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UNEMPLOYMENT
IN AUSTRALIA

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by

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UNEMPLOYMENT IN AUSTRALIA.

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Unemployment in Australia.

Chapter I

The Problem.

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1. THE UNSOLVED PROBLEM.

The reason for writing this book is to be found in Chart 1. This shows how we are continuously faced with the presence of unemployment in our community, and how, from time to time the situation becomes abnormally acute. Our chart shows the quarterly percentages of unemployed trade unionists for the sixteen years 1913-1928. It has not fallen below 5.2%, while on some occasions it has risen higher than 10%. The accuracy of these figures has been questioned[1], but even if they are inexact, there is no disputing the presence of the problem. How is it that such a large proportion of our working population cannot find work ? Can the situation be remedied? These two questions go to make up what might well be called "our greatest social problem", and it is because statistical and economic analysis can add something to the community's store of knowledge, and can assist us towards answers to these questions that this study is undertaken.

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Moreover, no serious attempt has hitherto been made to study the subject in detail. The price of knowledge and understanding is laborious, persistent, and sustained research, and this explains why such reports and articles on Unemployment in Australia as have appeared, have been rather general in tone and have given little specific help to the solving of the problem.

Perhaps it is superfluous in these days, to explain why unemployment is regarded as such a serious problem. Yet our thinking is as obscure in this as in other economic matters that have attained political implications, and it may be

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1. See Appendix 11

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worth while setting out clearly the reasons that prompted the author to select this problem from the host that surrounds any student of economics.

2. Unemployment and Distress

The poverty resulting from unemployment is before our eyes daily. Particular instances of distress provide news items for the press, and question matter for parliamentary oppositions. The suburban householder entertains a stream of applicants for relief. Even if many are not genuine, their use of the excuse "out of work" betokens the prevalence of the malady. Social agencies and charitable organisations meet the unemployment evil in its concrete form, and testify to its devastating effects upon individual strength, efficiency and enterprise, and upon family life. Crudely stated, unemployment means an absence of wages in a section of the community where wages are the only source of income. A stoppage of income for any members of the community is itself an evil, yet its implications go still further. Malnutrition renders the unemployed unemployable, and his children cannot grow to economic efficiency while they are underfed, and inadequately clothed. From the point of view of child welfare, the rigours of unemployment have more deleterious effects than the failure of the wage system to allow for large families. No less important than its effects upon physical efficiency are the psychological effects of unemployment upon the worker. Enforced inactivity breeds a habitual idleness. Fear of privation and worry produce a lack of efficiency while at work. The need of

accepting charity tends to sap the moral fibre of the unemployed, and to undermine his initiative. But this is well known.

The effects of a short period of unemployment are not so serious as of a long period. Thus we cannot estimate the evil results of unemployment in our community merely on the basis of an estimate that say, 11% of trade unionists are unemployed. At the 1921 Census, information was collected which made possible the compilation of Table 1. It is remarkable that this table has attracted so little attention, for it shows the distribution of unemployed according to the period of unemployment. Now of those who were unemployed on April 4th, 1921, 37% had been out of work for less than 20 days. If all our unemployed found work after 20 days of idleness, we would not have such grounds for concern, unless, of course, the period of employment were short also, that is, unless such brief periods of unemployment were frequent for all workers. But an occasional spell of 20 days without work or pay would reduce few families to starvation. Since the basic wage deliberately allows no margin for saving, 20 days of unemployment would involve privation, but a frugal existence would be possible, on the assistance of friends or even by recourse to borrowing. But 27% of those out of work on April 4th, 1921, had been unemployed for 90 or more days, that is, for over three months. Charity of friends and sources of credit tend to dry up before long and while a food shortage may have no visible effects upon health and strength in the first three weeks, privation for three months means slow starvation. It is this 27% that provides our most serious problem. These are the people who are

impelled to deputationise the ministry, or under more restless leadership, to interrupt the deliberations of parliament or to invade restaurants with a demand for food. These it is who stir even the conservative to wonder if something cannot be done to stop all this disorder, and these it is who stand, for the socially conscientious, as the living rebuke to our social inefficiency, or as the "shadow of our social sins". These it is, too, who provide the Communists with illustrations of Marx's doctrine that whereas men formerly fed the system, the approaching collapse of capitalism is heralded by the demand that the system shall now feed its men.

It is these indeed, who have turned economists' thought to new aspects of our social life, to matters which the 19th century writers found little time to study. It is obvious, then, that to know just how serious the problem of unemployment is at any time, we want to know not only the amount of unemployment, but such information as this table gives. ~~But no such~~ Little information is available for other years. We cannot take it for granted that the distribution of periods of unemployment among the unemployed is today the same as in 1921. It must be remembered that 1921 was an abnormal year, and this information was collected at the beginning of a big slump in business. Figures collected in abnormal times are of no more value in normal times than are normal figures in abnormal times. The Commonwealth Bureau of Census and Statistics might well attempt to supply such information more frequently. The only other figures the writer has come across, are for one trade union in England, in the eighties and nineties of last century and for Queensland of recent years. These,

reproduced in Tables 11 are somewhat similar in general form of distribution to those in Table 1. but more heavily concentrated in the shorter period. They also show that the distribution might be expected to vary from year to year.

Another question affecting the seriousness of any given unemployment situation is this: Does unemployment tend to be distributed over the whole body of workers, or is it concentrated in special trades? If the latter, is it generally distributed throughout all the workers in these trades or does it fall upon a few unfortunate individuals, who tend to become unemployed more times in their life than their fellow workers? A priori we would expect that, when firms find it necessary or desirable to reduce their staff, the least efficient employees would be dismissed first, and for this reason unemployment would tend to fall more heavily upon the least efficient, time after time. No definite information for Australia is available on this point, but it is probably true that the most efficient workmen in any particular occupation suffer least from unemployment. It might be noted that this belief is less widely held among workers than among employers. As a rule too, we would expect their period of unemployment to be shorter than that of less efficient workers, who would find it more difficult to get another job. Perhaps the development of large industrial concerns, where the employer knows his men less intimately militates against this tendency, for the respective merits of different employees may not be so clearly defined in the mind of the management as in the days of smaller staffs. On the other hand the development of scientific selection of employees,

and systematic employee records, tends to make it more and more inevitable that unemployment falls first upon the least efficient. When a trade depression demands retrenchment, the management naturally takes the opportunity of "weeding out" the poorest workers. As against this, personal management is not so well developed in Australia as in some parts of the World.

We have more accurate information regarding the distribution of unemployment among different trades. The Commonwealth Statistician's figures are classified according to industrial groups. The classification is not very detailed, but this is partially due to the ~~extent to which~~ fact that some Australian trade unions are organised on an industrial rather than a craft basis. Moreover, trade unions are in some cases unwilling to supply figures unless these figures are lumped with others before publication. The Statistician has not published figures for Industrial Groups in the separate States, although such figures for 1925-27 appear in the Development and Migration Report on Unemployment. Such detailed figures for the period 1913-1928, not previously published but supplied privately to the Author from the Statistician's Records by courtesy of the Development and Migration Commission, are given in Appendix 1. Table IV is based on these figures, and makes it plain that during these sixteen years, some industrial groups have, on the average, suffered more from unemployment than others. Moreover, the incidence is different in the various states. This fact is important when we endeavour to explain the causes of unemployment. At this stage however, our interest lies merely in this demonstration of the differential incidence of unemployment as

between different sections of the working community.

Now, just as economists agree that great inequality of incomes is a bad thing, it must be admitted that great inequality of working conditions is a bad thing, unless it offsets inequality of incomes. Is unemployment worse in the better paid industries? Does it offset inequality in workers' incomes? It is possible to give some answer to this question, in terms of concrete figures, but consideration of the relation between wages and unemployment is postponed to a later chapter. In general however, it ~~may be stated~~ cannot be claimed that unemployment merely serves to equalise the inducement offered by different occupations. Since the risk of unemployment may be regarded as a subjective cost of production from the workers viewpoint, inequality is to be condemned, and a closer approximation to equality in its incidence as between different sections of the working community might be, on the whole, desirable, although the question is complicated and debatable.

3. Unemployment and Production.

There is another side to the unemployment problem which though none the less human in the long run, may appeal more to the business man than the portrayal of individual distress which he himself is not likely to undergo. It is now generally recognised that it is to the interest of all sections of the community that our ~~total~~ national income per head, should be as great as possible, and that even for a country like Australia where international trade assumes such significant proportions, the most important determinant of national income per head is

production per head of population. It does not require great erudition to perceive that an increase in unemployment must, other things being equal, result in decreased production per head. Fewer men at work means, as a rule, smaller total output, and since, over a short period, the population of the country is approximately the same whether unemployment is severe or not, smaller total production involves less production per head. This can hardly be called economic theory. It is just common sense. Hence it is nothing short of a catastrophe that so large a proportion of our productive power, although willing to work, should be kept in idleness. In fact, it is shockingly bad business, from a national point of view. Much has been said and written about the effects upon production of industrial strife, with its frequent stoppages. But the loss in wages or in production, resulting from industrial disputes is, on the whole, insignificant as compared with the loss due to unemployment. It has been calculated that, on a conservative estimate, to abolish industrial disputes altogether would reduce productive time lost to the nation less than a reduction of one per cent in the volume of unemployment.(i) This may, however, convey an impression which should be qualified. First, it must be remembered that the time lost through unemployment is probably lost chiefly by the least efficient employees, as was explained above. Second, stoppages on account of industrial disputes are merely symptomatic, we are told, of a continuous undercurrent of industrial unrest, and this engenders a bitter spirit in industry provoking "go slow" and virtual

(i) Benham:Prosperity of Australia p.234

"sabotage", so that the loss of productive effort due to industrial unrest is a good deal greater than is indicated by figures relating to the number of days work lost. Moreover, the lack of continuity of output in certain industries, due to disputes, makes it increasingly difficult to compete in the international market. This argument has been well ventilated in the coal crisis in several countries. Nevertheless the claims that a cessation of industrial disputes would usher in the economic millenium are absurd. Admitting the serious nature of industrial disputes, the ~~Author~~ we remains convinced that unemployment is a still more serious problem.

4. Industrial Unrest and Insecurity.

It is often stated that industrial disputes cause unemployment. There is some truth in this, but we must postpone our estimate of how important this suggestion is. At this stage it is sufficient to notice a relationship of the reverse order. There is no doubt that one of the prime causes of discontent and unrest is the insecurity of the worker's life. The spectre of unemployment is never very distant from the wage earner. It is a risk quite as real as that experienced by the investor. Moreover, it seems ruthless and impersonal in its action. Apparently without rhyme or reason, the labour market becomes heavy and unemployment spreads, and it seems beyond the power of the worker to prevent it. Again, this situation provides a reserve from which strike breakers may be drawn. Human nature is so constituted that we naturally look round for a culprit whenever we experience some evil, and the employer is readily

regarded as the knave responsible for this one. Seeing a little further, some workers find their culprit in "the system" which supports the employer while placing the workers in such an insecure position. And this feeling that somebody else is to blame for our economic ailments is basic to industrial unrest of a destructive type. "Industrial Peace" is a futile slogan so long as the lot of the employee is one of insecurity. The tragedy is that neither party in industrial strife really understands the situation. Each puts it down to the wickedness of the other. Partly it arises from their common stupidity but still more fundamental is the inefficiency of our social and economic organisation. To go some distance towards an understanding of this inefficiency is the aim of this book.

5. Unemployment an International Problem.

Our introductory survey of the problem would be incomplete if we omitted to point out the international aspects of unemployment. Economic questions are political problems. The presence of unemployment colours the attitude of governments towards migration. There has been much discussion regarding the possibility of finding a place for Great Britain's unemployed in the Dominions. There have been experiments in Canada, while the "34 Millions Agreement" between Australia and Great Britain was intended to assist in providing an outlet for the latter's surplus working population. Unemployment is popularly regarded as evidence of overpopulation, and though an inadequate test of this, it nevertheless

affects the political outlook on migration. The presence of unemployment in Australia stimulates opposition to immigration, since the worker naturally fears that an influx of migrants, whatever their nationality, will still further embarrass the labour market. From this point of view, then, unemployment becomes an international problem. But from another viewpoint it is of international import. Unemployment is found in a greater or less degree in practically every industrial country. Table ~~IV~~ V illustrates this, with figures taken mostly from the International Labour Review. The list could be extended, but is long enough to show the international ramifications of unemployment. Of course no international comparisons should be made from this table, because population is greater in some cases than in others, statistics are collected differently, and seasonal fluctuations vary in incidence in different countries.

But the fact that unemployment is so widespread shatters any suggestion that its causes are largely local. On the other hand, unemployment is less severe in some countries, and this fact should help us to decide where to look for its causes and indeed for its remedies. We shall be able to draw upon the experience of many countries. In each country where the problem is acute, economists are studying it with various degrees of intensity. Thus there is a mass of material of a more or less helpful nature, which an isolated student of our local problem might overlook. Fortunately, the International Labour Office provides a clearing house for information and the results of research, and in the later sections of this book we shall be able to compare some of our own findings with those of

some workers in other parts of the world.

