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AN EVALUATION OF THE DICHOTOMY BETWEEN STRUCTURAL
VERSUS DEFICIENT-DEMAND UNEMPLOYMENT

by

Carl D. Parker

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Economics

Approved:

Utah State University
Logan, Utah

1967

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Carl D. Parker

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ABSTRACT

An Evaluation of the Dichotomy Between Structural
Versus Deficient-Demand Unemployment

by

Carl D. Parker, Master of Science

Utah State University, 1967

Major Professor: Professor Glenn F. Marston
Department: Economics

This thesis is addressed to the theoretical controversy which revolves around the explanation of the higher unemployment rates that prevailed after 1957. The debate that has been generated concerning the causes of this unemployment problem is usually referred to as the "structural" versus "deficient-demand" debate. An attempt is made to present a representative view of both sides of the debate as well as a critical evaluation of both positions. Care is taken to keep both positions separated for each leads to entirely different policy recommendations. A more general theoretical structure is presented which will be useful in analyzing the relevance of structural unemployment. Finally, the controversy is analyzed in terms of current economic development.

(62 pages)

CHAPTER I
INTRODUCTION

Objectives

The objective of this thesis is to analyze the debate which has been generated concerning the causes of recent high levels of unemployment known as the "structural" versus "deficient-demand" debate. This debate will be analyzed with the retrospection that is afforded through the passage of time.

More specifically, this study is concerned with the following: (1) presentation of representative views from both sides of the debate; (2) discussion of the policy significance of the debate; (3) analysis of evidence useful in evaluating both positions in the debate; (4) inspection of the economy's recent economic situation in order to discover any additional evidence pertaining to the problem.

Recent Historical Trends

At this point, it might be useful to note the recent historical trends that have brought about this debate.

The Great Depression brought about changes in the attitudes toward public policy concerning unemployment. This change in attitudes may be attributable, in part, to effects of the depression which were felt directly or indirectly by everyone in the economy. At the depths of the depression as much as one-fourth of the labor force was unemployed. Throughout the 1930's the unemployment rate

remained above 14 per cent.¹ The public was not convinced that the depression was attributable to governmental errors, nor were they able to accept that the depression was an inevitable result of their economic system. The result was a call for social action which was answered, to some extent, by the innovations of the New Deal.

It should be noted here that during the 1930's there was a specific development in theoretical economics which established a basis for public policy against unemployment. This development was the denial by John Maynard Keynes of the validity of Say's Law. The destruction of this doctrine by Keynes was significant in that it destroyed the logical foundation for faith in the basic stability of the private economy which, according to the doctrine, assumed that full employment would automatically be achieved. Keynes thus provided a theoretical basis for new public policy.

In 1946, the nation set high and stable levels of unemployment as an objective of national economic policy. This goal was expressed in the Employment Act of 1946.

The succeeding post-war unemployment rates were lower than those of earlier years with unemployment rates averaging in the neighborhood of 4 per cent. From late 1957 to 1964, however, unemployment was not significantly below 5 per cent at any time. The following quotation should bring to focus the trend of unemployment in recent years:

Since mid-1957 unemployment rates have averaged considerably higher than earlier in the postwar period. Measuring from cyclical peak to peak, the unemployment rate averaged

¹Stanley Lebergott, "Unemployment: A perspective," Men Without Work: The Economics of Unemployment (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1964), p. 27.

4.2 percent during the 18 quarters of the 1948-53 cycle, 4.4 percent during the 17 quarters of the 1953-57 cycle, and 5.9 percent during the 11 quarters of the 1957-60 cycle. This adverse development was highlighted by the persistence of high levels of unemployment during the expansion phase in 1959 and 1960. Higher levels of unemployment have been accompanied by an increased average duration of unemployment, with consequent depletion of family financial resources. The average duration of unemployment was over 11.5 weeks in the 1953-57 cycle, and over 13.5 weeks in the 1957-60 cycle.²

This quotation should help us place the unemployment problem in proper perspective. As indicated in the quotation, a rather unusual aspect of unemployment rates after 1957 was their persistence even during the expansion phase of the business cycle.

Definitions

In one sense, there are about as many causes of unemployment as there are people involved. Common denominators which can permit some meaningful grouping or classification of the types of unemployment are necessary for meaningful policies and programs concerning the problem. The literature on unemployment provides many different kinds of classification systems. Probably the most meaningful is a system which groups unemployment according to its duration. The categories include: transistional or frictional unemployment, seasonal unemployment, cyclical unemployment, and structural unemployment.

Exactly what is meant by structural unemployment? Does it refer to the existence of the differentials in the incidence of unemployment

²U. S. Joint Economic Committee, Subcommittee on Economic Statistics, Higher Unemployment Rates, 1957-60: Structural Transformation or Inadequate Demand, 87th Cong., 1st Sess., 1961, p. 3.

as between different levels of education or skill? What about unemployment differentials among different age groups and different ethnic groups? Does structural unemployment refer to a relative widening of the differentials in unemployment among various groups in recent years? These questions indicate that a proper definition of structural unemployment is absolutely essential in any discussion which involves the term.

It is important that we define the above categories of unemployment so that structural unemployment is more easily distinguished from them. As far as this presentation is concerned, the writer will borrow Eleanor Gilpatrick's definition of frictional unemployment:³ "Frictional unemployment refers to short-term unemployment due to normal market adjustments." The frictionally unemployed are those unemployed for whom jobs are available within reasonable reach, which are reasonably suited to their skills, and pay current wage levels. Seasonal unemployment refers to regular recurrent spells of unemployment which show a yearly pattern. This type of unemployment could be considered as a component of frictional unemployment because both may occur in a healthy economy. Since frictional unemployment may exist, regardless of the level of demand, the definition of full employment is that level of unemployment where all unemployment is frictional.

Short-term, demand-linked unemployment is often called cyclical unemployment since it appears as a characteristic of business cycle

³Eleanor Gilpatrick, "On the Classification of Unemployment: A view of the Structural-Inadequate Demand Debate," *Industrial and Labor Relations Review*, XIX (January, 1966), 201ff.

fluctuations. It is the unemployment caused by levels of final demand sufficiently low to leave unutilized members of the labor force with currently used labor skills. Inadequate aggregate demand is the term usually referred to as the cause of this type of unemployment.

The reader is reminded that structural unemployment is handled in detail in Chapter II and that deficient-demand unemployment is considered in depth in Chapter III. No more than a cursory examination of structural unemployment will be presented at this time. Structural unemployment may be considered independent⁴ of the level of final demand and is a long-run phenomena. Such changes as in the composition of demand, the location of industry and technology affect the composition of labor-skill requirements. Since the labor force is not able to adapt itself to the new requirements instantaneously, the unemployed individual will possibly be faced with one of the following situations: an obsolescence of their skills, nontransferability of their skills to other occupations, or smaller proportions of certain skill requirements in production. Unemployed individuals faced with any of the above situations are considered structurally unemployed.

As Eleanor Gilpatrick has stated:

The key to the structural problem is the mismatching of specific labor skill demands and supplies where there is (1) limited transferability of skills and (2) limited substitutability among skills.⁵

⁴Structural unemployment may not be completely independent of the level of final demand. For example, if unemployment rates remained relatively high for a long period of time, it is possible that some unemployed persons might lose their labor skills and could not regain employment once aggregate demand increased.

⁵Ibid., p. 203.

Technical change may result in the obsolescence of a certain skill, for example the coal miner, stagecoach producer, or the blacksmith. In such cases, no amount of increase in demand will provide employment for the displaced workers, unless they are qualified and willing to do other work.

If technological change results in an increase in the proportions of one kind of skill to the detriment of others, and if the one in greater demand has a shortage in supply in the population, then all those with skills which are complementary to those in short supply will also be considered structurally unemployed.

CHAPTER II

STRUCTURAL UNEMPLOYMENT

Within this chapter, the writer will attempt to present the structuralists' position in the debate over the cause for higher rates of unemployment.¹ The structuralists, according to their adversaries, have not stated their position clearly. As a result, the structuralists' adversaries have had to interpret the structural theory and generate clear test statements. These test statements, purporting to indicate the structuralists' views, have not always reflected a position that a "good" structuralist would accept. The purpose of this chapter is not to review the various statements or hypotheses that have been generated, but to indicate a representative prostructural position that might be acceptable to a structural theorist.

Pro-Structural Position

The structuralists have presented a general argument concerning the nature of technological progress with some assertions about how this affects unemployment, and they have presented a few facts which are meant to bear out the view being advocated.² The explanation of higher unemployment as evidenced since 1957 and before the recent

¹The following could be considered in the ranks of the structuralist: Charles C. Killingsworth, Gunnar Myrdal, Harold Demsetz, Thomas B. Curtis, and Walter Fackler.

