

**THE COUNTER-CYCLICAL EFFECTS OF
UNEMPLOYMENT INSURANCE**

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PREFACE

The problem of economic instability and its solution is always, it seems to me, a pertinent one for investigation by economists. Certainly, the subject has and does hold a prominent place in economic literature, and many writers feel that a partial solution--the wise application of monetary and fiscal policy--has been developed. On the other hand, a leading economist has recently expressed his belief that the American economy is inherently more stable now than it was twenty years ago. But the problem remains.

In evaluating the stability of our economy, most writers include a reference to the existence of certain "built-in" stabilizers. These are institutional arrangements which, although serving other purposes, are said to more or less incidentally insert a stabilizing influence into the system. The unemployment insurance system is usually included among the most promising such stabilizers.

However, no one, to my knowledge, has thoroughly investigated this program in all its aspects with the specific purpose of empirically testing its counter-cyclical quality. I have attempted, in this thesis, to do so. I was guided in this endeavor by Drs. J. J. Klos and A. M. Sharp, and wish to thank them for their patient assistance. My wife, Edys, who performed the typing chore, deserves special recognition. The fact that our marriage survived the ordeal testifies, not to my excellent penmanship, but to her skill and understanding.

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CHAPTER I

INTRODUCTION

Modern economics textbooks invariably refer to the United States unemployment insurance system as a "built-in stabilizer." The validity of these assertions constitutes the subject of this study. It is proposed to test the proposition that unemployment compensation acts as an automatic device exerting a stabilizing influence in our nation's economy. Before elaborating on this objective, a few comments concerning the concept of automaticity will be helpful.

The Concept of Automaticity

Economic forces can be divided, for analytical purposes, into two broad categories. First, there are forces which are automatic in nature. They operate or are supposed to operate in a consistent and logical fashion so that their direction and intensity can be predicted, or at least described. Such forces are not subject to rapid change since they arise out of human nature, human institutions, laws, and customs.

"Normal" or "natural" automaticity can be distinguished from "built-in" automaticity. The former type is based more directly on human nature and the institutions which evolve to give expression to human needs. The economic theories of consumption, production, income distribution, and the theory of economic equilibrium are based on the existence of such consistent and predictable human behavior patterns. An important char-

characteristic of this type of economic force is that it is generated by individuals independently pursuing their own particular needs and interests. The market place is usually thought of as giving expression, direction, and organization to these automatic forces.

"Built-in automaticity results more directly from cooperative effort. Society sometimes finds that existing economic institutions do not produce certain desired results and consciously set about to create new ones. After initial action of this sort, however, the economic forces finding expression in the consciously created institution operate as automatically as those finding expression in the market place or similar devices. The unemployment insurance system is an example of this type of automaticity. It was found that the informal market did not always provide jobs and income for the worker. Society felt that something should be done and created a new institution to fulfill its objective.

The second broad category of economic forces can be referred to as non-automatic. Such a force is not predictable, following no established pattern. No particular known circumstance will necessarily bring it into operation. "Acts of God" affecting economic phenomena are in this category. Of the forces resulting from human decisions, central government action, including sporadic and unpredictable fiscal policies, whether arising from political or economic considerations, is an example. These forces can be thought of as external to the economic system, not constituting part of its internal structure, while automatic forces are part of the system and operate through its established institutions.

Automaticity as a Source of Disagreement

Among economists, the automaticity of an economic system has been, in the past, a controversial subject. They have all, however, wished to determine whether or not a capitalistic economic system possesses forces which automatically (without conscious human effort being directed toward this purpose) produce levels of production high enough to insure full employment of all resources, and especially the human resource. Opposite answers given this question provided the basic difference between "Keynesian" and "Classical" economists for several years subsequent to publication of the General Theory.

Don Patinkin has summarized these conflicting viewpoints. He states, "The traditional interpretation of Keynesian economics is that it demonstrates the absence of an automatic mechanism assuring the equality of desired savings and investment at full employment."¹ Patinkin proceeds to point out that Keynesians were accused of failing to recognize that the rate of interest affects savings and investment as well as income. The accusers felt that ". . . variations in the interest rate serve as an automatic mechanism insuring full employment."² The answer to this argument was, in Patinkin's words, "that it greatly exaggerates the importance of the rate of interest. . . Whether the system will generate full employment depends on whether the full employment savings and investment functions intersect at a positive rate of interest. But there is no automatic mechanism to insure that

¹Don Patinkin, "Price Flexibility and Full Employment," Readings in Monetary Theory (New York, 1951), p. 253.

²Ibid., p. 254.

the savings and investment functions will have the proper slope and position to bring about such an intersection."³ Patinkin concludes, "The fundamental disagreement between Keynesian and Classical economics lies in the former's denial of the automaticity of full employment posited by the latter."⁴

The argument centered around the savings-investment function. The question posed was: Will desired savings equal desired investment at full employment levels of output? If this question deserves a negative answer, at least one of two conditions will exist. Either people wish to save too much or they wish to invest too little. Both of these conditions can be described by a generalization that the aggregate demand for goods and services will be insufficient to absorb a full employment level of production. Thus, the problem has often been formulated in terms of the ability (or inability) of the system to automatically generate aggregate demand of sufficient force. The automaticity around which the controversy centered was of the "normal" type described above. The question was whether or not individuals acting independently of one another would generate forces resulting in a full employment economy.

Samuelson and Burns on the Automaticity of the American Economy

Out of Keynesian and Classical economics arose two distinct and seemingly incompatible bodies of thought, microeconomics and macroeconomics. With the passage of time, however, the disputants began to seek common grounds for understanding and achievements. As Paul

³ Ibid., pp. 256, 257.

⁴ Ibid., p. 257.

Samuelson says, "In recent years, ninety per cent of American economists have stopped being 'Keynesian economists' or 'anti-Keynesian economists.' Instead they have worked toward a synthesis of whatever is valuable in older economics and in modern theories of income distribution. The results might be called 'neo-classical economics' and is accepted in its broad outlines by all but about 5 per cent of extreme left-wing and right-wing writers."⁵

Samuelson goes on to aver that this peaceful coexistence among economists has resulted in a "grand neoclassical synthesis" which he refers to as "an important tenet of modern economics." He describes this tenet in the following manner:

By means of appropriately reinforcing monetary and fiscal policies, our mixed enterprise system can avoid the excesses of boom and slump and can look forward to a healthy progressive growth. This fundamental being understood, the paradoxes that robbed the older classical principles dealing with small scale "microeconomics" of much of their relevance and validity--these paradoxes will now lose their sting. In short, mastery of modern analysis of income determination genuinely validates the basic classical pricing principles; and--perhaps for the first time--the economist is justified in saying that the broad cleavage between microeconomics and macroeconomics has been closed.⁶

What are the implications of this synthesis in regard to the Keynesian-Classical dispute? Samuelson seems to be saying that the American economic system would, if left alone, probably not automatically produce stability and full employment, but it really doesn't matter anyway. Monetary and fiscal tools are available so that we can make the system operate the way we wish. Certainly one way of eliminating a disagreement is to brand the issue in question as too insignificant to merit

⁵ Paul A. Samuelson, Economics, An Introductory Analysis (5th ed., New York, 1958), pp. 209, 210.

⁶ Ibid., p. 360.

consideration. But others have recently approached the problem of automaticity in a somewhat different manner.

A. F. Burns delivered an interesting address at the 1959 American Economic Association Convention. Being impressed by the stability which our economy has exhibited in recent years, he observed:

Although our economy continues to be swayed by the business cycle, its impact on the lives and fortunes of individuals has been substantially reduced in our generation. More than twenty-five years have elapsed since we last experienced a financial panic or a deep depression of production and employment. Over twenty years have elapsed since we last had a severe business recession. Between the end of the Second World War and the present, we have experienced four recessions, but each was a relatively minor setback. Since 1937 we have had five recessions, the longest of which lasted only 13 months. There is no parallel for such a sequence of mild--or such a sequence of brief--⁷ contractions, at least during the past hundred years in our country.

In short, the American economy has since 1940 operated at near full employment levels, and this is a novelty. What is the explanation? Has stability been achieved because the policy formulations arising out of Samuelson's "grand synthesis" have been employed? Burns attaches some importance to this, but offers other explanations.

"In our generation," Burns says, "the structure of the American economy has changed profoundly, partly as a result of deliberate economic policies, partly as a result of unplanned developments."⁸ The growth of corporations with their stable dividend policies, the progressive income tax, transfer payment programs by governmental bodies, and other structural changes have, according to Burns, stabilized the flow of income by partially separating the flow of income from the flow of production. A stable income flow helps, of course, to stabilize

⁷ Arthur F. Burns, "Progress Toward Economic Stability," The American Economic Review, March, 1960, pp. 1,2.

⁸ Ibid., p. 2.

consumption at high levels. And this goes a long way toward the maintenance of an aggregate demand sufficient to absorb full employment levels of production.

In connection with the discussion of automaticity, Burns seems to be saying: Up until recently, automatic forces could not be relied upon to produce a stable and full-employment level of economic activity, but the structural changes which have taken place have produced an economic system which approaches this performance. The existence and influence of non-automatic forces are recognized by Burns. "To be sure," he says, "special factors of an episodic character played their part in recent business cycles, as they always have."⁹ After enumerating some of these factors, however, he concludes, "The ability of our economy to adjust to such major disturbances without experiencing a series of protracted slumps testifies not only to our good luck, it testifies to the stabilizing power of the structural changes that I have emphasized."¹⁰

Burns therefore feels that stability and prosperity have been achieved, not primarily because of monetary and fiscal policy applications, but primarily because the inner workings of the system have produced such results. It should not be inferred that the conclusions reached by Burns and Samuelson are necessarily incompatible. Nevertheless, Samuelson places emphasis on the availability of outside help (monetary and fiscal policy), when and if automatic forces fail, while Burns seems to have more faith in the unassisted performance of the recently modified American economy.

⁹ Ibid., p. 16.

¹⁰ Ibid., p. 60.

Both writers, furthermore, are optimistic concerning the future performance of our economy. Samuelson is cautious:

The worst of the business cycle, which . . . plagued capitalism from its beginning, is probably a thing of the past. But that does not mean that the cycle is gone: we still shall have minor inventory fluctuations, still shall have transitions from war to peace and from one kind of a boom to another. The difference will be this: the age-old tendencies for the system to fluctuate will still be there, but no longer will the world let them snowball into vast depressions or into galloping inflations--no longer will we let our banking system fail and our nation go through the most painful debt inflation and bankruptcy.¹¹

Most of his confidence rests on the wise application of monetary and fiscal policy.

Burns is somewhat bolder. "It seems reasonable," he states, "to expect that the structural changes in our economy, which have recently served to moderate and humanize the business cycle, will continue to do so," and concludes, "The business cycle is unlikely to be as disturbing or troublesome to our children as it once was to us or our fathers."¹² His confidence does not lie in the availability of corrective tools of policy, but in the system itself.

The Significance of Built-in Stability

Part of the optimism shared by both writers originates in their observations that certain automatic forces favorable to stability have been "built in" to our economy. Burns merely views these developments as part of the structural changes which have occurred. An important distinction, however, can be made between a stable dividend policy by a corporation, and the unemployment insurance system, although the

¹¹ Samuelson, pp. 340, 341.

¹² Burns, pp. 16, 17.

effects on economic stability may be similar. The former development results from private individuals acting independently of one another, whereas the latter is the result of social action. A stable dividend policy is not "built in" to our system; it evolved out of the needs of private interests.

Samuelson is rather enthusiastic concerning "built-in" automaticity. He says:

The modern fiscal system has great inherent automatic stabilizing properties. All through the day and night, whether the President is in the White House or golfing on some distant vacation links, the fiscal system is helping to keep our economy stable. If in 1961 a recession should get under way while Congress is out of session, powerful automatic forces would go instantly into action to counteract it without the need for any committee meetings or for the exercise of any human intelligence.¹³

Samuelson proceeds to enumerate these automatic stabilizers: automatic changes in tax receipts, unemployment compensation and other welfare programs, farm aid programs, and corporate and family savings.¹⁴

Thus, part of the stability achieved in the recent past and predicted for the future is attributed to automatic forces which have been "built in" to the economy. It is said that due to these and other automatic forces which have more or less evolved, and forces of a non-automatic nature (monetary and fiscal policy), the American economy will, with qualifications, tend to operate at fairly stable levels of production. The implication is, of course, that these levels will be not only stable, but will approach full employment.

If these great automatic stabilizers are to be relied upon even as, in Samuelson's words, "a first line of defense"¹⁵ against economic

¹³ Samuelson, p. 345.

¹⁴ Ibid., pp. 345, 346.

¹⁵ Ibid., p. 346.

instability, they warrant further investigation. Theoretically to attribute stabilizing properties to them is not enough; more empirical study is needed. It would be helpful to know the extent to which the nation's tax system, the unemployment compensation program, and other devices operate to counteract fluctuations in economic activity, if they do possess counter-cyclical properties.