6. The Facts about Unemployment.

So much by way of preliminary discussion. Without further ado, let us begin our analysis of the problem set before us so tersely, yet so urgently by Chart 1. Our first step is to consider the statistics of unemployment, so that we may have a clear knowledge of the facts. Here, however, is our first difficulty. How are we to find the facts about unemployment? The Commonwealth Statistician, we have seen, publishes figures showing the number and percentages of unemployed trade unionists. But the accuracy of these figures has been questioned. The arguments for and against the accuracy of his figures are of a somewhat technical nature, and since they will not interest the ordinary reader, they are relegated to Appendix 11. Those interested will find there a fuller discussion of the merits and demerits of the figures. Here we may just summarise our conclusions somewhat dogmatically

The Statistician's figures are incomplete in that they are based on returns made by trade union secretaries for only a selection of trade unions. Moreover, the figures do not discriminate adequately between unemployment due to scarcity of work, sickness, and other causes. There is no guarantee that the trade union secretary's returns are careful and accurate. Some discrepancies between these figures and those given by the Census Reports and the Queensland Unemployment Insurance System have been pointed out.(i) But on the whole, the

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(i) Gifford: Economic Statistics for Australian Arbitration Courts.

figures of percentage unemployed give a sufficiently ~~proximate~~ accurate impression of the general course of unemployment, and are good enough to form the basis of statistical investigation. The urgency of the problem is such that instead of waiting for more accurate figures, it is better to use these, but to be prepared to qualify any inferences which may turn out to be inconsistent with the more accurate figures which may appear in the future. Of the figures given in Appendix 1, to which reference will be made again and again, the figures for the Commonwealth may be considered as more reliable than those for the separate states. These supplementary figures are less complete than the Commonwealth figures, and probably the margin of error is greater, since to some extent errors tend to compensate for each other as one takes larger samples of figures. Nevertheless they are worth using to gather an impression of the general trend of unemployment in any industry in the different states, and it is not proposed, in this book to use them for any other purpose. Our more detailed quantitative studies are to be based upon the Commonwealth figures.

In addition to these tables some other information is to be had from Census Reports and other sources, and where this is used, special mention will be made of the sources.

7. Preliminary Analysis of the Facts : Three Problems.

A careful examination of the tables in Appendix 1 will suggest many questions, and the following chapters present the writer's further investigations in attempting to answer these questions to his own satisfaction. Most of them, however, are

suggested by Chart 1 , and the detailed tables merely emphasise their persistency, so we shall use Chart 1 to illustrate our preliminary analysis. "To know what to ask is half of every science".

The first question in the mind of any student acquainted with the literature of the unemployment problem, as he examines Australian figures is this : Do these figures show the same features which are characteristic of unemployment in other countries?

These are:-

1. The continuous presence of some degree of unemployment.

2. The presence of cyclical fluctuation in the degree of unemployment.

3. The presence of "seasonal unemployment".

Now, reference to Chart 1 will show that the first feature is present. During the period in question, the lowest figure recorded is 5.2%. This is apparently the irreducible minimum under present conditions. We may normally expect to find at least this much unemployment at any time. This is the problem of "normal" unemployment, although it is questionable whether we can regard the irreducible minimum as "normal". This matter will be discussed later. Examination of the tables in Appendix 1. will show that very rarely does a figure of 0% appear - and then only in one or two industries in particular states. Our question then is, Why must we normally expect to have a certain amount of unemployment, and how much may we

normally expect? To answer this is a requisite step towards the understanding of unemployment.

What of the second feature ? Is it observable in Australian figures,too ?

Perhaps the most striking thing about Chart 1 is the remarkable fluctuations which it reveals. This fluctuation indeed, is characteristic of most phases of our economic life. If one examines Australian figures of production, international trade, bank clearings, prices, or even births, deaths and marriages, not to mention the consumption of alcoholic beverages, one finds in all cases considerable fluctuation. In some cases there is a general move upwards, as in production and trade,, but the growth is irregular, with many reversals. In other cases, such as the birth and death rates, there is a general fall over a long period, but here again there are remarkable up and down movements that seem independent of the general, long term movement. It almost seems as though growth and decadence both take place in waves, with very marked troughs and peaks. So this phenomenon of fluctuation in unemployment is nothing unique. The term "fluctuation" might be extended to cover not only the violent oscillations of this chart, but the general growth of trade, and the general fall in the birth rate, but it is conventional to restrict it to the shorter period variations, covering anything up to ten years or so.

It is these fluctuations which direct attention most forcibly to the unemployment evil. It is when the curve rises high that the community begins to get excited over the matter, but when

the situation is easier, our interest appears to wane. It is truly ironic that our desire to solve "what has often been described as the world's most baffling social and economic problem" should be dormant except at the very times when human effort can do little to relieve the situation. "Prevention is better than cure" is usually not a slogan, but a regretful afterthought. Since it is in those periods of excessively severe unemployment that we take an interest in it, inevitably false notions arise as to the immensity of the problem. To regard the unemployment figure for any particular quarter as an indication of a semi-permanent state of affairs is absurd. But this is the error into which we easily fall. Whenever an increase is reported, we say "Unemployment is still increasing" although probably it has actually decreased in the previous few years. Even the British Economic Mission to Australia interpreted figures in a way likely to lead to a false impression.

"The latest figure[(i)] given to us of unemployment, viz. 11.4% of the working population may not mean the same thing as a similar figure would mean in Great Britain, (but) there is no doubt that unemployment in Australia has of late been upon the increase". This was true enough with regard to the previous two years, yet the quarter during which the Report was written showed an improvement, for unemployment fell to 9.9% and in the next quarter to 9.3%. The important thing to remember is that we must not, in the face of such fluctuation, attribute long-term significance to figures that refer to a short unit of time. In studying the increase or decrease in unemployment we must

(i) 3rd quarter 1928.

review a period of several years. Of course this principle works both ways. If in ~~June~~ May 1914 or November 1920 we congratulated ourselves upon the relatively small amount of unemployment, the next half year in each case furnished returns which brought us up against the hard reality of industrial fluctuation.

Fluctuation is regarded as cyclical when there is a recurrence of alternate good and bad periods, the good periods being separated by at least two years or so. If the alternating good and bad phases recur at such short intervals that there is a more or less regular annual movement, this is not known as cyclical, but as seasonal fluctuation, since there is good reason to believe that it is due to seasonal factors. Now Chart 1 would lead us to believe that both types of fluctuation exist in Australia. "Peaks" of unemployment occurred in 1914-15, 1921, 1924-25 and 1928. In the intervening periods, ranging from about six to three years in duration, unemployment was much less severe. Thus the presence of "cyclical" fluctuation is established. There is ~~also~~ observable, moreover, ~~however~~, a short-term fluctuation, which suggests that seasonal influences are at work. To establish this definitely, however, mathematical treatment of the statistics is necessary, and the results of such treatment are reserved for a later chapter. We ~~will~~ may expect to find, of course, that seasonal fluctuation is more evident in some industries than in others.

Now these general impressions derived from Chart 1, are borne out by study of the detailed tables in Appendix 1. But general impressions are of little value, except as guides to further

investigation. The next ~~five~~ three chapters then, will be de - voted to making our knowledge more precise. Statistical methods will be applied to our data so as to measure normal unemployment and the different types of fluctuation in the different industries. This will give us matter for some quantitative comparisons which will prove invaluable when we come to seek the causes of these phenomena. To follow the statistical methods used, unless the reader is used to such material, (may demand a good deal of concentration,) But to imagine that a problem such as unemployment can be understood without mental effort is a delusion.

Unemployment in Australia

Chapter II

The Normal Rate of Unemployment

1. The Normal Reserve of Labour.

2. Averages and long term trends.

1. The Normal Reserve of Labour.

The title chosen for this chapter is not unambiguous, for the adjective "normal" has not a very explicit application in economic matters. Certainly it refers to conditions which may be contrasted with an "abnormal" state of affairs. We often hear and read allusions to "abnormal unemployment", but one may well doubt whether those who use the term have its meaning precisely conceived in their own minds. The importance of clarity and definiteness in this matter is apparent when, for example, the Report on the Australian Tariff[(i)] states that the only test as to whether "the wage standard and the other pressure for welfare" of employees has "exceeded the capacity of the country's resources", is "whether there is, or is not any abnormal unemployment". But how are we to say whether unemployment is abnormal? We have suggested that seasonal and cyclical unemployment exist in Australia, and such fluctuations are normal in the sense that they continue to recur in the ordinary course of affairs. If a seasonal movement be unusually pronounced or a cyclical fluctuation be of unusual amplitude or duration, we may justifiably regard the situation as abnormal. From another point of view however, all such fluctuations may be regarded as abnormal. If unemployment is generally worse in one month than throughout the rest of the year, we may regard that month as abnormal. So too, the severe unemployment which accompanies a

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(i) The Australian Tariff: An Economic Inquiry by Brigden, Copland & Others, p.97

trade depression may be regarded as abnormal in the sense that it is worse than usual, even though such a depression occurs time after time in the "normal" course of business cycles. The term "normal" then, is relative, but in these pages it will be given a specific meaning, because no other term expresses adequately the concept with which this chapter deals. What we are concerned with is the fact that there is always a certain amount of unemployment, irrespective of particular fluctuations. What is the "normal" rate, and how can we measure it?

The continuous presence of some degree of unemployment has suggested to many investigators the term "reserve of labour". This phrase may have unfortunate associations. It immediately suggests military metaphor, and in the hands of some the "reserve of labour " becomes the reserve from which"reinforcements " are drawn to fill the "gaps in the ranks" of the "army of industry", as the machine ridden capitalist system inflicts casualty after casualty. Thus is created another lash with which to flog that rather indefinite thing, Capitalism. For Capitalism is depicted as a system which is fed by the lives of the workers, and so finds it necessary to maintain a reserve of "machine fodder!" This use of the term makes economists rather diffident about speaking of the "reserve of labour". Yet, as used by Beveridge,(i) for example, the term conveys a useful concept. Under the existing form of organisation each particular industry attracts to it more workmen than can ever be employed, even when trade is at its best. This is borne out by Table VI. which shows the lowest recorded percentage of unemployment in each Industrial

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(i) "Unemployment, A Problem of Industry".

Group in the different States of the Commonwealth. It will be noticed that there are marked differences.

In each case the figure shown represents the point below which the "reserve of labour", available to supply the industry in times of expansion, has not fallen for at least sixteen years. But the minimal amount of unemployment cannot be taken as the normal reserve, for by "normal" we mean typical, and these lowest recorded percentages are really as "abnormal" as the highest peaks in unemployment. The reserve of labour is really a fluctuating surplus which makes it possible for the number of workers unemployed in an industry to vary with changes in the profitability of employing labour. One might almost think that the provision of such a reserve, practically never exhausted, even momentarily, were the deliberate policy of the community, - or some might say, of those who control the community. But at this stage we shall not attempt to explain how this reserve comes into being, nor to allocate the responsibility for it. That is relegated to a later chapter.

2. Averages and Long Period Trends

Our immediate concern is to find out how great it normally is. We have rejected the "irreducible minimum" as a measure of normal unemployment, for we want a figure that is typical of the whole series. Table ~~III~~ IV (on p.) gives the average percentage of unemployment for the different Industrial Groups in each State. The reader will notice the considerable variation from industry to industry, and from state to state. Moreover, comparison with Table VI will reveal differences in the relation

betwe'en minimal unemployment and the average rate. That is, the lowest averages are not always associated with the lowest minima. But that is a problem of fluctuation which we must leave to a later chapter. Where a crude estimate is all that is desired, these averages give a satisfactory measure of normal unemployment. But if we examine the actual figures (in Appendix I), we shall see that except in a few cases, a simple average is an inadequate measure of normal unemployment over the whole period. This arises from the fact, fairly obvious upon reflection, that what is normal at the beginning of a fairly long period may not be normal towards the end. If conditions change we may normally expect an appropriately greater or smaller amount of unemployment. It must be remembered that by normal we mean typical.

An examination of Chart I will show that, quite apart from the violent fluctuations there appears to be a gradual but definite upward trend. Through the graph of the figures has been drawn a line, labelled "secular trend". It will be seen that this rises at a slight angle, and that the fluctuations are distributed fairly regularly on either side of it. This line may be taken to reflect the long period trend of the figures, as distinct from the shorter period fluctuations. The concept of "secular trend" is very important and is coming more and more into use. It affords a refuge from the danger of generalising from short period changes, for "the trend value at any date is taken to be the normal value at that date",(i) and the direction of the line of secular trend gives ~~more infor-~~ a better Indication of ~~nation about~~ long term changes than do the recorded figures

(i) Mills, Statistical methods ~~(IV)~~ p. 256

of unemployment, for these may reflect transient factors, such as those producing seasonal and cyclical fluctuations. The fluctuations which occur may be regarded as deviations above or below this secular trend. Indeed, the study of secular trends in economic statistics has really arisen from the desire of investigators to isolate the fluctuations from long term changes. If it is necessary to compare cyclical fluctuations in, for example, the birth rate and the volume of international trade, the problem is complicated by the fact that, apart from cyclical fluctuations, the birth rate has fallen, on the whole, while international trade has increased. If the effects of this long period change can be eliminated in both cases, the fluctuations about these secular trends can be more easily compared. Once this practice of eliminating secular trend became generally known, the lines of trend themselves attracted attention. Business cycles present so urgent a problem that comparatively little statistical analysis has been made of secular trends for their own sake. In the case of unemployment this is understandable, for the British figures had fluctuated about the same mean for seventy years, until after the war, and so long as a trend is horizontal, it arouses little interest. There is not even any need to eliminate it when studying cyclical fluctuations. But in the case of the Australian figures, a slight but perceptible upward trend is presented. Moreover, if we consider the different industrial groups, a still more pronounced trend makes its appearance in some cases.

