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Differences in unemployment rates in industrialized countries since the 1970s are often seen as the result of differences in labor market regulations and institutions. According to this view, highly regulated European economies were unable to respond to changes in the world market, while deregulation in the United States allowed firms to engage in employment expansion as the economy grew. However, endogenous forces may be challenging the traditional positive correlation between productivity, employment, and economic growth. Rather than stifling employment and productivity growth, institutions may now be offering policy options to respond to structural changes in the world economy.

INTER-INDUSTRY PATTERNS OF EMPLOYMENT AND PRODUCTIVITY GROWTH IN INDUSTRIAL SOCIETY

In 1960, W.E. Salter published his seminal study on structural economic change based on an analysis of productivity growth in twenty-eight British mining, manufacturing, and utility industries. Salter found no systematic relationship between productivity growth in an industry (which he measured as change in output per worker) and earnings growth in that industry. He interpreted this to mean that changes in earnings are not determined by industry-specific conditions, but by factors in the larger economy. Nevertheless, Salter did find a negative correlation between productivity and prices and a positive correlation between productivity and employment. When output per worker rose, the cost of producing the same amount of output fell, allowing for lower prices. As goods became cheaper, demand for them increased, leading to an increase in employment in that industry. In industries where price elasticities for products were high, lower prices could generate dramatic increases in demand and employment effects were pronounced.

Mass production of household durables was the hallmark of the Golden Age of economic expansion after World War II. A system of positive feedback developed: markets expanded and economies of scale led to higher productivity, lower prices, and higher employment which further expanded demand. This was a defining characteristic of an industrial society. Policies that bolstered income when demand slowed effectively kept the system operating. Institutions involved in the operation of labor markets were less important than differences in productivity between industries. Where productivity was low, usually in services, prices rose relative to prices in manufacturing. In some service industries (e.g., domestic servants or railway porters) demand withered away.

THE POST-INDUSTRIAL SOCIETY

By the 1980s, industrialized countries began to experience a reversal in the relationship between productivity growth and employment expansion. Employment in high-productivity industries began to stagnate or decline. Unless employment in low productivity industries could take up the slack, unemployment was bound to grow. This shift was “caused not by exogenous factors, rigid labor markets, or policy mistakes, though these may exacerbate the problem, but rather by the endogenous development process itself.”[611] In accord with Harrod’s Law, the absolute value of the price elasticity of goods falls as income rises. In other words, as households become more prosperous, they are less responsive to lower prices; as they accumulate more durable goods, they are less apt to need new ones. Employment thus begins to slow down in those industries in which productivity growth is most rapid. This process “contributed to the end of the virtuous cycle of economic development in industrialized countries. It marks a change that is often, though imprecisely, described as the shift from an industrial to a service economy.”[611]

DISTRIBUTION EFFECTS

OECD data for industries in fifteen countries exhibits this reversal in relationship between productivity¹ and employment, but also confirms the persistence of other patterns noted by Salter, namely that earnings differences are not correlated with productivity differences between industries, and that productivity gains translate into lower labor costs and lower prices. Further analysis of OECD data comparing labor cost indicators, operating surplus (a proxy for profits), and productivity levels reveal that the share of labor productivity gains declined in many countries during the 1980s. In some of these countries the profit share of productivity gains increased, while in others the productivity of other non-wage components increased.

ALTERNATIVE EXPLANATIONS

While the reversal of the relationship between productivity growth and employment in industrialized countries has gone unnoticed, the decline in manufacturing employment has received much attention. A review and extension of these arguments to productivity and employment growth dynamics provides possible alternative explanations for the phenomenon under discussion. Some arguments are:

(1) Trade among industrialized countries has led to “deindustrialization.” Trade can account for employment losses in countries in which traded sectors are less efficient than they are in the trade partner. Trade can not, however, account for the negative correlation that exists between employment growth and productivity growth in industries located in OECD countries.

(2) Since the early 1970s, less industrialized countries engaged in trade have experienced an increase in the growth rate of exports from newly industrialized countries (most of which go to industrialized countries), and a decrease in the growth rate of exports from industrialized countries. However, estimates of employment impact on the industrialized world are too low to account for the decline in manufacturing, nor can they explain why

the reduction in employment is greatest in industries with high productivity growth. Adrian Wood, in his 1994 book *North-South Trade, Employment and Inequality*, claims that the greatest reduction of employment in industrialized countries is occurring among low-skilled manufacturing workers. This is because industry is shifting towards more capital intensive (presumably more productive) employment activities, and/or firms are investing in more labor-saving technology as a defense against competition from low-wage countries. These effects may be accurately described, but they do not explain the negative correlation between employment and productivity growth. The outcome of this shift in the composition of labor and capital is still not clear. If firms defensively turn to labor-saving technology, the impact on employment will still depend on the price elasticity of demand, as explained above.

(3) Some analysts claim that in mature (non-agricultural) economies the shares of services and manufacturing in real output remain constant over time, while their rates of productivity growth diverge. However, one recent study shows an increased role for demand factors in U.S. output shares, while other studies indicate that the share of services in real output is growing faster than the share of goods. Both are consistent with the analysis given here that demand elasticities for manufactured goods change as industrialization progresses.

(4) The negative relationship between productivity growth and employment could mean that industries, as they are defined in this analysis, have submarkets with different patterns of productivity and demand that are masked by industry averages. Though individual firms within an industry may differ in productivity growth, the differences evaluated here occur *between* industries. In this case, higher-productivity firms will survive and lower-productivity firms will not. The more productive firms will expand supply to compensate and employment in the industry will still depend on demand elasticities.

CONCLUSION AND POLICY OPTIONS

Industrialized countries have shifted from an industrial to a post-industrial model. While some have argued that exogenous changes in wage and price-setting behavior caused this shift, these two variables exhibit the same relationship to productivity under both regimes. Instead, the shift is shown to be the result of factors endogenous to the process of development itself. As incomes rise, demand is less responsive to the decrease in price that accompanies productivity growth; in other words, as households accumulate consumer durables, the demand for new ones declines.

In the long run this shift may reverse the relationship again if new products are introduced that are capable of setting off a new “virtuous cycle.” Information and communication technology may be the key. Although their full potential is not clear, public policy can increase the capacity to diffuse and incorporate new technologies. In the short run, however, it appears that employment growth will remain confined to services. Countries might choose policies that can increase productivity in services, perhaps through teamwork or shared income arrangements, or they might choose to promote inefficient, low-wage activities. “But these are social and political

choices on which economists can lay no special claim and on which, like other citizens, [each] gets just one vote.”[622]

Notes

1. Productivity is defined as real output per employed person, except for the U.S. where employment is based on full time equivalents and includes the self-employed.