

Trade, Technology and Labor Productivity Effects on the Demand for Skilled and Unskilled Workers: Implications for Rural Areas

Chinkook Lee and Gerald E. Schluter
Economic Research Service
U.S. Department of Agriculture
Rm 2148, 1800 M St. NW
Washington, D.C. 20036-5831

Contact person; Chinkook Lee
(202) 694-5354
Fax: (202)694-5681
e-mail:chinlee@ag.econ.gov

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Abstract

An U.S. I/O model is used to examine the effects of trade and domestic consumption on the separate and interactive effects of trade, technology, and labor productivity on the demand for skilled and unskilled workers for 1972, 1987, and 1993. The results suggest that trade has not been the major contributor to changes in demand for skilled vs. unskilled labor during the period examined, counter to the continuing debate on theory and on evidence supporting the trade-widening wage gap linkage. We found the ratio of high skilled to low-skilled workers was higher for exports than imports and has risen over time, suggesting that U. S. has moved toward more skilled-labor intensive exports. The effect of trade on rural workers is to reenforce structural trends already working to the disadvantage of rural workers.

Keywords - Structural Analysis, International Trade Impacts, Skilled-Unskilled Wage Gap

Trade, Technology and Labor Productivity Effects on The Demand for Skilled and Unskilled Workers: Implications for Rural Areas

The gap between the earnings of skilled (or highly educated) and unskilled (the less educated) in the United States has been rising sharply for the last two decades. Even the US economy's robust expansion during the past few years failed to narrow the gap. While this widening gap is a fact, a debate among economists on the causes of the gap has continued. Using an Input-Output model of United States, this paper examines the effects of trade and domestic use on the demand for skilled and unskilled workers for 1972, 1987, and 1993.

The aim of this paper is twofold. We first examine empirically the effects of trade on the demand for skilled and unskilled workers. This involves determining how much skilled and unskilled labor a country uses in producing its exports and how much labor would have been used if the country had produced its imports domestically. The difference between skilled and unskilled employment needs of exports and imports provides our measure of the impact of trade on the demand for skilled and unskilled workers. Second, we analyze the labor demand on four different scenarios to examine different effects of trade, technology, and labor requirement on the demands for skilled vs. unskilled labor.

I. Measuring the Factor Content of Trade and Domestic Use

Wood (1994 and 1995) has been a strong advocate of trade as the main cause of the widening wage gap between skilled and unskilled. He points out that "the main cause of the deteriorating situation of unskilled workers in developed countries has been expansion of trade with developing countries," (Wood, 1995: pp.57). Krugman and Lawrence (1994) dismiss the argument that the widening wage gap in the 1980s was due to imports from developing countries because these imports were quantitatively small. Lawrence and Slaughter (1993) and Bhagwati

and Kusters (1994) also dismiss the notion that international trade has played more than a minor role in pushing down the relative wages of less-skilled U.S. workers. They argue that the rising earning inequality in the U.S. and other industrialized countries is mainly the result of technological change rather than pressure on unskilled wages from foreign competition. A number of important papers, such as, Berman, et al (1994) and Doms et al (1997) have also identified skilled-biased technical changes within industries as an important source of shifting demand for skilled vs unskilled labor. And, the debate on the widening wage gap highlights the prominent role played by the relative factor endowment model of international trade. This paper builds upon previous studies on the wage gap and empirically test skilled and unskilled labor content of trade and domestic use.

One method of calculating the factor content of international trade relies upon Leontief's input-output (I/O) model. The Leontief-type of empirical estimation continues to be a standard method for analyzing the H-O factor endowment model of U.S. trade. In an open I/O system, we can calculate equilibrium output of each sector of the economy for a given set of final demand of goods and services. The system can be expressed in a matrix form, by:

$$(1) \quad \mathbf{X} = \mathbf{AX} + \mathbf{F}.$$

In our empirical analysis, \mathbf{X} is an 80 by 1 vector of sectoral output, \mathbf{A} is an 80 by 80 I/O direct requirement matrix, and \mathbf{F} is an 80 by 1 vector of aggregate final demands consisting of vectors of household consumption (\mathbf{C}), inventory change and gross private domestic investment (\mathbf{I}), government purchases of goods and services (\mathbf{G}), and net trade ($\mathbf{Nt} = \text{exports} - \text{imports}$). The equilibrium output levels required to satisfy final demand \mathbf{F} are:

$$(2) \quad \mathbf{X} = [\mathbf{I} - \mathbf{A}]^{-1} * \mathbf{F} = [\mathbf{I} - \mathbf{A}]^{-1} [\mathbf{C} + \mathbf{I} + \mathbf{G} + \mathbf{Nt}]$$

