

This PDF is a selection from a published volume from the  
National Bureau of Economic Research

Volume Title: Immigration, Trade and the Labor Market

Volume Author/Editor: John M. Abowd and Richard B. Freeman, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-00095-8

Volume URL: <http://www.nber.org/books/abow91-1>

Conference Dates: September 11-12, 1987

Publication Date: January 1991

Chapter Title: Immigrants, Labor Market Pressures, and  
the Composition of the Aggregate Demand

t

Chapter Author: Susan M. Collins

Chapter URL: <http://www.nber.org/chapters/c11777>

Chapter pages in book: (305 - 318)

---

# Immigrants, Labor Market Pressures, and the Composition of the Aggregate Demand

Susan M. Collins

The purpose of this paper is to examine the effect of changes in the composition of aggregate demand on total labor requirements and on the requirements for jobs typically held by immigrants, using the input-output (IO) tables for the United States. The paper asks two sets of questions. First, how are labor requirements affected by a dramatic turnaround in the trade balance? Does it matter whether the deficits are accompanied by an investment or a consumption boom, and how are the resulting labor market pressures distributed across industries? Second, how are immigrants distributed across domestic industries, are they differentially affected by shifts in the composition of demand, and are the recent changes likely to have made immigrant workers more “visible,” providing one explanation for the increased attention they have received in recent years?<sup>1</sup>

The basic approach is as follows. Changes in the composition of aggregate demand will alter the distribution of labor requirements across sectors and industries. While these shifts do not imply changes in labor demand or in actual employment, they can be interpreted as indicating labor market pressures in those sectors where demand has decreased. Because immigrants and native workers are distributed quite differently across jobs, these pressures will influence the two groups differently.<sup>2</sup>

Input-output analysis provide a useful framework to explore the linkages between aggregate demand, labor market pressures, and immigrants because it integrates both microeconomic and macroeconomic aspects. On the microeconomic side, it considers the output and employment responses of particular industries. On the macroeconomic side, it incorporates the key identity from

Susan M. Collins is associate professor of economics at Harvard University and a faculty research fellow of the National Bureau of Economic Research.

The author would like to thank J. Abowd, H. Bowen, R. Freeman, and K. Lang for comments and A. Revenga for excellent research assistance.

the National Income and Product Accounts, which highlights the linkages between net exports and the other components of aggregate demand. The counterpart to an external imbalance (i.e., a deficit in U.S. goods and services vis à vis the rest of the world) must be an excess of investment over domestic savings.

The macroeconomic focus is important because it points to a different set of issues and conclusions than many of the industry studies. For example, suppose that a researcher concluded that imports had been a “cause of injury” in a particular industry and that restricting imports would be likely to raise domestic output and employment. From the macroeconomic perspective, unless the policies to restrict imports were expected to reduce the savings investment imbalance, thereby reducing the total trade deficit, these policies merely shift the trade deficit between sectors.

There are also some drawbacks to the IO analysis. By maintaining constant input-output coefficients and fixing the commodity composition of each component of aggregate demand, it rules out substitution on both the production and the consumption sides. A related point is that it does not specify why aggregate demand changes and how relative prices (including interest rates and exchange rates) are affected. The answers to these questions will in turn have implications for the composition of imports, consumption, and the other components of demand. In order to incorporate these factors, it would be necessary to imbed the IO framework into a macroeconomic model, which is beyond the scope of the current paper.

The paper is composed of four remaining sections. Section 11.1 asks where the immigrants are and examines the distribution of immigrant workers across sectors. Section 11.2 turns to the key macroeconomic issues and discusses changes in the composition of aggregate demand. Section 11.3 analyzes the effect of shifts in the composition of aggregate demand on labor requirements by sector and for immigrants and nonimmigrants. The section first spells out the methodology and then discusses results. Concluding remarks are given in the final section.