One study has shown, for instance, that our tax structure in its entirety is not as progressive as one would be led to conclude when viewing the federal income tax in isolation. In fact, state and local taxes were found to be, during 1948, regressive for all income levels. Furthermore, total taxes, federal, state, and local, were, in 1948, regressive for the lowest income levels and were practically proportional from around \$2500 to around \$4500. For higher levels, total taxes were progressive.¹⁶

Regardless of the existence (or lack) of progressivity in a tax system, if tax receipts vary directly with income, a counter-cyclical effect is likely. A regressive tax, however, is not as counter-cyclical as a progressive one.

In connection with farm aid, price support programs are not necessarily counter-cyclical. In good crop years, supports provide a relatively high farm income, but when crops fail, price supports are rendered ineffective. If a recessionary movement were to be precipitated by, or coincide with, widespread adverse weather conditions, our support policy would provide little anti-cyclical influence.

¹⁶R. A. Musgrave and others, "Distribution of Tax Payments by Income Groups: A Case Study for 1948," National Tax Journal, March, 1951, p. 27.

This work is not meant to disagree with the general positions of either Burns or Samuelson. Our economy has exhibited a high degree of stability and prosperity of late. Monetary and fiscal policy is available. Structural changes have occurred, and the future may produce even more stability than in the past. A pessimist might, however, remember the Biblical admonition: "When they cry peace and safety, then sudden destruction cometh upon them."¹⁷ The cautious economist merely calls for further investigation.

Purpose and Scope of the Study

As mentioned earlier, an inquiry into the counter-cyclical aspects of the United States unemployment compensation system is the intent of this study. More specifically, it is meant to test the proposition that unemployment insurance acts as a built-in stabilizer in the American economy by automatically setting in motion forces which are expansionary when aggregate economic activity is falling, and, conversely, by generating contractionary forces when activity is rising.

There are several different programs under which unemployed persons receive financial assistance. The study is confined to the federal-state program initiated by the Social Security Act of 1935. The programs providing compensation for railroad workers, placed under exclusive federal jurisdiction in 1939, for veterans and for federal employees, are excluded from consideration.

The state-federal system is viewed in this work as an automatic device for augmenting and diminishing the nation's income stream.

¹⁷ II Thess. 5:3.

The magnitude of the device is discussed in the following chapter. This involves an investigation of the provisions and operations of the Social Security Act and the state laws which give the system its legal existence. The nature of the device is considered in Chapter III. This entails a consideration of the economic impact which various aspects of the program are likely to produce. Chapter IV is reserved for an empirical study concerning the timing of the automatic device. From available data, an attempt is made to determine whether or not additions to income made by the program coincide with a falling income and vice versa. A summary and some conclusions are presented in Chapter V.

CHAPTER II

THE MAGNITUDE OF UNEMPLOYMENT INSURANCE

As the name implies, the primary purpose of an unemployment insurance system is to provide financial assistance for the unemployed. The United States system can be summarized briefly: Employers, subject to the Federal Unemployment Tax Act and state unemployment compensation laws, are required to contribute a stipulated percentage (from 0-2.7, depending on the state and the employer's experience with unemployment) of their taxable payrolls (usually defined as the summation of the first \$3000 of each employee's annual earnings) to state unemployment trust funds. These funds are deposited with the Secretary of the Treasury of the United States and constitute a "master" unemployment trust fund out of which states may draw funds with which benefit payments are made to eligible unemployed persons. Money not immediately needed is invested in government obligations.¹

A person's right to receive benefits depends upon the law of the state in which he was employed. In general, an unemployed person will be eligible to receive assistance if (1) he has, while working in covered employment, either earned a stipulated minimum amount or worked a stipulated minimum time period, or both; (2) he is presently

¹U. S., Bureau of Employment Security, Comparison of State Unemployment Insurance Laws as of January 1, 1958, (United States Government Printing Office, Washington, 1958), pp. 17, 44, 47.

a member of the labor force (that is, if he is actively seeking work); (3) he is not disqualified for other reasons (such as quitting former job without good reason or refusing to accept offered employment.) The weekly benefit amount and the time period during which benefits will be received ordinarily depends on the length of the worker's former employment, his earnings level while employed, and, in some states, the number of his dependents.² The average weekly benefit for the nation during 1958 was \$30.58, and the average number of weeks during which benefits were received by an unemployed person was 15 weeks.³

Unemployment Insurance as an Automatic Device

Before examining the program in more detail, a perspective is needed. Although the primary purpose of unemployment insurance, as stated earlier, is assistance to the unemployed, the program can be viewed in another way. As a built-in stabilizer, it is an automatic device for adding to and subtracting from the nation's income stream. The counter-cyclical quality of the device is determined by the nature, magnitude, and timing of the additions and subtractions, and this is determined by the rules under which the program operates. Hence, we proceed to examine these rules; but first, some general comments about the counter-cyclical determinants of the device.

Additions to income made by the program consist of transfer payments to active spenders in the form of benefit payments to the

² Ibid., p. 49.

³ U. S., Social Security Administration, Social Security Bulletin, Annual Statistical Supplement, 1958, p. 12.

unemployed, and, occurring in connection with trust fund operations, transfer payments to inactive spenders and government purchases of goods and services. Subtractions from the income stream take the form of transfer payments from active spenders through the payroll tax on employers, and, again in connection with trust fund operations, transfer payments from inactive spenders.

The extent to which income is augmented by the device depends on the volume of eligible unemployed and the size and duration of benefit payments. Covered employment, the size of taxable payrolls, and the federal tax and state contribution rates determine the degree to which the program will diminish income.

The timing of the device refers to the coincidence of injections with a falling income and the coincidence of subtractions with a rising income. Assuming the program is timed properly, and ignoring trust fund operations, the unemployment insurance system will be more counter-cyclical the greater the following:

- (1) With respect to additions
 - (a) the volume of covered employment and eligible unemployment
 - (b) the size and duration of benefit payments
- (2) With respect to subtractions
 - (a) the volume of covered employment
 - (b) the size of taxable payrolls of covered employers
 - (c) the federal tax and state contribution rates

The nature of our automatic device will be discussed at some length in Chapter III. Chapter IV will be concerned with the timing aspect; therefore, any final conclusion concerning the counter-cyclical qualities of the program must await the presentation of empirical data

in that chapter. The present chapter deals with the size of unemployment insurance. It is proposed to point out the more important provisions in the laws and changes in these provisions which reflect upon the subject under discussion. Since the discussion is not meant to be a complete description of the system, many important aspects will be omitted.

Coverage

One measurement of the size of unemployment insurance is the potential number of assistance recipients. Benefit payments are limited to unemployed persons who, when working, were classified as covered employment. Employees are covered if their employment makes their employers subject to the federal excise tax and/or state unemployment compensation laws. The volume of covered employment is partly determined by the federal government. Besides placing an excise tax on the payrolls of certain employers, the Social Security Act of 1935 allows subject employers to escape most of this tax if they are required by state laws to contribute to unemployment trust funds.⁴ The combined impact of these provisions made it imperative that each state not only institute unemployment insurance systems, but that these systems be at least as inclusive as the federal excise tax. Otherwise, a state loses revenue to the Federal Treasury with no direct benefit to its citizens. Both federal and state laws utilize a two-fold criteria to determine coverage: (1) the size of the firm in terms of employees; (2) the type of firm in terms of service performed by its employees.

⁴U. S., Statutes at Large, XLIX, part 1, 639.

The size-of-firm provision of the original federal act covered employers who had in their employ eight or more persons on any day during twenty different weeks in a calendar year.⁵ In 1956, the law was amended to extend coverage to employers of four or more.⁶ From the beginning, some state size-of-firm provisions covered smaller firms than the federal statute, while all state laws were at least as inclusive. Table I shows that on December 31, 1937, employers of eight or more employees in all 51 states were covered. At that time nineteen states had extended coverage beyond the federal law to employers of less than eight or more. In ten of these states, firms employing one or more persons were subject to a state law. The other nine states had varying size-of-firm provisions ranging from three to five employees.

The trend in state size-of-firm provisions has been to extend coverage to smaller firms. Thus, by December 31, 1953, a total of ten additional states had joined the original 19 whose laws were broader than the federal statute. Seventeen of the states covered employers of one or more employees, and the other twelve states deviating from the federal pattern had laws covering firms of from three to six employees. The federal amendment of 1956 prompted all states which had not done so previously to extend coverage to employers of four or more. By January 1, 1958, 23 state laws were broader than the federal size-of-firm provision even after the 1956 amendment. Of these 23, 18 covered employers of one or more, two of two or more, and four of three or more. Table I summarizes state size-of-firm provisions on selected dates.

⁵ Ibid., 639, 642.

⁶ Ibid., LXX, 804.

TABLE I
STATE SIZE OF FIRM PROVISIONS, 1937, 1953, 1958

Size of Firm Coverage	Number of States		
	December, 1937 ^a	December, 1953 ^a	January, 1958 ^b
8 or more employees	32	32	0
6 or more employees	0	2	0
5 or more employees	1	0	0
4 or more employees	6	8	28
3 or more employees	2	2	3
2 or more employees	0	0	2
1 or more employees	10	17	18
Total number states	51	51	51

a. Source: U. S., Bureau of Employment Security, Employment Security Review, August, 1955, p. 22.

b. Source: U. S., Bureau of Employment Security, Comparison of State Unemployment Insurance Laws as of January 1, 1958, (United States Government Printing Office, Washington, 1958), p. 4.

The federal and state provisions utilizing the type-of-firm criteria for determining coverage state that all employment is covered except specified types. An employer is not subject to the laws if his employees perform these services; likewise, his employees may not receive benefits. Originally, the federal statute excluded the following types of employment: (1) agricultural labor; (2) domestic service in a private home; (3) service of officers and crews of vessels on the navigable waters of the United States; (4) service of an individual in the employ of his son, daughter, or spouse, or of a child under 21 years in the employ of his father or mother; (5) employment by Federal, state, and local governments; (6) employment by non-profit institutions which are operated exclusively for religious, charitable, or educational purposes.⁷

Several modifications have been made in the federal provisions concerning excluded employment. In 1938, railroad workers were removed from the jurisdiction of the state-federal system and placed under a separate federal program.⁸ Also in 1939, agricultural labor was redefined in a manner that excluded some processing and marketing activities and other services that were included under the original act.⁹ Another modification tending to restrict coverage was an amendment to the law in 1948 which limited the term "employee" to employment under common law rules. The Supreme Court had formerly ruled that "employment" as defined in the 1935 act was broad enough to cover services such as those performed by outside salesmen. Such salesmen are not

⁷ Ibid., XLIX, part 1, 643.

⁸ Ibid., LII, 1094.

⁹ Ibid., LIII, part 2, 1360.

employees under common law; therefore they have not been covered by the federal statute since 1948.¹⁰

Two modifications have increased coverage under the federal law. The 1939 amendment extended coverage to federal and some state and local instrumentalities not wholly owned by the respective governments.¹¹ National banks, among other things, were covered as a result of this change. In 1946, the federal statute was amended to provide coverage for most maritime employments. Services performed on a non-American vessel outside the United States and services by some fishermen on small crafts are yet excluded.¹²

Provisions in state unemployment compensation laws concerning type-of-firm coverage are essentially identical to the federal statute. Thus, with minor exceptions, all services covered by the federal law are also covered by the states. Most state laws contain a provision stating that any employment covered by the federal law is also covered by the state statute.¹³

Changes in federal and state provisions concerning covered employment, along with changes in the farm-non-farm ratio of our population, have resulted in an increasingly larger proportion of the labor force being included in the scope of the United States unemployment insurance system. Table II shows the results of these changes for the period 1938-1958. Note that in 1938 around 36.5 per cent of the civilian labor force was covered by unemployment insurance. By 1953 this

¹⁰ Ibid., LXII, part 1, 438.

¹¹ Ibid., LIII, part 2, 1360.

¹² Ibid., LX, part 1, 978.

¹³ Comparison of State Unemployment Insurance Laws as of January 1, 1958, pp. 9, 14.

TABLE II

THE CIVILIAN LABOR FORCE AND EMPLOYMENT COVERED BY STATE LAWS, 1938-1958

Year	Civilian Labor Force ^a (in thousands of persons)	Covered Employment ^b (in thousands of persons)	Employment As A Per Cent of Labor Force (%)
1938	54610	19929	36.5
1939	55230	21378	38.7
1940	55640	23096	41.5
1941	55910	26814	48.0
1942	56410	29349	52.0
1943	55540	30828	55.5
1944	54630	30044	55.0
1945	53860	28407	52.7
1946	57520	30234	52.3
1947	60168	32278	53.6
1948	61442	33088	53.9
1949	62105	31695	51.0
1950	63099	32887	52.1
1951	62884	34858	55.4
1952	62966	35577	56.5
1953	63815	36667	57.5
1954	64468	35372	54.9
1955	65848	36591	55.6
1956	67530	39170	58.0
1957	67946	39876	58.7
1958	68647	38405	55.9

a. Source: U. S., Bureau of Labor Statistics, Employment and Earnings, February, 1960, p. 1.

b. Source: U. S., Bureau of Employment Security, Employment and Earnings of Workers Covered By State Unemployment Insurance Laws, Fourth Quarter, 1958, Inside Front Cover.

percentage had increased to 57.5. In 1958, 55.9 per cent of the labor force had available benefit payments in case of loss of job.