There are different methods of determining the line of secular trend.(i) In Chart I the "method of least squares" was

(i) See bibliography in Appendix III

adopted, to arrive at the correct equation. In Chart II no very definite trend is visible, but mathematical treatment yields the line shown. In the case of Engineering (Chart III) some upward trend is apparent. An arbitary decision must be made as to whether a straight line or a curve best represents the secular trend. Possibly a third degree parabola would be more appropriate than the straight line here given, but the difference is not significant enough to justify the additional mathematical labour involved. No definite trend is observable in Chart IV, so a horizontal line has been drawn through the arithmetical mean for the period. The same is true of Chart V. There has been a general tendency for unemployment to decline in the printing industry, and the method of least squares yields a descending line of secular trend in Chart VI. Of the whole set, the most marked rise in secular trend is revealed in Chart VII, and this would be apparent even without mathematical analysis. But the method of least squares cannot be applied with satisfactory results in Chart VIII. Obviously no straight line can represent the general trend, and a parabola is little more satisfactory. In this case it might be questioned whether there is visible any trend sufficiently definite over a long period to merit the term "secular trend". But long and short periods are relative terms, and it is worth while adopting some method of isolating the very obvious cyclical fluctuations which occur in the building industry. The most suitable method proved to be the calculation of a series of moving averages. If the normal length of the major fluctuations be three years, we would find the average for the first twelve quarters, and regard the value obtained, as the value for the secular trend at the middle of the period, i.e.

between the sixth and seventh quarters. To obtain the trend between the seventh and eighth quarters we find the average of the group of twelve quarters consisting of the second, third ..... and thirteenth quarters. Successive groups gives us a series of "moving averages". It is preferable to take groups totalling an odd number as the average may be then centred at an actual quarter, instead of half way between two quarters. In this case we have followed an unconventional procedure, starting off with groups of seven quarters, gradually increasing them to seventeen, and then reducing them to eleven. This is the best way of overcoming the chief objection to the method of moving averages, namely, that the period of the cycles is not constant, and so cannot coincide in all cases with the group of quarters for which each average is calculated. In our method the length of the group is adjusted approximately to the duration of the cycle in operation over the period in question. The resulting curve was smoothed by eye to give the line of secular trend as shown in Chart VIII. The method does not give accurate trend values for the beginning or end of the period, but the line may be produced without a great margin of error. It may be suggested that this line of secular trend itseld resembles a section of a vaster wave-like fluctuation, with a peak in 1916. Perhaps it is less important as a measure of the normal rate of unemployment than as a means of isolating the cyclical fluctuations.

Chart IX shows an ascending line of secular trend, calculated by the method of least squares. An experiment was made with a logarithmic curve, but it did not fit the data so well as the straight line. The secular trend is just as definite in Chart X and was determined by the same method. Those who desire (i)

(i)The Statistician's tenth industrial group "Miscellaneous" is not considered in this enquiry for it is too vague a classification to assist

further light upon the problems involved in determining secular trend, and upon the various technical methods, are referred to our Bibliographical Note (Appendix III).

For the purposes of this enquiry we shall follow what is becoming an established principle, and regard the value of the trend in any quarter as a measure of the normal rate of unemployment. Our study of normal unemployment then becomes a study of these different secular trends. Unfortunately many people in Australia use the term "trend" when referring to the general direction of the actual figures over shorter periods, without any idea of smoothing out these fluctuations. But for this, we might well have called this chapter "Trends in Unemployment".

The significance of the secular trend as a measure of normal unemployment is just this. When the trend rises during a period, long term factors have produced a set of conditions causing unemployment to fluctuate about a new and higher level: what would have been considered normal at the beginning of the period would now, at the end, be regarded as abnormal. Normal conditions are not necessarily permanent, but by definition they are comparatively independent of short term changes and are altered only in response to long term developments.

Great care must be observed in the interpretation of secular trends, and any attempt to explain them must be based upon an examination of the actual quarterly figures, as well as of the trend itself. Our investigations have already revealed a definite upward secular trend for the industries for which official figures are available, but since the period studied extends over sixteen years only, at least two alternative interpretations suggest themselves. It may be that long term factors are at work, making for a gradual and continuous increase in unemployment. On the ~~other hand, it may be that a sudden~~

other hand, it may be that a sudden and considerable change of semi-permanent nature took place during the period, so that the normal rate of unemployment has definitely increased, perhaps without threatening to increase any further. The choice between these alternative hypothesis is of great importance. If the latter be the true one, then we are faced with a problem of post war adjustment. But if the former alternative be true, increasing unemployment may be regarded as an inevitable accompaniment of modern industrial progress. The problem raised in this paragraph will demand our attention at a later stage of this book.

Another important fact revealed by our investigation is the divergence among the nine industrial groups. Not only have some a higher rate of normal unemployment than others, but the course followed by the secular trend varies from industry to industry. The inference is justified that different causes of normal unemployment have exercised more influence in some industries than in others, and this suggests that a better understanding of these causes may be obtained if we endeavour to correlate the differences in the conditions and organisation of these industries with the differences in unemployment. This problem will be better approached, however, when we have pushed our statistical analysis somewhat further.

Unemployment in Australia

Chapter III

Fluctuations in Unemployment

1. Amplitude of Fluctuations.
2. Good and Bad Periods.
3. The technique of measuring Seasonal Variation.
4. Results: Indexes of Seasonal Variation.
5. Seasonal Fluctuations in Queensland.
6. Cyclical Fluctuations.

1. Amplitude of Fluctuation.

In the last chapter we arrived at a measure of normal unemployment, in the line of secular trend. Our next task is to consider the fluctuations that take place about the normal rate. If we subtract the value of the secular trend for any quarter from the actual percentage of unemployment, we arrive at the deviation of the actual from the normal. The fluctuations consist of a number of these deviations from the trend, which will obviously be negative if the fluctuation brings unemployment down to below normal, but positive if it be above the secular trend. Even a cursory glance at the charts we have been discussing in the last chapter will suggest that the amplitudes of these fluctuations about the trend vary from industry to industry. No attempt has previously been made to compare the extent of fluctuations in unemployment in the different industrial groups in Australia, yet with the data we have at our disposal, though laborious, this is not difficult. We merely need to arrive at some measure of the dispersion of the actual figures about the trend. The most satisfactory measure is known as the standard deviation, for which we may use the sign σ (sigma) as an abbreviation. To calculate this we must find the deviation for each quarter from the trend. These deviations are then squared and the squares are averaged. The square root of this average is the standard deviation.(i) For instance, in the case of Chart I, the sum of the squares of the deviations from the trend is 228.88 . There are 64 quarters, so

(i) The formula is $\sigma = \sqrt{\frac{\Sigma d^2}{n}}$ where n = number of cases and d = the deviation from some measure of central tendency (eg secular trend). σ may be calculated from any measure of central tendency.

the average is $\frac{1}{64}$ of this, viz. 3.5763 . The square root of this is 1.9 . If this procedure is carried out for each industrial group, we obtain the figures in column (a) of Table VII. Column (b) gives the "ranking" of the standard deviations in order of magnitude. That is, it indicates the order of the industrial groups in amplitude of fluctuation, the industry with the greatest amplitude being ranked 1, and with the least 9. Where two are of equal rank, they are given a number such as 5½, which is midway between 5 & 6.

But another question arises. Is this a fair comparison ? The normal rate of unemployment is much greater in some groups than others, and a high degree of absolute amplitude may not be so high relatively to the higher normal rate. Obviously a deviation of .20 from a trend value of 5.00 is a relatively greater disturbance than a similar deviation from a trend value of 10.00 . It is worth while determining the relative amplitude of the fluctuations, as well as their absolute amplitude. To this end it is best to express each actual quarterly figure as a ratio to the secular trend value for that quarter. If the trend be 5.00 and the actual figure 4.00, the trend may be represented by 100, and the actual figure by 80. The ratios for each industrial group in the Commonwealth are given in Appendix I. Once these ratios are calculated it becomes a simple matter to find their standard deviation from 100, which represents the secular trend. This procedure is simpler to work than to express the actual deviations as percentages of the trend. Moreover, we shall have to deal with these ratios in later sections of our enquiry. The standard deviations from 100 of these "ratios to trend" are given, for the various industrial groups, in Column (c), Table VII, while Column (d) shows their rankings in order of amplitude. As we might expect, the rankings are not the same as for absolute amplitude. The degree of agreement may be measured by the

co-efficient of correlation which is + .49 .(A coefficient of + 1.00 would represent perfect agreement, and --1.00 complete disagreement). Notice that the relative amplitude of all industrial groups taken together, is less than for any particular one. This we would expect, since fluctuations in one industry may be compensated for by contrary fluctuations in another. In comparing the absolute amplitudes however, it will be noticed that fluctuation in the printing and land transport industries is exceeded by the average for all groups.

Which of these two measures is the true test of amplitude ? The answer depends upon the purposes of our enquiry. Where we merely want to compare actual fluctuations, their absolute amplitude is the more important, but if we are concerned with comparing the amount of disturbance evoked in different industries by certain forces, the relative amplitudes may be more significant.

2. Good and Bad Periods. Asymmetry of Distribution

Surely another question suggested itself to the reader as he examined these charts. In some of the industrial groups the peaks in the waves of unemployment appear sharp and narrow. That is, the phases of abnormally acute unemployment seem shorter in duration than the periods when the chart has fallen below the line of secular trend. What are the facts regarding the relative frequency of good and bad periods ? Do the industrial groups differ from each other in this respect, as they differ in amplitude of fluctuation ? This is obviously important, for if abnormally heavy unemployment occurs only in occasional

short lived crises, we might suspect it to be due to specific events. If however, the fluctuations take the form of a constant and steady wave like motion, we might look rather for some inherent rythm in the labour market.

Two methods of studying this question are available, and their results are brought together in Table VIII . The first method is obvious enough. Let us classify the ratios of actual figures to the trend. Those falling between 96 and 105 inclusive, represent fluctuations so slight that we cannot regard them as significant deviations: they are approximately normal. But ratios in excess of 105 may be regarded as abnormally great, and those below 96 as abnormally small. The division is arbitrary, but by counting the number of cases in each class we arrive at a very crude measure of the relative frequency of "good", "bad" and "normal" quarters. In all the industrial groups "good" quarters are more frequent, but their frequency varies from industry to industry. Column (b) gives the rankings of the industrial groups, according to the magnitude of the proportion of "bad" to "good" quarters.

The second method is to calculate the coefficient of skewness, or asymmetry, of the frequency distribution of the "ratios to trend". If we arrange the ratios in order of magnitude, instead of in chronological order, it will be seen that some occur more than once, and their frequencies differ. A table showing the frequency for each ratio, is known as a table of frequency distribution. Now our problem is this. Are the frequencies greater among the smaller ratios or the greater ? If the latter, we know that "bad" quarters predominate. It is

this that the coefficient of skewness measures, for if neither good nor bad quarters have the greatest total frequency, the distribution is said to be symmetrical. It may be asymmetrical or skewed in a positive direction, that is, the greater ratios may have greater frequency, or in a negative direction, that is, the smaller ratios may have greater frequency. The ratio having the greatest frequency of all is known as the mode. In a case of positive skewness the mode will be located well above the average. If it falls below the average we have negative skewness. The difference between the average and the mode, then, gives a measure of asymmetry of distribution. Since, however, this difference will be affected by the amplitude of the fluctuations, i.e. by the range of the distribution, we divide it by the standard deviation. (σ) This gives us the difference between the mode and the average, expressed in units of one standard deviation. Thus comparison between industries differing widely in the amplitude of their fluctuations may be safely made. The coefficients of asymmetry[i] are given in Column (c) of Table VIII. Again it is clear that the good quarters predominate in all industries, for the coefficients are all

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(i) Owing to the great range of the distribution compared with the size of the units (1% of the trend) in which the ratios are expressed, the crude mode is not altogether satisfactory. Theoretically the difference between the mode and the average is three times the difference between the median and the average. The median is the midmost case. In these series it falls midway between the 32nd and 33rd ratios, when arranged in order of magnitude. The coefficient of skewness then is found by the formula $Sk = 3\frac{(\text{Median}-\text{Average})}{\sigma}$. Day (II) does not consider 3(median-average) a suitable substitute for (mode-average), but Thorndike (VIII), Mills (IV) and others, however, give the formula used here. The average is taken in all cases to be 100 - since the trend is regarded as the "norm".

negative, and this means that the smaller ratios are more frequent. But again differences are observable between the industrial groups, and Column (d) gives their ranking in order of positive magnitude. That is, the industrial group where "good" periods predominate least is marked "1", and that in which their predominance is most marked, "9".

The coefficient of correlation between these two measures is + .53, which is not particularly high, yet significant that the two measures give somewhat similar results. Both methods show that the "bad" periods are less frequent than those in which unemployment is below normal. The significance of this will be discussed in a later chapter.

3. The Technique of Measuring Seasonal Variation.

The presence of seasonal fluctuation in Australia is so well recognised that the Commonwealth Statistician was moved to collect quarterly returns of unemployment since 1913 because it was felt that the annual figures, which were habitual before that year, did not take sufficient account of the seasonal factor. The quarterly figures now refer to a particular day in the second month of each quarter. If we hope to find statistical evidence of seasonal unemployment we really need to examine monthly figures, because seasons do not move with mathematical precision, nor can the months of February, May, August and November be singled out as those in which the appropriate seasons are ordinarily at their height. However, we shall examine the quarterly figures to see whether they do reveal the influence of seasonal factors.