### **11.1 Where Are the Immigrants?**

A number of authors have pointed out that immigrant workers tend to be concentrated in different industries than native workers. In particular, immigrants tend to enter the labor market in low-wage, relatively unskilled positions, but the distribution of immigrants over industries and occupations becomes more similar to that of natives the longer they remain in the United States.<sup>3</sup>

Table 11.1 compares the 1982 employment distribution of foreign-born (immigrants plus refugees) and native workers across sectors. These data are derived from a special matched sample of respondents to supplementary CPS surveys conducted in March and April 1983. Unfortunately, only about 75%

**Table 11.1** Employment Distribution by Sector

	% of Total Group Employment			Foreign as % of Total Sector Employment
	Total	Foreign	Native	
Agriculture	3.4	3.6	3.4	8.4
Mining	.9	.7	1.0	5.7
Construction	5.9	4.7	6.0	6.4
Manufacturing	19.6	25.3	19.2	10.2
Transportation and public utilities	7.0	4.2	7.2	4.8
Wholesale trade	4.3	3.9	4.4	7.1
Retail trade	16.3	16.5	16.3	8.1
Finance, insurance, real estate	6.2	6.6	6.2	8.4
Private household	1.3	1.8	1.2	11.5
Other service	30.3	30.5	30.3	8.0
Public administration	4.7	2.4	4.9	4.1
Total (thousands)	109,064	8,694	100,370	7.97

Source: Sehgal (1985).

of the April sample matched with the March sample, and no corrections were made for missing values.<sup>4</sup>

The first three columns of the table report the shares of total, foreign-born, and native employment in each of eleven sectors. The final column gives the percentage of foreign born in total sectoral employment for each sector. The table shows that foreign born accounted for 7.97% of total employment but that these workers were not evenly distributed across sectors. The largest difference between the two groups is in manufacturing, which accounted for 25% of foreign-born workers but only 19% of native workers. Furthermore, manufacturing has the second highest concentration of immigrants, behind private household services. Immigrants are relatively underrepresented in public administration. However, it is not surprising that natives are twice as likely to hold these jobs since many of them require citizenship. Immigrants are also underrepresented in construction and in transport and public utilities. Within manufacturing, immigrants are disproportionately located in nondurable goods: 9.5% of total employment in nondurables was immigrant compared to less than 7% of total employment in durables.

Immigrants are disproportionately located in apparel, where they account for over 19% of total employment. They also account for large employment shares in textiles, footwear, leather, drugs, and cleaning and toilet preparations. They are relatively scarce in tobacco, petroleum refining, and chemical product industries. The various durable goods industries each account for a small share of total immigrant employment. Immigrants are relatively visible in some sectors, such as miscellaneous manufacturing.

In summary, immigrants account for less than 8% of total employment. However, they are distributed across industries quite differently than native workers are. Furthermore, they are extremely visible in some industries, amounting to 12%–20% of the total work force. The remainder of the paper explores the implications of recent changes in aggregate demand on the distribution of job requirements across industries and asks whether reductions in job requirements have been concentrated in industries where immigrants are also concentrated.

## 11.2 Shifts in the Composition of Aggregate Demand

In fact, there have been large recent changes in the composition of aggregate demand. The two identities from national income accounting given in (1) and (2) are very useful for documenting the shifts in key macroeconomic variables and for highlighting the linkages between the foreign sector and domestic demand:

$$(1) \quad Y = C + I + G + (X - M),$$

$$(2) \quad (X - M) = S_p + S_g - I - R.$$

As usual,  $Y$  denotes GNP;  $C$ ,  $I$ , and  $G$  denote private consumption, investment, and government spending, respectively; and  $X$  and  $M$  refer to exports and imports of goods and services,  $S_p$  and  $S_g$  to private and government savings, and  $R$  to net other international transactions.<sup>5</sup> Equation (2) says that foreign savings must equal the difference between domestic savings and investment.