Other things equal, the extension of coverage to a larger proportion of the labor force increases the counter-cyclical qualities of unemployment insurance. For the economy as a whole, the volume of benefits will be directly related to the volume of covered employment. Mere experience in covered employment does not, however, automatically insure financial assistance for any particular unemployed individual. Eligibility, along with benefit size and duration, depends upon state laws. The only federal provision concerning benefits is a stipulation restricting slightly the conditions under which a state may refuse benefits to otherwise qualified individuals.¹⁴

All state laws contain eligibility requirements for receipt of benefits designed to limit payments to only those workers regularly attached to covered employment. Thus, an individual must, in order to draw benefits, have earned a stipulated minimum amount during a specified time period while employed.¹⁵ This minimum amount has been increasing and operates to prevent some otherwise eligible persons from receiving benefit payments.¹⁶

Size of Benefit Payments

Each state, of course, has its own formula for determining the

¹⁴U. S., Statutes at Large, XLIX, part 1, 640.

¹⁵Comparison of State Unemployment Insurance Laws as of January 1, 1958, p. 49.

¹⁶U. S., Bureau of Employment Security, Employment Security Review, August, 1955, p. 36.

size of benefit payments once eligibility is established. Originally, the states adopted formulae which would produce benefits equal to fifty per cent of the claimants' full-time weekly wages.¹⁷ When these formulae proved administratively unpractical, provisions began to appear basing benefits on the individual's earnings during some past quarter-year in which wages were highest. By December 31, 1937, only four states provided for weekly benefits based exclusively on a worker's full-time weekly wages. Five states permitted the agency to adopt an unspecified alternative, and 32 states allowed the high-quarter wage formula to be used as an alternative. Nine states based benefits directly on high-quarter wages.¹⁸

The trend in benefit provisions has been toward allowing larger payments. This can be seen by viewing changes in those states which base payments on high-quarter wages as shown in Table III. Note that in 1937, 35 of the 41 states using this type of formula paid weekly benefits equal to 1/26 of the unemployed person's high-quarter wages, and in only six states was this fraction larger. In 1954, the fraction was higher in 21 states, and in 1958, 20 states employed a higher fraction.

All state laws provide for both a minimum and maximum benefit. The ceiling limitation is the more important for our purposes. Most original laws established a \$15-per-week maximum on benefit payments, but this limit increased through the years. Thus by 1954, in no state was the maximum as low as \$15, and by 1958 a maximum as low as \$25 existed in only one state. Table IV summarizes these provisions.

¹⁷ Ibid., p. 31.

¹⁸ Ibid.

TABLE III

FRACTIONS USED BY STATES BASING BENEFITS
ON HIGH-QUARTER WAGES, 1937, 1954, 1958

Fraction of High-Quarter Wages	Number of States		
	December, 1937 ^a	August, 1954 ^b	January, 1958 ^c
1/26	35	6	7
More than 1/26:	6	21	20
1/25	-	11	12
1/24	-	1	2
1/23	-	1	1
1/20	-	8	5
Variable (1/17 to 1/30)	-	-	12
Variable (1/17 to 1/28)	-	11	-
Total Numbering States	41	38	39

a. Source: U. S., Bureau of Employment Security, Employment Security Review, August, 1955, p. 32.

b. Source: U. S., Bureau of Employment Security, Comparison of State Unemployment Insurance Laws as of August, 1954, (United States Government Printing Office, Washington, 1954), p. 57.

c. Source: U. S., Bureau of Employment Security, Comparison of State Unemployment Insurance Laws as of January 1, 1958, (United States Government Printing Office, Washington, 1958), p. 61.

TABLE IV
 MAXIMUM BENEFIT PROVISIONS, 1937, 1954, 1958

Maximum Weekly Benefit Amount ^a	Number of States		
	December, 1937 ^b	August, 1954 ^c	January, 1958 ^c
\$15	49	0	0
\$16-\$20	2	4	0
\$21-\$25	0	14	1
\$26-\$30	0	31	21
\$31-\$35	0	1	18
\$36-\$45	0	0	10
Total Number States	51	50	50

a. This table represents maximum amounts for claimants without dependents. In both 1954 and 1958, 11 states paid extra amounts for individuals with dependents. For these claimants, maximum amounts ranged in 1954 from \$26-\$70 and in 1958 from \$30-\$70.

b. Source: U. S., Bureau of Employment Security, Employment Security Review, August, 1955, p. 32.

c. Source: U. S., Bureau of Employment Security, Comparison of State Unemployment Insurance Laws as of August, 1954, (United States Government Printing Office, Washington, 1954), p. 60.

d. Source: U. S., Bureau of Employment Security, Comparison of State Unemployment Insurance Laws as of January 1, 1958, (United States Government Printing Office, Washington, 1958), p. 65.

Liberalization of provisions concerning the size of benefit payments has resulted in an upward movement in the average weekly benefit amount paid. As shown by Table V, this figure increased from \$11.06 in 1941 to \$30.58 in 1958. However, in relation to the average weekly wages of production employees in manufacturing industries, the weekly benefit amount has remained fairly constant since 1941. In both 1941 and 1958, the weekly benefit was 37 per cent of weekly wages (see Table V).

One more aspect of the provisions concerning benefits remains to be considered. This is benefit duration. The length of time which benefits will be paid depends in most states on the length of time which the unemployed person worked in covered employment. Some states, however, provide uniform duration for all eligible persons. All states specify a maximum duration which benefits may be drawn.¹⁹ Both the duration determined with reference to prior employment and the maximum time which benefits can be paid have been increasing since the inception of the program.²⁰

Provisions not discussed affect the volume of benefit payments, but the major ones have been considered. The net effect of changes has been to increase the size of the program in terms of additions which it makes to the income stream. Figure I showing benefit payments for the period 1938-1958 reflects this clearly. Although periodic fluctuations occur (as is expected), the upward trend is unmistakable.

¹⁹ Comparison of State Unemployment Insurance Laws as of January 1, 1958, pp. 72-77.

²⁰ Employment Security Review, August, 1955, pp. 36, 37.

TABLE V
 AVERAGE WEEKLY WAGE IN MANUFACTURING INDUSTRIES COMPARED
 WITH AVERAGE WEEKLY BENEFIT AMOUNT, 1941, 1954, 1958

Item	Year		
	1941	1954	1958
Average Weekly Wage - dollars	29.58	71.86	83.50
Average Benefit - dollars	11.06 ^b	24.93 ^b	30.58 ^c
Percentage - Benefit of weekly wage	37	35	37

a. Source: U. S., Bureau of Labor Statistics, Employment and Earnings, May 1, 1960, p. 29.

b. Source: U. S., Bureau of Employment Security, Employment Security Review, August, 1955, p. 18.

c. Source: U. S., Social Security Administration, Social Security Bulletin, Annual Statistical Supplement, 1958, p. 12.

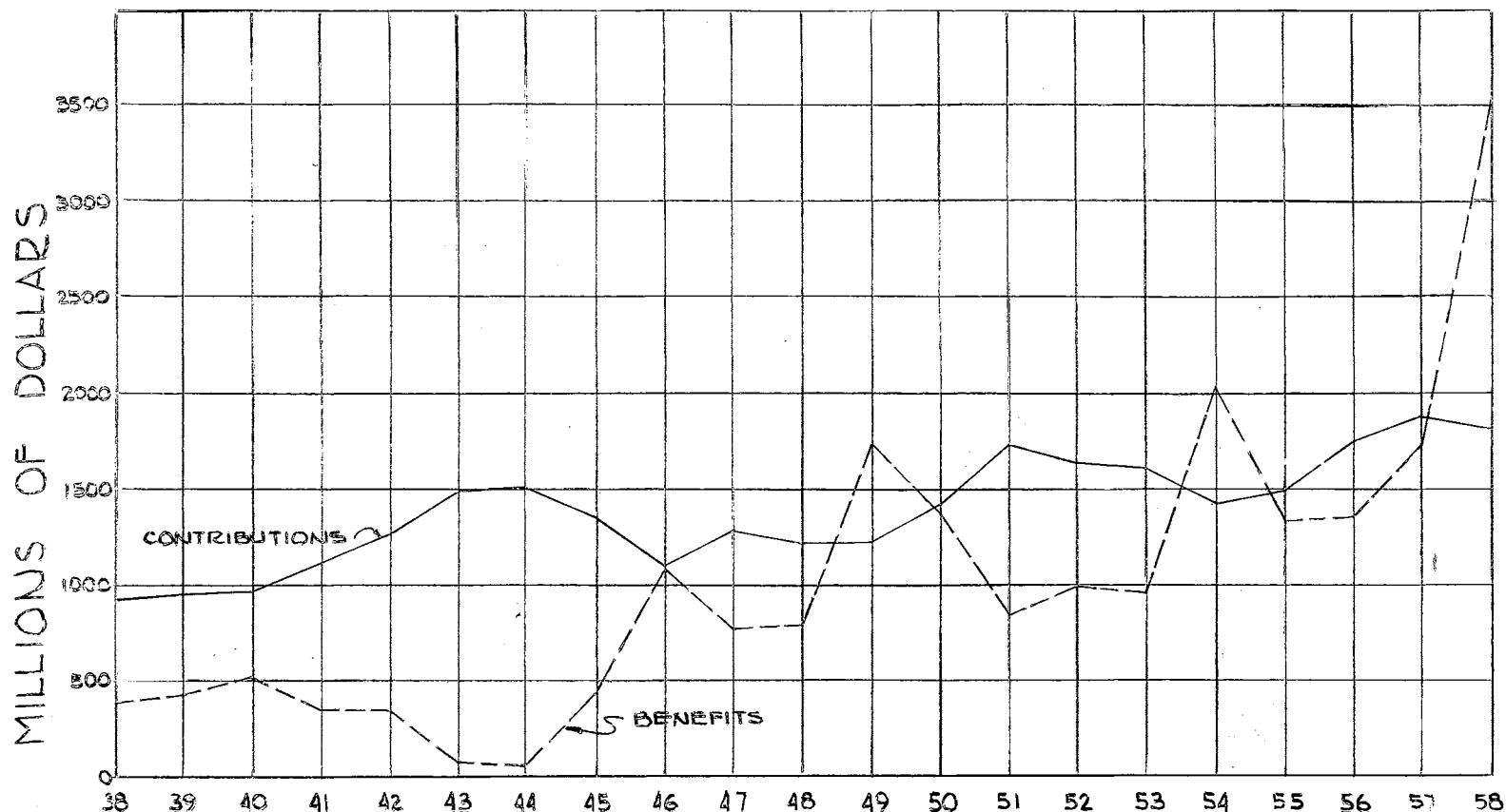


Figure 1. Benefit payments and contributions under state unemployment compensation programs (based on data obtained from Social Security Bulletins published by the United States Social Security Administration.)

- a. Contributions include unemployment excise tax levied by the federal government.
- b. Benefits exclude payments made in 1954 and subsequent years under the Unemployment Compensation for Federal Employees Act and payments made in 1958 under the Temporary Unemployment Compensation Act.

Size of Contributions

We have yet to consider the magnitude of the automatic device from its other side; that is, its operations in diminishing income. As stated earlier, the program is financed through the contributions of employers to state unemployment trust funds. Excise tax collections by the federal government must also be considered. Thus, the extent to which the system will diminish income depends on the volume of covered employment, taxable payrolls, state contribution rates, and the federal tax rate.

Covered employment has previously been discussed and was found to have increased. The federal excise tax was originally set at 3 per cent of taxable payrolls, but all states immediately set contribution rates at levels that reduced the federal rate to 0.3 per cent. This rate has since been maintained.²¹

Besides the volume of covered employment, the size of taxable payrolls depends upon that portion of the total payrolls of covered employment which is subject to the state and federal laws. The original federal act included the entire wages of all covered employees, but a 1942 amendment excluded all over the first \$3000 of the employee's annual earnings.²² State provisions have followed the federal pattern in this respect. Thus, in January, 1958, in all except five states, employers paid taxes and contributions on only the first \$3000

²¹Comparison of State Unemployment Insurance Laws as of January 1, 1958, pp. 17, 18.