Here again one is faced with several alternative methods of statistical analysis. The method adopted here is the most satisfactory, in view of the fact that we have already measured the secular trend and have expressed the fluctuations as ratios to it, when calculating the relative amplitude of these fluctuations. If seasonal factors are present in the conditions producing the actual figures of unemployment, evidence of their influence will be obscured by the other factors at work. By calculating our "ratios to trend" we have eliminated the effects of secular growth or decline in unemployment.

But the other fluctuations do even more to cloak the action of seasonal influences than does the secular trend. To what extent is this sweep up and down, from quarter to quarter, due to seasonal factors ? If it be due to them in any degree at all, we would expect some general tendency for one or more of the quarters to differ from the others. This tendency would be stronger in some years than in others, according to whether accidental factors bolster up or hold in check the seasonal variation. If the building trade is ordinarily slack in the February quarter, retrenchment in building operations by ~~the~~ Government departments of education, ~~educational department~~ might in one year exaggerate the seasonal depression, while next year an extension of building, coming perhaps through additional loan expenditure, might check the depression appropriate to that season. But if we review a number of years the general seasonal tendency should be more apparent. Our first step is to collect the "ratios to trend" into four groups, each group containing all the ratios for a particular quarter over the sixteen years we are considering. Then it is just a question of picking out the ratio which is most typical of each group. We might calculate the average in each case, but the average is unduly influenced by extreme cases, and it is usual to adopt an alternative method of selecting the normal value for the quarter. The ratios are arranged in order of magnitude and a median or midmost group is picked. The number of ratios in this median group should be determined by the distribution of the gaps between the ratios, and its choice is a matter for discretion.(i)

(i) Some statisticians think that the size of the median group once determined should be kept constant throughout such a series of comparisons as we make here. But since the problem

The average of this group is taken as the crude index of seasonal movement for that quarter. If the average of the median group is the same for all four quarters of the year, there is no seasonal fluctuation. These crude indexes are then adjusted so that, for each separate industrial group, they fluctuate about an average of 100.[1] This gives us a common basis in comparing the range of variation These adjusted indexes, together with the crude indexes, are given in Table IX. The last column of this table shows the range between the highest and lowest quarters' index for that industrial group. It should be born in mind that only horizontal comparisons of the indexes are possible, but the range in different industries may be compared.

4&. Results: Indexes of Seasonal Variation.

As in all our previous measurements, there are striking differences between industrial groups. We shall postpone our discussion of the significance of these indexes and the differences in the seasonal range of different industries to a later chapter. It is worth pointing out however, how little similarity there is between the amplitude of seasonal fluctuations as measured by the range, and the amplitude of all fluctuations taken together, as measured by the standard deviation. (Table VII p. 7). The industrial groups with the greatest total fluctuation are not the most subject to seasonal movement. The

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(i) contd.
is to select in each particular case, a typical ratio, I have not hesitated to vary the size of the median group, using 4, 6, and 8 ratios in different series. For considerations affecting the size of the median group see Mills (IV) p. 326 (Statistical Methods)

coefficient of correlation between seasonal range and relative amplitude of total fluctuation is only -.18 while between seasonal range and absolute amplitude of total fluctuation it is almost zero, namely, -.03. On one point however, the seasonal indexes agree with the measures of relative amplitude. In both cases there is less variation in industry as a whole than in any particular industrial group. As we shall see later, we would not expect to find the seasons affecting different trades in the same way, and our seasonal indexes make this plain. The best quarter in wood and furniture, for instance, is the worst in books and printing. In this way contrary seasonal fluctuations tend to obscure each other's influence upon the total index.

5. Seasonal Fluctuation in Queensland.

It should be remembered that seasons vary considerably in incidence in different parts of Australia, and that their appearance in the calendar year does not always occur on any fixed date. These factors go to cover up the effects of seasonal changes upon the statistics. It is really desirable to consider the different states separately, but unfortunately our quarterly figures for the different industries, classified by states are incomplete, and probably rather less accurate than the Commonwealth figures we have been working upon. It is probably not worth while attempting their mathematical analysis. But for one state of the Commonwealth there are some reliable monthly figures. Queensland has a system of unemployed insurance,

which is probably the most reliable method of obtaining unemployment statistics. Since a large proportion of her population is engaged in primary production, we would expect to find a definite seasonal fluctuation. Unfortunately the number of years covered by the figures is small, and any index based upon them should be treated with caution until verified in subsequent years. The period is too short to calculate the secular trend. ~~so~~ Instead of using the "ratios to trend" method, ~~therefore~~ we had better use the "link relative method" invented by Warren Persons.* This gives us the index shown in Table X

*. For descriptions of this see Day, Mills, Rietz etc.

6. Cyclical Fluctuations.

We may remind the reader of the exact significance of our indexes of seasonal variation. Where the range is considerable, it does not necessarily follow that certain quarters in the year experience always so much more unemployment than the rest of the year. This would be the case, only if seasonal variation were quite regular from year to year, and if this were the only type of fluctuation present. It is obvious enough that the intensity and duration of the seasons vary from year to year, and we would expect this irregularity to be manifest in the figures of unemployment. The second point, however, is more important. Though the normal seasonal variation may tend towards an increase in unemployment in one particular quarter of the year, it is possible that some factor operating independently of the seasons may so improve the employment situation as to produce a fall in the figures for that quarter. On the other hand it may happen that some non-seasonal factor will produce a greater increase than the seasonal variation alone. The method we adopted, however, was directed towards offsetting the influence of these non-seasonal factors by taking an average for a number of years. Our indexes show how much seasonal variation to expect, on the average, if non-seasonal factors are not present.

To what extent are these other fluctuations present, which

are not due to seasonalcvariation ? To answer this question we need to know whether, throughout the period under consideration, the actual ratios to trend are closely clustered about the crude seasonal ratios, or widely dispersed. A numerical measure of this is available if we calculate, for each quarter throughout the period, the average deviation of the ratios from the crude seasonal ratios for that quarter. The average deviations for the four quarters of the year may be averaged , and the final figures in different industrial groups compared . The results are given in Table XI, and the higher the figure in the last column, the more important are non-seasonal fluctuations.

When we apply the term "cyclical" to these other fluctuations which operate independently of seasonal variations and often obscure them, we do not imply that they occur with a constant periodicity, but merely that each relative boom follows a relative slump, and is followed in turn by another relative slump. In a later chapter we shall have to enquire whether these cyclical fluctuations are in fact caused by a periodic rythm in industry, or by a series of discrete events. Our immediate task is to get a clearer picture of them.

In the ratios to trend, which are given in Appendix I, and whose derivation was described at the beginning of this chapter, the secular trend has been eliminated. Having calculated our seasonal indexes we may now eliminate seasonal variation from our ratios to trend, thus obtaining indexes of the cyclical fluctuations that remain. For this purpose we use the crude seasonal indexes which measure the percentage deviation of the trend that may be expected from seasonal factors alone. Thus, if the crude seasonal index for one quarter be 103, we

subtract 3 from all the ratios of that quarter, and if it be 98, we add 2 to the ratios for that quarter.(i)

Corrected in this way, the ratios represent the cyclical fluctuations. If graphed out, however, they still exhibit a ragged "saw tooth" contour. That is,there still remain small oscillations representing a random factor that it seems impossible to calculate. They are not due to normal seasonal movement, since this has been eliminated. Their presence reflects rather the continuous instability of the labour market, which resembles the instability of the share market, and most other markets, where the normal course of seasonal and longer term movements is alternately checked and strengthened by variations that are in no wise explained when we label them "accidental". Important as these small oscillations are in some markets, to those dealers whose living is made by conducting a large turnover with small margins of profit, they do not figure importantly in the labour market. For the purpose of understanding the causes of unemployment we are more concerned with the cyclical fluctuations of greater amplitude and longer duration, and the best course is simply to eliminate the small oscillations by taking a series of moving averages. Since the oscillations are of short duration we may take groups of three quarters, and centre the average at the second quarter in each case.

One further step is necessary. We have seen that the amplitude of the fluctuations varies from industry to industry, and this introduces some difficulty in comparing different

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(i) A somewhat different method of correction should be followed if the link relative method were used to obtain the seasonal index, because the bases of the two methods are not identical.

industrial groups. We may get over this by expressing the series of moving averages (based on the corrected ratios) as deviations (+ or -) from the trend (i.e. from 100), and by dividing each deviation in turn by the standard deviation for that industry.(i) We now have, for each industry, an index of cyclical fluctuation, expressed in units of one standard deviation.(2) When these measures are graphed we obtain charts XI to XIV. The different industries are grouped in this way, not to economise space, but to emphasise the relations that are apparent between different industrial groups. Charts XI to XIII group together industries thatvresemble each other more closely than they do any other industry, so far as cyclical fluctuation is concerned. Chart XIV contains two industries that do not resemble each other or any other industry to an appreciable extent. The significance of this grouping of these industries will be discussed in Chapter VI. In Charts XV to XVII an index of cyclical fluctuation will be found based upon the figures for "all groups".

(i) Theoretically we should calculate the standard deviation of the corrected ratios, but the error involved in using the standard deviation already obtained is insignificant.

(2) See Appendix I for figures.

Chapter IV

FURTHER FACTS.

1. Occupational and Sex differences.

2. Various types of unemployment.

3. Age distribution of the unemployed.

1. Occupational and Sex Differences, 1921 Census.

There are some further facts to be noticed, which we have not yet mentioned. The statistics we have been discussing refer to trade unionists. But there are sections of the community which are not covered by trade unions. Are they, too, subject to unemployment? At the 1921 Census, 159,080 persons registered as unemployed, and these were classified according to the rather broad occupational groups adopted for the Census purposes. Table XII gives these figures, classified according to sex.

It is interesting to note that not only does the percentage of the total population unemployed differ as between men and women, but its incidence in different occupational groups varies with sex. While unemployment was relatively slight among professional men, it was heavier for women in the professions than in primary production or transport. This difference is not very significant since the numbers engaged in these two industries are small, but it is significant that the professions offer relatively less stable employment to women than to men. For men and women alike, unemployment in 1921 was heaviest in "industrial" occupations.

While the Census Reports subdivide these occupational groups, the classification ~~is not~~ *though* detailed enough, ~~however~~ *is not arranged*, to throw much light upon the incidence of unemployment as between particular trades. One fact however, does stand out. Of the total unemployed males, 30.5% gave their usual occupa-

tion as labourer. Actually 44.4% of those who registered as labourers were unemployed at the time of the Census. These of course were scattered throughout the occupational groups in the above table. The significant thing is that the incidence of unemployment upon labourers was about four times as heavy as upon the community in general. Of course it does not follow that this ratio is constant. We would expect unemployment to fall with relatively greater severity upon unskilled labour during a depression, than during a boom in business activity. The frequency of unemployment in this section of the working community is testified by other authorities. "The experience of the operations of Government labour exchanges in the several states..... indicates that from 55% to 60% of those who register for employment are general labourers."(i) But it must be remembered that skilled tradesmen do not patronise the labour exchanges, except in Queensland, where registration is necessary before one may draw unemployment sustenance. Information collected in connection with the Unemployed Workers Insurance(ii) system in that State makes possible the compilation of Table XIII From this it is clear that at least half the unemployed in Queensland are labourers, and that labourers have drawn rather more than half the total sustenance payments made. The latter is ~~probably~~ possibly the more important test since it gives more weight to the duration of unemployment for each individual than does the number of applications. On the other hand

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(i) Royal Commission on National Insurance. Secdon Progress Report. p.6.
(ii) 2nd, 3rd, 4th, & 5th Annual Reports on Operations under Unemployed Workers Insurance Act.

since sustenance includes childrens allowances, it may be distorted by the distribution of families.

2. Various Types of Unemployment.

The Census Reports contain other information, published under the title "causes of Unemployment" which makes possible a division of the unemployed in April 1921, into several classes. The classification is one of types rather than of causes for the "causes" considered are too immediate to assist us much towards an understanding of the problem. Nevertheless, the facts presented have some significance. In Table XIV we ~~shall~~ do not give the actual numbers, but express them as a percentage of the total number of unemployed in each occupational group. It is interesting to find that illness accounted for almost as much unemployment as scarcity of work, among professional men, and for much more than did scarcity of work, among professional women. The same was true of domestic workers. It was in the industrial group that the dominance of the workers unemployed through scarcity of work was apparent, yet even here the number of those unemployed through illness was about one third as great. These percentages refer to April 1921, when the Census was taken. We may not, however, assume that they would be equally applicable today, or at any other time than that to which they originally refer. Not only does the scarcity of

work vary from time to time, but so does ill health, as might be inferred from the fluctuations that occur in the death rate. We know that fluctuations in health do not necessarily coincide with fluctuations in the demand for labour. The proportions of the unemployed falling into these classes, will vary from time to time, and so will the proportions coming under "accidents" and "industrial disputes".

Such figures as are supplied by trade unions suggest that unemployment other than that due to "scarcity of work" enters less into the figures discussed in the previous four chapters than Table XIV might suggest. The figures in Table ~~XIII~~ XV are compiled by the Commonwealth Statistician from trade union returns, and the comment is added that "the unions do not at all times give particulars as to causes of unemployment". There is little variation even in the quarterly figures for sickness (not reproduced here) ~~let alone~~ nor in the annual figures, which is somewhat surprising. These figures are not classified into the various industrial groups, and it is evident that we may not expect much help from statistics in attempting to assess the quantity of unemployment due to sickness which is included in our earlier statistical enquiry.