²Richard G. Lipsey, "Structural and Deficient-Demand Unemployment Reconsidered," Employment Policy and the Labor Market, ed. Arthur M. Ross (Berkeley and Los Angeles, California: University of California Press, 1965), p. 242.

reduction in employment beginning in 1964 proceeds as follows:³

Charles Killingsworth was, in his argument, saying that the very fact that this is an age of high mass consumption, to use Rostow's terminology, means that one luxury good after another is going to reach a state of satiation of demand, i.e. when we get into the area of consuming luxuries, we find that the marginal utility of consuming any one particular luxury falls rapidly. This would mean that the individual's demand curve for luxury items is as we would expect, fairly inelastic (Note: Market demand may still be elastic.) We are, however, saved from secular stagnation, satiation of demand in general, by the great variety of luxury items available to us, so that as we consume one and drive its marginal utility down, we quickly shift to consuming a different luxury good. If the consumer is not consuming such things as electric can openers, then he will be consuming such things as color televisions or outdoor camping equipment.

In one sense this can be seen as instability of consumer patterns, and it imposes upon the labor market a rapidly shifting pattern of labor demand. This rapidly shifting pattern is one with which normal processes of labor market response and mobility cannot keep up. Just as the normal processes which facilitate occupational mobility retrain and shift workers into electrical household goods, the demand may fall off for those kinds of products relative to the demand for goods requiring skilled furniture craftsmen, for example. This implies that

³Except where otherwise indicated, the ideas of this section concerning automation are those of Charles C. Killingsworth, "Automation, Jobs, and Manpower," *Men Without Work: The Economics of Unemployment*, ed. Stanley Lebergott (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1964), pp. 55-57.

the structural problem of lack of social, occupational, and geographic mobility is not an absolute but rather a relative one and is one in the sense of a mere lag in what is needed by an increasing of the rapidity of shifts in product demand.

An industry which is in its early growth stages may experience further rapid growth with the introduction of automation. This may be accomplished especially through price cuts. Total employment in the industry may increase substantially as a result. However, when the industry's markets approach saturation, it is no longer possible to substantially increase the amount demanded via price reductions.⁴ Further improvements in productivity made possible by automation and other technological advances allow the industry to keep up with any growth in demand while at the same time reducing employment. The structuralists suggest that this is what happened in a number of our major industries in the 1950's. They indicate that:

About 99.5 percent of the homes that are wired for electricity have electric refrigerators; 93 percent have television sets; 83 percent have electric washing machines; and we have more radios than homes.⁵

It is not meant to be implied that all consumer markets in the United States are approaching saturation and that the consumer will soon be buying only replacements for the stock of goods they have accumulated. Changing patterns of consumption, which have an important effect on patterns of employment, are noted throughout our history. The economic

⁴Killingsworth used the term "mature industry" to indicate that the industry's markets are approaching saturation. This is not the conventional usage of the term "mature."

⁵Killingsworth, op. cit., p. 59.

environment, according to the structuralist, determines the effect that automation or technological change will have on the economy. The economic environment today is so different from that of half a century ago that there are some major differences between automation and most earlier technological changes. These differences are:⁶

(1) There is much broader applicability of automation. Automation is evident in almost every phase of industrial activity.

(2) Automation appears to be spreading more rapidly than previous major technological changes.

(3) In the past, automation techniques were mainly the product of the production man, who was skilled in his work and closely linked to the production line. Today automation techniques are the products of individuals who are not closely related to the industry in which the technique is to be applied. They are not linked to the industry through working skills or physical contact with the production line.

(4) The effect on the structure of demand due to automation is very different from that of earlier innovations. Killingsworth, in emphasizing these differences, has said:

Today we have the electric eye, the iron hand, the tin ear, and the electronic brain. We also have the knowhow to tie them together in self-regulating systems that can perform an enormous variety of jobs.⁷

The structuralists say that this difference in technological

⁶Ibid., p. 61

⁷Ibid.

change has a definite effect on the labor market. Automation has the fundamental effect on the labor market of "twisting" the pattern of demand. It pushes up the demand for workers with large amounts of training while pushing down the demand for workers with little training. These changing patterns of demand, however, would not create labor market imbalances unless changes in the supply of labor lagged behind. These statements yield the following generalization:⁸ at recent low rates of economic growth and the high levels of unemployment, there existed a scarcity of highly educated and skilled labor. A rising trend of business activity would very soon be bottlenecked by a lack of this type worker, long before the hard-core of unemployment of an inferior quality became employed. This physical limitation should tend to push up prices since wages would tend to rise.

It has been suggested that the expanding service sector of the economy might absorb some of the hard-core unemployment. Will the loss of jobs in goods industries be offset by the growth of jobs in services? Although this kind of offset is possible, it is by no means inevitable. "Unfortunately, the displaced production worker does not have the education or skills to find employment [comparable with respect to wage] in the expanding service sector."⁹ This is evidenced by the educational requirements for such jobs as clerks, teachers, nurses, and etc.

⁸Gunnar Myrdal, Challenge to Affluence (New York: Pantheon Books, 1963), p. 22.

⁹Daniel E. Diamond, "New Jobs for the Structurally Unemployed," Challenge, XII (November, 1963), p. 37.

The assumption sometimes used in economic theory, that all labor is homogeneous, cannot be accepted. Rejecting this assumption invalidates the conclusion that only inertia or ignorance can impede the free flow of labor from one industry to another as the pattern of consumer spending changes. J. M. Keynes made this assumption when he measured labor in wage units.

The labor force is not homogeneous, but is heterogeneous, and is heterogeneous in a number of different dimensions.¹⁰ The following dimensions can be obtained from United States data: color, sex, age, industry of last employment, occupation, and geographical areas. Some comparisons within these dimensions can be made: male versus female, white versus non-white, and one age group versus another. The youth, females, and non-white, according to some structuralists, have suffered a disproportionate increase in their unemployment rate.

Policy Implications

Perhaps the main reason that any serious attention should be given to the structuralists' argument is because of the policy implications involved in their theory.

The structuralists indicate that the incidence of structural unemployment is highest among the less skilled, the teenagers and Negroes, in particular. To help reduce this incidence, the structuralists advise:

To reduce the abnormally high and stubborn unemployment rate for Negroes requires a major improvement in their education and training and attack on racial discrimination.

¹⁰R. A. Gordon, "Has Structural Unemployment Worsened?," Industrial Relations, III (May, 1964), p. 55.

To reduce the persistent high rate for the unskilled and the uneducated groups demands measures to help them acquire skills and knowledge. To reduce excessive unemployment associated with declining industries and technological advance requires retraining and relocation.¹¹

The policy implications may be summed up by saying that attention is concentrated on relocation and other methods that could be used to increase labor mobility, also attention is focused on skill improvements through the educational system and training institutions.

A pure structuralist, if one exists, would argue that there are already enough jobs to go around, all we need to do is solve the growing problem of matching labor demand and labor supply through policies which facilitate social, occupational and geographic mobility.¹²

Accusations and Assumptions

The structuralists have not stated their position clearly and as a result have allowed themselves to be backed into a box in which they must prove the adequacy of over-all demand in order to make their case.¹³

Many of those who feel that the major explanatory variable of

¹¹Walter W. Heller, "Employment and Manpower," Men Without Work, ed., Stanley Lebergott (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1964), p. 73.

¹²Arthur M. Ross, "Introduction: The Problem of Unemployment," Unemployment and the American Economy, ed., Arthur M. Ross (New York: John Wiley & Sons, Inc., 1964), p. 10. (Although there is probably no such thing as a "pure" structuralist, it is useful to hypothesize such in order to develop a "polar case.")

¹³Eleanor Gilpatrick, "On the Classification of Unemployment: A View of the Structural-Inadequate Demand Debate," Industrial and Labor Relations Review, XIX (January, 1966), p. 209.

high rates of unemployment is the lack of sufficient aggregate demand take the position that significant correlation between unemployment and aggregate demand is itself sufficient evidence to reject the structuralists' argument.¹⁴ However, it might be unfortunate to dismiss the structuralists' theory in this manner because surely it is possible for some segment of unemployment to be associated with structural relations even though inadequate demand may be the major cause.

In a sense, the structuralists are asked to prove that increases in job vacancies match increases in unemployment. If unemployment has increased strictly because of structural imbalances rather than because of inadequacy of total demand, one would expect to observe an increase in unfilled job vacancies along side the increase in unemployment. At present, there is no comprehensive series specifically designed to measure unfilled job vacancies.¹⁵

Failure to prove the structuralist's argument against this statistical test is not as critical as it may seem since it is probable that the relationship between aggregate demand and structural unemployment is much more complicated than an "either" - "or" relationship.

