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CHAPTER 8

FACTORS IN THE TREND OF EMPLOYMENT IN THE SERVICE INDUSTRIES

OUR survey of the trends in employment in the service industries has been devoted chiefly to individual industries with widely different characteristics. Their variety is of course the reason it was desirable to look beneath the portmanteau concept of "the service industries." Can we now, looking back over these industries, find major forces which have influenced most or all of them, and which would probably deserve special attention in studies of the many service industries we have not studied? This problem is the subject of this, our final chapter.

Every classification of economic forces yields categories that depend upon one another. Income, for example, depends in part upon resources, and both capital resources and labor resources (including number, quality, and training) depend upon past and present income. This interdependence is reduced, and our task of explanation is simplified, if we narrow our question: What forces govern the trend of employment in an industry which does not itself constitute any great share of the economic system? Then variables like income may be taken as at least approximately independent of the particular industry's fortunes, whereas, for the whole economy, income is determined by resources and technologies.

1. Technology

When one is concerned, as we are, with only the longer-term movements of employment, it is traditional to begin with or place special emphasis upon technology. Historical studies of manufacturing or transport industries seem quickly to drift into an exciting chronicle of unending technical advances. The emphasis has considerable basis: the machine or the chemical process often dominates the labor required per unit of product as well as the relative price and extent of sales of the commodity.

In the service industries it is easier to err in the opposite direction and minimize the role of technology. This is true because technological advance often takes two elusive forms. First, the advance may consist in an increase in the knowledge and skill of the worker, permitting him to work more rapidly or effectively. Second, the

advance may take the form of an organizational change. Seldom, however, will technical advance in the service industries be so palpable as its counterpart in manufactures—say a loom or a hank of nylon.

Mechanization, to discuss first this form of advance, has been present. Certain kinds of machinery, such as electrical office equipment and elevators, are used by many industries (including service industries), but their ubiquity means that usually they have no preponderant effect upon the costs and prices of one industry relative to others. In a few service industries there has been an accumulation of technical advances of this sort which have had a noticeable influence upon employment trends. The retardation of growth and then the decline of the number of barbers, and more recently of beauty parlor workers, are attributable in considerable part to mechanical and chemical contrivances which permit the consumer to serve himself. The host of household appliances no doubt played some, although probably a minor, part in the decline of domestic service. Conversely, the changing technology of war is part of the explanation for the great rise in the number of military officers.

But in only one set of service industries—finance, insurance, and real estate—do we find relatively large amounts of capital per worker, and only in real estate relatively large amounts of durable, tangible capital.[1] In the other service categories, if an industry—like power laundries or cleaning and dyeing establishments—has special machinery complicated and extensive enough to be worthy of study, it is almost enough to classify it as a nonservice industry. It is worth noting that both of these industries have at times been enumerated in the census of manufactures.

The first form of technical advance we listed—increased skill of the worker—has probably had little direct influence upon employment as a rule. In medicine the advances have played a considerable part in preventing a rise in the ratio of physicians to population. This appears to be the only important case in our sample of industries, however. More often, increases in knowledge have increased the demand for services even more than they have increased the supply. If perchance present-day professors know more than their predecessors—as they should—it does not serve to reduce, but rather increases, the demand for their services.

The remaining form of technical advance—organizational

[1] Compare the last two columns in Table 5.

changes—is the most interesting. It is conventionally overshadowed by mechanical advances in the commodity-producing industries, but not so in services. We have found it to have appreciable importance in areas as different as trade and medicine.

A change in the organization of an industry is a change in the scale or range of operations of the business unit, or in the relationship among business units. In trade there were at least four changes in business practices worth recapitulating. The chain store took over some of the functions of wholesalers and jobbers, and on the other hand persuaded the consumer to undertake some retailing functions such as finance and delivery. The department store supplied to the consumer the convenience of accessibility to a wide range of commodities. The mail-order establishment persuaded the consumer to forgo certain services such as immediate availability and inspection of goods in exchange for lower prices. The division between producing and distributing has been obliterated for many goods as manufacturers have undertaken wholesaling, perhaps (we could find no wholly satisfactory explanation) in part because large scale producers and large scale retailers can dispense with the assembling and dispersing of goods fundamental to the wholesaler's function.