3. Age Distribution

The recognition in Table XIV of a class of unemployed who are out of work because of old age suggests the enquiry; How old are the unemployed ? In more technical terms, we

want to know whether the age distribution among the unemployed is different from that among the rest of the working population. Studies in other parts of the world have indicated that unemployment falls more heavily on the older men in industry. On the assumption that, after a certain point, efficiency declines with age, we would expect this. Statistics regarding this matter however, are ~~lacking for~~ scarce in Australia. The Queensland Insurance System provides some data referring to the conjugal state of applicants for relief, and it is interesting that single men are in the majority. But the classification is too crude to justify any attempt at a comparison with figures ~~to justify any attempt at a comparison with figures~~ of general age distribution in Queensland. In any case the unemployment figures do not go back as far as 1921, for the insurance system was started in 1923.

An examination of the percentage of workers in Australian industry who are under the age of sixteen years (i) should give some indication of any tendency to dismiss older men first, or to employ boys in place of adults. As a matter of fact, in 1919-20, of the total employees 5.03% were under the sixteen years. With the increase in unemployment in 1920-21, the percentage of young people fell to 4.85 . The next good year, 1922-23 saw it increase to 5.03 again, but as unemployment increased, the percentage under sixteen years fell, in 1924-25 to 4.80. The next year saw it rise again to 4.98, and this was a year of relatively low unemployment. Earlier in our period, the highest percentage was 4.84 in 1916. Comparison with Chart I will show that

(i) For figures see Production Bulletins.

in this year, too, unemployment was lower than previously. It is obvious that young workers are not better off than adults during periods of trade depression, but tend to be employed in larger proportion during good periods. This however, does not disprove the theory that older men suffer more than young adults, any more than it substantiates it. The question of age distribution is one of many that awaits the collection of accurate data before it can be answered.

The Census figures for 1921 do not help us much, as the only age classification given for the unemployed is in age groups of ten years. Table XVI does not suggest that older men are appreciably more liable to unemployment than are youths, for it must be remembered that the age group 10-19 cannot in reality cover a longer period than from 13 or 14 years to 19 years. The age distribution of the total population is not sufficiently asymmetrical to make any qualification necessary. Of course the age distribution of unemployed women is not significant since the numbers available for employment decrease with age.

This completes our statistical survey of the facts of unemployment. These three chapters have been purely descriptive, and no attempt has yet been made to explain any of the matters raised, but our appreciation of these different types of fluctuation, and the other facts we have set out, will make our task of analysis more hopeful.

Unemployment in Australia.

Chapter V.

The Theory of Unemployment.

1. The Need for Theory.
2. The Unemployable
3. The Problem of Emphasis.
4. The Determinants of the Reserve of Labour.

1. The Need for Theory

The business man and the politician are equally contemptuous, as a rule, of economic theory. They want a practical policy, not a theory. Yet this view draws a false distinction, for policies are always based upon theories, however inarticulate the theories may be. There are but few actions in the economic world the outcome of which can be predicted with complete certainty, and when a policy is planned it is based upon the belief, or the hope, or the gamble, that a certain definite causal relation may exist between that policy and its desired end. This belief, hope, or gamble, is a theory, and subsequent events may prove it true or false. The fact that the theory may not be clearly set out in detail makes it no less theoretical, but actually makes it more difficult to determine a consistent policy.

These considerations hold good of unemployment policies, plans and remedies. All are based upon some sort of theory — often vague and ill conceived, sometimes elaborate and complicated. Those who think the problem is to be solved by a higher tariff, or lower wages, or less taxation, or less immigration, or more public works, or fewer strikes, or nationalisation, or rationalisation, or communism, or land taxation, or birth control, base their suggestions, fundamentally upon a theory. If this be recognised it follows that trial and error

need not be our only policy, for theory can be submitted to logical criticism, and only such theory as can pass this criticism unscathed is worth testing in practice. Even then it might fail, but the chances of failure would be less than for the ~~theories~~ plans that are rejected under theoretical criticism.

Calling this chapter "theory" should not then stigmatise it as unpractical, for in these pages we shall discuss suggested causes of unemployment, with a view to reducing these many theories to the few that may have some practical importance. It must not be thought, however, that we may deal only in abstract generalisations. Our data are the facts, in so far as we are able to ascertain them, and this section on "Theory" should be no more divorced from reality than the chapter upon "Policy" can be divorced from theory. Our aim is to develop a theory so consistent with the facts as to provide a firm basis for a constructive policy. We do not hope to present a theory that shall meet no criticism. For criticism is not performed by calculating machines: it is a task for human beings, and since human minds differ in point of view, no theory can go entirely free from criticism. The same is true of menus, but in that case agreement is not important. It is worth while setting out some of the conditions which place artificial difficulties in the way of agreement in criticism. These are largely matters of prejudice and vested interest, from which none of us are entirely free, but which

we may avoid more successfully if we set them down in black and white.

a.
X. The Worker's Viewpoint.

Let us consider the outlook of the worker. Unemployment comes through dismissal. If dismissal is due to inefficiency or bad discipline, his resentment makes it difficult ~~for him~~ to regard it as a matter of justice. But where it is due to a shortness of work, there is every evidence that he is not himself to blame. There must be a culprit. Is it the new machine, which renders his labour unnecessary but helps to line the employers' pockets? Is it the employer, who did so well out ~~of him~~ while business was brisk that he can now afford to draw in his commercial horns until times improve, without feeling any pinch of personal poverty, and regardless of the hardship this entails for his former employees? Or is it the whole system of capitalism ? There are those who are ready to tell ~~him~~ the worker that the employer deliberately maintains a reserve of labour. During the war, in 1915, ~~the~~ he deliberately increased its size so as to drive men into the trenches to fight out his capitalist squabbles! Today he continues to keep a reserve from which to draw "volunteer" labour with which he can break the strike of workers in defence of their rights! And as the working class grows in strength he endeavours, by schemes of rationalisation, so to increase the numbers of unemployed that he still holds the whip hand in the face of the trade union. Can he not make out a case for lower wages, by pointing to the high rate of unemployment as evidence of the serious situation

of the industry? However unconvincing the employer, or the professional man may find this line of argument, it must have a great appeal to the man who has observed and felt the merciless hand of the system, and who, though ready to work, finds no one to employ him. Once convinced of the essential truth of this doctrine, it is only natural that he pours scorn on those who suggest that unemployment can be decreased by lowering wages, lessening taxation, and rationalisation. Equally contemptible are the economists' dreams of controlling the trade cycle through monetary and banking policy or any other avenues.

b. The Social Worker

Instead of flying to the other extreme, yet, let us now consider an unprejudiced third party — the social worker : religious, medical, educational, philanthrophic and the like. He is naturally sympathetic with the genuine unemployed, for he sees at first hand, as the employer never, and the politician seldom does, its evil effects on human personality, and he agrees with the British Labour Party in its horror at this "indeterminant sentence of misery and social decay". But he is impressed by the large proportion of the unemployed passing through his hands who are ill, drunkard, weak-willed, feeble-bodied or otherwise impotent specimens of humanity. Tending to forget that the better class of man seldom approaches a social institution until broken in health and spirit, he naturally comes to the conclusion that much unemployment is traceable to defects in individual character or physique. From

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this comes the absurd dictum "The unemployed are unemployable". The social worker is consequently sceptical of "schemes" which do not impinge directly upon the individuals with whom he is in constant touch.

c. The Employer.

The employer finds comfort in the view of the social worker whenever he is in a sentimental mood. But he knows the worker as one who is always out for all he can get in the way of pay and leisure, and as one who seldom has any real enthusiasm for the job for which his employer pays him. In addition the employer feels the constant pressure of competition, the inexplicable variations in the state of business activity, the annoyances of governmental regulations regarding conditions of work and the burden of taxation. In the face of these, even if on good terms with his men, he periodically finds it unprofitable to keep them all at work, and feels literally forced to act accordingly. "Business is business" and " a man must live". How can we expect him to believe that a better organisation of industry would reduce unemployment? Reduce wages, lower taxation, raise the tariff (unless he imports), by all means, but don't suggest absurd schemes such as his always applying to a labour exchange when he has a vacancy, or making him bear the cost of unemployed insurance. And the suggestion that more efficient management of labour and of marketing would reduce unemployment is heresy.

d. The Economist

We could continue our list of points of view indefinitely

but let this be our last. The academic economist has these initial advantages in his attempts to avoid bias: as compared with the worker he has a steady job and a margin for saving; as compared with the social worker he can see industry and society as more than a collection of distressed individuals; as compared with the employer, he has rather less vested interests. All these advantages, however, make it harder to get the other peoples' points of view. Still, he has a better chance of getting more than one point of view, and is more likely to be impartial, until he discovers a pet scheme of his own.

He is most aggravating in his attitude to the schemes of others. Thus the worker recognises in him the bulwark of conservative thought, the employer considers him theoretical and dreamy, the social worker finds him intellectual and cold, and the poor politician discovers in him a critical wet blanket. Yet this function of criticism is, in the long run, of outstanding value. It fences round some pitfalls and checks some foolishness, even though it often takes the annoying form of an admonition to everyone of the disputants. And if his plea for research does seem like tendering a stone in place of bread, it should be remembered that a stone may crack nuts.

6. Wherein Lies Responsibility?

There is one other point to be clear before we attempt, stripped of our prejudices, to understand this matter, and it is not a question of economics but of social theory. As such we shall state it dogmatically and without endeavouring to establish it. The responsibility for social evils lies with

him who has power to prevent them. ~~This~~ a doctrine ~~is~~ pragmatic in its ethics, ~~and bears the imprint of the instrumental view of knowledge~~. In the case of our problem its application is as follows. Wherever it is found by enquiry, that some section of the community, or some individual, can by its actions lessen or prevent unemployment, then that is where the responsibility lies for ~~so much~~ a certain amount of the existing unemployment. Whether failure be due to ignorance or inertia, sinfulness or stupidity, is, in this view, immaterial. Our task is, ultimately, to find a way through our troubles, and it is only by adopting such an attitude that, once found, the way may be followed.

But in assessing responsibility in this way it is extremely difficult to avoid that bias referred to above. A striking example of this was afforded by the Melbourne Conference on Unemployment in 1922, attended by representatives of the Victorian Employers' Federation and the Trades' Hall Council. The object of the conference was "to endeavour to trace the causes of unemployment with a view to such joint action as would attack the evil at its source". Both parties soon introduced various economic theories, and the Conference was finally abandoned because they would not agree upon a theory. The Trades' Hall Council's representatives believed that "Unemployment is the natural result of the present economic system called Capitalism". But the Employers argued against this theory and attributed the existing depression in employment to the fall of prices in 1921 and the rigidity of wages. In their opinion the major cause of the abnormal situation was the resistance offered by workers against lower wages at a time

when prices were falling. But the Trades' Hall Representatives divided the responsibility for this particular crisis between the machinations of financial magnates at the Genoa Conference and the competitive nature of Capitalism, leading, according to the theory of J.A. Hobson, to periodic depressions through "oversaving". Here were conflicting theories, but instead of their discussion leading to a synthesis, each party considered the other absurdly biassed, and the Trades' Hall Representatives finally decided that it would "not serve any useful purpose to go any further with the Conference".

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It is inevitable that some will regard the theory outlined in these pages as erroneous, but let us hope that the bias lies with them, not with the author.

2. The Unemployable

There is one obvious cause of unemployment that had better be dealt with first, and that is "unemployability". We have seen in ~~Chart VI~~ Chapter IV that a certain proportion of the unemployed who go to make up the percentages we have been considering in our statistical analysis, are unemployed because they are ill. This is quite a different problem from unemployment through scarcity of work, and its solution will come through medical science and public health rather than through economic analyses and policies. Since it is wrapped up in our figures, however, it would be valuable to know how extensive such unemployment is, but, as we explained earlier, exact information on this point is not available.

Sickness is not the only type of unemployability, for there is a minimum requirement of efficiency, regardless of health, and if this be not reached, it is unprofitable to continue employing the worker. The experience of employers with a proportion of the volunteer labour which offers itself during a strike, bears out the contention that a section of the unemployed cannot hope to remain employed for more than one week with the same employer. It is unfortunate that we cannot estimate how much this is reflected in our statistics. By no means all the unemployable are members of trade unions, and only such as are members would affect our figures. It is certain that the number of unemployable men is smaller than the utterances of

some conservatives would suggest, and yet greater than most labour ~~agitators~~ leaders would admit. Moreover, "unemployability", like sickness or intoxication, is a relative matter. It will pay to employ rather inefficient men in times of great business activity, but not when the economic outlook is less promising. Until new sources of information come to light, we must remain somewhat ignorant on this matter. While we shall neglect it for the remainder of this book, we should still bear it in mind as a possible reason for qualifying some of our conclusions. One comforting thought is that there are indications that Australia is rather better off as regards her proportion of unemployable men than the older industrial countries.

Perhaps we should include as generally unemployable those who do not want to work. They are not unemployed through scarcity of work. They are "work scared". But are their numbers of significant proportions ? We would expect them to be more frequent in Queensland than in other states, for Queensland has a system of insurance which supplies sustenance for the unemployed. The best comment we can make upon the matter is to quote from those who administer the unemployed insurance scheme in that State.