One of the real objections to the structuralists' theory is the failure of the bottleneck hypothesis to make any allowance for the proven capacity of the free labor market to reconcile discrepancies

¹⁴Ibid., p. 211.

¹⁵Walter W. Heller, "The Administrations's Fiscal Policy," Unemployment and the American Economy, ed., Arthur M. Ross (New York: John Wiley & Sons, Inc., 1964), p. 103.

between particular labor supplies and particular labor demands.¹⁶ This is especially true of an economy such as the United States which is endowed with a high average level of education and enterprise and expanding programs to improve labor skills and mobility. The argument is presented as follows:

The highly-educated-manpower-bottleneck argument arrives at its alarming conclusion by projecting to new situations a perfectly static set of educational requirements. The argument makes no allowance for flexibility in the system. Flexibility, of course, is not unlimited. If we were talking about accomplishing a massive increase in output within a few months, manpower bottlenecks might indeed become critical.¹⁷

It might be said that, after all, the structuralists are effectively arguing for policies that will make the normal responsiveness of the labor market more rapid. At the same time that they are arguing that the responsiveness of the labor market has become inadequate recently, they are admitting that this is the basic way that the structural imbalance problem has been solved previously in our history.

Another basic objection to the structuralists' theory is that "technological change can economize significantly on the use of capital or raw materials, without having much impact on output per man-hour or on the demand for labor."¹⁸ When the structuralists

¹⁶Heller, "Employment and Manpower," p. 81.

¹⁷Ibid., p. 81.

¹⁸U. S. Congress, Subcommittee on Economic Statistics of the Joint Economic Committee, Higher Unemployment Rates, 1957-60: Structural Transformation or Inadequate Demand (Washington, D. C.: U. S. Government Printing Office, 1961), p. 9.

assume that automation is displacing workers, they are often making an assumption that should be recognized:

Greater than average productivity increases in a particular establishment or industry will lead to the displacement of labor, if demand for its product or service is inelastic with respect to price, or if reductions in relative costs per unit are not passed on to the consumer in the form of quality improvements or commensurate declines in relative price. Employment will rise in establishments or industries with greater than average productivity increases if demand is price-elastic, and if prices are reduced. However, labor displacement may then occur in less technologically progressive industries producing substitute products. Workers losing specific jobs will experience a certain number of weeks unemployment while hunting for a new job. Consequently, taking all possible combinations of these events into account, it is often assumed that all other things being equal, the higher the increase in output per man-hour, the higher the unemployment rate.¹⁹

This quotation is implying that employment is just as responsive to change in output before the technological change as after the change. This may not be the case as will be indicated in the next section.

Theoretical Basis For The Structural Theory

It is the writer's opinion that much of the confusion arising out of the "debate" revolves around the theoretical basis for structural unemployment. An attempt will be made below to present a more general theoretical structure which will be useful in analyzing the relevance of structural unemployment.

It was stated earlier that structural unemployment is a long run phenomenon which can come into existence regardless of the level of

¹⁹Ibid., p. 10.

demand. The structural changes that affect the composition of labor skill requirements were noted as: technology, the composition of final demand, and changes of industry location. When the labor force is not able to adapt itself to these structural changes, individuals may be structurally unemployed because of several reasons: their skills may no longer be used in output and also cannot be transferred to other occupations, or smaller proportions of their skills may be required for production.

Structural unemployment may be on the local or regional level when there exists depletion of raw materials; a shift in the location of industry; or a particular concentration in changing technology and composition of final demand. These latter two reasons are primarily causes for structural unemployment at the aggregate level rather than on the local or regional level.

When structural unemployment is demonstrated by the absolute uselessness of a skill, such as the coal miner or the blacksmith, the individuals will remain unemployed regardless of the level of demand and regardless of the supply of workers with other skills. As Eleanor Gilpatrick has stated: "The less adaptable the skill endowments and the less elastic the technical coefficients with respect to substitution of other skills, the more the workers approach a condition of 'pure' structural unemployment."²⁰

Structural unemployment cannot only come about by an increased proportion of one type skill used in production to the detriment of

²⁰Gilpatrick, *op. cit.*, p. 203.

others, but in cases where there exists a shortage of the greater demanded skills, all those with skills which are complements of the one in short supply are also structurally unemployed.

It has been indicated above that structural unemployment may result from skill shortages and skill obsolescence. Either of these situations, by itself, can produce structural unemployment, making them additive in nature.

The meaning of structural unemployment might be made clearer by an understanding of the term labor-skill technical coefficient and its implications. This term refers to the proportions of certain kinds of labor to output, given the amount of capital.²¹ In this terminology, the existence of structural unemployment depends on the nontransferability of some labor skills and the relative inelasticity of specific labor skill coefficients in at least some sectors of the economy.²²

As labor spends increasingly more time developing a particular specialized skill demanded in production, that skill is less likely to be transferable to other occupations. However, transferability may be, in fact, increased between industries that use similar skills. In the case where technological change requires proportionally more highly trained workers in production, this would mean a decrease in the general transferability of skills as among occupations, while at the same time increasing the transferability of skills as between industries. Yet, this increase in transferability between industries

²¹Ibid., p. 205.

²²Ibid.

may not mean much when inadequate demand is generalized.

It might also be mentioned that as technological change renders an industry more mechanized, either through reorganization of the existing means of production or through the addition or introduction of capital, specific labor skills required in production become more and more fixed. These labor skills may be fixed in relation to a unit of capital, where the labor and the capital can produce a given range of output.

Another feature might be summarized by saying that employment of certain labor skills are becoming less elastic with respect to changes in output. This might be noted by seeing how fixed are the personnel requirements. For example, today's modern machinery requires a certain amount of labor for maintenance and for keeping it in production, whether the machine is operating at full capacity or not. A cutback in production would mean that a larger proportion of the workers would be retained because the maintenance of modern machinery has become increasingly necessary. The same type logic can be used for increases in production over certain ranges, unless production increases are constrained by the capacity of the machine. The firms' labor requirement (for many skill categories) may not respond very much to increases in product demand until it becomes expedient to enlarge the scale of the plant.

The above argument assumes that technological change is basically labor saving or capital using in nature. Gardner Ackley points out that technological change may be both capital and labor saving in

the absolute sense, while capital using in the relative sense.²³ Whether or not the labor force will be automatically restored to a full employment equilibrium when technological change deletes certain individuals and their skills from the productive process is a question of economic dynamics. Actually the question is whether there exists an automatic adjustment for the system through flexible prices, interchangeable factors and divisible units.

Let us look first at how the neoclassical economists would handle this problem. They would assume infinite divisibility of both capital and labor inputs, as well as homogeneity of both. It is also assumed that there are many ways to produce a given output by varying the quantities of the input. The quantities employed of the inputs depends on their relative prices. This is a short run concept which must hold technology constant. This assumption of flexible coefficients and factor substitutability in the short run is consistent with neutral technological change in the long run.

Fixed technical coefficients, in the short run, might not seem too unreasonable because it might be argued that once capital (a machine, for example) is acquired, certain labor requirements are thus dictated with respect to that machine. Also, a new machine is unlikely to be purchased unless the savings from variable cost of using the new machine at least compensate for the additional depreciation of the new machine. This short-run inflexibility in the technical coefficient

²³Gardner Ackley, Macroeconomic Theory (New York: Macmillan Company, 1961), p. 543.

does not mean that there will be long run inflexibility. It is possible for a given technical coefficient to be labor intensive while labor commands a high price. This will lead to labor saving techniques which, in the long run, will result in changes in the technical coefficient and the overall labor to capital ratio.

Most economists would concede to the possibility of fixed technical coefficients in the short run, but at the same time, their analysis would consider labor as a homogeneous input in its relation to capital. Keynes considered labor as homogeneous when he accounted for units of labor in terms of wage units. This assumption of labor homogeneity has some important implications. Even when recognized that technical change can alter the overall capital to labor ratio, this assumption of homogeneity of labor denies the possibility that the technical coefficients for particular labor skills may be changed. Upon dropping this assumption, the possibility of labor bottlenecks is admitted which may lead to unemployment of capital as particular skills become scarce. Unemployment of labor may also result as complementary skills are restricted from employment due to skill shortages in some areas.

Conclusions

This chapter has presented the structural theory and the policy implications involved. The criticisms concerning the structural theory indicates that there needs to be more work done developing statements that can be tested. It should also be noted, while reading the next chapter, that the structural explanation and the deficient-

demand explanation may not be mutually exclusive arguments, so that validating a hypothesis concerning one explanation does not invalidate the other explanation.