The economist is especially familiar with organizational changes, and it may be that he is prone to underestimate their influence relative to advances in natural science technology. The service industries remind us that such changes can have substantial influence upon the trend of employment, and suggest that they may also play a considerable role in the commodity-producing industries.

2. *Specialization*

Progressive specialization characterizes a growing economy. When goods are few and production processes simple, when technical knowledge is largely empirical and the pace of technology slow —then there is little need for specialization. But as goods multiply, processes of production become complex, technological knowledge becomes abstract and formal, and the rate of obsolescence of knowledge rises, specialization must become ever finer.

The business service industries are important beneficiaries of this specialization. The host of auxiliary enterprises that surround the commodity-producing industries embrace research, design and construction, marketing, advertising, legal and regulatory prob-

lems, internal control systems, training of specialized labor, and other business functions which require highly specialized knowledge and skills. The variety of these services and the small size of the enterprises supplying them together make for an incomplete enumeration of them by data-collecting bodies. One may plausibly argue that many are now misclassified in the commodity-producing industries and many are incompletely reported.

The consumer service industries have shared in this drift toward specialization. (One special change favorable to specialization, the urbanization of the population, is discussed later.) The trend is evident in the growth of specialization of medical practice, or in the proliferation of varieties of educational institutions. Specialization takes a different form when the family abandons activities, such as baking bread and even preparing meals, to business enterprises. There are reverse movements, as when technological developments returned much personal care (shaving and hair dressing) to the household, but the dominant tendency is in the other direction.

3. *Income*

The demonstrated importance of fluctuations in income in explaining short-run changes in savings and in the consumption of particular goods, and the obvious differences in the consumption patterns of rich and poor nations, give rise to the hope that changes in income will also be important in explaining trends in employment. The hope is not abundantly fulfilled.

Our experiments with income as a variable in explaining trends in industry outputs (and thus, in a more remote manner, trends in employment) have not been successful. In trade we found no correlation between changes in employment from 1920 to 1940 in the various states and changes in per capita income. Again there was no relationship between differences among states in the employment of domestic servants in 1940 and differences in average family income. A similar comparison by states of changes in per capita income and changes in college enrollments for the decade 1940 to 1950 displays an inverse relationship.[2] On the basis of budget data one would certainly have expected a positive association of family income and employment of domestic servants or college attendance.

It would be premature to conclude that long-term changes in in-

[2] R. H. Ostheimer, *Student Charges and Financing Higher Education*, Columbia University Press, 1953, p. 115.

come are a minor influence on consumption (and hence employment) changes. As a rule, income loses influence in these statistical studies only if other variables, which are related to income, are introduced. Ostheimer found that the educational level of the population was a very strong influence making for differences in college attendance.[3] High levels of education are both a cause and a consequence of high incomes.

Or, to use our own studies, urbanization proves to have a strong influence upon numerous service industries. Clearly urbanization is in part dependent upon income—the increase in urbanization in this country has been due most basically to the rising productivity in agriculture, transportation, and urban industries. Yet the relationship between income and urbanization is far from unique; many poorer nations are more highly urbanized than the United States.

Since we cannot isolate perfectly the net influence of urbanization (or of other characteristics we discuss later), it is possible that we have attributed some of the influence of income to urbanization or other variables.

And yet it would be timid to shrink away from the hypothesis that the absolute level of income is only a minor influence on the longer trends of consumption. We have observed in history poor nations that devote large shares of their resources to warfare or cathedrals, and can observe advanced nations that devote large shares of their resources to food and housing. It would seem plausible from daily observation that a richer person can better protect himself against possible adversities than a poorer person, but as our nation has grown wealthy the state has assumed an increasing share of the task of protecting individuals from economic hardship. It is easy to contrive or overemphasize paradoxes in this area. But it is also possible to overlook the versatility that societies display in spending a rising income.

