

**Comments on “The Returns to Job Mobility during the Transition: Evidence from Czech Retrospective Data”
by Daniel Münich, Jan Svejnar, and Katherine Terrell**

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1. Introduction

- This paper uses Czech individual data from a 1996 retrospective survey to look at wage growth and job mobility in the 7-year period following the end of communism.
- Only individuals who had a job in both 1989 and 1996 are selected so that wage growth over the period is observed.
- Wage changes are related to (1) human capital -gender, education, & experience-, (2) local demand -unemployment & Prague dummy-, and (3) job characteristics -stayers vs. movers, movers to old vs. new sectors, quits vs. lay-offs-.
- Next, the paper considers the determinants of (1) quitting vs. staying, (2) the multinomial choice of staying, quitting to a new sector, & quitting to an old sector, (3) old vs. new sector job conditional on being laid-off.
- Finally, the estimated probabilities are used to introduce selectivity corrections in the wage change equations.
- The main conclusion is that quitters & movers to the new sector gained more than stayers, lay-offs, & movers to the old sector.

2. A summary of the framework

- Let wage growth if an individual quits be

$$\Delta \ln W_q = \mu_q(X) + \varepsilon_q$$

and wage growth if the same individual stays

$$\Delta \ln W_s = \mu_s(X) + \varepsilon_s.$$

- The gain from quitting for this individual is

$$\Delta \ln W_q - \Delta \ln W_s,$$

and the average gain for individuals with X

$$b(X) = \mu_q(X) - \mu_s(X).$$

- Observed wage growth is

$$\begin{aligned} \Delta \ln W &= q \Delta \ln W_q + (1 - q) \Delta \ln W_s \\ &= \mu_s(X) + b(X)q + [\varepsilon_s + (\varepsilon_q - \varepsilon_s)q] \end{aligned}$$

- If $(\varepsilon_q, \varepsilon_s) \perp Z = (X, X_e)$ for some instruments X_e , then
$$\begin{aligned} E[\varepsilon_s + (\varepsilon_q - \varepsilon_s)q \mid Z] &= E(\varepsilon_q - \varepsilon_s \mid q = 1, Z) E(q \mid Z) \\ &= \varphi(Z) E(q \mid Z) \end{aligned}$$

so that

$$\begin{aligned} \Delta \ln W &= \mu_s(X) + [b(X) + \varphi(Z)]q + v \\ E(v \mid Z) &= 0 \end{aligned}$$

- $E[b(X)]$ is the overall average gain, and $E[b(X) + \varphi(Z)]$ is the average gain for movers. Both are quantities of interest. We could also consider average gains for stayers.
- Aside from means, there could be other interesting characteristics of the distribution of gains.

3. Comments on the framework

- If given Z , q is independent of $(\varepsilon_q, \varepsilon_s)$ then $\varphi(Z) = 0$ and $E(v | Z, q) = 0$, so that q is exogenous and $b(X)$ can be estimated by OLS.
- If the gain for individuals with X is homogeneous $\varepsilon_q - \varepsilon_s = 0$ and $\varphi(Z) = 0$. In this case, subject to identification, $b(X)$ can be estimated by IV methods.

- If the gain is heterogeneous but

$$\Pr(q = 1 | Z) = \Pr(Z\pi + u > 0 | Z)$$

and $u, \varepsilon_q, \varepsilon_s | Z \sim \mathcal{N}(0, \Sigma)$ then

$$\varphi(Z) = (\sigma_{qu} - \sigma_{su}) \lambda(Z\pi).$$

- The extent of heterogeneity in gains depends on the quality of observables X in the dataset. If unobservables are important q will be endogenous.
- Note that $\varepsilon_q, \varepsilon_s$ represent heterogeneity in growth rates. Fixed effects in wage levels are removed by differencing.
- There is a trade-off between IV and selection estimators.
- A further useful exercise would be to consider a structural model for $\Pr(q = 1 | Z)$; ie. as maximizing behavior subject to job offers and wage offer equations. In this way one can measure the responsiveness of quitting decisions to wage opportunities, using both quit behavior data and observed wages.