CHAPTER III

DEFICIENT-DEMAND UNEMPLOYMENT

Within this chapter, the theory will be presented which is in opposition to the structuralists' theory in the previous chapter. The main intention is not to review the various statements or hypotheses generated by different authorities, but to indicate a representative position that might be acceptable to a deficient-demand theorist.¹ Implications that are a result of this theory will also be shown. These will include both the policies and the problems implied. The deficient demand theorists have adopted the following position with respect to unemployment.

Structural differentials in unemployment are recognized by the deficient demand theorist.² However, it is pointed out that these differentials have always existed and that they have not become more pronounced since 1957, when the generally favorable employment situation of the post-war period took a turn for the worse.³

¹Although the term "deficient-demand theorist" is used rather consistently in this chapter, the terms expansionist, anti-structuralist, and aggregative theorist are all used in the literature to refer to the same group.

²The deficient demand theory is associated with the Council of Economic Advisors. R. A. Gordon, Otto Eckstein, and Walter W. Heller would also be considered as deficient-demand theorists.

³Arthur M. Ross, "Introduction," Unemployment and the American Economy, ed. Arthur M. Ross (New York: John Wiley & Sons, Inc., 1964), p. 10.

Deficient-Demand Theorist's Position

The deficient-demand theory contends that recent unemployment rates are explainable by demand and supply analysis. The economy's potential output of productive resources, at full employment, rises from year-to-year. This happens because, in a dynamic economy, the population of working age, the stock of capital, and the technical efficiency of production all show year-to-year increases.⁴ If aggregate demand for goods and services do not grow as rapidly as the economy's output potential, then demand will not be large enough to provide jobs for the annual increments in labor resources.

In order for unemployment not to be a significant problem, aggregate demand, at any given time, must be sufficient to generate a volume of production that will not only continue to provide employment for those already employed, but will also do four other things:⁵ provide employment for an expanding labor force that results from increasing population; provide employment for the additional workers who tend to join the labor force when opportunities are rising; offset any reduction of jobs due to increased productivity; lead to a reduction in existing levels of unemployment. The deficient-demand theorists feel that the aggregate demand in the United States has not been great enough to generate full employment.

⁴U. S. Congress, Subcommittee on Economic Statistics of the Joint Economic Committee, Higher Unemployment Rates, 1957-60: Structural Transformation or Inadequate Demand (Washington, D. C.: U. S. Government Printing Office, 1961), p. 6.

⁵Seymour L. Wolfbein, Employment, Unemployment, and Public Policy (New York: Random House, 1965), p. 8.

Inadequate demand is clearly characteristic during recessions, when employment actually declines; however, it is also characteristic during those recovery and expansion periods during which the rate of growth in demand does not keep pace with the expansion of potential supply. The failure of aggregate demand to rise at a rate required by the growth of the labor force, capital stock, and the increase in labor productivity is reflected in the rise in total unemployment in the United States between the mid-fifties, and early sixties, according to the deficient-demand theorist.⁶ This inadequate demand also affects structural programs.

In the absence of adequate growth of aggregate demand, programs to reduce structural unemployment will run into severe difficulties.⁷ Such an expansion of demand is necessary to assure that retrained and up-graded workers, for example, will find jobs at the end of the training period and will not do so at the expense of job opportunities for other employed workers. R. A. Gordon has stated:

The American unemployment problem has been and continues to be a two-fold one. We need to maintain a sufficiently high and rising level of aggregate demand. This we have failed to do in recent years. And we need to reduce the tragic differentials in unemployment rates that persist whatever the level of total unemployment. This problem is now being attacked in a variety of ways and more vigorously than in the past. But it is not a new problem; and, if I have interpreted the figures correctly, the problem has not grown significantly worse, at least in a quantitative sense, since the mid-50's.⁸

⁶R. A. Gordon, "Has Structural Unemployment Worsened?," Industrial Relations, III (May, 1964), p. 74.

⁷Economic Report of the President (Washington, D. C.: U. S. Government Printing Office, 1964), p. 74.

⁸Gordon, op. cit., p. 76. A similar view is expressed in ibid., p. 170.

Since the structural problem has not become more significant, an adequate level of demand, according to the deficient-demand theorists, will cure the unemployment problem by various market adjustments.

Expansion of aggregate demand would set up forces working on both the supply and demand sides of the economy which would work toward an improvement in matching jobs and men. Rising incomes would be experienced in occupations where there were labor shortages. This would attract new workers entering the labor force, induce older workers to retrain themselves, and motivate employers to train and retrain workers. Those techniques which used readily available labor would become more attractive because of the changes in relative wage rates. Jobs for the less skilled workers would become available as the relatively lower priced products utilizing ample labor supplies induced shifts in demand.

Labor shortages would result in increased recruiting efforts by employers, resulting in widespread availability of job information. Workers with appropriate qualifications would tend to relocate in areas where premium wages are being paid for particular jobs. Market adjustments would be made by these and other means, due to expanding demand, that should reduce unemployment by an improved matching of men and jobs. It should be noted that this explanation is for the economy in general and not of a particular industry.

Acceleration or slackening in the rate of growth in aggregate demand need not and will not have the same effect on the rate of growth, output, and employment in all industries. The long term trend in employment and output will be increasing in some industries, and

decreasing in others. Changes in the rate of growth in aggregate demand may affect industries differently:

Divergences in output and employment trends by industry can be quite extreme. A change in the overall rate of economic advance will have a multiplicative or partially offsetting impact on these trends. A faster rate will lead to larger employment gains in growing industries, and to smaller declines in industries where the level of employment is being contracted. Contrariwise, a slower rate will lead to smaller employment gains in growing industries, and to larger declines in industries where employment levels are in a downtrend. Regardless of the rate of growth, however, divergences in trend will persist.⁹

Changes in aggregate demand also need not and will not have equal effects on the different groups of the unemployed. Disadvantaged groups almost invariably share more than proportionately (the skilled and white-collar groups less than proportionately) in both decreases and increases in total employment.¹⁰ Employers do not typically discharge many supervisory and technical personnel when output drops, therefore they do not need to expand their employment of such persons proportionately when output rises.

The above would have the following results:

In the face of employment trends more divergent than earlier, a faster rate of growth in aggregate demand would have reduced the unemployment rate to the 4 percent level without appreciably more difficulty than was encountered in 1948 or 1955-57, only if the labor force were quite mobile--occupationally, industrially, and geographically.

⁹Higher Unemployment Rates, 1957-60, op. cit., p. 14.

¹⁰Economic Report of the President, op. cit., p. 175. This point is also discussed in a different context in Gardner Ackley, Macroeconomic Theory (New York: Macmillan Company, 1961), pp. 696-697.

If the labor force were sufficiently mobile, expanding industries would have been able to fill their labor requirements by hiring new entrants to the labor force and workers displaced from other activities. In industries where employment was declining, the labor force would also have contracted, as displaced workers and new entrants sought employment in other activities.¹¹

The aggregate demand hypothesis does not deny the theoretical possibility of the structural theory, but it does deny that a rapid structural shift, which would leave behind an appreciable residue of hard core unemployment, has occurred.

The structural shifts mentioned above refer again to such things as a shift in the composition of final demand and technological change. What has occurred, according to the deficient-demand theorist has been a slower rate of growth in final demand relative to the actual and normal rates of growth in capital stock, labor force and productivity.

Policy Implications

The full employment policy of the United States is best described by its attempt to maximize the demand for labor. The deficient-demand policy strives to maintain a high level of derived demand for labor by attempting to maintain an adequate demand for goods and services.¹²

The inadequate-demand explanation calls for policies to increase

¹¹Higher Unemployment Rates, 1957-60, op. cit., p. 14.

¹²William H. Miernyk, "British and American Approaches to Structural Unemployment," Industrial and Labor Relations Review, XII (October, 1958), p. 8.

effective demand via expansionary fiscal and monetary policies. "If a pure [deficient-demand theorist] could be found, he would point to our Second World War experience and argue that, if jobs are available, workers will manage to find them and qualify for them."¹³

If there existed natural forces in our economy which would increase aggregate demand within a relatively short period of time, there might be reason for inaction. Unfortunately, there are no such forces. There are, however, demographic factors which may produce substantial increases in demand over long periods of time. An example would be the large baby crop of the immediate post-war period who will reach the age for marriage and household formation. It is hoped that this will result in spontaneous increases in the demand for many different goods and services. The need to accommodate their own latent demands is preceded by the need to provide them with adequate job opportunities.

This example of the post-war baby boom is a long-run situation, and may not be counted on to increase aggregate demand sufficiently in the short-run. Other measures, primarily monetary and fiscal policies, must be used for changing the short run situation, although it is possible that the present state of our economy may somewhat restrict the full use of such policies.