"Much has been said and written of the person who does not want to obtain work. Particular notice has been taken of this matter and careful observation made. It will be of interest to all classes to know that the actual experience of the administration is that the person who does not want work is indeed a "rara avis" - i.e. compared with the total number of workers. This observation is particularly relevant to male workers. Female workers in particular callings, by reason of

"their better economic position, have been found to evade work ..... "

"Any sceptic on this subject has only to attend a roll call at the Labour Exchange when jobs are offered to observe the keenness of the competition even for ordinary labouring work"(i

There is evidence then, that "the great majority of workers who experience periods of unemployment are anxious to obtain work, and seek it as far as they are able." (ii)

It should be remembered, however, that the Queensland system of insurance, like all others, finds it necessary to have a provision penalising those who refuse work when it is offered them.

Let us turn then to the major problem of unemployment due to scarcity of work..

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i) Second Annual Report on Operations under the Unemployed Workers Insurance Act p.4.

ii) Third Annual Report p. 4.

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3. The Problem of Emphasis

~~In the last chapter we promised the reader some~~ Economic theory ~~and it~~ is as plentiful on the subject of unemployment as on any other. Yet most of what has been written on the matter is somewhat inconclusive and its most beneficial function is to induce bewilderment and to stimulate thought. Most economists agree that there are a number of factors in modern economic life which may, in some degree, tend to produce some unemployment. At the same time many of these same factors tend to produce some employment. The real difficulty

arises when we ask what their net effect is, in each case. Economists give still less committal answers when asked what are the relative importance of different factors in the present situation in a particular country such as Australia. At different times and in different places it has been agreed that some measure of unemployment has been caused by deflation, credit restriction, labour saving devices, unduly high wages, heavy taxation increases, foreign competition, retrenchment in public expenditure, especially of loan moneys, industrial disputes, bad harvests, lack of adequate vocational guidance, the impoverishment of consumers, scientific management, bank failures, and unwise poor relief or unemployment "doles". Viewing the world as a whole, we are faced by a plethora of "causes" of unemployment, some of which however, may be, at one particular time and place, quite insignificant and unimportant. In this chapter we seek to develop, not a list of vital and universal causes of unemployment, but some systematic method of approach to and classification of the factors involved. This accomplished, we may apply our theory to the facts revealed by our statistical analysis. This process of classification will render the problem of emphasis less formidable.

4. The Determinants of the Reserve of Labour

The more one studies the facts of unemployment,, statistically or historically, the more apparent is the fact that basic to the problem is the variation and change that pervade all economic conditions. An industry in which there are great

fluctuations in the demand for labour, will, during good periods, attract to its ranks a much greater number of work-people than can profitably be employed when a period of adversity provokes a reduction in demand. Unless this unprofitable excess be attracted into other industries it remains, a reserve of unemployed, until a later fluctuation involving a greater demand for labour, again absorbs ~~them~~ it into profitable employment. If this fluctuation in demand occurs fairly regularly there is less likelihood of those unemployed during a slump being permanently or even temporarily induced to abandon the industry, for there is the constant hope that things will soon improve again. The most obvious case of this perhaps, is in seasonal industries. The work people know that the slack period will pass with the change of the seasons. Often, during the brisk months they receive a higher wage than they would in other trades open to them, and they do not think of abandoning the industry just because they are, for the time being, out ofwork. But in the seasonal trade, the slack months see the appearance of a reserve of unemployed. If operation were constant and the work evenly spread throughout the year, the total number employed at any time would be less, but there would be no inducement for a reserve of labour to accumulate, since under these conditions there would be no prospect of more employment later in the year. Suppose there are 280 working days in a year,and the actual work available annually in the industry requires 280,000 days work by one man. If operation is constant throughout the year, there is continuous employment for 1000 men. If the industry can only work on 140 days in the year, through seasonal influences, there is

employment in the brisk months for 2000, but a reserve of 2000 unemployed for the rest of the year. A more realistic case would be presented if there were work for only 500 men during the first half of the year, and for 1500 men during the second. This would provide the total 280,000 days work necessary to maintain production, but it would involve a reserve of 1000 unemployed men for half the year, who are led to keep in touch with the industry during the slack period, ever in hopes of gaining employment. If a new industry starts, and operates on the same scale continuously, with no variation in its demand for labour, there will be no inducement for such a reserve of labour to be formed in that industry. If variations in its demand for labour occur, a reserve of unemployed is sure to develop, unless there is other employment readily available during slack times.

Intermittency in the demand for labour, due to seasonal factors may be of two kinds.

(a) Seasonal variation in the demand for goods. (e.g. clothing, radio, heat and light).

(b) Seasonal variation in the conditions of production (e.g. sugar cutting, shearing meat packing, and in some countries, building).

~~Most countries experience considerable seasonal unemployment.~~

It is not possible to deal with this problem in any detail, for we would be inevitably drawn into an investigation of the conditions in particular trades, and this would involve several volumes of the size of Webb's "Seasonal Trades". In this section our discussion will be general, with only such reference to specific trades as is necessary for purposes of illustration. Investigations made by the International Labour Office (i) indicate that in Great Britain more than one fifth of the total average number of unemployed in December and January may be

(i) International Labour Review XVII No. 3

regarded as seasonally unemployed. These are the bad months in Germany too: "the seasonal figure for January, for instance, is over one third of the average number of unemployed at that date". In the United States, seasonal depression in employment appears in January, April, May, July and August, while December is "the most favourable month of the year". But these three countries do not, in general, suffer from seasonal unemployment to the same relative extent as some others.

During a period of seventeen disturbed years, covering "declaration of war, blockade, armistice and general economic depression, there was not a single year in which unemployment in Denmark did not increase in November and December and decrease in March, April, May and June.....In December, January and February, seasonal unemployment represents about two thirds of the average total unemployment for these months". Similar conclusions were reached froma study of Sweden, Norway and Holland. Canada, too, experiences a great proportion of seasonal unemployment. Australia was not considered in that investigation, because our statistics are not collected monthly. Out of the fifteen countries studied the United States is the only exception to the golden rule that seasonal unemployment is heaviest in winter months. The countries in question possess both primary and secondary industries, but their relative importance varies from country to country.

For Australia, our own investigation has indicated the presence of a considerable degree of seasonal unemployment in secondary industries, and in the State of Queensland as a whole where the relative importance of primary industries is apparent. Given this intermittency in the demand for labour,

the growth of a reserve of unemployed labour is inevitable, unless the workers find other employment during the slack months.

Variation in the demand for labour occurs not only from time to time, however, but from place to place, and from employer to employer, and under the conditions of modern industry, this would be the case even if the total demand for labour were constant from day to day and from year to year. Competition introduces an additional source of variation in the demand for labour, for even with comparative business stability there are some firms losing ground to their rivals. But the workers thrown out of employment are seldom encouraged to seek new pastures. Even their erstwhile employers have hopes of business reviving. Often it does, and the chance that it will, tends to keep people in the neighbourhood. Even when an employer reduces his payroll permanently, it is often only after some fluctuations in the amount of employment he can offer. And when a district loses an industry, the decadence is usually checked by sporadic attempts at recovery. In this way it is not easy for workpeople to estimate the ~~kixxx~~ true prospects of their being unemployed permanently, so far as their former employer is concerned.

Of course, even when the demand for labour in a district has been permanently reduced, the mobility of labour is imperfect. The chief obstacles to mobility from place to place are ignorance, costs of movement, and our conventional but inefficient methods of hiring labour, under which several men may rush the same position while other employers may experience difficulty in finding workers. But we must not overlook the psychological aspect, for the hope of finding employment without

having to move to new parts is supported by the worker's past experience of an intermittent demand for labour.

The classical example of intermittency, is, of course, casual labour, and the relation of this to the reserve of labour in such callings as wharf labour, has been made clear by Beveridge. We may, therefore, pass on without further comment, except to note that casual labour is important in Australia, in certain developmental works employing unskilled men.

The most important cause of intermittency in the demand for labour, however, is to be found in business cycles. Not only does business depression throw thousands out of work in all industries, but prosperity induces people to take employment that cannot be other than transitory, although they may not realise it at the time. The fact that business expansion comes in huge waves, followed by crises or depressions, imposes upon industry the need to maintain a fluctuating reserve of unemployed much greater in numbers than would develop if the progress of industry were continuous and steady. The more violent the fluctuations of business cycles, the greater the normal rate of unemployment will tend to be. From every point of view it appears that the business cycle is one of the most importantt features of the problem, and we shall accordingly devote a special chapter to its bearing upon unemployment in Australia.

It should be born in mind that these causes of intermittency in the demand for labour have a dual importance. As we have seen, they produce a much larger reserve of labour than would be necessary if the demand for labour were more constant. But in addition to this they produce great fluctuations in the quantum of unemployment, and it is to seasonal and cyclical

fluctuations in particular that the greatest hardships through unemployment may be attributed.

But beneath these fluctuations from time to time there continue the slow moving changes in the demand for labour that inevitably accompany all social development. These secular changes ~~in the demand for labour~~ are in part due to changing tastes of consumers. Gone are the silk hats, and four-wheel "buggies" of our youth, but we need not multiply examples. The changes that continue in the distribution of the demand for utilities and futilities are ever before our eyes. Every new demand stimulates employment in one trade, but it often lessens the scope for employment in others. The process is inevitable, while man retains his freedom to consume the goods he is prepared to pay for. The growth of education and of foreign travel hastens it, and the vested interests of manufacturers and publicity experts judiciously cultivate it. Yet it has another side, for wants are the basis of endeavour and the rising and diversified standard of living is a potent incentive to work and resourcefulness. It is well to remember however, that our sacrifice to the God of Progress includes not only our leisure and our peace of mind, but also the chances of regular employment for those who find their lot cast in occupations that have been superseded with the passing of time.

But no less important are the secular changes in the demand for labour introduced by new methods in industry, especially the adoption of what are called "labour saving devices". Workers have always viewed them with suspicion and considerable propaganda has been required to induce the belief that these new methods have actually improved the lot of the wage

earners.

The most obvious effect of a machine which can displace human labour is a changed distribution of the demand for labour. The demand for labour in the occupation which the machine invades is usually reduced, at least for the time being. But the demand for some other types of labour is probably increased, for labour is required to make and to repair the machine and to produce fuel or power for it. If, instead of producing the new machine within the country, we import it from abroad, there should tend to be a greater demand for labour in the export industries, for imports must be paid for by exports almost immediately, unless they are borrowed. It does not necessarily follow that the increased demand for labour in these other industries will be equal to the decrease in the occupation where the machine is adopted---- it may be less, or it may be greater. This will depend upon the relative extent to which labour rather than machines are used in the other industries. The effects may carry still further into the industries that supply machinery and power to those other industries. But, assuming that there is no change in the total demand for labour, this change in distribution will cause some dislocation of the labour market, for the imperfect mobility of labour will prevent the displaced workers finding employment in the trades which have expanded as a result of the change. In all probability the increased demand in these industries will be met largely by new entrants into the ranks of the workers, that is, by young people or immigrants.

In most cases, however, the total demand for labour will be increased by the adoption of new methods in industry. The management does not introduce new methods and labour saving devices for their own sake, but because their adoption holds out

greater hopes of profits than does the retention of old methods. Quite as essential is the employer's conviction that the new methods are, from his point of view, cheaper than the old. Their adoption generally leads to lower prices of the commodities produced. In most cases this provokes an extension in the demand for the goods, and so a greater demand for the labour engaged in their production directly, for the wage earners in that industry, and indirectly for those engaged in the industries supplying machinery and power. If the employer does not reduce the prices of his goods, his higher profits will attract further capital into competition against him, and this will increase the demand for labour in the same way as the fall in prices ultimately should. Where new methods which displace labour are adopted because otherwise the industry would decline, the total demand for labour may not be so obviously increased, but certainly its decrease will be checked. From this point of view, new methods and machines "create" employment, and economists are justified in laying emphasis upon this. At the same time it is impossible to ignore the fact that the change in the distribution of the demand causes some unemployment. Moreover, unless the increased total demand for labour that accompanies expansion of industrial operations is followed by a better organisation of the labour market, the actual proportion which the fluctuating reserve bears to the total wage earning population will be no smaller than before. There will still be, even with the expansion of industry, that transient fluctuation in the demand for labour which will induce more people to enter each occupation than can ever be profitably employed at one and the same time. Of course it is possible that some of the new methods introduced may have as their

object a reduction in the instability of industrial operation, and their permanent effects may be to reduce these fluctuations in the demand for labour and so to reduce the proportionate size of the normal reserve of unemployed.

Another qualification to the thesis that the introduction of new methods and labour saving devices ultimately benefits the community, is that the employer does not always wait for indications that there will be an actual reduction in costs. For instance, it is questionable whether the saving cost per yard of excavation has been much reduced in some cases by the substitution of machinery for labour. The gain often arises from the fact that it is less irritating to manage machinery than men. This convenience does not influence profits or prices so clearly as does an actual lowering of costs. Moreover, the employer sometimes will adopt new methods for non-economic motives, perhaps to show the world that he is up-to-date, whether or not that fact actually influences his business.

Fortunately however, such changes have, in the past, come gradually, and the dislocation involved has been less acute than is generally realised. On this authorities are agreed. The explanation is to be found in the fact that over long periods, the mobility of labour is considerable, not only from place to place, but from trade to trade. If we take a sufficiently long period mobility may be achieved, not by industrial transference of adult workers, but by diverting the flow of new labour, youths and immigrants out of the overcrowded trades into those that are expanding and employing more labour. But there is no gainsaying that even over long periods, the mobility of labour leaves much to be desired. Perhaps the problem is more familiar under the name "dead-end occupations".

