

Wage Rate, Compensation Rate, and Earnings Rate Equations v2.0

October 2015

This report summarizes the new estimates of elasticities for the three equations.

The Regression Equation

$$\Delta WD_t^l = \alpha_1 \left[\left\{ \frac{E_t^l}{LF_t^l} \div \frac{EA_t^l}{LFA_t^l} \right\} - 1 \right] + \alpha_2 \left[\left\{ \frac{EO_{i,t}^l}{EOA_{i,t}^l} \right\} - 1 \right]$$

ΔWD_t^l	change in compensation rate, or wage rate or earnings rate
α_1	compensation rate elasticity with respect to relative employment opportunity
α_2	compensation rate elasticity with respect to occupational employment demand
E_t^l	employment
LF_t^l	labor force
EA_t^l	employment moving average
LFA_t^l	labor force moving average
$EO_{i,t}^l$	occupational employment
$EOA_{i,t}^l$	occupational employment moving average

Data & Sources

The current estimates are based on data for years 2003-2013. The elasticities currently implemented in PI+ ver 1.7 were based on data for years 1999-2007.

Labor force, national employment by state, by industry, by occupation come from the BLS website. Wages and salaries, compensation and earnings by place of work were downloaded from the BEA website. The employment data at the state level, cross-classified by industry and by occupation were derived.

The regression used to obtain the estimates is a time-fixed effects model

Results

2015 Re-Estimation										
	PI+ 1.7	2015 Re-Estimation				PI+ 1.7	2015 Re-Estimation			
	α_1	α_1	t	R-square		α_2	α_2	t	R-square	
Wages & Salaries	0.0819	0.0627	3.6	0.91		0.0364	0.0303	1.4	0.91	
Compensation	0.0645	0.0605	3.3	0.91		0.0388	0.0378	1.6	0.91	
Earnings by place of work	0.0852	0.0894	2.6	0.81		0.0146	0.0174	0.4	0.81	