The equilibrium output to satisfy net trade and domestic use can be obtained by replacing F with Nt^1 for net trade and domestic use D ($D = C + I + G$) such that

(3) $X = X_t + X_d$, labor demands for net trade are estimated by,

(4) $L_{nt} = dl * X_t$ for net trade and,

(5) $L_d = dl * X_d$ for domestic use,

where dl is an 80 by 80 diagonal matrix of labor coefficients, showing amounts of labor required per unit of output in each industry. Thus, $L_{nt} + L_d$ is the total labor employment in the U.S. economy for a particular year.

We estimate the skilled and unskilled labor demand for a given component of final demand using the nine major occupational categories of U.S. workers as classified by the Bureau of Labor Statistics (BLS)². We then grouped the nine occupational categories into high-skilled, medium-skilled, and low-unskilled labor which allows us to estimate the amounts of skilled and unskilled labor embodied in U.S. exports and the estimates of the amount of skilled and unskilled labor that the U.S. would need to produce domestically the goods and services imported. These estimates are shown in Tables 1-3.

Once we estimate labor demands for the combined effects, we examine the separate effects of,

¹. This is similar to Borjas and Ramsey's (1995: p.1094) method except that their employment coefficients are employment/shipment while ours are employment/output per sector.

². BLS (1995) reports nine occupational groups. They are; 1. Executive, administrative & managerial, 2. Professional Specialty, 3. Technicians and related support, 4. Sales occupations, 5. Administrative support, incl. clerical, 6. Precision production, craft & repair, 7. Service occupations, 8. Operators, fabricators & laborers and 9. Farming, forestry, & fishing. We combined occupational categories and defined categories 1 through 3 as high-skilled, categories 4 through 6 as medium-skilled, and categories 7 through 9 as low-skilled. Also note that we use the terms "skilled and unskilled" in the text while our estimation contains high, medium, and low skilled. "Skilled" refers to the high-skilled category while "unskilled" refers to the low-skilled category.

direct labor requirement, direct technical coefficients, and trade over time. First, we estimate the effects of 1993 demand on the skilled/unskilled labor content changes between 1972 and 1993 years by fixing dl and A from the equation (**Scenario 2 in table 4**) at their 1972 level. Second, we hold labor requirement and final demand at 1972 levels by fixing both dl and F and using changes in A between 1972 and 1993 to estimate the effect on labor demand of changes in technological coefficients (**Scenario 3 in table 4**). Finally, to show the effect of changing per unit labor requirements on labor demand, we fix I/O technology (A), and final demand (F) and change dl (**Scenario 4 in table 4**).

II. Empirical Analysis of Factor Content of Trade and Domestic Use

We estimate the high, medium, and low skilled labor content of trade and domestic use. We focus on the high and low skill categories. We make all calculations in 1987 prices. Tables 1-3 show 1972, 1987, and 1993s' labor requirements needed to satisfy trade and domestic use. The tables contain labor requirements for imports and exports for ten (out of eighty) sectors with the highest ratio of labor use for net trade to total labor used in the sector (last table column). We also analyze the ratios of the skilled and unskilled labor requirement for imports and exports to examine different configurations of skilled vs. unskilled labor for import and for exports.

In 1972 (Table 1), for example, the employment equivalent of net trade for two import vulnerable sectors, sugar crops and refined sugar was 24,700 and 16,800 which was over 50% of the 48,600 and 33,400 total civilian employment in sugar crop and refined sugar sectors. The subtotal of the ten most import-affected sectors shows a net trade loss of 513,100 workers, which was 14.6% of the 3.5 million subsector total employment. The net trade loss of high skilled