²²U. S., Statutes at Large, LVI, part 1, 732.

of their employees' annual earnings.²³ The result is that contributions are smaller than they would be in the absence of such provisions. For instance, taxable payrolls were in the second quarter of 1958 around 80 per cent of total wages of covered workers.²⁴ Total covered wages, however, have increased, being in 1957 almost four times greater than in 1938.²⁵

An important provision for our purposes, written into the original federal act, is a stipulation allowing employers to offset against their federal tax liability, in addition to contributions, amounts they were excused from contributing in connection with state employment experience rating provisions.²⁶ These provisions make an employee's contribution rate depend on his employment (or unemployment) record. An individual employer's rate will vary directly with the amount of benefits which are paid to his former employees.

The relatively low level of unemployment during the war years creating large accumulations in the unemployment trust fund prompted states to introduce modifications in experience-rating provisions designed to reduce contribution rates and the volume of contributions. Thus the average contribution rate for the nation fell from a high of 2.7 per cent in 1938 to below 1.5 per cent in 1955.²⁷

²³Comparison of State Unemployment Insurance Laws as of January 1, 1958, p. 17.

²⁴U. S., Bureau of Employment Security, Employment and Wages of Workers Covered by State Unemployment Insurance Laws, Second Quarter, 1958, p. 6.

²⁵Ibid., p. 7. See also May, 1950 issue, p. 8.

²⁶U. S., Statutes at Large, XLIX, part 1, 643.

²⁷Employment Security Review, August, 1955, p. 28.

The reduction in the contribution rate, however, was more than offset by the increase in payrolls during the period 1938-1958. The result has been an increase in the size of subtractions from the income stream caused by the unemployment insurance system. Figure I reflects the upward trend in the total volume of contributions plus federal excise tax collections.

Benefits, Contributions and National Income

The foregoing analysis has revealed an absolute increase during the period 1938-1958 in both additions to and subtractions from income made by the automatic device. The relative size of the device can be ascertained by comparing the difference between contributions and benefits with national income. Table VI reveals that in no year since the inception of the program has this difference been as much as one per cent of income. In this sense, unemployment insurance is an insignificant part of the national economy.

In any given year, however, it is possible for the program to exert considerable influence. This can be seen by comparing changes in the excess of contributions over benefits with changes in national income. These comparisons are shown in Table VII. Note that in the contractionary years of 1945, 1949, 1954, and 1958, the device obtained some significance. The year 1958 is especially notable; national income changed only \$300 million, but the excess of contributions over benefits changed \$1.8 billion. In the absence of any unemployment insurance program, it is likely that income would have suffered a decline of more severe proportions.

TABLE VI

COMPARISON BETWEEN NATIONAL INCOME AND THE DIFFERENCE
BETWEEN CONTRIBUTIONS AND BENEFITS, 1938-1958

Year	National Income ^a (Billions of Dollars)	Difference Between Contributions and Benefits		Per Cent of National Income (%)
		Contributions over Benefits ^b (thousands of dollars)	Benefits over Contributions ^b (thousands of dollars)	
1938	67.6	524,000		0.775
1939	72.8	510,000		0.701
1940	81.6	440,511		0.540
1941	104.7	760,024		0.726
1942	137.7	918,762		0.667
1943	170.3	1,406,699		0.826
1944	182.6	1,438,154		0.788
1945	181.2	900,422		0.497
1946	180.9		7806	0.004
1947	198.2	504,598		0.255
1948	223.5	418,457		0.187
1949	217.7		521,518	0.240
1950	241.9	41,705		0.017
1951	279.3	887,171		0.318
1952	292.2	635,053		0.217
1953	305.6	639,795		0.209
1954	301.8		605,405	0.201
1955	330.2	165,634		0.050
1956	350.8	403,080		0.115
1957	366.5	139,666		0.038
1958	366.2		1,712,314	0.468

a. Source: U. S., Office of Business Economics, Business Statistics, 1959, p. 1

b. Source: Contributions and Benefits data obtained from relevant issues of the Social Security Bulletin published by the United States Social Security Administration. Annual differences between the two were then computed. Benefit payments made in 1954 and subsequent years under the Unemployment Compensation for Federal Employees Act and payments made in 1958 under the Temporary Unemployment Insurance Act were excluded from computations. Contributions include unemployment excise tax levied by the federal government.

TABLE VII
CHANGES IN NATIONAL INCOME AND THE EXCESS OF
CONTRIBUTIONS OVER BENEFITS, 1939-1958^a

Year	Changes in National Income ^a (billions of dollars)	Changes in the Excess of Contributions over Benefits ^b (thousands of dollars)	Changes in the Excess as a Per Cent of Changes in National Income (%)
1939	+ 5.2	- 14,000	0.269
1940	+ 8.8	- 69,489	.790
1941	+ 23.1	+ 319,513	1.383
1942	+ 33.0	+ 158,738	.481
1943	+ 32.6	+ 487,937	1.497
1944	+ 12.3	+ 31,455	.256
1945	- 1.4	- 537,732	38.409
1946	- 9.7	- 908,228	9.363
1947	+ 17.3	+ 512,404	2.962
1948	+ 25.3	- 86,141	.340
1949	- 6.8	- 939,975	13.823
1950	+ 24.2	+ 563,223	2.327
1951	+ 37.4	+ 845,466	2.261
1952	+ 12.9	- 252,118	1.954
1953	+ 13.4	+ 4,742	.035
1954	- 4.2	- 1,245,200	29.640
1955	+ 28.4	+ 771,039	2.715
1956	+ 20.6	+ 237,446	1.153
1957	+ 15.7	- 263,414	1.678
1958	- .3	- 1,851,980	667.327

a. Source: Computed from Table VI.

b. The plus and minus signs in this column require some explanation. Note in Table VI that contributions exceeded benefits in 1938 by \$524,000,000, and in 1939 by \$510,000,000. Thus, in 1939, contributions exceeded benefits by \$14,000,000 less than they did in 1938; hence, a minus sign is required for 1939. In years in which benefits exceed contributions, the amount is added to the amount in the previous year by which contributions exceeded benefits. The \$908,228,000 shown opposite 1946 in this table is the summation of the \$900,422,000 and the \$7,806,000 shown in Table VI opposite the years 1945 and 1946 respectively. The year 1946 requires a minus sign since contributions exceeded benefits by a lesser amount in that year than they did in 1945.

The analysis of the magnitude of the automatic device is completed. An absolute increase in the size of both additions and subtractions has been revealed from the discussion. The study now focuses in the following chapter upon the nature of the device.

CHAPTER III

THE ECONOMICS OF UNEMPLOYMENT INSURANCE

An analysis of the nature of the automatic device involves the economics of unemployment insurance. It is an attempt to ascertain the economic impact upon the economy of benefit payments, contributions, and other aspects of the program. In other words, how does the system affect income, employment, prices, and resource allocation? This chapter is meant, in a general way, to touch upon this question. The analysis will first consider separately the economics of contributions, benefit payments, and trust fund operations. Afterwards, the program will be viewed in its entirety. Lastly, and more relevant to our purpose, the theory of built-in stabilization will be examined and the unemployment compensation system compared with the workings of this theory.

Contributions

Since contributions to the state unemployment insurance trust funds are derived mostly from a payroll tax on employers, an analysis of the economics of contributions involves the question of tax incidence. It is important to determine who actually bears the financial costs of the programs, since economic activity is likely to be affected differently according to whose income is reduced.

For instance, if the employer is able to shift the tax to the worker, the reduction in the wage earner's income may have adverse effects on aggregate demand for goods and services. On the other hand, if wage reductions do not result, unemployment pressures may be strengthened. Any price increases due to the forward shifting of the tax may result in a reduction of aggregate output. An unfavorable effect on investment expenditures may occur if the employer is forced to bear the tax himself. The problem of resource allocation is also involved since an increase in labor costs may encourage the introduction of labor-saving devices.

Seymour Harris points out that economists were, prior to the passage of the Social Security Act in 1935, in general agreement that a payroll tax will ultimately be passed on to the wage earner.¹ This position is very succinctly expressed by Russell Bauder. After refuting the contention that under certain circumstances a payroll tax will be shifted forward, Bauder states that if the marginal productivity theory of wages is accepted, the conclusion is inescapable that the wage earner will bear the tax. He reasons that since the tax represents an increase in labor costs, there are only two possibilities: lower wages or unemployment.²

The position taken by Bauder rests upon the marginal productivity theory of wages and the assumption of perfect competition. The conclusion that the tax is shifted backward is the logical outcome of the

¹ Seymour E. Harris, Economics of Social Security (New York, 1941), p. 285.

² Russell Bauder, "The Probable Incidence of Social Security Taxes," American Economic Review, 26 (1936), p. 465.

type of analysis which postulates an individual firm in a competitive situation and examines the firm's actions when faced with an increase in its marginal labor costs. Since wages are conditioned by the marginal worth of the worker and market price is not subject to influence, the employer's only recourse is to reduce output and employment. The permanence of the unemployment and reduced output will depend on the worker's willingness to accept lower wages.

Some writers had suggested that to the extent that unemployment insurance taxes are imposed universally, the employers will be able to raise prices and shift the tax to the consumer.³ Bauder and others, maintaining the position that the wage earner pays, answered this suggestion with an argument that the collection of payroll taxes does nothing to increase the money supply. Any upward movement in prices would therefore necessitate a reduction in output. But, this argument continues, if perfect competition is assumed and the marginal productivity theory of wages is operative, there is no reason to conclude that output will be permanently reduced.⁴ Under these assumptions, the universality of the tax is not relevant.

The discussion which followed the passage of the Social Security Act of 1935 revealed much divergence of opinion concerning the incidence of a payroll tax. As indicated by the foregoing analysis, early writers emphasized long-run considerations. Harris points out that after 1935, economists began to emphasize short-run considerations more than before, and were more prone to support the position that the tax

³ Eveline M. Burns, Toward Social Security (New York, 1936), pp. 158, 159.

⁴ Bauder, p. 463.

might be passed on to consumers. The general position that the tax is ultimately shifted backward was with modification maintained.⁵

Writing in 1940, Sumner Slichter exemplifies fairly well the approach that was being utilized at that time. He first considers short-run effects of the imposition of a payroll tax. His conclusions are that the wage earners, consumers and employers will initially share the cost. Then he views the situation from the long run. There are three theories, he says: (1) The tax will produce higher prices and consumers will pay. (2) The tax will move the demand curve of labor to the left and labor will pay. (3) The tax will reduce the rate of interest and property owners will pay. Slichter seems to support the second position, although he states that it must be modified in cases of administered wage setting.⁶

Developments in theory along the lines indicated by Harris and Slichter have continued to the present. This is reflected in a statement made by Eveline Burns in 1956: "The weight of economic opinion seems to be that it (payroll tax) is in fact ultimately passed on in large measure to consumers . . . and to wage earners . . . but that some part under non-competitive conditions falls on profits."⁷ Burns goes on to express the opinion that the unemployment insurance payroll tax has a greater chance of falling on profits to the extent that it is

⁵Harris, p. 286.

⁶Sumner H. Slichter, "The Impact of Social Security Legislation Upon Mobility and Enterprise," American Economic Review 30 (March, 1940 supplement) 52-55.

⁷Eveline M. Burns, Social Security and Public Policy, (New York, 1956), pp. 161, 162.

imposed on different employers and firms with varying intensity.⁸ The frequent exclusion of small employers and the existence of experience rating arrangements makes the tax discriminatory.

Note that it is no longer rigidly maintained that the wage earner will ultimately bear the cost of unemployment insurance. This development appears to arise out of the tendency to emphasize non-competitive conditions and either to de-emphasize or modify the marginal productivity theory of wages. Also, later writers feel that the universality and uniformity of the tax is relevant in considering whether or not it may be shifted forward.

The conclusion reached by later writers complicates the analysis somewhat. If it is maintained that the tax will be shifted to the wage earner, further analysis is supposedly unnecessary. The worker bears the burden either in the form of lower wages or in the form of unemployment. On the other hand, the conclusion that the tax is borne to some extent by the consumer, wage earner, and employer immediately raises a question as to what degree and under what circumstances will each pay.

Another quote from Burns will be helpful here:

The exact proportion borne by these three groups is held to be much influenced by the economic conditions prevailing at the time the tax was first levied and shortly thereafter and by the characteristics of the individual industry . . . The ability of an individual employer to shift the tax will vary in some measure with the elasticity of demand for his product, its amenability to concealed price increases . . . the structure of the pricing system . . . the degree of the organization of his labor force, the feasibility of substituting machinery for labor, the ratio of wages to all costs . . . and similar matters.⁹

⁸ Ibid.

⁹ Ibid., p. 163.

Thus the incidence of the payroll tax is seen to depend on a multitude of factors, and it is no longer maintained that it will be shifted backwards or shifted at all, for that matter. It is, however, usually maintained that the employer will escape most of the burden, and if any falls on him, it is the differential above the minimum tax which is initially imposed on all firms. That the tax, under certain circumstances, may be shifted forward is usually admitted.

In this section, we have concerned ourselves exclusively with the effects of contributions and their incidence. Before arriving at any final conclusions concerning the financial burden of unemployment insurance, it is necessary to consider the impact of benefit payments on our economy.