4. Comments on the data

- From 1989 to 1993 the participation rate fell and self-employment increased. Wage growth opportunities for workers who abandoned the labor force or became self-employed between 1989 and 1996 are censored, and this may be another source of self-selection.
- I could not find information on geographical mobility. Over a seven-year period one would expect living in Prague to be to some extent a choice variable.
- One would expect the effect of mobility to change over time as the transition takes place. Is there anything to be gained from a finer use of the retrospective information?
- The data were collected at the time when Czech unemployment began to increase. What do we know about the fortunes of stayers, and quitters to old and new sectors after 1996?
- It is mentioned that working in the new sector is riskier. Are there differences in job security between the old and new sector? Are there other differences not accounted by wages -like effective number of hours worked?
- Is there any way to assess the amount of measurement error in observed wage growth?

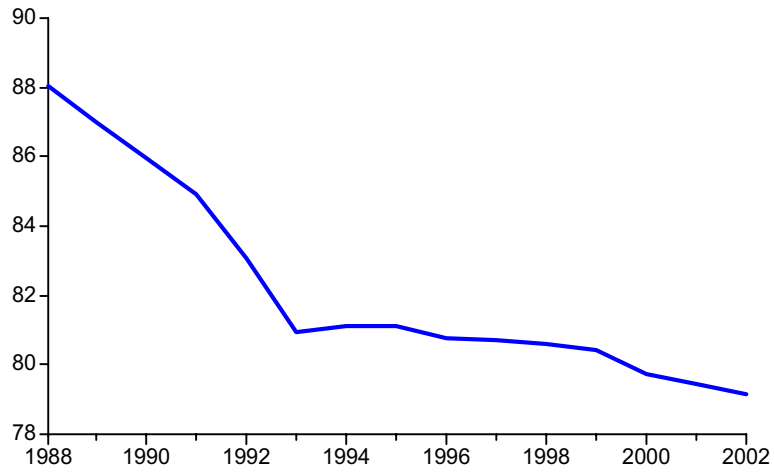
5. Comments on measurement

- Average wage growth effects of quitting, both overall and for specific groups (stayers, quitters, etc.) could be useful summaries. i.e. estimates of the form:

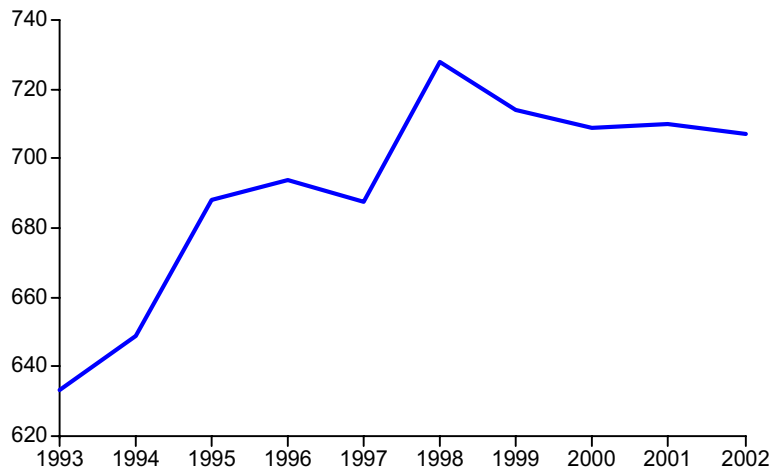
$$\frac{1}{n} \sum_{i=1}^n \hat{b}(X_i), \quad \frac{1}{n} \sum_{i=1}^n \left[\hat{b}(X_i) + \hat{\varphi}(Z_i) \right].$$

- Instruments are marital status, no. of children & household income. Why not complementing selection methods with IV estimators? They rely on the homogeneity of returns but do not require distributional assumptions.
- Wages in 1996 relative to mean wages are used as an explanatory variable in the probit models for the decision to quit. This type of variable does not belong to a reduced form equation of the type considered here.
- Even if a layoff is not a choice variable, it may be econometrically endogenous if the probability of being laid-off is related to unobserved determinants of wages.
- There is a large dispersion in wage growth residuals. Are conditional variances related to observables? Are stayers and quitters possibly trading off mean for variance?
- Under normality there are selection effects if the difference between the lambda coefficients is not zero: $\sigma_{qu} - \sigma_{su} \neq 0$. According to Table 4 these differences are not large (is a formal test available?).

**Czech Republic: Participation rate
Percent**



**Czech Republic: Self-employed
'000 persons**



**Czech Republic: Unemployment rate
Percent**