Table 1. Ten sectors most proportionately affected by imports and exports, 1972

Import affected	Exports	Imports	Net trade 1000 workers	Domestic	Total	Net/Total share
Sugar crops	1.3	-26	-24.7	73.3	48.6	-0.508
Sugar Proc	0.9	-17.7	-16.8	50.2	33.4	-0.503
Forestry	1.8	-7.2	-5.4	18.7	13.3	-0.406
Metal mining	18.5	-52.4	-33.9	119	85.1	-0.398
Leather	8.5	-82.1	-73.6	372.8	299.2	-0.246
Crude petrol	24.4	-80.2	-55.8	333.1	277.3	-0.201
Treenuts	6.6	-11.4	-4.8	31.7	26.9	-0.178
Metal mft	181.1	-319.1	-138	1366.2	1228.2	-0.112
Misc Crops	1.9	-3.5	-1.6	16.2	14.6	-0.110
Apparel	21.8	-180.3	-158.5	1646.9	1488.4	-0.106
Subtotal	266.8	-779.9	-513.1	4028.1	3515	-0.146
h-skilled	32.8	-86.6	-53.8	381.5	327.7	-0.164
m-skilled	31.2	-92.6	-61.4	473.2	411.8	-0.149
l-skilled	202.5	-600.7	-398.2	3173.4	2775.2	-0.143
ratio (high/low)	0.16	0.14	0.13	0.12	0.11	
Export affected	Exports	Imports	Net trade	Domestic	Total	Net/Total
Oilcrops	59.9	-6.1	53.8	77.3	131.1	0.410
Food grain	42.5	-2.6	39.9	67.8	107.7	0.370
Cotton	39.6	-16.6	23	132.6	155.6	0.148
Computer	61.4	-28.1	33.3	219.1	252.4	0.132
Ag. Chemicals	3.6	-1.9	1.7	12.7	14.4	0.118
Oilseed mills	9	-3.8	5.2	41.3	46.5	0.112
Fertilizer	8.4	-3.8	4.6	38.5	43.1	0.107
Tobacco mft	8.8	-0.9	7.9	67	74.9	0.105
Grasseed	2.3	-1.4	0.9	9.8	10.7	0.084
Coal mining	25.7	-13.1	12.6	149.7	162.3	0.078
Subtotal	261.2	-78.3	182.9	815.8	998.7	0.183
h-skilled	46.3	-18.8	27.5	168.1	195.6	0.141
m-skilled	30.1	-10.6	19.5	104.6	124.1	0.157
l-skilled	184.9	-48.7	136.2	543.1	679.3	0.201
ratio(high/low)	0.25	0.38	0.2	0.3	0.29	
US Total	3648.6	-3811.8	-163.2	84862.4	84699.2	-0.002
h-skilled	632.3	-609.1	23.2	17983.6	18006.8	0.001
m-skilled	1082.7	-915.1	167.6	35633.6	35801.2	0.005
l-skilled	1933.7	-2287.6	-353.9	31245.2	30891.3	-0.011
ratio(high/low)	0.32	0.27	-0.06	0.57	0.58	

workers was 53,800 compared with 398,200 unskilled jobs lost.

For the sectors most affected by exports in 1972 (middle of Table 1), oilcrops had 41% (53,800) of total sector employment (131,100) generated by net exports. The subtotal of the ten most affected sectors shows a net trade gain of 182,900 employment (18.3% of 998,700 total employment) of the ten subtotal sectors. Output for total U.S. exports required 3.65 million workers compared to the 3.81 million implicit job equivalent of total imports (US Total row). The net trade loss of employment was 163,200 which was only two-tenths of one percent (-0.2%) of the 84.7 million civilian workers employed in 1972. Net trade resulted in a slight gain (23,200) for skilled employment (0.1%) but a loss of 353,900 (-1.1%) in unskilled labor employment. For the United States as a whole, exports used a higher ratio of high-skilled over low-skilled labor compared to imports. In 1972, export-related employment for high-skilled labor was 32% of export-related employment of unskilled labor while it was 27% for imports-related employment⁴.

In 1987, in the midst of the 1980s' recovery, the net trade deficit soared and the effects on employment were all negative (Table 2, US Total row) 2.25 million jobs, a significant, 2%, share of the total 114 million civilian workers. Net trade resulted in a loss of 328 thousand for skilled employment (-1.3%) and a loss of 1.86 million (-5.3%) unskilled labor employment. For the U.S., exports again used a higher ratio of high-skilled to low-skilled labor (.46) compared to imports (.37). Among the ten most import-vulnerable sectors, the Leather and Fishing sectors show losses due to net trade of more than 100% of total labor required to satisfy net trade and

⁴. A similar situation prevailed in 1982, a recession year. However, page limitation prevents us to include a table and an analysis for 1982. We plan to present a table and a brief discussion of 1982 at the session, however.