Benefit Payments

Superficially, the economic impact of benefit payments is fairly self-evident. Persons receiving benefits are, of course, unemployed, and would otherwise be forced to draw upon personal savings or borrow in order to subsist. It seems reasonable to assume that in any period in which benefit payments are made, consumption expenditures will be greater than they would have been in the absence of the payments. Without doubt, the payments themselves act as a stimulus during periods of unemployment.

In this regard, benefit payments may have a somewhat unexpected effect during relatively short periods of economic fluctuations. It is possible that the effect of payments during short periods of unemployment will be merely to eliminate the necessity for the unemployed worker to draw upon savings or borrow. Under this assumption, consumption

expenditures would have been as high without unemployment insurance. However, the stimulus is merely transferred to the initial upswing phase of the cycle. The re-employed will enter this period in better financial condition, and consumption needs will not be sacrificed because of the necessity to rebuild savings accounts or repay debts.

Much has been said about the possible adverse effects which benefit payments may have on worker mobility and incentive. Slichter feels that mobility is affected very little because those workers who have been employed long enough to qualify for benefits are not ordinarily part of the mobile work force anyway.¹⁰ The arrangements between states which permit a worker to receive benefits for which he has qualified in one state although he has moved to another state should at least reduce the adverse effects upon mobility.¹¹

It is usually assumed that benefit payments are too small in relation to full- or even part-time wages to appreciably affect worker incentive. Furthermore, it appears that most workers would rather be employed than idle and drawing benefits.

There is, however, the possibility that the supply curve of labor will be somewhat influenced by unemployment insurance benefits. This could happen in at least two ways: (1) By increasing the reservation price of labor. (2) By strengthening the bargaining power of unions.

The fact that an unemployed worker has some income will supposedly make him more particular about the type of job which he receives and

¹⁰Slichter, p. 468.

¹¹To the extent that "red tape" and bureaucratic inefficiency make it difficult to receive these inter-state payments, the adverse effect will remain.

the wage rate he accepts. It could happen that unfilled vacancies will exist concurrently with unemployed workers' receiving benefit payments. On the other hand, the program has probably been helpful in preserving the skills of the unemployed. As Ewan Clague says, "We must be very cautious in rushing to the conclusion that the first thing we must do for an unemployed man is to push him into a job, any job, as quickly as possible."¹²

Slichter, however, feels that an increase in the reservation price of labor would affect the ability of our economy to recover from contractionary periods. Although the wages of existing firms will not be affected because these wages are set by the employed, benefit payments may discourage new enterprises. Slichter maintains that wages are historically and necessarily lower among new firms and any increase in the wage rate which unemployed individuals are willing to accept may dampen expansionary forces by discouraging new businesses.¹³

A second way in which benefit payments may affect the supply of labor is by strengthening unions. The fact that a source of income is available for unemployed persons may eliminate, or at least reduce, any consideration which a union may have given to the effects of its demands for higher wages upon employment.

Let us now take a closer look at the influence which benefit payments have on aggregate demand for goods and services. At the same time we can reconsider the question of tax incidence by viewing the combined impact of contributions and benefits upon the economy.

¹²Ewan Clague, "The Economic Aspects of an Integrated Social Security Program," American Economic Review 26: 123.

¹³Slichter, pp. 56, 57.

Earlier it was shown that contributions tend either to be shifted to the wage earner or consumer. If the wage earner is forced to reduce his wages, then money income in the economy is reduced. On the other hand, if the consumer pays, output may be reduced. This is, of course, a reduction in real national income. Contributions per se are undoubtedly contractionary.

If, however, benefit payments shift the aggregate demand for goods and services rightward a sufficient amount to offset the contractionary influence of contributions, the combined effect of both forces will be neutral. This appears to be a logical occurrence in periods when benefit payments equal contributions. Under these assumptions, the increased demand will eliminate the necessity of lower wages and/or a reduction in output because of higher prices.¹⁴ This leads to the conclusion that the cost of the program does, indeed, fall on the consumer.¹⁵ When contributions exceed benefits, the net effect will, of course, be contractionary, and the former analysis concerning tax incidence still holds.

One point should be made clear. To say that the combined effect of contributions and benefit payments is neutral, contractionary, or expansionary is not equivalent to saying that the effect of the entire unemployment insurance program is similar. The operations of the trust fund must be considered before final statements are made. The fund monies may be distributed in such a way as to modify the effects rather

¹⁴Harris, p. 250.

¹⁵It might be added that this is not a true net additional social cost. In the absence of any unemployment insurance program at all, the burden of unemployment falls entirely on the unemployed people.

unexpectedly.

The Unemployment Insurance Trust Fund

The Social Security Act provides for the establishment in the Treasury of the United States of an Unemployment Trust Fund. Into this Fund are deposited all contributions collected by state agencies. Benefit payments are made out of the Fund. The Secretary of the Treasury is responsible for investing any excess of contributions over benefit payments in interest-bearing obligations of the United States or in obligations guaranteed by the federal government.¹⁶ The practice has been to restrict the investment to United States Bonds and special issues are frequently "sold" to the Fund.¹⁷ The effects of these operations is the topic presently under discussion. Of course, if contributions never exceeded benefits, we would have nothing to discuss. This is not the case. In all but four years since the inception of the program, an excess has been available for investment.¹⁸ Most of the following discussion will deal with this condition.

There are three different assumptions which may be made concerning Fund operations: (1) The investment of excess contributions in United States obligations (or the sale of obligations by the Fund when benefits exceed contributions) affects neither the rate of interest nor the expenditure, borrowing and taxing activities of the government. (2) The Fund's dealings in securities do affect the rate of interest,

¹⁶U. S., Statutes at Large, XLIX, 642.

¹⁷Social Security Bulletin, Annual Statistical Supplement, 1958, p. 13.

¹⁸See Table VI, p. 32.

and government borrowing plans, but no other fiscal activity. (3) Fund operations affect the expenditure activities of the federal government.

The first assumption simply sterilizes the funds as far as the economy is concerned. In this sense, they are similar to a general fund tax surplus not used to liquidate debt. This effect would be realized if the Treasury allowed the funds to remain idle on deposit with the Federal Reserve Banks. Under this assumption, the unemployment insurance is, without much question, contractionary in any period in which contributions exceed benefit payments.

The second assumption allows for Fund operations to affect the borrowing activities of the Treasury and thereby the rate of interest. This means that the funds are used to retire other debt, or that because of the availability of these funds, not as much borrowing is done from the general public. In either case, the rate of interest is lowered and investment is stimulated. Viewed in another way, investment funds which would have been required by the federal government are now free to seek investment elsewhere or possibly to be spent on consumption goods. Under this assumption, the contractionary influence of the program cannot be measured by the size of trust fund accumulations. The disposition of these excess contributions exerts an expansionary influence. It is doubtful, however, that this would completely offset the dampening effect which the payroll tax creates. In effect, money is transferred from active spenders (employers, workers, consumers) to inactive spenders (former holders of government securities).

The third assumption postulates that, in effect, the Treasury (or Congress) looks upon the Fund as an additional source of revenue and uses the money borrowed from the Fund for current expenditures on

goods and services. The taxing and borrowing (exclusive of special issues to the Fund) plans of the Treasury remain the same as they would have been in the absence of the unemployment insurance program. This assumption leads to the unusual conclusion that in periods when contributions exceed benefits, the net effect of unemployment insurance in our economy will be expansionary. This is so because theoretically the government expenditures multiplier is always greater than either the tax or transfer multiplier. Since excess contributions tend to be greater in periods of economic expansion, the program would tend to add to the expansion rather than detract from it if this assumption conforms to reality.

It is probably true, as Harris says, that not much weight should be attached to its validity.¹⁹ Although evidence supporting any position would be difficult to find, it appears that the first assumption discussed above is a logical one, although the second assumption may have some validity. Under either assumption, in any period in which funds accumulate, the program can be considered contractionary; and, by the same token, in any period in which funds are diminished, an expansionary effect can be assumed.

Built-In Stabilization

The discussion of conditions under which the unemployment insurance program is likely to be contractionary or expansionary is more directly related to the theme of this study. We now turn to a consideration of built-in stabilization. Our main concern here is to define

¹⁹Harris, p. 70.

more precisely that term and to determine how snugly the program fits the definition.

If a program is built in to our economy, it operates automatically according to pre-established rules which need not be substantially modified under differing economic circumstances. Automaticity implies the absence of discretionary action. Theoretically, the only decision necessary is the one which initiates the program and formulates the rules for its operation. Subsequent action is merely complying with these rules.

Now a word about economic stabilizers. If a program acts as a stabilizer, it will prevent fluctuations in economic activity from being as pronounced as they would be in the absence of the program. It is, of course, impossible to determine what would have happened in the absence of something that does, in fact, exist. However, if it is found that unemployment insurance sets in motion forces which tend to reduce the amplitude of fluctuations in economic activity, it can be referred to as a stabilizer.

By way of illustration, let national income be used as a measure of economic activity. If, when national income increases for any reason, the program automatically sets in motion forces which tend to decrease income, it is a built-in stabilizer. By the same token, the program must act in an expansionary manner when income declines. Note that nothing has been said concerning the degree of counter-cyclical qualities. The existence of a force is in question in this chapter, not its strength, assuming one is found.

That the unemployment insurance program operates automatically is evident. It is true that changes in the laws are made every year and

the program has undergone substantial development since its inception. These changes are not, however, made in direct response to, and do not necessarily coincide with, changes in economic activity. On the other hand, the program responds directly and necessarily to certain developments in the economy. In short, unemployment insurance operates automatically.

The question of stability cannot be answered so simply. Several aspects of the program tend to prevent or weaken its counter-cyclical effects. In terms of stability, contributions must vary directly with income. Since they depend to some extent on the size of payrolls, a rise in national income causing a rise in payrolls will increase contributions.

The levy of the tax on only the first \$3000 of the employee's annual earnings may, under certain conditions, limit this development. During periods of declining business activity, the worker may have his hours reduced rather than be dismissed. A smaller annual wage bill will not necessarily reduce an employer's tax liability if no worker's annual earnings are reduced below \$3000. It may therefore happen that the employer's tax liability as a per cent of total wages (or sales) will increase in a period of declining activity.

Experience-Rating Arrangements

Experience-rating arrangements also tend to limit the counter-cyclical quality of contributions. As mentioned in Chapter II, under these arrangements an employer's contribution rate will be smaller to the extent that his employees (or former employees) do not draw benefit payments. For the economy as a whole, this aspect of the program

operates to decrease contributions when employment increases (unemployment decreases). Since employment and income ordinarily move together, experience-rating arrangements insert a pro-cyclical force into the unemployment insurance system.

Provisions concerning these arrangements vary from state to state. All, however, are devised to establish the relative experience of individual employers with unemployment or with benefit costs. In 1958, there were five distinct systems in use. They are usually identified as (1) reserve-ratio, (2) benefit-ratio, (3) benefit-wage-ratio, (4) compensable-separations, and (5) payroll decline.²⁰

The reserve-ratio formula is used in 33 states. Under this system, a separate account is kept for each employer in which is recorded the amount of his payroll, his contributions, and the benefits paid to his workers. The employer's contribution rate is determined with reference to a ratio or fraction. The excess of the employer's contributions over his benefits constitutes the fraction's numerator; its denominator represents the employer's payroll. The larger the fraction, the smaller the contribution rate, and vice versa. In most states using this formula, the numerator includes all contributions and benefits since the inception of the program in the state. The denominator usually reflects the employer's payroll for the past three years.²¹

It follows from the above that under this plan, an employer's contribution rate will decrease if (1) his payroll decreases, (2) his contributions increase, or (3) the benefits paid to his workers

²⁰ Comparison of State Unemployment Insurance Laws as of January 1, 1958, p. 25.

²¹ Ibid., pp. 25, 26.

decrease. His rate will rise if the reverse of these developments occurs. It is important to note that the most decisive factor in establishing the rate is the level of benefits and changes in this level. This is because the payroll and contributions move together; their movements will tend to (but not necessarily) leave unaffected the ratio upon which the rate is based. The contribution rate tends therefore to vary directly with benefits. Since benefits vary inversely with income, a rise in income will cause a fall in the rate. Thus, this arrangement tends to weaken the stabilizing quality of contributions.

Five states employ the benefit-ratio formula. In these states, the employer's contribution rate is determined with reference to the ratio of benefits for the past three years to the employer's payroll for the same period. Again, the higher the ratio or fraction, the lower the rate, and vice versa.²² The exclusion of contributions from the formula makes the ratio depend more directly upon benefit level than in the case of the reserve-ratio system. The benefit-ratio formula, therefore, affects even more adversely the stabilizing aspects of contributions than does the reserve-ratio plan.

