Effects of Amendments to H-2A Rules on Use of H-2A Program in Tobacco Growing States

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Introduction

The Department of Labor (DOL) amended elements of the 2008 H-2A Final Rule and adopted the 2010 Final Rule which came in effect on March 15, 2010. Compared to the 2008 Final Rule, the 2010 H-2A Final Rule is arguably costlier to farm employers. The major cost-increasing element of the 2010 H-2A Final is the change in methodology in which the Adverse Effect Wage Rate (AEWR) is calculated. In the 2008 Final rule, the AEWR was estimated based on the Occupational Employment Statistics (OES) wage survey which is undertaken by the Bureau of Labor Statistics (BLS) of the DOL. However, in the 2010 Final Rule, the DOL reverted to the 1987 Final Rule methodology that set the AEWRs based on the Farm Labor Survey (FLS) of the United States Department of Agriculture (USDA). Since OES and FLS surveys cover different farm-related employers and provide different levels of detail by occupation and geographic area, they provide different estimates of AEWR. The FLS-based AEWR are annual weighted average hourly wage rates for field and livestock workers (combined) by region while wages from the OES survey are established by levels of skill and experience. The change in methodology from OES to FLS surveys raises the national average of the AEWR by $1.02 per hour.

The increase in the AEWR increases production costs to employers, potentially leading to a reduction in the number of petitions for H-2A workers. Considering the fact that tobacco growers are major employers of the H-2A program, and that labor expenses account for the largest proportion of the cost of tobacco production, their marginal costs are more sensitive to labor costs potentially decreasing their overall profit margin in response to the increase in the AEWR. Considering the prevailing balance of bargaining power between growers and manufacturers in marketing contracts, the price paid for tobacco may not increase enough to cover the increased labor costs.

Given these circumstances, one plausible option that tobacco growers have is to absorb the higher labor costs decreasing profit margins, given steady tobacco prices. Another plausible option is that they adjust their production process decreasing expenses such as employing less workers.

Objective

To assess the effect of the increase in Adverse Effect Wage Rate due to the 2010 Final Rule on tobacco production, revenue and producer benefits under the current product and labor market conditions as well as under different scenarios in which growers bear the additional costs of production.

Methods

The effect of the increase in AEWR due to the 2010 H-2A Amendments is assessed using a Linear-in-logarithms Equilibrium Displacement Model.

From a system of nine labor and tobacco demand and supply equations in log-differential forms describing the U.S. tobacco economy, the proportional change in tobacco price due to the increase in wage rate was derived through a substitution method as:

$$(1) \qquad dLnP = \left(\frac{\varepsilon}{\varepsilon - B}\right)(1 + A)\gamma dLnW$$

$$B = \beta\eta + (1 - \beta)\eta_e$$

$$\left(\frac{\varepsilon}{\varepsilon - B}\right)(1 + A) \qquad \Leftarrow \text{The pass-through elasticity}$$

$dLnP$ is the percentage change in tobacco price
ε is the price elasticity of the supply of tobacco
$A = \alpha\mu + (1-\alpha)\mu_e$ is the price elasticity of the derived demand for labor
γ is the labor cost share
α is the share of domestic labor
μ is the price elasticity of the demand for domestic labor
$dLnW$ is the percentage change in adverse effect wage rate
β is the share of domestic tobacco sales
η is the price elasticity of the domestic demand for tobacco

Then the change in producer surplus was calculated using:

$$(2) \qquad \Delta Ps = (dLnP - dLnC)P_0 Q_0 (1 + 0.5 dLnQ)$$

where
P_0 is the initial equilibrium price
Q_0 is the initial equilibrium quantity
$dLnP$ is the percentage change in tobacco price
$dLnQ$ is the percentage change in tobacco output
$dLnC$ is the percentage change in marginal cost

Results

The increase in marginal cost of production due to the nearly 4% increase in AEWR in burley growing states, and about 5% in flue-cured growing states would affect the welfare of growers depending on whether and how much the additional cost they are willing to bear and how much they are able to pass onto manufacturers and leaf dealers in the form of a higher tobacco price.

Table 1: Effects (%) of the increase in AEWR on burley tobacco production and revenue.

Variables	Market Response	0% pass-through	25% pass-through	50% pass-through	75% pass-through	100% pass-through
Price	1.11	0.00	0.42	0.84	1.25	1.67
Domestic demand	-1.62	0.00	-0.61	-1.22	-1.83	-2.44
Export demand	-3.33	0.00	-1.25	-2.51	-3.76	-5.02
Total output	-2.65	0.00	-1.00	-1.99	-2.99	-3.99
Revenue	-1.54	0.00	-0.58	-1.16	-1.74	-2.31
Surplus($)	-1.26	-5.63	-4.20	-2.79	-1.39	0.00
Revenue($)	-5.17	0.00	-1.95	-3.89	-5.84	-7.79
Supply(Lbs)	-5.33	0.00	-2.01	-4.02	-6.02	-8.03

Table 2: Effects (%) of the increase in AEWR on flue-cured tobacco production and revenue.

Variables	Market response	0% pass-through	25% pass-through	50% pass-through	75% pass-through	100% pass-through
Price	0.84	0.00	0.32	0.64	0.96	1.28
Domestic demand	-1.23	0.00	-0.47	-0.93	-1.40	-1.86
Export demand	-2.53	0.00	-0.96	-1.91	-2.87	-3.83
Total output	-2.04	0.00	-0.77	-1.54	-2.31	-3.08
Revenue	-1.19	0.00	-0.45	-0.90	-1.35	-1.80
Surplus($)	-2.53	-11.20	-8.37	-5.56	-2.77	0.00
Revenue($)	-10.49	0.00	-3.96	-7.92	-11.88	-15.85
Supply(Lbs)	-10.17	0.00	-3.84	-7.68	-11.52	-15.37

Table 3: Effects of the increase in AEWR on domestic and H-2A employment in tobacco farms

Variables	Burley	Flue-cured
Domestic labor	-2.19	-2.39
H-2A labor	-4.77	-6.38
Total employment	-2.58	-3.99

With regard to employment, burley and flue-cured would cut their total employment by nearly 2.6% and just over 4.0%, respectively with the use of the H-2A labor declining 5% in burley farms and over 6% in flue-cured farms.

Conclusion

This poster has provided preliminary estimates of the effect of the increase in AEWR on tobacco production due to the 2010 H-2A Amendments that went into effect on March 15, 2010. Results suggest that the increase in labor costs due to these amendments has important economic consequences for tobacco growers if they have to fully absorb the additional labor costs in which case burley growers would be worse off with a loss of $5.6 million in producer surplus. With respect to flue-cured growers, if they bear the full cost of the increase in adverse effect wage rate, they would be worse off with a loss of about $11 million in producer surplus, which is twice the loss of burley growers.

Under the current market conditions, it is possible that both burley and flue-cured growers are able to pass on 66% of the additional cost of production associated with the increase in the AEWR. In other words, given their demand behavior in the labor market and their supply behavior in the tobacco market, they can offset 66% of the increase in costs.

While these estimates were made under the assumption of no adjustment in the production process, it is likely that the additional costs associated with the new rules prompt both burley and flue-cured growers to make adjustments in their production process. In the absence of such adjustments, the additional costs may have significant implications for competitiveness.