The present state of our economy somewhat limits the available means of increasing aggregate demand. Walter Heller states:

¹³Ross, op. cit., p. 10.

An increase in aggregate demand is most appropriately brought about in a predominantly private enterprise economy such as ours by means of monetary or fiscal measures. Under present conditions our balance-of-payments position constrains us from making full and vigorous use of expansionary monetary policy. It is necessary for us to keep our short-term interest rate reasonably aligned with those in foreign money centers in order to minimize outflows of short-term capital. Within the constraint imposed by this requirement, the Federal Reserve and the Treasury are conducting their current monetary and debt management operations in a way to avoid increases in long-term interest rates.... The fact that the term structure of interest rates is strongly affected by the expectations of investors limits the ability of the monetary authorities to bring about lower long-term rates without permitting short-term rates to fall. It is doubtful whether much could be done beyond the actions that have already been taken to ease credit and then reduce long-term rates while keeping short-term rates at the levels called for by balance-of-payments conditions.¹⁴

Expansion of aggregate demand must depend on fiscal policy since monetary policy is constrained. "In effecting an expansionary fiscal policy, we can work with the spending or the collecting side of the federal budget."¹⁵

An Implied Problem

The method used by some deficient-demand theorists for testing their hypothesis can lead to some serious problems. As stated in Chapter II, these theorists take the position that significant correlation between unemployment and aggregate demand is itself sufficient evidence to reject the structuralists' argument.¹⁶ Deficient-demand theorists state that, "The evidence adverse to the

¹⁴Ibid. p. 100

¹⁵Ibid.

¹⁶See p. 14.

structural transformation theory confirms the contention of the aggregate demand theory."¹⁷

The deficient-demand theorists have often judged their theory by testing the structural theory. Once a variant of the structural hypotheses is assumed, statistical tests are performed to determine whether or not the hypothesis should be rejected. If evidence leads to the rejection of the structural hypothesis, these theorists would claim that this, in turn, supported their contention. This results in the recommendation for the policy corresponding to the deficient-demand hypothesis. The selection of the rejection region for different statistical tests implies a problem which must be faced by the theorists.

This problem has to do with the probability of making a type I (alpha) or a type II (beta) error and the consequence of such an error.¹⁷ The selection of a level of significance, the alpha level, depends largely upon the amount of risk one is willing to assume of being wrong in making the statistical decision to reject the test hypothesis.¹⁸

The smaller we make the alpha level, the less likely one is of making a type I error. The problem is that as we decrease alpha, we

¹⁷Higher Unemployment Rates, 1957-60, op. cit., p. 79.

¹⁸A type I error is rejecting the hypothesis when, in fact, it is true. A type II error is accepting the hypothesis when, in fact, it is false.

The central idea of this section was first presented to the writer by Professor Rex L. Hurst. A similar argument is presented by Vladimir Stoikov, "Increasing Structural Unemployment Re-examined," Industrial and Labor Relations Review, XIX (April, 1966), 370.

are increasing the chances of making an error of the second type.

Alpha and beta are inversely related: as one increases, the other decreases. Alpha can be directly controlled, but beta is indirectly controlled through its inverse relation to alpha.¹⁹

The crux of the dilemma is how much weight to give to each kind of error. The answer to such a question involves the relative cost of making each of the errors.

More often than not, the deficient-demand theorists form a hypothesis for the structural theory and perform statistical tests on it. Selection of an alpha of .05 or .01 indicates a much greater probability of making a type II error than a type I error. This would mean that there is a large probability of accepting the structural hypothesis, when in fact, it is false, which would lead to implementation of the policies corresponding to the structural theory. This might be unfortunate if the policies were not adequate to deal with the real situation.

The selection of alpha should reflect a careful consideration of the policy implications that would result from making either of the two errors.

Conclusion

Not only does every needlessly unemployed worker represent a human cost which offends the sensibilities of a civilized society, but

¹⁹J. P. Guilford, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill Book Company, 1965), pp. 205-207. It should be noted that alpha plus beta do not necessarily have to add up to one.

each worker needlessly unemployed also represents a waste of potential goods and services which even an affluent society can ill afford.

This chapter has presented the deficient-demand theorists' explanation for the needlessly unemployed workers and their solution to the problem. Because of the policy implications, one or a combination, of the two theories should be accepted. In order to accept either of the theories, data must first be analyzed to determine which of the two theories, or what combination, best depicts the real world.

CHAPTER IV

EVIDENCE OF STRUCTURAL UNEMPLOYMENT

It should be evident that this study would be unnecessary if there existed meaningful and comprehensive data which would yield direct evidence as to changes in the level of structural unemployment. There are many inadequacies in unemployment statistics, e.g., data on duration of unemployment are based on length of current rather than terminated spells of unemployment, and measures such as unemployment rates by occupation refer to the last job held by the unemployed person. The information presented in the following section is an attempt to analyze the available evidence dealing with structural unemployment.

In order to reach a conclusion as to the significance of structural unemployment, one must analyze what happens, over time, to the unemployment rates of particular groups suspected of having high concentrations of structural unemployment in relation to the total unemployment rate.¹ The following should be recognized in analyzing structural unemployment:

It would clearly be misleading simply to compare unemployment rates for such groups in a year like 1957,

¹The Manpower Revolution: Its Policy Consequence, ed. Garth L. Mangum (Garden City, New York: Doubleday & Company, Inc., 1965), p. 113.

when the total rate was about 4 percent, with the corresponding rate in 1962-63, when the total rate averaged 5.6 percent. Rather, it is the relationship between the total rate and the group rate--and its historical development--that reveals whether the structural problem is getting worse or not.²

Following this type analysis will not insure correct interpretation of the problem, however, this procedure has been used and should be kept in mind.

The following is a discussion of the evidence of structural unemployment in the following areas: unemployment by occupation, age, and sex; the inexperienced unemployed; duration of unemployment; and unemployment by color.

Unemployment by Occupation

It should be noted that when the unemployed are classified according to industrial and occupational groupings, they are listed by the last job held. As a result of this method of classification, the incidence of unemployment can be shifted by having the unemployed person work even one day's work in a different category. An individual is listed as employed if he works at least fifteen hours in the survey week with or without pay. A worker is not considered in the workforce if he is not actively seeking work or unless he volunteers information that he would look for work if it were available. It is also interesting to note that an unemployed new entrant to the labor force is classified as inexperienced and not according to any occupational groupings.

²Ibid.

A somewhat strong argument in the Knowles and Kalacheck report³ has been presented against the structuralist using unemployment rates by occupation and industry. Knowles and Kalacheck state that if any structural change in the economy had led to higher unemployment rates, an unusually heavy concentration of unemployment should have developed among workers attached to blue-collar occupations and goods-producing industries.⁴ Using unemployment rates by occupation and industry, Knowles and Kalacheck conclude that unemployment has not tended to become more concentrated by occupation or industry when viewed independent of the over-all unemployment rate for experienced workers.

It is important that we examine the meaning of the data used to derive these conclusions. What does it mean to say that certain skills (or educational levels), for example, are being structurally displaced? This would mean, first of all, that no new workers with these displaced qualities would be hired, and in fact, those workers possessing these qualities will be laid off as soon as reorganization can take place. Unemployment rates would also increase among new entrants who are inadequately trained as well as those currently in the affected category. What are the alternatives now available to these unemployed individuals? The displaced workers could (a) find other employment; (b) remain unemployed; or (c) leave the labor force.

¹U. S. Congress, Subcommittee on Economic Statistics of the Joint Economic Committee, Higher Unemployment Rates, 1957-60: Structural Transformation or Inadequate Demand (Washington, D. C.: U. S. Government Printing Office, 1961), p. 20.

⁴Ibid., p. 19.

If employment is only temporary in case (a), the individual is now classified according to the last job held although, in any real sense, he is still structurally unemployed. It should be obvious in case (c) that unemployment data cannot reflect this portion of structural unemployment. Only in case (b) will structural unemployment be reflected over time by the occupational groupings originally affected.

The net result is that structural unemployment could only become more concentrated in case (b). It may also be possible that a structural change might result in unemployment in all categories of employees of a particular industry, white collar as well as blue collar workers, so that unemployment will not become necessarily more concentrated in a particular category of workers.

Knowles and Kalachek used the average deviation of unemployment rates by occupation as an index of the dispersion of unemployment rates:⁵

Dispersion of unemployment by occupation of most recent attachment is equal to

$$\frac{U_o - U_e}{LF_e} LF_o ,$$

where "U" is the unemployment rate; "LF" is the labor force; "o" is any occupation; and "e" is experienced workers.

The index of the average deviations was regressed against the experienced worker unemployment rate for the years 1948-1960.

⁵Ibid., p. 21.