The benefit-wage-ratio formula is used in six states. The employer's contribution rate under this plan depends on the ratio of his "benefit wages" to his total taxable wages. The rate varies directly with this ratio. "Benefit wages" represent for the most part wages which were paid to the employer's workers who subsequently drew benefits. In computing the ratio, a three-year period is used for both taxable wages and "benefit wages." This formula is designed to raise

²² Ibid., pp. 27, 28.

in contributions an amount equal to that paid out in benefits. For the state as a whole, the dollar value of benefits per dollar of "benefit wages" is computed during the immediately preceding three-year period. This figure is the dollar value of contributions to be raised per dollar of "benefit wages." The total amount to be raised is then distributed among employers according to their benefit-wage ratio; the higher the ratio, the higher the rate.²³ To the extent that this formula produces the results for which it is designed, a change in benefits will always cause a change of like amount in contributions. The stabilizing aspects of the program would be virtually eliminated if the formula worked perfectly.

The compensable-separations formula, used in only one state, is similar to the benefit-wage-ratio system. Rates are set so they will vary directly with benefit payments causing contributions to rise when benefits begin to decrease the state's unemployment trust fund.²⁴ Stability considerations, however, would require contributions to fall during these times.

Four states employ the payroll variations formula for establishing contribution rates. Under this plan, an employer's contribution rate depends on the percentage which his payroll declines during a specified period. The smaller this percentage, the smaller the rate. A decline in activity and employment, therefore, causes the rate to rise.²⁵ Again, the rate tends to vary directly with benefits and unemployment, partially offsetting the stabilizing qualities of contributions.

²³ Ibid., p. 28.

²⁴ Ibid., p. 29.

²⁵ Ibid., pp. 29, 30.

All of the plans tend to cause contributions to be less counter-cyclical than they would be if contribution rates were not varied at all. Experience-rating arrangements, however, have been defended on other grounds. It is felt by some writers that the employer is encouraged to stabilize his employment if by so doing he can reduce his rate. Also, these arrangements help protect the solvency of the trust fund, and, by the same token, prevent an excessive fund balance from being accumulated.

The above discussion shows that some aspects of the provisions concerning contributions operate to weaken the stability properties of the program. What about benefits? Benefits to the unemployed tend to support consumption expenditures during relatively limited contractionary periods. The limitation to the time period for which benefits may be received would render the program ineffective in a severe depression. Modifications could be made to strengthen this aspect of the system. Extended coverage, lengthening of payment period, increase in size of payment, and shortening of the time period between loss of job and receipt of payment would all increase the effectiveness of the program as a counter-cyclical device.

Most of this chapter has dealt with the nature of the additions to and subtractions from income made by the unemployment insurance program. The discussion of built-in stabilization touches upon the timing of the automatic device. In the following chapter, this aspect of the investigation will be more thoroughly treated.

CHAPTER IV

THE TIMING OF THE AUTOMATIC DEVICE

The timing of the automatic device is the subject of this chapter. As stated earlier, timing refers to the coincidence of additions made by the unemployment insurance program with a falling income stream, and, conversely, the coincidence of subtractions with a rising income stream. If the coincidence exists, the program acts as a built-in stabilizer. To determine whether or not the program has been timed properly, a 13-year period, 1946-1958, has been examined. Yearly, quarterly, and monthly operations of the program were separately considered. This chapter presents the results of this empirical study.

Yearly Operations

The empirical study utilized five statistical series: (1) national income; (2) contributions; (3) benefit payments; (4) the excess of contributions over benefits (sometimes referred to as "excess" in the following discussion); (5) acquisitions by the Unemployment Trust Fund of government obligations (sometimes referred to as "acquisitions"). Little further need be said of the national income series since it consists of figures published by the Department of Commerce. The other four sets of data require further comment.

The benefit series represents payments made by states under their laws to unemployed persons. Payments made during the years 1954-1958

under the Unemployment Compensation for Federal Employees Act are excluded. Although these payments are made by state agencies, they are not a part of the state system and their inclusion would render 1954-1958 data incomparable with data for 1946-1953. Payments made in 1958 under the Temporary Unemployment Compensation Act are also excluded to avoid distorting the datum for that year.

Contributions consist of contributions made by employers to state unemployment trust funds under state laws, and excise taxes paid to the federal government by employers covered by the Federal Unemployment Tax Act.

The series referred to as the excess represents the excess of contributions over benefit payments. Since contributions usually exceeded benefits during the period under study, the net effect of the two is best represented by this set of data. In years when benefits exceed contributions, a minus sign is attached to the datum.

The acquisitions series represents acquisitions of government obligations made by the Unemployment Trust Fund. In years in which net redemptions of securities occurred, a minus sign is attached to the datum.

Since we are interested only in cyclical fluctuations in the series, these movements must be isolated. This was done by constructing straight-line trends for each set of data (using the least-squares method) and measuring the variations of original data from the trend values. It was thought best in the case of national income to use a 21-year period, 1938-1958, for construction of the trend line. Trends for all other series were constructed using the shorter period under study, 1946-1958.

Percentage variations from trend values for national income and benefit payments are plotted in Figure 2. The figure shows clearly that positive fluctuations in income coincide with negative fluctuations in benefits and vice versa. Computation of a Pearsonian statistical correlation between the percentage variations from trend values for the two sets of data produces a coefficient of minus 80. Thus, for the period under study, a high degree of correlation existed between upward cyclical variations in income and downward cyclical variations in benefits. Benefit payments exerted a counter-cyclical force in the economy during the period 1946-1958.

In correlating income and contributions, a one-quarter lag was recognized in the contributions series. This adjustment is necessitated by a stipulation in state laws allowing employers to tender their payments to state unemployment trust funds on a quarterly basis. Over 90 per cent of all contributions are actually collected by state agencies in the first two months of each quarter. For instance, amounts appearing in state clearing accounts in April and May represent liabilities incurred during the preceding January, February, and March. Federal excise tax payments are made in January and February, based on prior calendar year payrolls. Thus, the one-quarter lag will match these data with the proper income figures.

Figure 3 shows percentage deviations from trend values for income and contributions. As can be seen, positive fluctuations in income and contributions coincide rather closely. The coefficient of correlation between the two series of percentage variations is plus 65. Although the degree of correlation is not as high as was found with respect to benefits, it is high enough to conclude that contributions did, during

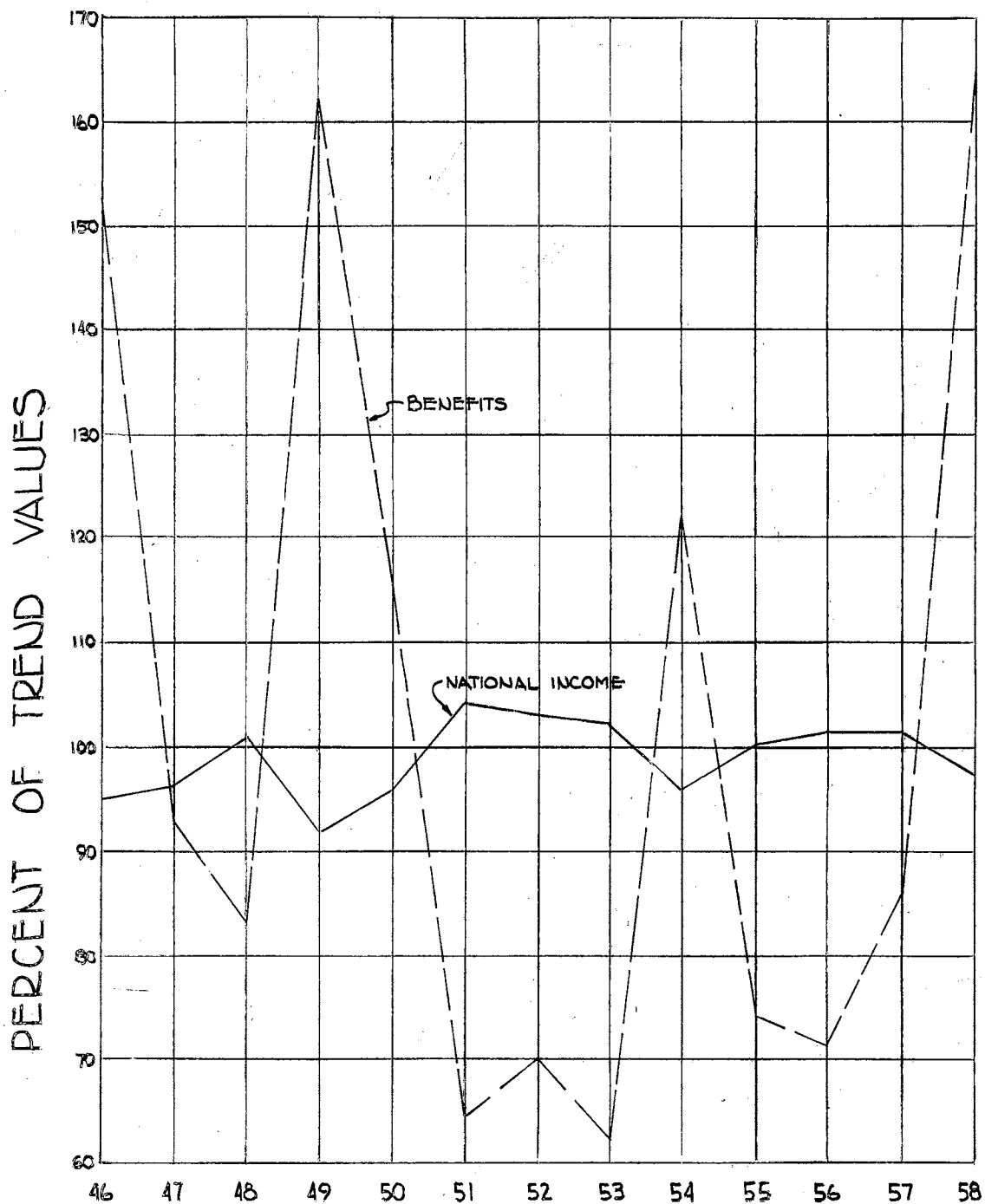


Figure 2. Cyclical variations in yearly national income and benefit payments. (Computation of trend and cycle for national income utilized data from 1959 issue of Business Statistics published by the United States Office of Business Economics, page 1. Computations of trend and cycle for benefit payments utilized data from relevant issues of the Social Security Bulletin published by the United States Social Security Administration.)

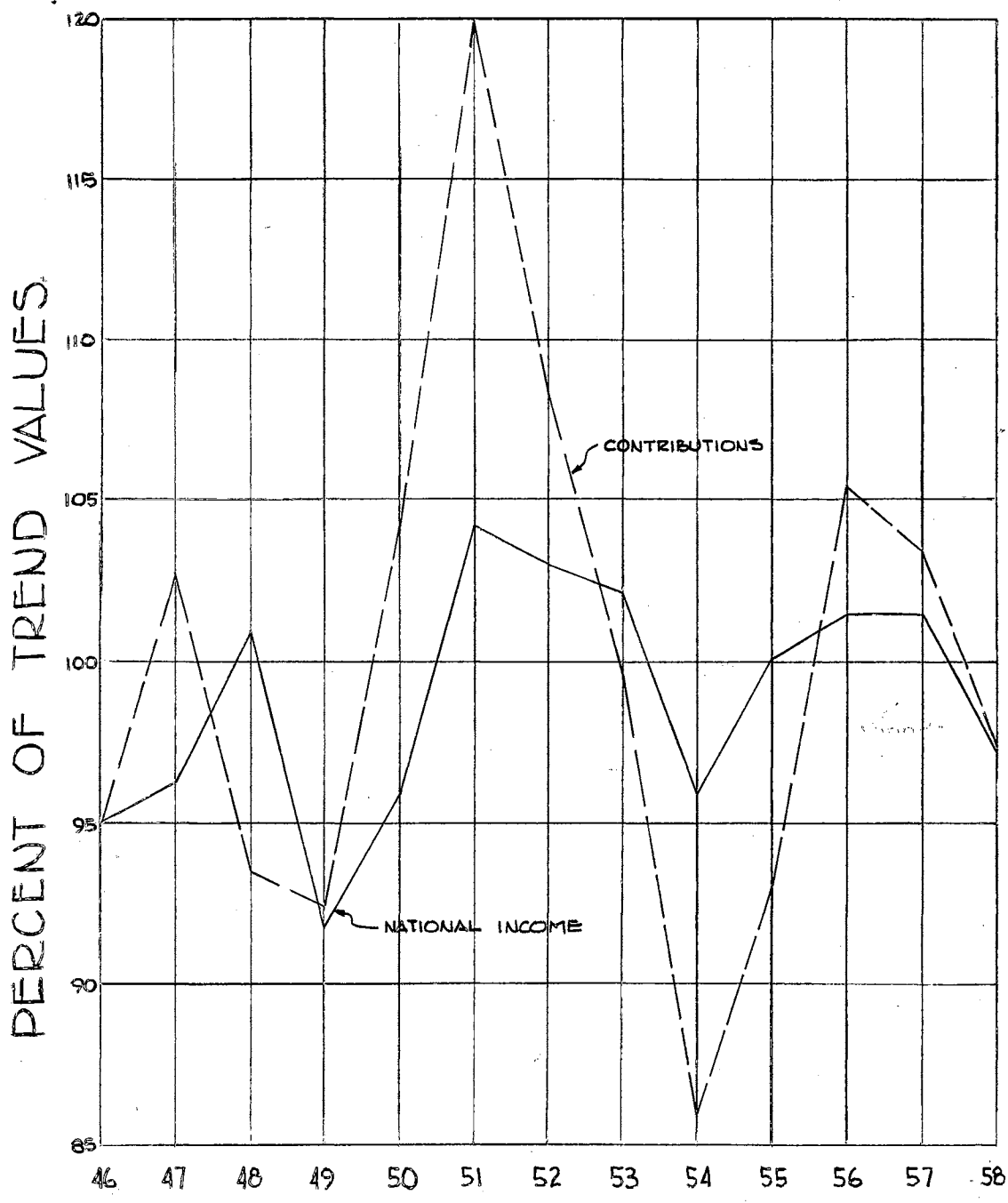


Figure 3. Cyclical variations in yearly national income and contributions. (Computation of trend and cycle for national income utilized data from 1959 issue of Business Statistics published by the United States Office of Business Economics, page 1. Computations of trend and cycle for contributions utilized data from relevant issues of the Social Security Bulletin published by the United States Social Security Administration.)

the period under investigation, operate in a counter-cyclical fashion.