One reasons is that young people and their advisors are liable to choose their occupations unwisely. Wage rates are looked to, and the prospects of steady employment are not given much investigation. Of course there is very little information available for those who do enquire into the employment situation in the occupations they contemplate entering. The need for better vocational guidance is another argument for the development of fuller statistics of unemployment, without which guidance must be incomplete. The other aspect of vocational guidance is equally imperfect, namely, the determination of vocational aptitudes. Improvements in these matters would increase mobility over long periods. Free education, especially in technical schools, is another factor which should help the long term mobility of labour. As in the case of place mobility there is a psychological factor operating here, for it is no easy matter for a young person to seek employment in a grade of labour that is noticeably different from that of his family and childhood associates. There is a certain tyranny in social custom in all sections of the community and to choose an unusual occupation is to flout tradition. However, it is clear that occupational mobility is much greater over long periods than short periods. Of course, fairly effective barriers prevent workers from developing occupational mobility except over long periods. Within a man's lifetime, it is not easy for him to change his occupation. There is a definite psychological factor militating against it, unless a man is a positive misfit. A man's work readily becomes part of his life and a change may actually involve an emotional disturbance. Except under great pressure, it is noticed, miners seldom desert their calling. "Once a miner, always a miner", is the

saying. This inertia is supported as in the case of place mobility, by the acknowledged intermittency of the demand for labour. When good and bad periods alternate, the hope of subsequent employment is a powerful deterrent to seeking some other occupation, and this hope is not always ill founded. It is not easy for a worker to realise that the opportunities for employment in his trade have become permanently reduced. Perhaps, as some have suggested, the diffusion of vague information about, and of a general belief in, the business cycle has restricted occupational mobility still further, leading workpeople to think that every depression will prove to be transient. ~~As we saw in an earlier chapter~~, Such a belief may not be true of particular trades, although it may be true of industry in general.

Probably this psychological aspect of the problem is less important than the more objective barriers in the way of occupational mobility. Different occupations demand various types and degrees of skill, and this excludes most men from most occupations. Skill is partly a matter of inborn ability, and there is much psychological evidence that the capacity which forms the basis of vocational aptitude is a matter of heredity. At any rate the distribution of vocational aptitudes throughout the population is by no means even. This applies not only to general intelligence but to specific abilities, too, such as capacity for mechanical skill. Lack of talent then, is one hindrance to the mobility of labour. But innate aptitudes are only the basis of vocational skill, and the other important factor is training. Even for those who have the necessary gifts there is little hope of acquiring the skill

needed in an occupation, because of the costs of training. These include not only such fees and equipment as are conventional, but the reduction in earnings that is customary during a period of training, compared with the wages that might be obtained even in unskilled labour. These costs, and the lack of innate ability, ~~are~~ provide a ready explanation of why so large a proportion of the unemployed are unskilled workers and labourers, as ~~was pointed out~~ we saw, in Chapter ~~V~~ IV. But apart from the failure of individuals entering industry to choose an occupation in which there is less surplus of unemployed labour, costs of training, in the broadest sense, make it almost impossible for an adult tradesman to change his occupation. Even if he be unusually adaptable, to learn a new trade may involve such a reduction in earnings that the prospects do not outweigh the hope that he will find employment, in his own trade fairly soon. If unemployment relief is available, his determination to stick to his own occupation is thereby strengthened. If training for a new occupation involves any actual expenditure on his part, it becomes quite beyond his reach. Over short periods then, mobility of labour tends to be very limited. It is not unknown, however. Professor Cassel has suggested that agriculture provides a substitute avenue of employment for workers in "instrumental trades" i.e. those producing capital goods. In some parts of the United States there is a seasonal movement of workers from the country to the city. Such transferences, temporary as they are, can only take place where the skill demanded is easily acquired. In discussing the problem of casual labour, the Officer in Charge of Un-

employed Insurance in Queensland remarks that casual storemen and packers "are not as restricted as waterside workers as many of them secure work for extended periods in retail and other wholesale stores". (i) It is apparent that a packer could be more easily transformed into a shop assistant than could a wharf labourer. There is singularly little information available on this subject, but it is probably true that the proportion of workers who change their occupation is fairly small. We are not justified in hoping for very great mobility of labour between different trades over short periods, so long as the craft differences and demarcation observed by trade unions continue. To the modern tendency to replace the craftsman with the machine, and to smooth over the differences between different trades, the workers naturally oppose a dogged insistence upon the recognition of the traditional distinction between skilled and unskilled, and between various types of skill. This prevents mobility between trades which are not very different from each other, so far as the actual operations of the worker is concerned. Employers often find in this feature of trade union policy a source of irritation, especially when there is a temporary shortage of labour in some trade where the skill required is largely imaginary. It is probably true that productive efficiency occasionally receives a slight setback as a result. But in attempting to convince workers of their folly, some absurd claims are made regarding the effects that a less rigid insistence on the observance of craft distinctions would achieve. It is sometimes suggested that if the mobility of labour were improved in this way, a considerable

(i) Fourth Annual Report p. 3.

61 m 1875

reduction in unemployment would automatically follow. This would be plausible enough, if the fluctuations that occur in the demand for labour in different trades were compensatory. To a certain extent they are, for while some trades are slack in summer, others are slack in winter, and in this lies some hope of reducing seasonal unemployment. For instance, variations in the demand for "hot-dog" merchants and the demand for ice cream vendors, may be regarded as compensatory. But as between such trades, there are often other barriers to mobility than trade union policy. The most serious fluctuations in unemployment, however, are those which follow in the course of the general business cycle, ~~which we discussed in an earlier chapter.~~ From charts XI & XIV it is clear that ~~Quite clearly~~, the fluctuations in various industries and trades are not dissimilar. The timing and amplitude of the cyclical fluctuations ~~varies~~ vary somewhat, ~~as we have seen~~, but most depressions in employment are felt throughout the greater part of industry. Improved mobility of labour, then, would not reduce cyclical unemployment much in time of depression, and trade union policy is not so important in this connection as may appear on the surface. It is notable that Professor Pigou considers the effects of imperfect mobility of labour upon fluctuations in employment to be negligible.(i) But of course, trade union leaders do not need this finding of economists to strengthen their determination to preserve demarcation between different trades. This is evidenced by the difficulties encountered by those labour leaders who are striving for industrial instead of craft organisations. But even they dare not smooth out the distinctions between differ-

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(i) Industrial Fluctuations. Chs XX & XXI

ent trades engaged in the same industry.

When he becomes unemployed, a worker may either seek work in another industry, or with a new employer in the same industry. Without leaving the industry he may attempt to enter another trade. He might transfer from a biscuit factory to a confectionery factory, or from dressmaking to shirtmaking, but in these cases he would still be in the same industry. This type of mobility may be referred to as "internal mobility". Other things being equal, internal mobility of labour should be greater in an industry involving a few similar trades than in one in which are concentrated a host of different occupations. For the reserve of labour in an industry is composed of the reserve in each particular trade, or in each group of trades between which there is great mobility. If 1000 workers are attached to ten different trades, the variations in the demand for labour will attract a greater proportionate reserve of labour than if the 1000 are all engaged in the same occupation. Diversity of trades within an industry is a factor tending to decrease the mobility of labour, or should we say tending to raise the problem of imperfect mobility of labour ?

So, too, the multiplication of the number of independent employers will tend to increase the importance of the problem. As one of the factors making for intermittency in the demand for labour is the varying fortunes of individual employers, the imperfect mobility of labour should be less important where a few employers do most of the employing. The only qualification to this is that the labour turnover of large establishments is often greater than that of small ones.

This will be corrected, in time, as personnel management improves.

One other factor might be mentioned, namely the rigidity of wages. It seems clear, on the surface, that often some unemployment could be avoided if workers would accept lower wages. But this is in fact so controversial a subject that we shall leave it to a special chapter.

It is fairly obvious that unwise stimulation of migration may cause unemployment, especially in some particular trades. The importance of this factor cannot be assessed, however, until we examine the position in particular industries.

We have surveyed the general economic theory of unemployment, upon which economists are in fairly close agreement. Our own account has probably placed more emphasis upon the relation between intermittency in the demand for labour and the reserve of labour, although ~~but~~ our treatment would be regarded as following the accepted theory. But it is clear that we are far from an understanding of Australia's unemployment problem until facts and theory shall have been united.

In the next chapter then, we shall consider our separate industries in the light of these theoretical points and in the light of our statistical analysis. We may hope to discover the relative importance in each industry of the various causes set out above.

Unemployment in Australia

Chapter VI

Application of the Theory to Australian Industries

1. Introductory.
2. Three Manufacturing Industries.
3. The Clothing Industry
4. Wood, furniture etc.
5. Other Manufacturing
6. Engineering and Mining
7. Printing
8. Building
9. Food, Drink, and Tobacco
10. Other Land Transport
11. Conclusions.

1. Introductory

So far, our discussion of this many sided problem has been in general terms. References to specific occupations has been made merely to illustrate the relevance to Australian conditions of some of the many factors in the unemployment situation. The many sidedness of the problem is a source of great difficulty, for until we can form some estimate of the comparative importance of the many factors that are at work our treatment remains somewhat vague and lacking in conviction. The root of the matter lies in the fact that industry is not homogeneous, and the dominant causes of unemployment are different in different trades. There is great need for a series of exhaustive enquiries into particular industries and trades. This would involve the collection of a considerable amount of data at present unavailable, but it would further our understanding of the problem in a way that is not possible with our limited knowledge.

It will render our own theoretical discussion more positive, and in the eyes of most readers, more convincing, if we apply it to our nine industrial groups. If in the case of each industry we can ascertain which factors are most important as causes of unemployment, and if we can then estimate the relative importance of that industry in the general unemployment situation in Australia, not only will the value of our theoretical approach have been demonstrated, but the whole problem will be made clearer.

We may base an estimate of the relative importance of the various industrial groups upon the figures shown in Table ~~XVII~~ XVII The returns relating to unemployment, upon which our figures for mine industrial groups are based, actually cover 46% of trade unionists and 33% of employees in 1928. It is impossible to say to what extent the unemployment situation differs as between the workers covered by our figures and those omitted, and this makes it difficult to assess the importance of particular causes throughout the whole of industry. But in this chapter we shall focus attention on the industries to which our figures refer. Accordingly our findings should be, within these limits, fairly precise. For convenience we shall follow the grouping of industries according to the degree of similarity in their indexes of cyclical unemployment, arrived at in Chapter VI

2. Three Manufacturing Industries

The indexes of cyclical unemployment in wood, furniture etc, clothing, hats, etc and other manufacturing are shown in Chart Xl. In the face of their similarity there is no denying that the timing and comparative amplitude of successive fluctuations in unemployment due to business cycles is much the same in these industries. When we turn, however, to the charts showing the course of the actual figures, (II, V, and Vll) the similarity is not so striking. The normal rate of unemployment as shown by the secular trend is fairly steady in wood, furniture etc at a little over 6%, and re-

mains at 5.5% in clothing, but in other manufacturing "there is a marked upward trend. Perhaps our line of secular trend, presupposing as it does a regular growth in the factor measured (i) does not accurately reflect the change that has taken place in this industry. But sudden or gradual, the change is there, and whereas the normal reserve of labour during the war years was about 6%, it now appears to be in the neighbourhood of 13%. Such a change is significant. But this is not the only difference between these industries, for the normal amplitude of the fluctuations about the secular trend varies. While the standard deviations of the actual percentages of unemployment are not very different, being 3.6, 3.2 and 3.0 respectively for wood, clothing, and other manufacturing, the standard deviations of the ratios are 57, 56, and 32. This means that despite the notable growth in the normal reserve of labour in the case of other manufacturing, it is rather less subject to great but transient changes in the demand for labour than are the other two industries. We suggested that one factor provoking a rise in the secular trend might be an increase in the variability of the demand for labour. There is no evidence, however, that the rise in unemployment in other manufacturing is due to greater amplitude in cyclical demand. Is it due, then, to changes in the other sources of intermittent demand, or to secular changes in demand, or to factors operating from the supply side, such as immigration, wage policy or the mobility of labour ? We must look more closely into the relations between the variability of unemployment in these three industries.

(i) See appendix 11,

Although the amplitude of the cycles in these industries, as measured by their standard deviations, is different, the course of the cycles is similar. (Chart Xl). This is consistent with a priori expectations, for these are primarily "consumption - goods" industries,(i) and as such we would expect the effects of subsequent phases of business cycles to be much the same in all of them, but rather different from their effects upon industries producing "instrumental goods", i.e. goods used as meand of production. But this similarity in our indexes of cyclical unemployment does not mean that the only source of difference between these industries is in secular trend. Wood, furniture etc. is an industry with a rather small range of seasonal variation (18)(ii) it yet is the most important industry so far as non seasonal factors are concerned, according to Table Xl. That these non seasonal factors are cyclical, is suggested by the smooth wavelike fluctuations in Chart 11. The clothing industry on the other hand has the highest range of seasonal variation of the series (41), and is intermediate of these three so far as non seasonal fluctuations are concerned. Its movement is correspondingly more complicated than that of wood, furniture etc.(cf. Chart V). Other manufacturing is intermediate so far as the range of seasonal variation is concerned (22), and, of the three, is least subject to non seasonal fluctuations. In order that we may understand these differences between these industries it is worth while considering their nature in more detail.

