Andrew Kliman, February 13, 2017

Addendum to "Notes on Moseley's 'Logic' vs. the Real Deal"

Fred Moseley has been arguing that, even if there is no technical change in basic (non-luxury-producing) industries and the real wage rate remains unchanged, labor-saving technical change in luxury-producing industries will reduce his (uniform) rate of profit. He claims that his rate of profit will fall because the technical change will lead to a rise in the value composition of capital (C/V), while the rate of surplus-value (S/V) will remain unchanged.

My "Notes" of February 13 implicitly disproved this claim. They showed that, if there is no technical change in basic industries and the real wage rate remains unchanged, then his rate of profit will remain unchanged. This implies that S/V will not remain unchanged; it will rise by the same percentage that C/V + 1 rises.

The purpose of this Addendum is to show explicitly that S/V will rise by the same percentage that C/V + 1 rises.

It follows from Equations (5) and (13) of the "Notes" that

$$\frac{S}{V} = \frac{p_1^{out}\left(x_1 + \left[\dfrac{a_2 + b\ell_2}{a_1 + b\ell_1}\right]x_1\right) - p_1^{in}\{(a_1x_1 + a_2x_2) + b(\ell_1x_1 + \ell_2x_2)\}}{p_1^{in}b(\ell_1x_1 + \ell_2x_2)}$$

$$= \frac{p_1^{out}\{(a_1x_1 + a_2x_2) + b(\ell_1x_1 + \ell_2x_2)\} - p_1^{in}\{(a_1x_1 + a_2x_2) + b(\ell_1x_1 + \ell_2x_2)\}(a_1 + b\ell_1)}{p_1^{in}b(\ell_1x_1 + \ell_2x_2)(a_1 + b\ell_1)} \tag{A1}$$

If per-unit input and output prices must be equal both before and after the technical change, as Moseley asserts, then $p_1^{out} = p_1^{in}$, and (A1) becomes

$$\frac{S}{V} = \frac{p_1^{in}\{(a_1x_1 + a_2x_2) + b(\ell_1x_1 + \ell_2x_2)\} - p_1^{in}\{(a_1x_1 + a_2x_2) + b(\ell_1x_1 + \ell_2x_2)\}(a_1 + b\ell_1)}{p_1^{in}b(\ell_1x_1 + \ell_2x_2)(a_1 + b\ell_1)}$$

$$= \frac{p_1^{in}\{(a_1x_1 + a_2x_2) + b(\ell_1x_1 + \ell_2x_2)\}}{p_1^{in}b(\ell_1x_1 + \ell_2x_2)} \cdot \frac{1 - (a_1 + b\ell_1)}{(a_1 + b\ell_1)} \tag{A2}$$

Now, the "Notes" derived the following expression for C/V + 1 (Equation (6) of the "Notes"):

$$\frac{C}{V}+1=\frac{p_1^{in}(a_1x_1+a_2x_2)+p_1^{in}b(\ell_1x_1+\ell_2x_2)}{p_1^{in}b(\ell_1x_1+\ell_2x_2)}$$

which can be rewritten as

$$\frac{C}{V}+1=\frac{p_1^{in}\{(a_1x_1+a_2x_2)+b(\ell_1x_1+\ell_2x_2)\}}{p_1^{in}b(\ell_1x_1+\ell_2x_2)} \tag{A3}$$

The right-hand side of (A3) appears in (A2). By replacing it with the left-hand side of (A3), Moseley's rate of surplus-value can be expressed as:

$$\frac{S}{V}=\left(\frac{C}{V}+1\right)\cdot\frac{1-(a_1+b\ell_1)}{(a_1+b\ell_1)} \tag{A4}$$

Thus, if the technical coefficents of Sector 1 (a_1, ℓ_1) and the real wage rate (b) remain unchanged, Moseley's *S/V* is a constant multiple of his C/V + 1. Thus, his *S/V* and his C/V + 1 must change by the exact same percentage. Q.E.D.