Cyclical fluctuations in the series representing the excess of contributions over benefits are plotted on Figure 4. Since the existence of negative values in the data precludes percentage computations, absolute dollar variations are shown. Percentage variations in income plotted on Figures 2 and 3 are shown on Figure 4, beside the absolute deviations in the excess series for corresponding years. It can be seen that in every year except 1947 that income fluctuated above the trend line, the excess did likewise, and in all years that income varied negatively, similar variations occurred in the excess series. If it were possible to statistically correlate percentage variations in income with percentage variations in the excess series, the result would be a positive coefficient lying somewhere between 65 (the coefficient associated with income and contributions) and 80 (the coefficient associated with income and benefits). Thus, the combined effect of contributions and benefits during the period 1946-1958 was to exert a counter-cyclical influence on the economy.

Since funds not required for benefit payments are invested in government securities, cyclical variations in the acquisitions series are almost identical to the variations in the excess series (see Figure 4). The economic effect of the two variables on the economy may, however, be of different degrees. It has been assumed, realistically, that the effects of contributions and benefits are of the same degree, though directly opposite. That is, a dollar injected into the economy through benefits exerts an expansionary influence equal to the contractionary influence of a dollar extracted from the economy through contributions. Thus, it is logical to combine the two series to measure

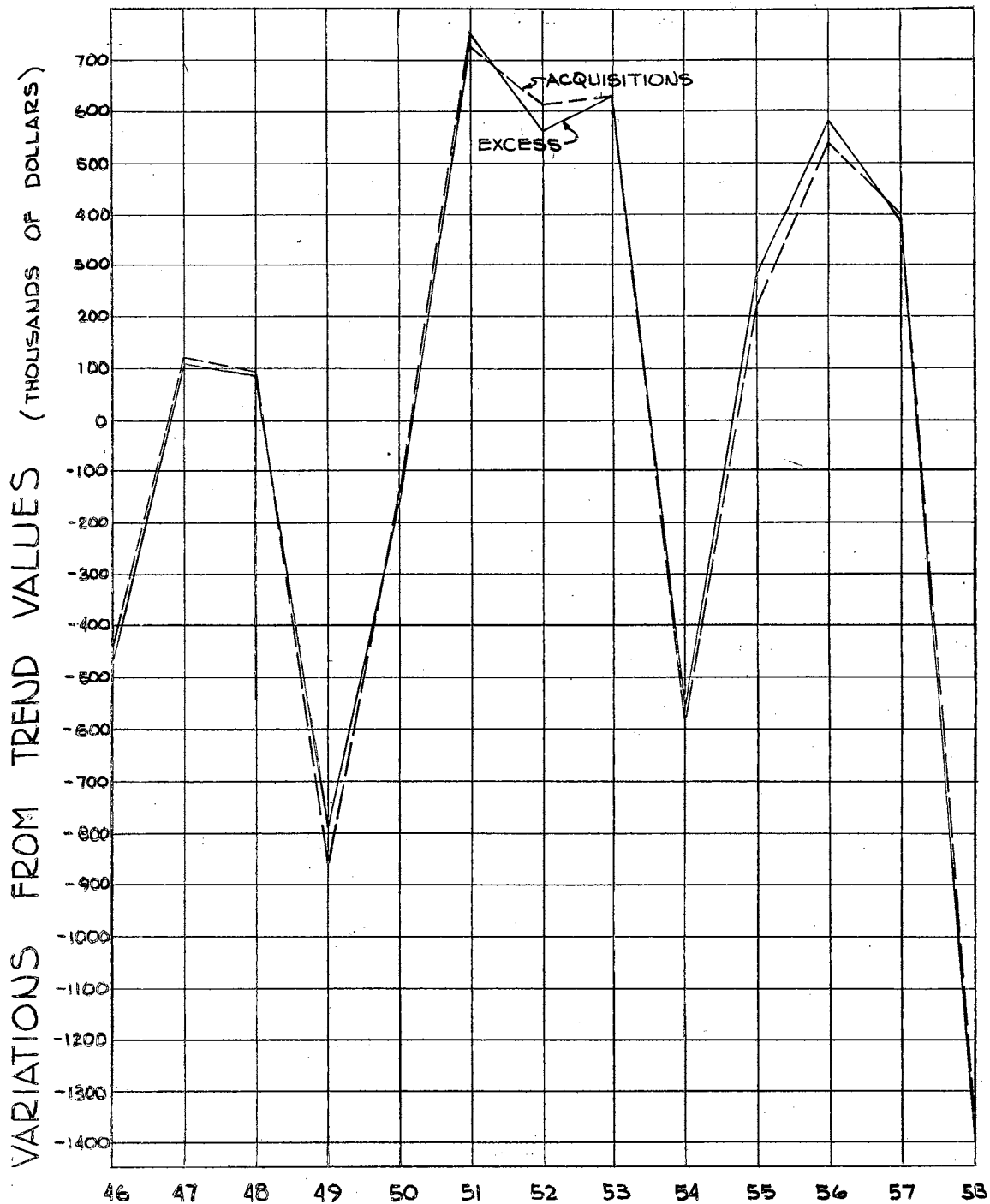


Figure 4. Cyclical variations in the excess and acquisitions series. (Computation of the excess and acquisitions and trend and cycle values for both series utilized data from relevant issues of the Social Security Bulletin published by the United States Social Security Administration. Percentage variations from trend values for national income were taken from Figure 3.)

their net effect.

This measurement which has been referred to as the excess represents a net extraction from (or addition to) income. Since over 90 per cent of all trust fund accumulations during the period under study were Treasury special issues, the acquisitions series represents in effect funds available to the Treasury for disposition at its discretion (or when issues are redeemed, Treasury cash outlay). To ascertain the economic effects of trust fund acquisitions (or Treasury redemptions), it is necessary to determine the influence upon Treasury spending, taxing and borrowing policies of trust fund operations. An extended investigation of this matter is beyond the scope of this thesis. It has been assumed that these operations have little, if any, influence on Treasury policies.

Quarterly Operations

Aside from trust fund operations, it has been shown that the unemployment insurance program does, on a yearly basis, act as a built-in stabilizer in the national economy. The possibility, however, of obtaining different results when using time periods of less than a year necessitates further investigation. Thus, the study now turns to quarterly operations.

Three statistical series were used to test the quarterly effects of the program: (1) national income; (2) contributions; (3) benefit payments. The income and benefit series are those used in the examination of yearly data, but placed on a quarterly basis. The yearly contribution series, however, has been modified to exclude excise taxes paid to the federal government. The employers' privilege of tendering

their federal tax liabilities yearly precludes inclusion of this data in quarterly figures.

The existence of negative values in both the excess and acquisitions series presents problems sufficiently involved to render impractical their use in any formal statistical tests in connection with time periods of less than one year. As will be presently shown, this difficulty will seriously hamper neither the study's validity nor its resulting conclusions.

The isolation of cyclical variations in quarterly data was compounded by the existence of seasonal influences in the benefits and contributions series. These influences were, however, eliminated by proper statistical methods, and quarterly variations from respective trend values were obtained for each set of data. Since the Department of Commerce publishes seasonally adjusted quarterly national income figures, the isolation of the cyclical variations in this series presented no particular problems. As in the case of yearly data, trend influences were eliminated in all three series by computation of straight-line trends (employing the least-squares method). For benefits and contributions the period 1946-1958 was used; for income the period 1938-1948.

Quarterly percentage variations from trend values for national income and benefit payments are plotted on Figure 5. The coincidence of positive fluctuations in income with negative variations in benefits is obvious. The coefficient of correlation between these two is a minus 79, almost equal to the coefficient of minus 80 obtained using yearly data. Thus, quarterly operations of benefits exerted a counter-cyclical influence during the period 1946-1958 equal in degree to that

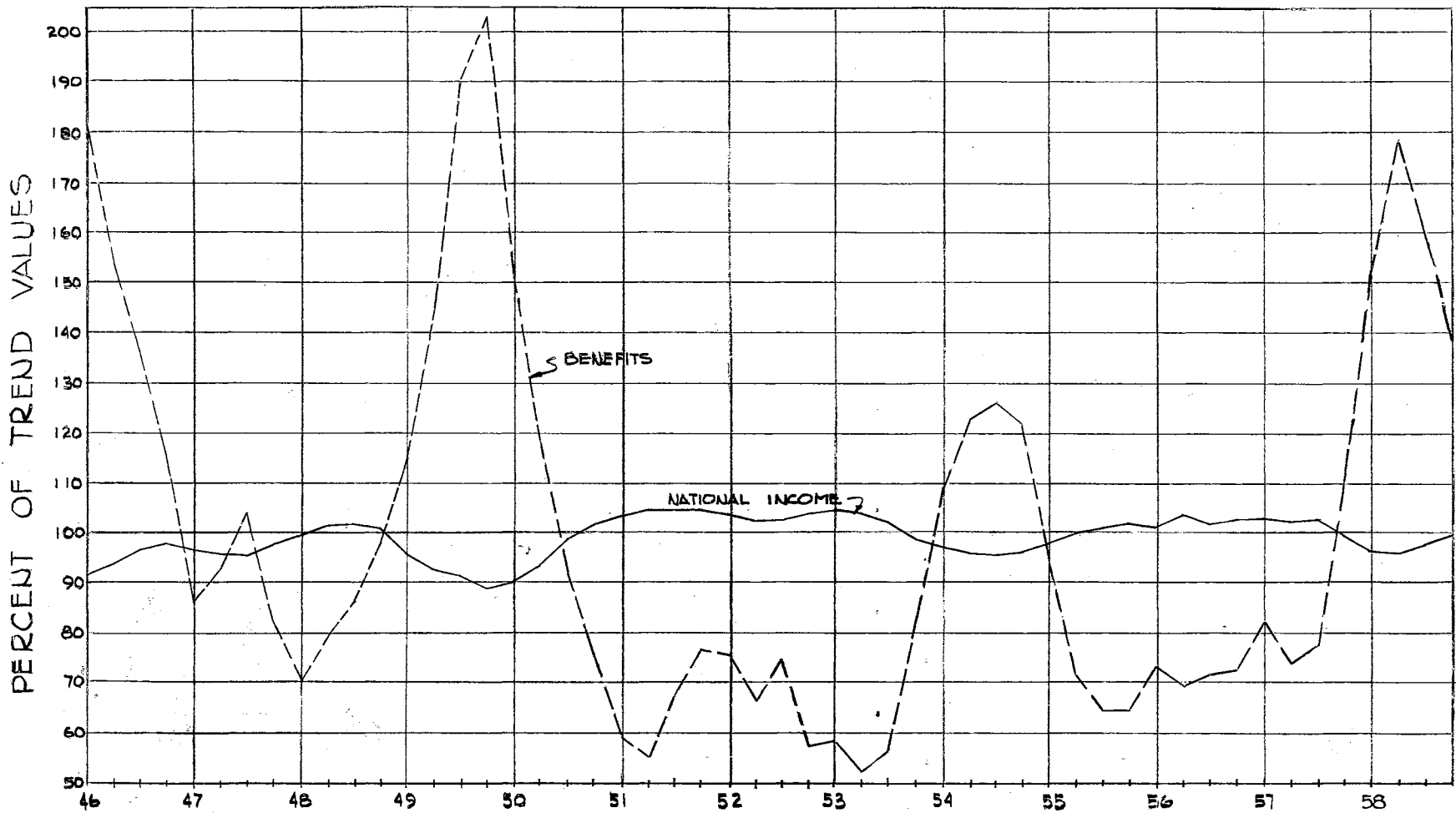


Figure 5. Cyclical variations in quarterly national income and benefit payments. (Computation of trend and cycle for national income utilized data from relevant issues of Business Statistics published by the United States Office of Business Economics. Computation of trend and cycle for benefit payments utilized data from relevant issues of the Social Security Bulletin published by the United States Social Security Administration.)

exerted by yearly operations.