Knowles and Kalacheck claim that the over-all level of unemployment adequately explains the observed concentration of unemployment.⁶ It seems quite possible that this relationship between the unemployment rate concentration and the over-all rate is due to the large categories responsive to changes in demand that make up each of these. The authors may be getting into the problem analogous to that Gardner Ackley discussed when "you are correlating a total with its own largest component."⁷

In order for this test to show the existence of structural unemployment, it is necessary for there to be an increased and sustained change in the unemployment rate concentration. It seems somewhat unrealistic to expect this to be the case. The result which seem more plausible is an initial increase in the concentration of unemployment of particular occupations followed by lower levels of concentration. This result seems more likely because with prolonged unemployment workers began to seek other jobs, even for temporary assistance, or leave the labor force. Temporary work would serve to lower the concentration ratio since the job classification of the unemployed would change as indicated above. Also, those who would have entered the work force in the occupation involved will be classified as inexperienced unemployed if they did not obtain work elsewhere, thus raising that group's concentration ratio over time.

Knowles and Kalacheck offered additional evidence concerning

⁶Ibid., p. 49.

⁷Gardner Ackley, Macroeconomic Theory (New York: Macmillan Company, 1961), p. 233.

structural unemployment using the following test: the structural hypothesis can be tested by regressing the unemployment rate in each occupation against the experienced worker unemployment rate and time. This was done for the period 1948-1960. The results can be interpreted as:

The partial correlation coefficient for time will be positive and statistically significant in those occupations...where the unemployment rate has shown a continuing upward trend relative to all other activities. It will be negative in those occupations...where unemployment experience has shown a tendency toward continuing improvement relative to the rest of the economy.⁸

The following table shows that three occupations had significant negative partial coefficients: professional, technical, and kindred workers, -0.77; managers, officials, and proprietors, except farm workers, -0.70; sales workers, -0.57. Farm laborers and foremen showed a significant positive coefficient, 0.70. It is also evident from the table that the introduction of the variable time raised the correlation coefficient to a considerable extent in each of the above cases. It seems reasonable to say that Knowles and Kalacheck did show evidence of an unfavorable shift in the case of farm laborers with a suggestion of an unfavorable shift in the case of operatives.

Unemployment by Age

Youth unemployment has always been substantially higher than unemployment among adults. For example, the unemployment rate for youth 14-19 years of age, in 1962 was about 13 per cent; the unemployment rate for individuals in their early twenties was 9 per cent; however, for individuals over twenty-five years, the rate was about 4 per

⁸Higher Unemployment Rates, *op. cit.*, p. 65.

Table 1. Correlation of unemployment rates by occupation, with the experienced worker unemployment rate and time

Major occupation group	Simple Correlation		Partial Correlation		Multiple correlation
	Experienced worker unemployment rate	Time	Experienced worker unemployment rate	Time	
Professional, technical, and kindred workers	¹ 0.67	-0.33	² 0.87	² 0.77	² 0.88
Farmers and farm managers	.52	.37	.46	.25	.56
Managers, officials, and proprietors, except farm	² .87	-.05	² .94	¹ -.70	² .94
Clerical and kindred workers	² .97	.29	² .97	.03	² .97
Sales workers	² .73	-.15	² .82	¹ -.57	² .83
Craftsmen, foremen, and kindred workers	² .97	.40	² .98	.44	² .98
Private household workers	² .87	.06	² .89	-.43	² .89
Service workers, except private household	² .94	.22	² .94	-.22	² .94
Farm laborers and foremen	² .93	.52	² .95	.70	² .97
Laborers, except farm and mine	² .98	.36	² .97	.29	² .98

¹ Significant on the 95-percent level.

² Significant on the 99-percent level.

Source: Higher Unemployment Rates: 1957-60, p. 65.

cent.⁹ Even though the youth represent about a fifth of the labor force, young people under twenty-five years of age account for over a third of the unemployed.

Unemployment among youth in relation to the experienced worker should be noticed because many new entrants to the labor force obtain their first work experience between the ages 14 to 19. Included in this group of workers are individuals who work to continue school as well as the high school dropouts.

The following table presents unemployment rates for 14-19 year olds by sex. The differential between their rates and the unemployment rates for experienced workers should be observed.

Table 2. Unemployment rates for experienced worker and youth, 14-19 years of age, by sex.

Year	Unemployment Rates		
	Males	Females	Experienced Workers
1950	11.0	10.4	4.9
1951	7.0	7.4	2.9
1952	7.6	7.0	2.5
1953	6.8	6.0	2.4
1954	11.2	10.0	4.6
1955	9.9	9.0	3.8
1956	9.6	9.9	3.4
1957	11.3	10.1	3.8
1958	15.2	13.1	6.2
1959	13.8	12.3	4.9
1960	14.0	12.9	5.0
1961	15.4	14.8	5.9
1962	13.3	13.2	4.9
1963	15.5	15.7	4.9
1964	14.5	15.0	4.4

Source: U. S. Department of Labor, *Manpower Report of the President* (Washington, D. C.: U. S. Government Printing Office, March, 1966), p. 202.

⁹ Joseph Zeisel, "A Profile of Unemployment," *Men Without Work: The Economics of Unemployment*, ed. Stanley Lebergott (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1964), pp. 115-16.

Vladimir Stoikov presents an interesting study which attempts to show structural unemployment among youth.

Stoikov regressed the unemployment rate of 14-19 year old males (U_y) against the over-all unemployment rate (U) and time (t) for the period 1947-1962 in an attempt to show structural unemployment in this group. He obtained the following equation:¹⁰

$$U_y = 2.811 + 1.799U + 0.1147t$$

$$(0.511) \quad (0.109) \quad (0.0309)$$

Where the regression coefficient (R^2) = 0.977, and the standard error of estimate (\bar{s}) = 0.455.

The regression coefficient for the variable time being statistically significant, it was concluded that one would be justified in claiming "structural unemployment"¹¹ among youth increased in the period covered.

Since the 14 and 15 year olds are required in most states, to attend school on a full time basis, the 16-19 year olds may be a more realistic group to test.

Regression of the group (U_y) against the total unemployment rate and time was also performed by Stoikov and the following equation was obtained:¹²

$$U_y = 3.439 + 1.815U + 0.2439t$$

$$(0.747) \quad (0.100) \quad (0.0204)$$

$$\text{where } R^2 = 0.986 \text{ and } \bar{s} = 0.418$$

¹⁰Vladimir Stoikov, "Increasing Structural Unemployment Re-examined," *Industrial and Labor Relations Review*, XIX (April, 1966), 372.

¹¹It should be noted that the "structural unemployment" referred to by Stoikov is not necessarily consistent with the definition of structural unemployment developed in this paper. Stoikov's term is the same as the "differentials" mentioned on page 43.

¹²Ibid.

The regression coefficient for the variable time was highly significant.

It was indicated by Stoikov that higher youth unemployment appears to show increasing structural problems rather than merely a problem of mobility among youth. The same level of education and training for youth may become increasingly less satisfactory over time resulting in greater difficulty for obtaining employment. This growing group of inadequately trained youth would raise the youth unemployment rate. It should be remembered that youth unemployment is also accounted for by the inexperienced unemployed. In addition, it is possible that employment opportunities may not have grown sufficiently rapid enough to keep up with the growth of youth.

There are, of course, some obvious reasons for the relatively higher rates of unemployment among the youth people. Their reasons would not, however, explain a significant structural change in the group's unemployment rate over time, if one has occurred.

Included in this group are a large proportion of new entrants into the labor market who often have periods of unemployment as a result of "looking" for a job. These individuals will tend to change jobs more often than other groups in search for the "right" job. They tend to hold part time jobs which offer no employment security and even under better employment conditions these individuals will usually lose their jobs first because of lack of seniority and lack of experience.

Unemployment Among Older Workers

Workers over 45 years of age usually have low unemployment rates; however, the unemployment is usually longer in duration. The obsolescence of skills in a rapidly changing economy causes many of the unemploy-

ment problems faced by the older worker.

The incidence of unemployment is higher for individuals past age fifty-five than for younger age groups. Seniority protects the older worker to great extent. This is one factor which may help explain why unemployment rates for men over fifty-five fail to raise appreciably during a recession. Once the older worker loses a job, however, he may have difficulties finding another job, because his health, strength and education are less than that of younger workers.

It is interesting to note that age and educational levels are inversely related, whereas age and experience are directly related. Structural changes may affect the reemployability of older workers as well as the employability of young workers especially those who are less educated by restricting them from moving out of contracting employment areas or by prohibiting successful entry into the labor market.