Table 2. Ten sectors most proportionately affected by imports and exports, 1987

Import affected	Exports	Imports	Net trade 1000 workers	Domestic	Total	Net/Total share
Leather	15.7	-205	-189.3	336.6	147.3	-1.285
Fishing	23.7	-150.5	-126.8	235.1	108.3	-1.171
Crude petrol	65.6	-297	-231.4	644.8	413.4	-0.560
Apparel	28.7	-555.8	-527.1	1659.8	1132.7	-0.465
Metal mining	14.2	-31.4	-17.2	62.7	45.5	-0.378
Motor vehicles	137.2	-437.6	-300.4	1153.3	852.9	-0.352
Textiles	70.1	-262.1	-192	909.1	717.1	-0.268
Metal mft	163.8	-362.9	-199.1	973.9	774.8	-0.257
Elec equipment	331.3	-652.3	-321	1783.9	1462.9	-0.219
Fish&seafood	12.3	-22.5	-10.2	59	48.8	-0.209
Subtotal	862.6	-2977.1	-2114.5	7818.2	5703.7	-0.371
h-skilled	169.4	-461.1	-291.7	1191.8	900.1	-0.324
m-skilled	118.6	-385	-266.4	1010.9	744.5	-0.358
l-skilled	574.4	-2130.9	-1556.5	5615.5	4059	-0.383
ratio (high/low)	0.29	0.21	0.18	0.21	0.22	
Export affected	Exports	Imports	Net trade	Domestic	Total	Net/Total
Oilcrops	69.6	-8.7	60.9	81	141.9	0.429
Food grain	54.2	-5.3	48.9	74.8	123.7	0.395
Treenuts	23.2	-2.3	20.9	36.6	57.5	0.363
Oth transport	269.5	-113.5	156	825.8	981.8	0.159
Tobacco	16.9	-3.4	13.5	82.2	95.7	0.141
Misc Crops	3.7	-2.4	1.3	8.7	10	0.130
Oilseed mills	8.1	-3.8	4.3	31.3	35.6	0.121
Cotton	20	-13.7	6.3	46.2	52.5	0.120
Ag chemicals	4.8	-2.4	2.4	18	20.4	0.118
Feed grain	57.1	-27.5	29.6	311.4	341	0.087
Subtotal	527.1	-183	344.1	1516	1860.1	0.185
h-skilled	110.3	-44.5	65.8	333.8	399.6	0.165
m-skilled	57.2	-21.7	35.5	169.6	205.1	0.173
l-skilled	359.8	-117	242.8	1012.7	1255.5	0.193
ratio(high/low)	0.3	0.38	0.27	0.32	0.31	
US Total	6536.7	-8788.4	-2251.7	116036	113784.3	-0.020
h-skilled	1258.2	-1586.7	-328.5	26443.6	26115.1	-0.013
m-skilled	2274.6	-2338.6	-64	52682.9	52618.9	-0.001
l-skilled	3003.9	-4863.1	-1859.2	36909.5	35050.3	-0.053
Ratio(high/low)	0.46	0.37	-0.35	0.79	0.81	

domestic use. The subtotal of these ten sectors shows a loss of more than 2.1 million jobs due to

net trade, 37% of these ten sectors' total employment. The net trade loss of employment was 292 thousand for high skilled and 1.6 million for unskilled workers. Among 1987 top ten exports (middle of Table 2), oil crops again shows 43% of total sector employment generated by net exports followed by 40% of food grains. The subtotal shows a 344 thousand gain in employment due to net trade, 18.5% of total employment in these ten sectors.

In 1993 (Table 3), the situation reversed from 1987. Net trade contributed 819 thousand workers to total employment demand, almost one percent (0.7%) of the total 123.5 million civilian employment in 1993. Net trade resulted in a 466.4 thousand gain for skilled employment (1.68%) and a 939,000 loss (-0.3%) for unskilled labor employment. For the U.S., exports again used a higher ratio of high-skilled to low-skilled labor, .50, than imports, .33.

A common result, throughout the three years examined, is that across the economy the employment impact of net trade is small. However, individual sectors did experience large losses. The largest percentage loss of employment during the three years considered were leather products (in 1987 and 1993) with more than 100% loss. The largest loss of levels of employment occurred in the apparel industry (527 thousand and 634 thousand in 1987 and 1993 respectively). However, the net trade effect on U.S. employment was less than one percent. Schluter and Gale (8:1996) similarly found the early employment effects of NAFTA were small, much less than both supporter and opponents had predicted.