The same one-quarter lag was recognized in quarterly contributions as in the yearly series, and for the same reason. Figure 6 shows quarterly percentage variations in income and contributions. Note, however, that a coincidence of movements in the two series is not clear. In fact, the coefficient of correlation associated with quarterly income and contributions is a low positive .44. This result is not promising as far as built-in stability is concerned. It means that quarterly contributions were not, during the period under study, responsive enough to changes in income to warrant any conclusion concerning their counter-cyclical effect.

As mentioned earlier, no attempt was made to statistically connect income to the excess and acquisitions series on a quarterly basis. However, a statistical correlation between income and the excess would produce a positive coefficient lying somewhere between .44 (the coefficient associated with contributions) and .79 (the coefficient associated with benefits). This coefficient would be closer to .44 than to .79 since contributions are larger than benefits; and it would not be as high as .62, the average of these two figures, but would probably not fall much below a positive .60. Thus, the combined effect of quarterly contributions and benefits, although not as responsive to income changes as yearly data, did, during the period 1946-1958, exert considerable counter-cyclical influence.

Monthly Operations

Testing the timing of monthly operations presented several difficulties. Due to the method by which contributions are collected,

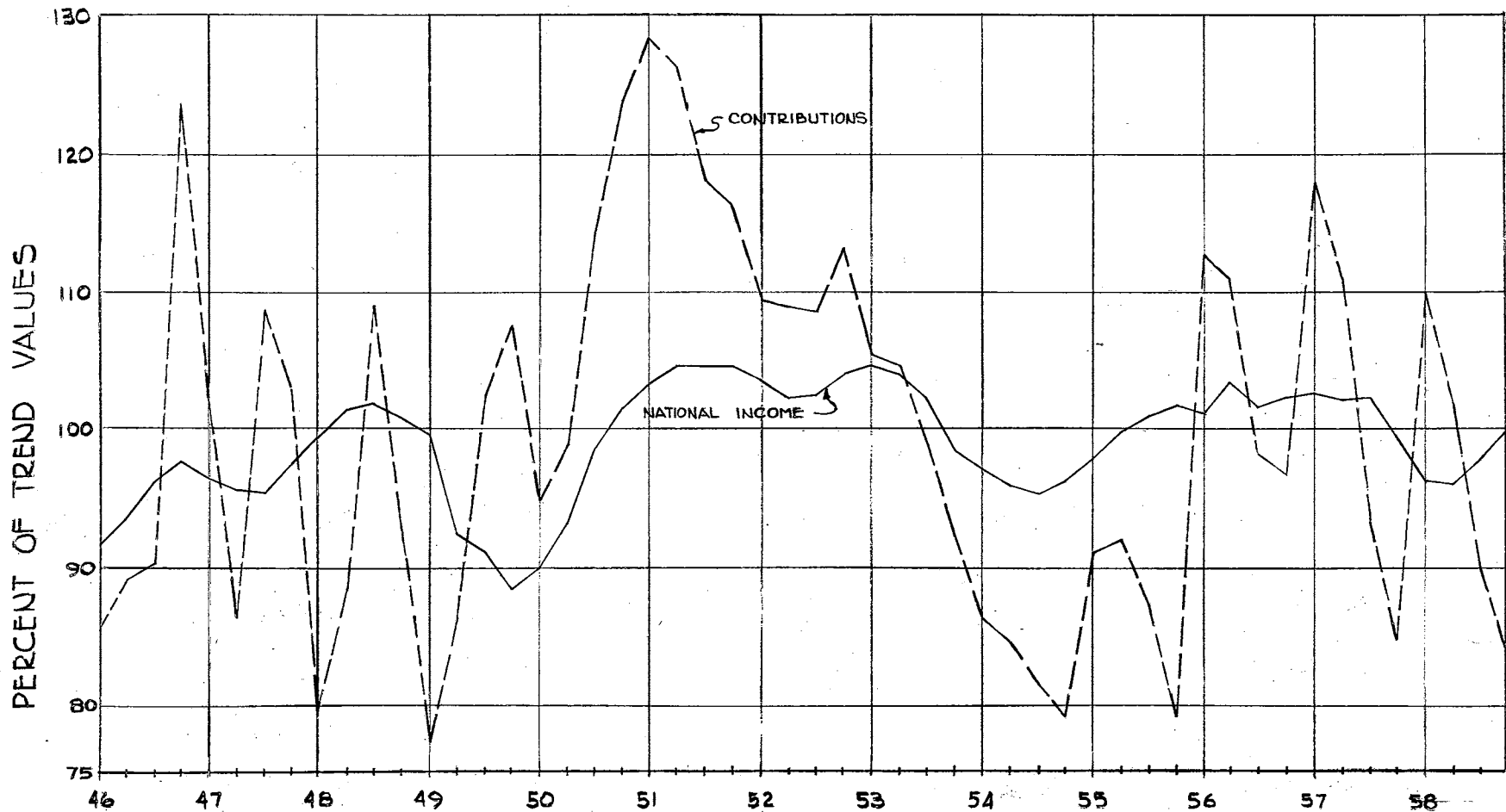


Figure 6. Cyclical variations in quarterly national income and contributions. (Computation of trend and cycle for national income utilized data from relevant issues of Business Statistics published by the United States Office of Business Economics. Computation of trend and cycle for contributions utilized data from relevant issues of the Social Security Bulletin published by the United States Social Security Administration.)

explained above, it is impossible to construct a meaningful contributions series on a monthly basis. This, of course, also eliminates the excess series. Since monthly national income figures are not published, the best measure of economic activity is also unavailable on a monthly basis.

All is not lost, however. The Department of Commerce provides a monthly series for personal income, and this was adopted as a sufficiently accurate measure of economic activity. Statistical procedures mentioned above were employed to isolate cyclical movements in the monthly personal income series as well as in a monthly benefit series. A correlation between cyclical variations in these two series produced a coefficient of a minus 63. Monthly benefit payments, therefore, were found to be fairly responsive to movements in personal income. It is felt that a higher association would be discovered between monthly benefits and national income if the latter data were available. This conclusion is based on the fact that, on a yearly basis, cyclical variations in benefits were more closely associated with such variations in national income than similar movements in personal income. The coefficient of correlation between yearly personal income and benefits was a minus .75 during the period under study. As was shown earlier, yearly national income was associated with benefits during the same period by a coefficient of minus .80.

No further statistical tests can be performed on monthly data. It is fairly evident that monthly contributions are even less counter-cyclical than quarterly data. Accordingly, a monthly excess series would be inadequately timed to produce noteworthy results. Except for benefits, the operations of the program did not significantly stabilize

monthly income in the economy during the period 1946-1958.

Conclusions

The results of the empirical study can be summarized:

(1) Yearly benefit payments and contributions during the period 1946-1958 were timed in such a way as to mitigate yearly fluctuations in national income.

(2) Quarterly benefit payments did, during the period under study, coincide closely with changes in quarterly income, but the coincidence of quarterly contributions with variations in income was not close. The combined operations of benefits and contributions did, however, act in a stabilizing fashion.

(3) Changes in monthly contributions probably did not vary with changes in monthly income during the period under study. Monthly benefits were, however, timed properly.

(4) Trust fund operations may limit the counter-cyclical effects of other aspects of the program. This would be true if either the second or third assumption discussed on pages 44-46 is incorrect.

The analysis of the size, nature, and timing of the automatic device is completed. The following chapter presents a final summary of the study and makes explicit some conclusions.

CHAPTER V

SUMMARY AND CONCLUSIONS

It is now appropriate to present an overall summary of the entire study. The first chapter introduces the subject, presents some background material, and defines the purpose and scope of the thesis. The purpose is to determine whether or not the United States federal-state unemployment insurance system acts as a built-in automatic stabilizer of economic activity.

In providing a background, it is pointed out in Chapter I that automatic forces, both "normal" and "built in", and non-automatic forces largely determine the level of activity in any economy. The disagreement between "Classical" and "Keynesian" economists concerning the ability of the "normal" automatic forces to produce full employment is reviewed. One leading modern economist, Paul Samuelson, maintains that full employment will be insured in the United States only if the built-in and normal forces are supplemented by the non-automatic forces of monetary and fiscal policy. Another eminent writer, Arthur Burns, feels that recent structural changes have created the necessary automaticity for a relatively full-employment economy.

Both writers recognize the existence of certain automatic stabilizers which have been built in to the economy and give some of the credit to these forces for the post-World War II and predicted future prosperity of the United States.

Thus, the initial chapter emphasizes the significance of ascertaining whether or not one of these so-called automatic stabilizers-- the United States unemployment insurance system-- does, in reality, possess counter-cyclical qualities.

Following the background material, the plan of the study is presented. The unemployment insurance program is, in this thesis, viewed as an automatic counter-cyclical device the operations of which diminish economic activity or income when the latter is rising and augment income when it is falling. The device is analyzed in terms of its size, nature, and timing.

The United States unemployment insurance program provides financial assistance called benefit payments to eligible unemployed persons. These payments are financed by a payroll tax on covered employers. The tax is also referred to as contributions to unemployment insurance trust funds. The size of the automatic device, analyzed in Chapter II, involves an examination of the federal and state laws and the operations of the laws which determine the magnitude of benefit payments and contributions.

After a brief examination of relevant federal and state provisions and changes in these provisions, it is pointed out that the volume of both benefit payments and contributions increased constantly during the period 1938-1958.

The relative size of the program is shown by comparing on an annual basis the difference between contributions and benefit payments with national income. It is pointed out in Chapter II that this difference has not been as much as one per cent of national income in any year since the inception of the program. In this sense, the

program is rather insignificant. However, when changes in the excess of contributions over benefit payments are compared with changes in income, a more accurate view of the program is obtained. In the contractionary years of 1945, 1949, 1954, and 1958, changes in this excess, representing the net effect of contributions and benefit payments on the economy, were quite significant in relation to changes in national income.

The nature of the automatic device, involving an analysis of the economics of unemployment insurance, is examined in Chapter III. Since contributions are, in effect, payroll taxes levied on covered employers, an attempt is made to locate the incidence of these taxes. The program's impact upon the economy may depend on which group bears its financial burden. A review of the literature reveals that, prior to 1935, writers place the incidence of the tax with the worker. The tendency among more recent economists, however, is to maintain that consumers help bear the burden through higher prices. At any rate, the analysis indicates that the economic effect of contributions, per se, will be contractionary.

Benefit payments, it is held in Chapter III, exert an expansionary effect upon the economy by shifting the aggregate demand for goods and services to the right. This effect will be slightly limited to the extent that the payments adversely affect worker incentive and/or mobility.

The net long-run combined effect of benefit payments and contributions, assuming the two are of equal volume, will probably produce higher prices, leaving the wage rate, production and employment virtually unaffected. This conclusion assumes, of course, a money

supply elastic enough to absorb the increase in the price level. When contributions and benefit payments are unequal, the net impact of the two is either contractionary or expansionary, depending on which is the greater.

It is maintained, however, in Chapter III, that the net effect of the entire program cannot be ascertained without considering the operations of the Unemployment Trust Fund. Acquisitions by this Fund of United States obligations, using contributions not needed for benefit payments, and redemptions, when benefits exceed contributions, of securities previously acquired, could partially offset the impact of other aspects of the program. A completely offsetting effect was, however, not assumed in this study.

Also in Chapter III the United States unemployment insurance system was compared with the theory of built-in stabilization. The device was found to fit the theory rather closely in most respects. Some aspects of the program such as experience-rating arrangements do limit its counter-cyclical qualities. Trust fund operations may, as mentioned above, further reduce its theoretical qualifications as an automatic stabilizer.

Chapter IV presents an empirical investigation of the timing of the automatic device. Ignoring trust fund operations, the device is timed properly if injections into the income stream in the form of benefit payments coincide with a falling income, and if subtractions from income in the form of contributions coincide with a rising income stream. Cyclical variations in national income were correlated with cyclical variations in contributions and benefits to ascertain the existence and extent of this coincidence.

Yearly, quarterly, and monthly operations of the program during the period 1946-1958 were considered. Both yearly contributions and benefit payments were, during the period, timed properly. Quarterly and monthly benefits also acted in a counter-cyclical fashion. No significant correlation, however, was found between national income and contributions on either a quarterly or monthly basis.

The results of this attempt to ascertain whether or not the United States unemployment insurance system does, in reality, possess counter-cyclical qualities can be briefly stated. Except as limited by trust fund operations, yearly operations of the program exert a stabilizing influence on economic activity as measured by national income. Likewise, quarterly and monthly benefit payments perform a stabilizing function. During periods of less than a year, contributions do not mitigate variations in economic activity.

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