Table 11.2 shows the U.S. experience during 1973–86. The top panel gives the composition of aggregate demand as shares of GNP during each of four subperiods, while the bottom panel shows the domestic savings and investment counterparts to net export performance. As shown, net exports declined during 1977–79, improving somewhat during 1980–82 before the substantial deterioration during 1983–86.

The two periods of poor trade performance differ in more than simply the magnitude of the deficit. In 1977–79, investment rose by 2.2% of GNP relative to 1973–76, requiring additional domestic and/or foreign savings. Approximately one-third was met by foreign savings, as the trade deficit declined by .8% of income. The remaining two-thirds was met by an increase in government savings. During 1980–82, investment fell, as did all three components of savings. However, because of the larger decline in government savings, foreign savings did not return to its 1973–76 level—the trade balance recovered only partially.

The 1983–86 period stands in stark contrast to 1977–79. Although the trade balance deteriorated by 2.6% of GNP, investment rose by little more than .5 percent. Instead of increased domestic savings, government savings fell pre-

**Table 11.2** The U.S. Experience, 1973–86

Year	Consumption	Investment	Gov't	(Defense)	Net Exports
The shifting composition of aggregate demand (as a percentage of GNP):					
1973–76	62.6	15.8	20.2	(5.5)	1.3
1977–79	62.7	17.9	18.9	(4.9)	.5
1980–82	63.6	15.7	19.6	(5.6)	1.0
1983–86	65.2	16.3	20.1	(6.4)	–1.6
Savings					
	Private	Gov't	Private Investment	Net Exports	Other
Decomposition of net exports: savings – investment (as a percentage of GNP):					
1973–76	18.1	–1.5	15.8	1.3	.6
1977–79	17.9	–.2	17.9	.5	.8
1980–82	17.7	–1.9	15.7	1.0	.9
1983–86	17.2	–3.3	16.3	–1.6	.8

Source: *Economic Report of the President*, 1987.

ceptuously, by 1.5% of GNP, while private savings continued its trend decline. From table 11.2, government spending rose by just .5 percent of GNP (although this figure masks the large shift toward defense spending). Private consumption, on the other hand, ranged from 64.8% to 65.6% of GNP during 1983–86. The jump is especially notable because private consumption has been relatively stable at 63% of income since 1950 and has exceeded 64% in only four years between 1950 and 1980. Thus, the 1983–86 trade deficit coincided with the large reduction in government revenues, which lowered government savings but raised private consumption. The next section of the paper explores the labor market implications of these compositional shifts in demand.

## 11.3 Final Demands and Labor Requirements

### 11.3.1 The Framework

The IO tables provide a useful way to link changes in the composition of demand to shifts in industrial output and labor requirements. As already discussed, the major shortcomings of the approach are that it does not consider whether the demand shifts are associated with relative price changes and that it rules out substitution—on both the demand and the supply side—by assum-

ing constant coefficients. The results provide information about the labor that would be required to produce the sectoral outputs consistent with a particular final demand. These labor requirements may be very different from sectoral employments—especially in the short run. Although the results of an IO analysis cannot be interpreted as indicting shifts in actual labor demands or employments, they do provide information about the likely labor market pressures.

The analysis uses the eighty-five-industry-level disaggregation of the 1980 IO tables.<sup>6</sup> Final demands and data used to compute the technical input-output coefficients are valued in producer prices. The vector of labor requirements per dollar output is matched to the 1977 IO tables.<sup>7</sup> The exercises discussed below will consider different compositions of final demand, so that the index  $k$  refers to the  $k$ th scenario, or aggregate demand composition.

The central relation is given in equation (3):

$$(3) \quad L_k = \gamma [I] \cdot Q \cdot d_k,$$

where

$L_k$  = the total labor required in each industry, given the  $k$ th aggregate demand composition ( $85 \times 1$ );

$\gamma$  = the vector of labor requirements for a dollar of output industry ( $85 \times 1$ );

$I$  = the identity matrix ( $85 \times 85$ );

$Q$  = the total requirements (direct and indirect) matrix of the output from each industry required to produce a dollar's worth of each commodity ( $85 \times 85$ );

$d_k$  = the vector of final demands for each commodity, given the  $k$ th aggregate demand composition ( $85 \times 1$ ).