The distribution of income among families may be an almost wholly independent source of influence on consumption. There is little enough knowledge of the size distribution of income in distant times and places, but what little there is offers no strong reason for believing that it is closely correlated with income levels. The trends of inequality and income level have moved inversely in this country in recent times. There are no doubt many subtle relation-

[3] *Ibid.*

ships between the two, but it seems that for considerable periods they may move rather independently.

The recency with which income distribution has been studied in a quantitative fashion, and the incompleteness of our present knowledge, make it difficult to determine its influence upon consumption and employment. We have used a measure of differences in the inequality of income among states to explain differences in the employment of servants, with fair success. More intuitive international comparisons point in the same direction. One may conjecture that the relative rise in the incomes of physicians, not paralleled in other professions, is also partly due to an expansion of demand for their services because of decreasing inequality of income distribution. It is too soon to claim that income distribution is a strong influence upon trends of employment, but it is probably not too soon to commend its use as a variable in the study of industries which sell much of their output to the wealthier classes.

4. Population Characteristics

The trade between urban and rural populations was a mainspring of the progress of opulence in Europe, according to Adam Smith. Their reciprocal needs, and the prodigality of landlords, were the bases for trade and accumulation. With his customary unvarnished prose, Smith wrote: "A revolution of the greatest importance to the public happiness, was in this manner brought about by two different orders of people, who had not the least intention to serve the public. To gratify the most childish vanity was the sole motive of the great proprietors. The merchants and artificers, much less ridiculous, acted merely from a view to their own interest, and in pursuit of their own pedlar principle of turning a penny wherever a penny was to be got. Neither of them had either knowledge or foresight of that great revolution which the folly of the one, and the industry of the other, was gradually bringing about."[4]

It would therefore be unhistorical to claim for modern times the discovery of the importance of differences between urban and rural consumers. But we may claim for recent times the beginnings of quantitative measures of the effect of urbanization and the demonstration that it can be an appreciable force even within periods as short as a generation.

[4] *The Wealth of Nations*, Modern Library, 1937, pp. 391-392.

In retail trade, for example, urbanization has brought a considerable amount of product, once produced and consumed within the household, into the money economy and into the channels of trade. In comparisons of changes in trade among the states from 1920 to 1940, urbanization displays a large influence, where income shows none. Employment in eating and drinking places has been growing very rapidly, and we find that this industry's customers are primarily urban dwellers. Urbanization has had similar effects upon routine service industries such as laundries and—to a lesser extent—upon professional services.

Compared with the differences between farm and nonfarm life, all other differences among communities of different sizes have relatively little influence upon an individual's spending habits. Since farm families have already fallen to less than one-fifth of the population, we may infer that changes in urbanization and community size will play a much smaller role in future changes in employment than they have in the past.

The age structure of the population also has considerable influence upon certain of the service industries. Enrollments in elementary and secondary schools are virtually in strict proportion to the corresponding population of ages five to eighteen. The strong upward trend in college attendance has served to diminish the effects of the fall of birth rates in the 1930's, but soon this trend will be reinforced by the rising population of college age, and vast increases in college enrollments are in prospect. We have also found that cities with a smaller number of children per family have relatively higher purchases of restaurant meals. The aged in the population are also increasing relatively, and this is a factor in the rising demand for medical service.

There are many other characteristics of our population that may exert an influence upon employment trends. The higher the percentage of married women in the labor force, the greater is the demand for some service industries such as beauty parlors and eating places. No doubt race and nativity and occupation leave their imprint on the family's habits. All we can say is that our unsystematic experiments with population variables other than urbanization and age have generally been unsuccessful in explaining changes in the rather broad categories with which we have been concerned.

5. The Supply of Labor

The composition of the labor force can also have a large influence upon the trend of employment in certain industries. In the great mass of semiskilled occupations there is sufficient industrial and occupational mobility so that any one industry, if it is not of great size, can recruit additional workers without encountering sharply rising wage rates. But at either end of the occupational ladder this is less apt to be true.

