0056
2004	0.0162	0.0060	0.0170	0.0060	0.0164	0.0075
2006	0.0194	0.0056	0.0214	0.0066	0.0210	0.0072
2008	0.0192	0.0056	0.0169	0.0055	0.0095	0.0064
2010	0.0221	0.0079	0.0204	0.0065	0.0168	0.0054

Note: Standard errors are computed based on block bootstrapping of 200 replications.

**[Table 2]** Estimates for the Variance of Transitory Wage Shocks

Year	All		Married		Married with a Working Wife	
	Estimate	S.E.	Estimate	S.E.	Estimate	S.E.
1967	0.0268	0.0112	0.0229	0.0112	0.0174	0.0136
1968	0.0095	0.0076	0.0080	0.0087	0.0034	0.0088
1969	0.0085	0.0076	0.0090	0.0084	0.0000	0.0036
1970	0.0136	0.0089	0.0159	0.0089	0.0045	0.0085
1971	0.0256	0.0097	0.0170	0.0094	0.0179	0.0117
1972	0.0318	0.0099	0.0348	0.0097	0.0411	0.0119
1973	0.0217	0.0090	0.0219	0.0099	0.0278	0.0107
1974	0.0267	0.0096	0.0258	0.0098	0.0213	0.0127
1975	0.0206	0.0088	0.0167	0.0086	0.0118	0.0085
1976	0.0457	0.0106	0.0442	0.0102	0.0478	0.0134
1977	0.0337	0.0103	0.0281	0.0112	0.0125	0.0086
1978	0.0317	0.0095	0.0296	0.0087	0.0319	0.0116
1979	0.0276	0.0093	0.0229	0.0095	0.0283	0.0117
1980	0.0532	0.0102	0.0399	0.0109	0.0503	0.0122
1981	0.0510	0.0111	0.0389	0.0113	0.0414	0.0117
1982	0.0491	0.0105	0.0426	0.0105	0.0431	0.0116
1983	0.0491	0.0103	0.0482	0.0105	0.0337	0.0124
1984	0.0513	0.0109	0.0457	0.0110	0.0550	0.0123
1985	0.0555	0.0107	0.0581	0.0114	0.0533	0.0120
1986	0.0638	0.0106	0.0630	0.0119	0.0619	0.0118
1987	0.0579	0.0107	0.0537	0.0109	0.0712	0.0135
1988	0.0780	0.0120	0.0731	0.0125	0.0815	0.0149
1989	0.0521	0.0099	0.0487	0.0104	0.0534	0.0115
1990	0.0577	0.0106	0.0555	0.0108	0.0596	0.0123
1991	0.0615	0.0112	0.0492	0.0111	0.0404	0.0108
1992	0.0622	0.0121	0.0523	0.0130	0.0524	0.0141
1993	0.0724	0.0106	0.0583	0.0110	0.0647	0.0114
1994	0.0666	0.0120	0.0612	0.0126	0.0683	0.0140
1995	0.0589	0.0123	0.0443	0.0125	0.0454	0.0123
1996	0.0515	0.0119	0.0357	0.0130	0.0330	0.0128
1998	0.0583	0.0125	0.0407	0.0137	0.0521	0.0138
2000	0.0643	0.0123	0.0512	0.0152	0.0664	0.0144
2002	0.1074	0.0135	0.1042	0.0161	0.1110	0.0175
2004	0.0953	0.0127	0.0730	0.0139	0.0785	0.0138
2006	0.0563	0.0089	0.0402	0.0114	0.0545	0.0119
2008	0.0674	0.0101	0.0438	0.0111	0.0507	0.0104
2010	0.0672	0.0134	0.0501	0.0150	0.0618	0.0128

Note: Standard errors are computed based on block bootstrapping of 200 replications.

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