Equation (4) divides final demand into three parts:

$$(4) \quad d_k = \Pi \cdot \pi_k \cdot D,$$

where

$D$  = total aggregate demand;

$\pi_k$  = the vector of shares in total demand of each of the nine components—private consumption, investment, inventory accumulation exports, imports, and four types of government expenditures ( $9 \times 1$ );

$\Pi$  = the matrix of demands for each of the eighty-five commodities per dollar of each component of final demand ( $85 \times 9$ ).

To focus on the implications of recent shifts in demand composition, alternative final demand vectors were computed by varying the shares in aggregate demand ( $\pi_k$ ) while holding everything else constant. In other words, total demand and the commodity composition of each piece of final demand were held constant as the shares of investment, consumption, imports, etc. were varied.

### 11.3.2 The Components of Final Demand

Variations in the composition of aggregate demand will influence labor requirements even when total demand is held constant. This is because each type of demand has a different commodity basket so that each concentrates its spending on commodities with different labor requirements.

To help interpret the results in the next sections, table 11.3 compares the total labor requirements to produce one million (1980) dollars worth of the commodities in each demand component. (Thus, the entry for imports is positive.) Inventories are excluded because the commodity composition of inventories varies substantially from year to year so that it is not particularly useful to think of them as a fixed basket of commodities.

The first column of table 11.3 reports the total number of jobs required per million dollars. The second column gives the average expenditure per job to produce each commodity basket. The figures point out that there is substantial variation. Government spending requires the most labor per dollar spent. A million dollars of government expenditure requires 69 jobs when spent on education and 55 jobs when spent on defense. (Equivalently, the figures imply a total of \$14,400 of educational expenditure per job and \$18,200 of defense expenditure per job.) Government expenditures are followed by fixed investment and private consumption, which require 42 and 41 jobs per million dollars, respectively.

It may seem surprising that the external sector has the smallest labor requirements and that labor requirements are slightly higher for exports than for imports. Because of the relative capital abundance in the United States, im-

**Table 11.3 Labor Requirements and Final Demand**

Type of Demand	All Workers		Immigrants	
	Jobs per \$million Expenditure	\$/Job	Jobs per \$million Expenditure	% Total Jobs
Private consumption	40.7	24,600	3.5	8.5
Fixed investment	42.0	23,800	3.2	7.7
Exports	26.6	37,600	2.1	8.0
Imports ( - )	23.0	43,500	2.1	9.2
Federal government:				
Defense	54.9	18,200	3.2	5.8
Other	61.8	16,200	3.5	5.6
State & local:				
Education	69.4	14,400	3.1	4.6
Other	59.7	16,700	3.4	5.7
Addendum: <sup>a</sup>				
Exports	38.3	26,300		
Imports ( - )	44.2	22,700		

Source: Tabulated by author from IO tables, as described in text.

<sup>a</sup> Excludes petroleum, and noncomparable products.



ports would be expected to be relatively labor using. However, traditional trade theory has implications for the ratio of capital to labor embodied in trade, not for the absolute amount of any single factor.

In fact, Leontief's paradox (that capital abundant countries have higher capital-labor ratios embodied in their imports than in their exports) has been a standard result in the empirical trade literature. For a review of this literature, see Deardorff 1984. Early resolutions to the paradox have included disaggregation of labor so as to include human capital as a separate factor and special treatment of natural resource industries. More recently, Leamer (1980) has shown that it is not inconsistent with theory for capital abundant countries to have higher capital-labor ratios in imports when they are also running trade surpluses.