A comparison of the occupational distribution of employed youth with the rest of the labor force should indicate the relative skill attainment of youth. It is interesting to note that 45.0 per cent of male youth fall in the categories of operatives and laborers as compared to 23.6 per cent of all employed persons.¹³ In addition, 6.0 per cent of male youths are in the professional, technical, and kindred workers category as compared to 12.2 per cent of all employed workers.¹⁴

¹³Walter W. Heller, "The Administration's Fiscal Policy," *Unemployment and the American Economy*, ed. Arthur M. Ross (New York: John Wiley & Sons, Inc., 1964), pp. 97-98.

¹⁴*Ibid.*

Unemployment Among Nonwhite Workers

Unemployment rates for nonwhite workers have been much higher than the rates for white workers. Disadvantages in education, occupational composition, and geographic location have contributed to this higher unemployment rate among Negroes.

Regressing the unemployment rate among nonwhites (U_N) against the over-all unemployment rate and time for the period 1948-1963, Stoikov obtained the following equation:¹⁵

$$U_N = 0.653 + 1.650U + 0.154t$$

(0.386) (0.080) (0.023)

where $R^2 = 0.987$ and $\bar{s} = 0.335$

The regression coefficient for the variable time is highly significant, indicating an upward shift of nonwhite unemployment rate over time.

The following table should help give us a clear picture of the difference in unemployment rates between Negroes and whites.

Basically, structural changes should result in a growing imbalance between an increased demand for the skilled and educated and decreased demand for the unskilled and uneducated. As shown by the data in Table 4, the nonwhite labor force is, on the whole, badly educated compared to the white labor force. Since structural changes would mean a decreased demand for the uneducated, it follows that there should be a concentration of structural unemployment among nonwhites.

¹⁵Stoikov, op. cit., p. 373.

Table 3. Unemployment rates by color, 1948-65, for persons 14 years of age and over.

Year	White	Nonwhite
1948	3.6	5.9
1949	5.6	8.9
1950	4.9	9.1
1951	3.1	5.3
1952	2.8	5.4
1953	2.7	4.5
1954	5.0	9.8
1955	3.9	8.7
1956	3.7	8.4
1957	3.9	8.0
1958	6.1	12.6
1959	4.9	10.7
1960	5.0	10.2
1961	6.0	12.5
1962	4.9	11.0
1963	5.1	10.9
1964	4.6	9.8
1965	4.1	8.3

Source: Derived from Table A-11 of U. S. Department of Labor, Manpower Report of the President (Washington, D. C., 1966), p. 166.

Table 4. Median school years completed by the civilian labor force, 18 years of age and over, by sex and color, 1965.

Sex, Color	Median school years completed
<u>Both Sexes</u>	
White	12.3
Nonwhite	10.5
<u>Male</u>	
White	12.2
Nonwhite	10.0

Source: U. S. Department of Labor, Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization and Training, Table B-9 (Washington, D. C., 1966), p. 189.

Periods of unemployment tend to last longer among Negroes than among white workers:

About one third of all jobless nonwhite workers had been out of work fifteen weeks or longer [in 1962]; the comparable figure for unemployed white workers was 27 percent. Nonwhite workers, who represented 11 percent of the labor force and 22 percent of the unemployed accounted for 26 percent of the long-term unemployed.¹⁶

How would compositional change (increasing numbers of youth in nonwhite unemployment and increasing numbers of nonwhite in youth unemployment) affect the unemployment of these groups? An increasing proportion of youth in nonwhite unemployment and an increasing proportion of nonwhites in youth unemployment could cause a rise in each groups' unemployment rate. The data in Table 5 indicates that the percentage of youth (14-19 years of age) in nonwhite unemployment has shown a very strong upward trend over the past ten years. The percentage of nonwhites in youth unemployment does not show a strong upward trend, but appears to be a fairly stable relationship.

Long-Term Unemployment

The length of unemployment is an indication of the general availability of jobs and is also an indication of the ability of an individual to be rehired. Under conditions of structural unemployment, workers tend to remain unemployed for longer intervals, independent of the level of potential demand. Increasing duration of unemployment is, therefore, a possible indication of structural problems.

¹⁶Zeisel, op. cit., p. 119.

The duration of unemployment is an indication of structural unemployment primarily because of the method of collecting unemployment

Table 5. Percent of youth in non-white unemployment and percent of non-white in youth unemployment.

Year	Percent of youth (14-19) in non-white unemployment	Percent of non-white in youth (14-19) unemployment
1954	12.9	16.1
1955	14.2	17.9
1956	18.5	20.5
1957	19.1	19.5
1958	16.3	20.2
1959	17.8	19.8
1960	19.2	21.1
1961	17.8	19.1
1962	18.2	19.6
1963	22.2	20.2
1964	23.3	19.8
1965	27.9	20.3

Source: U. S. Department of Labor, Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization and Training, Table A-5 (Washington, D. C., 1966), p. 158.

data. The yearly unemployment rate is an average of the twelve monthly rates. These monthly rates are determined by statistical tests, involving sampling, which are intended to measure unemployment at any point in time. Increases in the number of persons unemployed during th year will increase the yearly rate. Also, if the same number of persons unemployed are unemployed for more months, the yearly rate will increase.

N. J. Simler regressed the long-term (unemployed fifteen weeks or more) and the very long-term (unemployed twenty-seven weeks or more) unemployment rates against the over-all unemployment rate and time of the period 1947-1957. Simler's results indicated that duration has risen gradually over time, independent of the rise of the unemployment rate.¹⁷

Much of the evidence presented here is fragmentary and may be somewhat suggestive; however, the evidence tended to support the structural hypothesis, by and large. The evidence studied thus far has not included data resulting from the expansion of business activity which began in 1965. Evidence generated in the recent business expansion will be reviewed in the next chapter.

¹⁷N. J. Simler, "Long-Term Unemployment, The Structural Hypothesis and Public Policy," American Economic Review, LIV (December, 1964), p. 985 ff.

CHAPTER V

EVIDENCE OF STRUCTURAL UNEMPLOYMENT
IN THE RECENT BUSINESS EXPANSION

Perhaps one of the more encouraging developments of expansion in 1965 was the reduction of unemployment among almost every group in the population.

If the recent and continuing expansion in the economy has generated forces that will reduce unemployment to acceptable levels,¹ then it may be concluded that our unemployment problem² was basically due to deficient aggregate demand.

Unemployment Trend

The first quarter of 1966 was the ninth consecutive quarter that the unemployment rate had been dropping, reaching its lowest level since late 1953 of 3.8 per cent. Table 6 indicates a smoother adjustment of the job market to the recent expansion than that of 1951.

Between 1950 and 1951, unemployment was cut by one third. In contrast, between 1964 and 1965, the level of unemployment was reduced gradually, but persistently. The following has been shown

¹An unemployment rate of about 4 per cent is a reasonable and prudent full-employment target for stabilization policy: Economic Report of the President, 1963.

²As stated in Chapter 2, the unemployment problem and the structural theory refer to the high levels of unemployment experienced after 1957.

concerning the past unemployment trend:

Until recently, the improvement in unemployment was primarily among adult men. Jobless rates for adult men (2.6 percent in 1966) and married men (1.9 percent) began to fall much earlier than other rates; however, they have shown virtually no change since December, [1965].³

Table 6. Unemployed persons, annual averages (persons 14 years of age and over)

Year	Number unemployed (thousands)	Percentage change
1950	3351	37.3
1951	2099	
1964	3876	10.8
1965	3456	

Source: U. S. Department of Labor, Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization, and Training (Washington, D. C., 1966), p. 166, Table A-11.

Employers have turned to hiring adult women as the unemployment rate for men has slowed down. Adult women's unemployment rate was 3.7 per cent in the first quarter of 1966 which was the lowest since 1953.⁴

The most skilled and experienced workers had a very low unemploy-

³U. S. Department of Labor, Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization, and Training (Washington, D. C.: U. S. Government Printing Office, March, 1966), p. 15.

⁴U. S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings and Monthly Report of the Labor Force (Washington, D. C.: U. S. Government Printing Office, May, 1966), p. 14.

ment rate of 2.3 per cent for men 25 and over.⁵ This pointed to the potentially serious labor shortage that was developing in some local areas and occupations.

Long-Term Unemployment

Unemployment of 15 weeks or longer dropped by 200,000 in 1965 which was about twice the previous year's reduction.⁶ This would indicate that one out of five of the unemployed had been jobless for 15 weeks or longer. Persons who had been out of work 6 months or longer accounted for much of the improvement in 1965. Their decline amounted to 130,000.⁷

The data in Table 7 indicates that there has been a substantial reduction of long-term unemployment among adult males (25 and over). An important aspect of this reduction is the fact that the older adult males, 45 and over, showed a reduction in their unemployment rate. Those in this group who were unemployed 15 weeks and over showed a reduction from 31.4 per cent in 1957 to 25.2 per cent in 1965. Persons in this age group unemployed 27 weeks and over showed a change from 37.2 per cent in 1957 to 30.2 per cent in 1965. This indicates a significant improvement in that these workers are generally the ones more difficult to retrain and relocate.