At the top of the ladder stand the professions (and the business executive class). The professions are by definition the occupations for which one requires extensive formal education, and we have found that over the past half century and longer the standards of training have been rising in every profession. Only because of the historically unprecedented scale on which higher education is supplied in this country have we been able simultaneously to increase both numbers and standards in the professions. Moreover, the expansion of numbers and the rise of training standards have been accompanied—at least over the recent decades for which we have data—by a reduction in the relative earnings of the professional classes.

Since the earnings of the professional classes still exceed the amount necessary as compensation for the additional costs of acquiring this education, one may expect a continuation of the growth of these classes. But of the traditional occupations—law, medicine and dentistry, clergy, military officers, and college teachers—only the last two have been growing rapidly. The primary growth of the professions is now taking place in engineering and business professions, neither of which is organized, as are the traditional professions, as independent proprietors or employees of nonprofit bodies.

Entrance into professions and occupations is increasingly subject to licensing requirements—we have encountered this development in medicine, in law, and among barber and beauty shop operatives, and we could have studied also elementary school teaching, accounting, and other fields. Sometimes the licensing requirements are designed solely to raise the level of competence in a field, and sometimes some desire to restrict numbers for ordinary monopolistic motives is present, but in either case the licensing may seriously affect numbers in a field.

At the other end of the occupational ladder from the professions

stand the workers who lack both formal educational training and the skills that come from long experience. We find these workers preponderantly in the service industries—domestic service and routine workers in laundries, hotels, etc. In the past these occupations have been staffed chiefly by women, and especially by Negro and immigrant women. With the extension of education, and the sharp drop in the rate of immigration, this class of workers is becoming increasingly more expensive to their traditional employers.

Colin Clark's thesis that tertiary industries—roughly service industries—become an increasing share of the labor force as an economy progresses (as measured perhaps by rising per capita real income) is well known.[5] We saw in Chapter 1 that the American experience conforms to this rule.

Clark does not elucidate in detail the rationale of this trend, or the reasons why we find considerable variations among nations in the level and rate of growth of the service industries. The foregoing remarks provide a partial answer to these questions. We find that several developments which generally accompany economic growth in his sense do contribute to the rise of the service industries. The growth of urbanization, the spread of education, especially higher education, and the aging of the population—a consequence of falling birth rates and improving medical care—all lead to the expansion of important service industries. The increasing specialization that follows on expanding economic activity favors a host of business service industries.

But not all the forces normally accompanying economic development favor the service industries. The large decline in domestic service which is occurring in all industrial countries is also a product of the rising education and decreasing inequality of income, and the former development is surely and the latter possibly an accompaniment of rising real income. Technological changes cause the rise and fall of service industries just as they do of commodity-producing industries: the filling station replaces the stable when the automobile replaces the horse.

Moreover, these forces which we have found to be directly related to employment in the service industries are not in general perfectly, or indeed always highly, correlated with rising real income or any other index of economic development. We must there-

[5] *The Conditions of Economic Progress*, Macmillan, 1940, Chapter 10.

fore expect to find large national differences in the roles and rate of growth of the service industries: as between two countries with equal real incomes, the service industries will be larger, we may predict, the greater the urbanization, the higher the level of education, the lower the degree of inequality of income distribution, the larger the relative numbers of children and aged in the population, and so forth. Students of economic development may find it necessary to study a host of these phenomena, which are neither wholly independent of nor wholly dependent upon the general level of economic activity, before they can make tolerably precise predictions of the structure of industry.

It has often been remarked that research is an unusual form of purposeful activity: it sets out to answer questions but ends by multiplying questions. It is like a strange animal whose appetite is whetted in proportion to what it eats. We are therefore wholly traditional in our broadest conclusions: no simple rule describes the trend of employment in the promiscuous ensemble of service industries; a common group of forces seems to be operative in most of them; but we have not isolated all these forces or measured any of them very precisely. Responsible predictions of trends in this large area will not be possible until we have pushed much further in the study of individual industries.