In the 1980 IO tables, further disaggregation of imports and exports generates the more intuitive result that imports are labor intensive relative to exports. Both export and import final demands from the IO tables include substantial expenditures on commodities that have little or no domestic labor inputs. For example, 27.8% of exports are classified as commodities from the "rest of the world," including labor remittances. The relevant "industry" uses no domestic labor. Nine percent of imports are from the rest of the world. In addition, 14% are "noncomparable imports," also with no domestic labor usage, while 26% are on petroleum-related products that use relatively little labor. The total labor requirement per million dollars spent on imports excluding these special categories is 44. This exceeds the labor requirements for consumption and investment expenditures and the comparable figure for exports, which is only 38.

Total labor requirements per dollar of expenditure depend on the type of final demand expenditure. It is also interesting to explore how type of expenditure is likely to influence the availability of jobs for immigrants versus nonimmigrants. To do this requires an additional assumption—that the share of immigrants in total industry employment remains relatively constant. Then, if immigrants account for 8% of agricultural employment, an increase of 100 agricultural jobs will generate approximately 8 jobs for immigrants and 92 for nonimmigrants. Using the data on immigrants as a share of total industry employment from table 11.1 in this way, it is possible to split the total labor requirements from column 1 of table 11.3 into immigrant and nonimmigrant. The third and fourth columns of table 11.3 report the number of "immigrant jobs" per million dollars of expenditure on each demand component together with the jobs "held" by immigrants as a percentage of total labor requirements.

Because immigrants are not proportionally distributed across industries, the share of total jobs that are likely to be filled by immigrants changes with the component of demand. The last column of table 11.3 shows that the import commodity basket is the one with the highest immigrant labor concentration. Nine point two percent of the labor required to produce the (1980) import

basket was likely to have been immigrant. This is not surprising given the large percentages of immigrant workers in apparel, footwear, and other industries with strong import competition. Private consumption expenditures have the second highest immigrant concentration, followed by exports and fixed investment. Government expenditures, particularly on education, come at the other end of the scale because the labor requirements to satisfy these demands are concentrated in industries with relatively small shares of immigrants.

Thus, shifts in the composition of final demand will tend to put different labor market pressures on immigrants and nonimmigrants. In particular, an investment boom will generate a larger rise in total labor requirements than a consumption boom, and fewer of those jobs are likely to go to immigrant workers. Overall, a consumption boom will be relatively less beneficial for native workers.

However, these aggregate figures mask differences in the intraindustry labor requirements associated with the demand components and provide an incomplete picture of the likely labor market pressures associated with changes in the composition of aggregate demand. The next step is to consider particular aggregate demand vectors and to compare the implied labor requirements, disaggregating both by immigrant/native and by industry.

### 11.3.3 Alternative Scenarios

The analysis below considers four final demand vectors corresponding to four compositions of aggregate demand. These are shown in table 11.4. The first column shows the base case—the actual composition in the 1980 IO tables.<sup>8</sup> The second column shows a scenario like the 1983–86 period. The

**Table 11.4** Composition of Aggregate Demand (percentages of GNP)

Type of Demand	1980 Base % Total	% Δ Alt. 1 Trade Deficit Consumption Boom	From Alt. 2 Trade Deficit Investment Boom	1980 Alt. 3 Investment Slump Consumption Boom
Consumption	63.1	65.6	63.1	65.6
Investment:				
Fixed	16.1	16.6	18.6	14.1
Inventory	-.3	-.3	-.3	-.3
Exports	12.6	11.6	11.6	12.6
Imports	-11.5	-14.0	-14.0	-11.5
Government, federal:				
Defense	4.9	6.5	5.4	4.9
Other Federal	2.4	2.2	2.6	2.2
State & local:				
Education	5.2	5.0	5.4	5.1
Other	7.5	6.8	7.6	7.3

Source: Tabulated by author from IO tables, as described in text.

trade balance shifts from surplus to deficit, while private consumption soars. In addition, government spending shifts toward federal defense spending and away from state and local expenditures. The third column shows an alternative scenario with the same trade deficit as in column 2, but an investment instead of a consumption boom. The final column maintains the consumption boom from column 2 but assumes an investment slump instead of a trade deficit. (Inventories are the same share of output in all scenarios.)