Based on our definition of skilled vs unskilled labor, the unskilled labor share of total employment in the U.S. has declined slightly from 36.8% (30.9 million of total 84.7 million employment) in 1972 to 30.8% (35 million of total 113.8 million) in 1987, and 29.1% (35.7 million of total 123.5 million) in 1993. The domestic use effects dominated the net trade effects

Table 3. Ten sectors most proportionately affected by imports and exports, 1993

Import affected	Exports	Imports	Net trade	Domestic	Total	Net/Total
		1000 workers				share
Leather	26.6	-218.6	-192	314.3	122.3	-1.57
Apparel	79.1	-713	-633.9	1642.9	1009	-0.628
Fishing	74	-132.4	-58.4	154.7	96.3	-0.606
Crude petrol	84.8	-279	-194.2	565.5	371.3	-0.523
Fruits	46.4	-145.7	-99.3	396.4	297.1	-0.334
Textiles	112.3	-322.1	-209.8	893.9	684.1	-0.307
Motor vehicles	161.1	-369.4	-208.3	1045.8	837.5	-0.249
Elec equipment	450.6	-728.5	-277.9	1578	1300.1	-0.214
Misc livestock	14.6	-35	-20.4	119.3	98.9	-0.206
Computer	176.5	-248.4	-71.9	442.3	370.4	-0.194
Subtotal	1226	-3192.1	-1966.1	7153.1	5187	-0.379
H-skilled	292.7	-565.4	-272.7	1206.6	933.9	-0.292
M- skilled	178.9	-428.6	-249.7	939.4	689.7	-0.362
L-skilled	754.2	-2198.1	-1443.9	5007.2	3563.3	-0.405
ratio(high/low)	0.388	0.257	0.189	0.241	0.262	0.721
Export affected	Exports	Imports	Net trade	Domestic	Total	Net/Total
Oilcrops	49.9	-10.1	39.8	73.3	113.1	0.352
Food grain	43.1	-6.6	36.5	74.9	111.4	0.328
Oth transport	360.8	-122.7	238.1	603.6	841.7	0.283
Cotton	21.8	-13.3	8.5	36.2	44.7	0.190
Metal mining	17.4	-8.1	9.3	40.5	49.8	0.187
Fertilizer	13.4	-7.9	5.5	27.4	32.9	0.167
Ordinance	27.2	-6.2	21	144.1	165.1	0.127
Grasseed	1.9	-1	0.9	6.4	7.3	0.123
Feed grain	46.9	-17.5	29.4	209.1	238.5	0.123
Tobacco	16.9	-4.6	12.3	91.5	103.8	0.119
Subtotal	599.3	-198	401.3	1307	1708.3	0.235
H-skilled	151.1	-51	100.1	295.8	395.9	0.253
M- skilled	71.4	-24.2	47.2	148.6	195.8	0.241
L-skilled	376.6	-122.7	253.9	862.6	1116.5	0.227
ratios (high/low)	0.401	0.416	0.394	0.343	0.355	1.112
US total	10761.9	-9942.9	819	122649.5	123468.5	0.007
H-skilled	2255.4	-1789	466.4	28946.4	29412.8	0.016
M- skilled	4037.8	-2746.3	1291.5	57026.9	58318.4	0.022
L-skilled	4468.7	-5407.7	-939	36676.2	35737.2	-0.026
ratios (high/low)	0.505	0.331	-0.497	0.789	0.823	-0.615

on unskilled labor demand. Occupational distributions changed during the analysis as well. First, as discussed above, the unskilled share of the labor force declined and the skilled labor share increased over time. However, the small rate of change illustrates the relatively steady evolution of the US occupational distribution during the period considered. If import growth was an important influence on the differential labor demand by skill level, the employment related to the 1972 to 1993 import surge should have been concentrated in low skill industries. As imports gained market share, we would also expect to observe a falling employment share in affected industries. Indeed, this has happened in the leather and leather products sector. For example, leather and leather products employed 299 thousand in 1972 (three-tenths of one percent of total employment) which declined to 122 thousand (one-tenth of one percent) in 1993. Second, the sectoral compositions of U.S. exports and imports have not changed much over these periods.