Female workers had a general increase in long-term unemployment between 1957 and 1965; however, between 1964 and 1965, there occurred

⁵Ibid.

⁶Ibid.

⁷Ibid.

Table 7. Long-term unemployment compared with total unemployment, by sex, age, and color: annual averages, 1957-1965.

(numbers in thousands)

Item	Unemployed 15 weeks and over						
	1965	1964	1963	1961	1959	1957	
Total:	Number	755	973	1,088	1,532	1,040	560
	Percent	100.0	100.0	100.0	100.0	100.0	100.0
<u>Sex and age</u>							
Male		60.8	62.3	65.7	69.3	71.0	68.9
14-19		10.6	9.8	9.7	7.8	8.8	8.2
20-24		6.8	7.6	8.1	9.2	8.5	7.6
25-44		18.3	17.9	21.2	25.0	26.4	22.0
45-over		25.2	27.0	26.7	27.3	27.3	31.4
Female		39.2	37.7	34.3	30.7	29.0	31.1
14-19		8.2	6.1	5.6	3.9	3.5	4.3
20-24		4.9	5.9	4.3	4.3	4.0	3.4
25-44		14.0	13.9	13.2	12.3	11.1	13.2
45-over		12.0	11.8	11.1	10.2	10.4	10.4
<u>Color and sex</u>							
White		77.0	77.1	74.0	77.5	75.7	77.4
Male		47.9	49.2	49.4	53.9	53.4	53.0
Female		29.2	27.9	24.6	23.6	22.4	24.4
Nonwhite		22.9	22.9	26.0	22.5	24.3	22.6
Male		13.0	13.3	16.4	15.3	17.9	15.8
Female		9.9	9.7	9.7	7.2	6.4	6.8

Table 7 (continued)

Item	Unemployed 27 weeks and over					
	1965	1964	1963	1961	1959	1957
Total: Number	351	482	553	804	571	239
Percent	100.0	100.0	100.0	100.0	100.0	100.0
<u>Sex and age</u>						
Male	65.0	64.8	69.3	70.7	72.6	70.7
14-19	9.1	8.8	9.0	6.5	7.5	6.3
20-24	6.6	6.4	7.8	8.1	7.8	5.9
25-44	19.1	16.0	20.4	24.8	27.8	21.8
45-over	30.2	33.6	32.0	31.5	29.5	37.2
Female	35.0	35.2	30.7	29.3	27.4	29.3
14-19	5.1	4.9	4.2	3.1	2.6	3.4
20-24	4.0	5.6	4.0	3.6	3.7	2.1
25-44	13.7	12.1	11.4	12.0	10.0	12.6
45-over	12.2	12.6	11.2	10.7	11.1	11.3
<u>Color and sex</u>						
White	74.6	74.7	71.8	76.4	73.8	75.9
Male	49.6	50.2	50.8	53.7	52.6	53.9
Female	25.1	24.5	21.0	22.7	21.2	22.0
Nonwhite	25.4	25.3	28.2	23.6	26.2	24.1
Male	15.4	14.7	18.4	17.1	20.3	16.6
Female	10.0	10.6	9.8	6.5	5.9	7.5

Source: U. S. Department of Labor, Manpower Report of the President and A Report On Manpower Requirements, Resources, Utilization, and Training, Table A-18 (Washington, D. C., 1966), pp. 172-173.

a reduction in the 20-24 age group for those unemployed 15 weeks and over, and for those unemployed 27 weeks and over. Also, between 1964 and 1965, there was a reduction in females 45 and over who had been unemployed 27 weeks and over.

Non-whites experienced an improved situation as their long-term unemployment rate decreased. For those unemployed 15 weeks and over, their unemployment rate dropped from 15.8 per cent in 1957 to 13.0 per cent in 1965, and those unemployed 27 weeks and over experienced a drop from 16.6 per cent to 15.4 per cent over the same period.

Long-term unemployment, classified according to industrial groupings, has generally decreased over the period 1957 to 1965, as shown in Table 8, except for agriculture and persons with no previous work experience.

There were some significant improvements in long-term unemployment classified according to occupation. One important improvement was demonstrated by the increased employment among nonfarm laborers which is usually plagued by unemployment. Operatives also showed some improvement. Also, persons with no previous work experience showed a drop between 1963 and 1965.

The recent expansion has shown that unemployment has been reduced to acceptable limits by substantial increases in aggregate demand, thereby refuting statements that suggest that structural unemployment accounted for a significant portion of total unemployment. This evidence also casts doubts on the bottle-neck argument of the structuralists, since recent increases in production have resulted by adding unskilled laborers and has not been bottlenecked by lack of white-collar workers.

Table 8. Long-term unemployment, by major industry and occupation group: annual averages.
 [Persons 14 years of age and over; numbers in thousands]

Industry and occupation	1965	1964	1963	1961	1959	1957
Total: Number	755	973	1,088	1,532	1,040	560
Percent	(351) ^a	(482)	(553)	(804)	(571)	(239)
	100.0	100.0	100.0	100.0	100.0	100.0
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
<u>Industry Group</u>						
Agriculture	3.7	3.2	3.0	2.4	2.7	2.9
	(3.7)	(2.7)	(2.2)	(1.6)	(2.3)	(2.5)
Non-agricultural industries	82.4	84.0	84.8	88.4	88.5	88.8
	(83.5)	(84.2)	(84.8)	(89.3)	(89.2)	(89.1)
Wage & salary workers	79.9	81.5	82.3	86.0	86.0	85.7
	(79.8)	(81.3)	(82.6)	(86.8)	(87.1)	(86.2)
Self-employed & unpaid family workers	2.5	2.6	2.5	2.4	2.4	3.0
	(3.7)	(2.9)	(2.2)	(2.5)	(2.1)	(2.9)
Persons with no previous work experience	13.8	12.8	12.1	9.2	8.8	8.4
	(12.8)	(13.1)	(13.0)	(9.1)	(8.6)	(8.3)
<u>Occupation Group</u>						
Professional & Technical	3.6	3.8	3.3	2.4	3.0	1.4
	(4.3)	(3.3)	(3.4)	(2.5)	(3.0)	(2.0)
Farmers & Farm Managers	.5	.4	.4	.1	.3	.3
	(1.1)	(.4)	(.5)	(.1)	(.9)	(.8)
Managers, Officials & Proprietors	3.6	3.5	3.2	2.6	3.0	3.1
	(4.3)	(4.0)	(3.4)	(2.9)	(3.0)	(3.5)
Clerical Workers	10.3	12.3	10.6	9.8	9.4	8.2
	(10.5)	(11.2)	(9.9)	(10.0)	(8.7)	(7.9)

Table 8. (Continued)

Industry and Occupation	1965	1964	1963	1961	1959	1957
Sales Workers	4.4 (4.5)	3.7 (4.2)	3.9 (4.0)	4.2 (3.6)	3.8 (4.2)	4.4 (4.3)
Craftsmen, Foremen	10.9 (10.8)	10.6 (10.0)	11.4 (10.7)	13.6 (12.6)	12.4 (11.7)	11.0 (9.8)
Operatives	24.3 (22.7)	24.6 (25.4)	26.5 (25.7)	29.3 (29.6)	28.7 (29.9)	31.8 (30.7)
Private Household Workers	3.1 (3.4)	2.5 (2.3)	2.6 (2.5)	2.0 (1.7)	2.0 (2.1)	2.8 (2.8)
Service Workers exc. private household workers	12.5 (13.9)	12.0 (12.9)	10.8 (11.9)	10.6 (11.1)	10.3 (9.6)	10.6 (11.8)
Farm laborers & foremen	2.7 (2.0)	2.3 (2.1)	2.0 (1.4)	1.7 (1.1)	2.6 (2.3)	2.4 (2.4)
Laborers, exc. farm and mine	10.5 (9.7)	11.5 (11.2)	13.2 (13.4)	14.6 (15.8)	15.7 (16.0)	15.5 (15.7)
Persons with no previous work experience	13.8 (12.8)	12.8 (13.1)	12.1 (13.0)	9.2 (9.1)	8.8 (8.6)	8.4 (8.3)

^aThe number in parentheses represents unemployment of 27 weeks and over, while those numbers not in parentheses represent unemployment of 15 weeks and over.

Source: U. S. Department of Labor, Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization and Training, Table A-19 (Washington, D. C., 1966), p. 174.

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