Because it is misleading to interpret the labor requirements as employment, the results for the three alternative scenarios are presented as percentage changes from the corresponding 1980 base. Table 11.5 provides an overview of the effect of the compositional shifts in demand on labor requirements.

Even though total aggregate demand is held constant, total labor requirements rise in the first two scenarios and fall slightly in the third. The increases for trade deficits combined with either a consumption boom (alternative 1) or an investment boom (alternative 2) are not surprising given the relatively small labor requirements per dollar of total imports. The labor requirements rises somewhat more in scenario 2 because scenario 1 includes a shift toward defense and away from other types of government spending and because investment requires relatively more labor than consumption per dollar expenditure. This also explains the decline in the third scenario.

It is again interesting to decompose the total labor requirements into immigrant and nonimmigrant segments. This is done in the second and third rows of table 11.5. The figures point out a more striking difference between the two trade-deficit scenarios. In the actual 1983–86 combination described in alternative 1, there is little difference between the growth of “immigrant jobs” and “nonimmigrant jobs.” However, alternative 2, the historically typical combination of high investment and trade deterioration, implies a substantially larger expansion of “nonimmigrant jobs” than “immigrant” jobs. Similarly, a switch from investment to consumption with no trade change, as in alternative 3, implies an increase in jobs typically held by immigrants and a decline in jobs typically held by natives.

To the extent that workers in declining sectors are laid off more quickly than workers are hired in expanding sectors, any demand shift that alters the sec-

**Table 11.5 Demand Shifts and Total Labor Requirements**

	% $\Delta$ Alt. 1 Trade Deficit Consumption Boom	From Alt. 2 Trade Deficit Investment Boom	1980 Alt. 3 Investment Slump Consumption Boom
Immigrant	1.22	1.12	.16
Native	1.27	1.81	– .33
Total	1.27	1.75	– .30

toral distribution of labor requirements will tend to cause short-term unemployment, even if aggregate labor requirements have increased. A key implication of table 11.5 is that native workers will have a relatively easier adjustment to expanding imports when the trade deficit is associated with an investment boom. The very different distribution of jobs when the trade deficit coincides with a consumption boom places native workers more directly in competition with immigrants for the jobs in expanding sectors.

The next step is to look at the distribution of the change in job requirements implied by each scenario across industries. Table 11.6 examines the sectoral decomposition of total labor requirements for all sectors and nondurable manufacturing where immigrants are overrepresented. The first column gives the share of each sector in the total labor requirements in the 1980 base. Columns 2–4 give the percentage change in sectoral labor requirements for each of the three alternative scenarios.

The consumption boom–trade deficit alternative leads to a reduction of labor requirements in manufacturing but to increases in service and government sectors. (The decline in manufacturing, with its large concentration of immigrants, is offset by a spurt in household services and other particular industries.) In contrast, the investment boom–trade deficit scenario leads to increased labor requirements in manufacturing but slower growth in the service sectors.

An important implication from the top panel of table 11.6 is that we should expect a trade deficit cum consumption boom to shift employment from manufacturing to service sectors, but it is incorrect to conclude that such an employment shift is “caused” by an expanding trade deficit. A trade deficit of equal magnitude (alternative 2) cum investment boom will tend to shift employment toward manufacturing and construction and away from services, finance, insurance, and real estate.

The analysis has identified two sets of labor market pressures that are likely to arise from a consumption boom/trade imbalance but unlikely to be present in the more standard investment boom/trade imbalance combination. The first is that natives are relatively less concentrated in the sectors and industries with large increases in labor requirements. The second is that labor requirement decreases will be concentrated in the manufacturing sector and therefore more likely to increase pressures for protectionism.