In Table 4, we report 1972-93 changes in employment (on the left) and the percentage change (on the right) based on four different scenarios. The scenario **1**, the actual changes in all three variables (final demand, technological coefficients, and labor requirements) summarizes our previous analyses of tables **1-3**. In scenarios **2** through **4** we assume that only final demand changes while holding technical coefficients and labor requirement constant at 1972 levels (Scenario **2**), only technological coefficients change (Scenario **3**), and finally only labor requirements change (Scenario **4**). In Scenario **2**, growth in demands for exports and imports was the dominate factor explaining growth in labor usage in the U.S. economy and unlike over 250% strong growth of exports and imports, the domestic use and US total increased less than 50 percent. Changes in production technology (Scenario **3**) explained only seven to nine percentage points of the total change and improvements in labor productivity and technology reduced the

Table 4 Changes in U.S. Labor Demand Under Different Scenarios , 1972-93

Scenario	(in 1,000)				percent change			
	Exports	Imports	Domestic Use	US Total	Exports	Imports	Dom Use	US Total
Scenario 1	3574.2	-3714.1	84726.1	84586.2				
	10761.9	-9942.9	122649.5	123468.5	201.1	167.7	44.8	46
Scenario 2	3574.2	-3714.1	84726.1	84586.2				
	12930	-13201	123165	122894	261.8	255.4	45.3	45.3
Scenario 3	3574.2	-3714.1	84726.1	84586.2				
	3829.1	-4042.3	90971.1	90757.9	7.1	8.8	7.4	7.3
Scenario 4	3574.2	-3714.1	84726.1	84586.2				
	2009.4	-2271.3	49809.7	49547.8	-43.8	-38.8	-41.2	-41.4
Notes:								
Scenario 1 Changes in trade, technology, and, unit labor requirement								
Scenario 2 Changes in final demand only, holding tech and unit labor requirement at 1972 level								
Scenario 3 Changes in tech only holding final demand and unit labor requirement at 1972 level								
Scenario 4 Changes in unit labor requirement only holding final demand and tech at 1972 level								

demand for labor. Changes in unit labor requirement (Scenario 4) decreased evenly in the neighborhood of forty percent as improvement in labor productivity reduced the demand for labor.

III. Summary and Conclusions

In sum, the existence of large sectors producing nontraded consumer services muffles the effects of trade on labor demand and thus on wage inequality among skilled compared to unskilled labor. We have also found that changes in trade has not been the major contributor to changes in demand for skilled vs. unskilled labor during the period examined. We have found higher unskilled labor demand for domestic use offset any negative effects of net trade on unskilled employment. This suggests a small role for imports in the loss of demand for unskilled labor in

the economy. Thus, our analysis implies trade has played a very small role in changing the demand for skilled vs. unskilled workers. Accordingly, because it had just a small effect on employment levels, it is difficult to conclude that the widening wage gap between skilled and unskilled labor is due primarily to trade.

The ratio of high-skilled to low-skilled workers was higher for exports than imports and has risen over time. This suggests that the U.S. has moved toward more skilled-labor intensive exports. Thus, sector-specific technology is important when explaining this issue. The changing factor content of trade shifted the demand for labor against unskilled U.S. workers and in favor of skilled workers but again the employment effect of domestic use dominates the shift. There is only very limited evidence that technological change has accelerated enough in the past 25 years to induce substantial skilled labor demand. However, a further empirical analysis is needed to assess a possible acceleration in technical change and labor productivity since they are interactive in the sense that technological change and labor productivity go in hand and hand.

Generally, this analysis shows that trade makes a small contribution to widening the wage gap between skilled vs. unskilled labor. The more we import textile and leather products, the more unskilled labor is likely to lose employment compared with skilled labor. Conversely, the more we export other services, the more skilled labor will be employed. So, skilled vs. unskilled labor use by imports vs. exports could have an offsetting impact on the economy. Furthermore, as indicated above, gains or losses will be sector-specific.

The implications for rural areas of this analysis could be both positive and negative. Positive because, as Schluter and Gale found with NAFTA, concern about freer trade putting the rural labor force at a disadvantage may have been alarmist. The effects of domestic demand so

overwhelm the effects of trade that trade by itself should not significantly disadvantage rural workers. Negative, because on the average rural workers are less skilled, less educated, and more likely to work in goods producing sectors, which are more trade vulnerable than service sectors. Structural changes in production for both the domestic and foreign markets are shifting the demand for workers towards higher skill levels. Any import competition for products produced by the rural labor force, simply adds to the current pressures which are rewarding urban workers more than rural workers.

VII. References

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