The bottom panel of table 11.6 presents further information about the change in labor requirements in (durable and nondurable) manufacturing under each alternative to make a third point. Within manufacturing, many of the industries with large declines under the consumption boom–trade deficit scenario also have high concentrations of immigrants. In particular, leather, footwear, and plastics, three of the industries suffering the largest losses, have immigrants accounting for 9.5%–16.5% of their work forces. Immigrants are extremely “visible” in these industries. Similarly, of the three industries en-

**Table 11.6** Changes in Labor Requirements in All Sectors and in Nondurable Manufacturing

	1980 Base % Total	% Δ Alt. 1 Trade Deficit Consumption Boom	From Alt. 2 Trade Deficit Investment Boom	1980 Alt. 3 Investment Slump Consumption Boom
<b>All sectors:</b>				
Agriculture	1.95	-.44	-2.78	2.53
Mining	.80	-7.04	-6.56	-.69
Construction	6.39	-.78	8.60	-6.72
Manufacturing	20.87	-.53	.54	-1.85
Transportation, communication	5.08	1.32	.55	.63
Wholesale & retail trade	16.60	2.35	1.54	.79
Finance, insurance, real estate	5.12	2.46	.15	2.61
Services	24.26	2.35	.26	2.42
Government	18.94	1.28	4.46	-2.14
Total	100.00	1.27	1.75	-.30
<b>Nondurable manufacturing:</b>				
Food & kindred products	20.60	1.59	-1.80	3.50
Tobacco manufacturers	.84	1.32	-1.94	3.26
Fabric	6.64	-2.01	-4.40	2.25
Textile mill products	1.38	-1.02	.90	-1.74
Apparel & other textile products	15.86	-.28	-4.77	4.31
Miscellaneous textile products	1.89	.33	-1.62	1.94
Paper & allied products	6.24	-2.36	-2.88	.92
Paperboard containers & boxes	2.53	.08	-.85	.93
Printing & publishing	15.09	1.18	1.02	.70
Chemical & allied products	6.36	-3.93	-4.11	-.03
Plastic materials & synthetics	2.68	-2.92	-3.03	-.08
Drugs	3.78	.23	-1.86	2.64
Paints & allied products	.74	-.27	3.35	-3.19
Petroleum & coal products	3.86	-.50	-2.44	1.43
Rubber & miscellaneous plastic products	8.36	-1.75	-1.25	-.70
Leather products	.28	-8.08	-12.67	4.57
Footwear except rubber products	2.86	-5.70	-11.01	5.31
Total	100.00	.10	-2.20	1.92

Source: Tabulated by author from IO tables, as described in text.

joying the largest increases, two (tobacco and printing) have relatively small concentrations of immigrants, while the third (food) is about average.

#### 11.4 Concluding Remarks

This paper has made two major points. First, changes in the composition of aggregate demand will shift the distribution of labor requirements across industries and sectors. It will also affect total labor requirements. Thus, it is important to identify changes in the components of domestic absorption when analyzing the likely labor market consequences of aggregate demand shifts. By the same token, it is inappropriate to examine changes in imports or exports in isolation. An increase in imports must coincide with an offsetting shift in some other component(s) of demand, and a consumption boom is not equivalent to an investment boom or to a rise in government expenditures. Instead, the total and the sectoral distribution of labor requirements will depend critically on which has occurred.

The analysis showed that the 1980s consumption boom with trade deficit has implied that decreased labor requirements were concentrated in the manufacturing and construction sectors. In contrast, an investment boom with trade deficit would tend to raise labor requirements in both these sectors. Therefore, it is incorrect to ask whether trade deficits tend to “deindustrialize” the economy by shifting employment from manufacturing to services because the answer also depends on the changes in other components of aggregate demand.

The second set of points concerns the role of immigrant workers versus native workers. Immigrants are not evenly distributed across sectors but are concentrated in some manufacturing industries and in private household services. Thus, shifts in the distribution of labor market requirements should have quite different short-run implications for immigrants than for native workers.

The analysis showed that an investment boom cum trade deficit implies that requirements for jobs typically held by natives will increase nearly twice as quickly as requirements for jobs typically held by immigrants. Immigrants are relatively better off in a consumption boom, in which case there is little difference between the job growth rates for the two groups. Furthermore, some of the industries with the largest declines under the consumption boom are also the ones with the heaviest concentrations of immigrants. Both these factors may tend to make immigrants more “visible” in the labor market and help explain the recent increase in concern over their presence.

## Notes

1. Another possible explanation, an increase in the number of legal and/or illegal immigrants entering the country, is discussed in other papers in this volume.

2. This approach is relevant for short-run analysis only. Over time, both immigrants and native workers will presumably move from contracting to growing sectors.

3. This issue is discussed in Sehgal (1985) and in Borjas (1987).

4. For additional discussion of these data, see Sehgal (1985).
5. Net other international transactions are capital grants, net transfers, and interest payments. This term also includes the statistical discrepancy.
6. For further description of these data, see "The Input-Output Structure of the U.S. Economy, 1977" in *Survey of Current Business* (May 1984).
7. These data are from the *Survey of Current Business*, November 1985 and May 1986.
8. These data do not correspond exactly to the figures in table 11.1 because output is measured in producer prices in the IO tables but in consumer prices in the National Income and Product Accounts.

## References

- Abowd, J. M., and R. B. Freeman. 1990. Internationalization of the U.S. Labor Market. NBER Working Paper no. 3321. Cambridge, Mass.: National Bureau of Economic Research.
- Aho, C. M., and J. A. Orr. 1981. The Growth of Trade-Sensitive Employment. *Monthly Labor Review* 104, no. 2(February):28–35.
- Borjas, G. 1987. Self-Selection and the Earnings of Immigrants. *American Economic Review* 77, no. 4(September):531–53.
- Branson, W. H., and J. P. Love. 1986. Dollar Appreciation and Manufacturing Employment and Output. NBER Working Paper no. 1972. Cambridge, Mass.: National Bureau of Economic Research.
- Deardorff, A. V. 1984. Testing trade theories and predicting trade flows. In *Handbook of International Economics*, vol. 1, eds. R. W. Jones and P. B. Kenen. Amsterdam: North-Holland.
- Deardorff, A. V., and R. M. Stern. 1986. *The Michigan Trade Model of World Production and Trade: Theory and Applications*. Cambridge, Mass.: MIT Press.
- Dickens, W. T., P. Shapiro, L. Tyson, and J. Zysman. 1985. The Employment Effects of International Trade: A Review of the Literature. Department of Economics, University of California, Berkeley. Mimeo.
- Grossman, G. M. 1986. Imports as a Cause of Injury: The Case of the U.S. Steel Industry. *Journal of International Economics* 20, nos. 3/4(May):201–24.
- . 1987. The Employment and Wage Effects of Import Competition in the United States. *Journal of International Economic Integration* 2, no. 1(Spring):1–23.
- Krueger, A. O. 1979. The Impact of Foreign Trade on Employment in U.S. Industry. In *Current Issues in Commercial Policy and Diplomacy*, ed. J. Black and B. Hindley. London: Macmillan.
- . 1980. Protectionist Pressures, Imports and Employment in the United States. *Scandinavian Journal of Economics* 82(2):133–46.
- Leamer, E. 1980. The Leontief paradox reconsidered. *Journal of Political Economy* 90, no. 3 (June): 495–503.
- Orr, A. C., and J. A. Orr. 1983. Employment Adjustments in Import Sensitive Manufacturing Industries, 1960–80. Department of Economics, Manhattan College. Mimeo.
- Schoepfle, C. K. 1982. Imports and Domestic Employment: Identifying Affected Industries. *Monthly Labor Review* 105, no. 8 (August):13–26.
- Sehgal, E. 1985. Foreign Born in the U.S. Labor Market: The Results of a Special Survey. *Monthly Labor Review* 108, no. 7 (July):18–24.
- U.S. Trade Related Employment, 1978–84*. 1986. USITC Publication no. 1855, May. Washington, D.C.: United States International Trade Commission.