3. The Clothing Industry

The clothing industry is, of all manufacturing industries,

(i) Part of the wood, furniture group supplies builders materials

(ii) see Table IX

the notorious seasonal trade. It was included in 1912 82 within the scope of Sidney Webb's "Seasonal Trades" and has recently been selected for special investigation by the International Labour Office. In Australia as in other countries the industry covers a wide range of different trades. There are woollen mills, employing carders, spinners, drawers and menders, gillbox minders, scourers, warpers, twisters in, pattern weavers, milling hands, as well as dyehousemen and labourers. Recent years have seen the growth of cotton mills and the hosiery trade. The tailoring-to-order trade finds employment for cutters, pressers, tailors and trimmers, while the ready-made-tailoring industry employs, in addition, brushers, folders, and machinists, and enables pressers to specialise in some particular garment: coat hands, trouser and vest hands. In these trades we have a range from small establishments to large, and from skilled craftsmen to semi-skilled factory hands and unskilled labourers. The production of mercery and women's clothing is similarly diversified. This industrial group includes in addition to the trades we have mentioned the industries of bootmaking, dyeing, cleaning, and hatmaking.

These many trades are, to varying degrees, independent of each other. Certainly the seasonal variation would not be the same in all cases. It is unfortunate that we cannot make a more detailed study of their fluctuations in unemployment. The International Office finds[i], for example that in Great Britain, seasonal variations in five groups are considerable, and in the other two, negligible. In the trades such as tailoring, cap and hat manufacture, dressmaking and millinery,

(i) International Labour Review Vol. XVIII. No.1

blouses, shirts, collars and underclothing, the slack season extends from August to February, and the busy season from March to July. The average unemployment for the whole year is less than for all clothing industries, and therefore less than for the two groups in which there is little or no seasonal unemployment. These are hosiery, and boots and shoes, " in which the factory, as opposed to the home industry, form of organisation is predominant, and in which fixed capital and overhead charges form an important part of the cost of production."(i) This finding coincides with what we would expect from general reasoning. There is less incentive to an employer to stabilise employment if the greater part of the cost of instability is born by the employees, than if he fears diminishing his own profits through having valuable plant and machinery standing idle during the slack period. The positive inference is that seasonal operation may be stabilised if the employer finds such stabilisation profitable.

We cannot study the incidence of unemployment in different sections of the clothing industry in Australia until such time as more detailed figures are available. It appears, however, that home workers among whom seasonal unemployment is greatest in England, form a much smaller proportion of the total employees in Australia. Probably the figures relating to the matter do not include all home workers, but only those permanently associated with certain factories. The reduction in the percentage that their numbers bear to the total of employees, namely, from 1.9% in 1920 to 0.8% in 1928, no doubt reflects the general tendency, however.

Our own inquiries show that in Australia the seasonal

(i) Ibid p.

movement is of a dual nature, the February and August quarters experiencing on the average the most seasonal unemployment (Table X), while the best quarter is normally that centred at November. The seasonal demand is due partly to weather changes, partly to fixed and movable feasts, such as Christmas, Easter and the race season, when new wearing apparel is conventional, and particularly to the changes in fashion, which, as we noticed in an earlier chapter, are usually announced with the new season's goods. In no other secondary industry of such magnitude is there such great scope for seasonal fluctuation, but the seasonal movement is irregular from year to year. At the same time the industry as a whole continues to be fairly prosperous. The total number of trade unionists has trebled in sixteen years and the number of factories has increased by one half. In this the industry is assisted, so far as its unsheltered sections are concerned, by a beneficent and liberal tariff, which does not, however, prevent the full force of business cycles, seasonal changes, and fashionable whims from throwing a heavy burden of unemployment upon the worker. It is indeed a matter of interest that the industry is so free from industrial disputes. These are so rare that they may be regarded as neglibible.

4. Wood, Furniture etc.

The industrial group known as "wood, furniture etc.," has a wide range like the clothing industry. It includes organ builders and coffin makers; wire mattress makers, finishers, and varnishers, and Venetian blind makers. Its picture framing section includes fitters up, gilders, joiners, mount-

cutters, sawyers and "general hands". An equally diverse list covers those engaged in piano manufacturing. Under "furniture" come wood carvers, turners, and machinists, upholsterers, chairmakers, French polishers, cabinet makers, carpet cutters, layers and planners, drape cutters and bedding makers. Then, saw mills and timber yards employ a range of workers in various occupations, the differentiation of which is jealously guarded, even though the degree of skill required is often small. The growth in the value added in process of manufacture has been less regular and slower in this branch of the industry than in the furniture and allied trades.

The business cycle appears to be the dominant cause of fluctuations in unemployment. It is noteworthy, in view of the public attention attracted to the timber industry by the strike of 1929, that the secular trend of unemployment in this industrial group, has not altered appreciably over the last sixteen years, although for industry in general, it has risen. But if, as was suggested, a large section of the wood working industry was faced with a severe reversal, one would expect to find the secular trend of unemployment rising. If the anticipated depression was to be merely the usual phase of the business cycle, then this was nothing new, for it would be the fifth such depression in sixteen years.

It is possibly true that the artificial differentiation between some of the semi-skilled trades in this group causes some unemployment by reducing the mobility of labour, but the net effect of this factor is probably insignificant. There is little seasonal variation distinguishable in the figures for

the whole group, February usually being a slack quarter, and May the busiest, perhaps in preparation for June brides. Probably there is more seasonal unemployment in some of the particular furniture trades, and of course, among coffin makers.

5. Other Manufacturing

This third group is almost incredibly diversified. The list of minimum rates of pay for the various occupations as given in the Commonwealth Labour Report covers more than five pages for "other manufacturing." The clothing industries require less than one page, and wood, furniture etc. but a little more. The occupations begin with the half dozen involved in asphalting, and end with the three trades included in wickerworking. They range from coachbuilding and candlemaking, to masons and opticians, from manufacturers of artificial manure and jewellers, to ship builders and rubber workers, from tent makers and potters to soap makers and the gas industry. It is questionable whether an industrial group of this type is worth studying as a whole, for the trades involved bear little or no relation to each other, and it is almost impossible to seize upon any general characteristics which will explain the considerable rise that has taken place in the secular trend. We would expect to find a greater reserve of labour in such a diversified group, which is not of such numerical strength so far as trade unionists are concerned as other more homogeneous groups. Each particular trade attracts its own reserve of labour and the mobility from trade to trade is not great. It is probably true that the

number of different processes has grown under the shelter of protection. There is little doubt that efficiency of management has suffered, compared with what might have been expected under free trade, and consequently that forecasts of changes in the demand for goods have been less accurate. This would probably add to the volume of unemployment. Moreover it is in these branches of the manufacturing industries that many small concerns have sprung up, to run for a short time and then to go out of business. The growth of a large number of small employers, as we saw in an earlier chapter, increases the intermittency of the demand for labour and so encourages a greater normal reserve of unemployed. In this too, some blame is attributable to Australian tariff policy. It may be that the effects of increasing mechanisation have been felt more in this industrial group because of the difficulty of displaced workers finding employment without leaving the industry. Probably foreign competition bears more heavily here, too. But this is all somewhat speculative. We have not in fact sufficient data to come to any positive conclusion. The most definite conclusions are negative in character. It does not seem that wage rates have been raised higher in this group as a whole than in the other two; indeed the rise has been greater in them than in other manufacturing. Since 1914 money wage rates have advanced by 70% in other manufacturing, 88% in clothing and 76% in wood, furniture etc. There is no statistical evidence, that the change in secular trend is due to wages policy. Neither is it due to the incidence of assisted immigrants. During the period 1913-28, other manufacturing received 1,600, clothing 4.745, and wood furniture, etc. 1,887. And there until more information is

available, we must leave the matter.

The seasonal index does not tell us very much, for it may be regarded as the resultant of seasonal variations in many diverse trades. In some of these trades there is probably much more seasonal fluctuation that the range of 22 for the whole group suggests, but this we have no means of investigating, with our limited data.

Reference to Table VIII will show that of these three industrial groups it is in other manufacturing that the predominance of "good" periods is least marked. Thus it would appear that although its fluctuations are less violent, critical periods of unemployment are of somewhat longer duration in this group.

6. Engineering and Mining

The grouping of engineering, metals etc. with mining, is justified not only by the similarity of their indexes of cyclical unemployment, as shown in Chart XIII but by the almost identical slope of their lines of secular trend, in Charts III and IX. The normal rate of unemployment in mining is generally little less than one per cent higher than in engineering, but its rate of increase is practically identical. Thus it appears that the fortunes of the workers in these two industries, so far as employment is concerned, are intimately related. The only notable differences in the cycles is that the unemployment peak in engineering that occurred in 1925 appeared on a much smaller scale a year earlier in mining, and while mining lags behind engineering in the years up to 1920,

thereafter the time sequence is reversed. The most striking difference is that engineering is relatively free from seasonal variation, for its index has a range of 7, while that for mining has a range of 29. This explains why the close relationship between the cyclical fluctuations is not so clear on Charts III and IX as on Chart XIII. From the figures in Table XI it would appear that the strength of non seasonal fluctuations in demand is about the same in both industries. Yet the amplitude of fluctuations in general, according to Table VII is greater for engineering, whether we consider the actual percentages of unemployment or the ratios to trend. These three findings taken together, suggest that seasonal variation has to some extent compensated for the effects of the business cycle in the case of mining. The greater prevalence of seasonal unemployment in mining and the acknowledged intermittency of operation through other causes are probably sufficient to explain why the normal rate of unemployment is nearly one per cent higher than in engineering throughout this period.

From a comparison of Charts XI and XIII it would appear that the cycles in these two industries are more regular than in the three manufacturing industries. The amplitude of fluctuations in mining and engineering is less than in wood, furniture etc. and clothing, if we compare ratios, but so far as the actual figures are concerned, engineering has the greatest standard deviation of the whole, series of nine industrial groups. The engineering, metals etc. group is numerically the strongest and covers a broad range of occupations, but they are naturally a more homogeneous selection than those included in other manufacturing. The electrical

trades, including installation and supply, as well as manufactures, form an industry in themselves,producing a service to assist mainly in further production. The making of agricultural implements, brass working, moulding, nailmaking and galvanising, like the larger group of general engineering trades, all with their many distinct occupations, are concerned not with the production of goods for immediate consumption but goods to be used as instruments or raw material in further production. Ovenmaking, and iron bedstead making are trades that produce consumers goods, but form a comparatively small proportion of the whole industrial group. The mining industry too, produces comparatively little for the immediate use of consumers, but mostly the raw materials for the constructional and engineering industries, and fuel for all industries. These two industrial groups then, resemble each other in being "instrumental" industries, and as such it is not surprising that they should undergo similar cyclical fluctuations.

We might easily attribute the rising secular trend of unemployment in mining to the gradual decadence of this industry that the post war years have witnessed. Numerically the strongest group of the nine in 1913, it now ranks sixth. The troubles of the coal industry have been continuously before the public, and the decline in other mineral output has received attention.(i) A careful examination of Chart IX reveals the fact that it is the height reached by unemployment since the war that has drawn the trend upwards, but in this mining is not different from engineering and other manufacturing. It is possible that the gradual mechanisation of the mines, slow though it has been, is responsible for the upwards

(i) See D. & M. Commission Report on Unemployment p.

trend, but only in small measure. An important factor is the lack of occupational mobility of labour. The immigration of miners has to some extent counteracted the unhappily weak tendency for long period mobility out of mining into other occupations. The difficulties of the coal industry have been examined in detail in Mr. Mauldon's recent book.(i) Mr. Mauldon finds that diminished output in New South Wales due to slackness of trade is not highly correlated with that due to industrial disputes.(ii) This is interesting in view of the fact that mining shares with the maritime industry the unenviable reputation of being the most turbulent of the industrial groups. Here, if anywhere, we might expect some relation between industrial disputes and unemployment. It would be rash to interpret Mr Mauldon's findings in such a way as to suggest that no such relation exists. Inevitably, if a mine is closed through an industrial dispute, slackness of trade will not affect it. In other words, slackness of trade has a better chance of making itself felt when operation is not disturbed by industrial disputes. In any case Mr Mauldon finds that industrial disputes cause a greater loss in output per man than does slackness of trade. In this industry then, the problem of industrial peace has considerable importance for its prosperity, but it cannot be claimed that it has been demonstrated that industrial disputes induce "unemployment" through scarcity of work". The only positive relation between the two that can be justifiably suggested is that the uncertainty and unsteadiness of output resulting from frequent disputes may render it more difficult to meet over-

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(i) F.R.E.Mauldon: The Economics of Australian Coal.
(ii) Ibid p. 61

seas competition both in domestic and in foreign markets. But many other factors share the opprobrium of having reduced Australia's export trade, and the facts elicited by Mr.Mauldon might well be interpreted to discredit the view that lays so much at the door of industrial disputes. The decline in overseas markets through external factors (apart from "irregularity of deliveries"(i), unprogressive technique in coal winning, and the fact that "the laudable ambition of each State to develop its coal resources to the utmost has hastened the nemesis of over-capacity"(ii)) appear to be matters besides which industrial disputes are of minor importance. There is no denying that the industry is overstaffed and the assistance given to 5,741 immigrant workers and dependents over sixteen years cannot be defended.

The rising secular trend of unemployment in engineering is probably due to the rapid increase in a number of the minor branches of the industry which a generous tariff has made possible, each of which requires its own reserve of labour. The mushroom growth of small establishments (e.g. electrical goods) gives a more unstable nature to the general demand for labour. Some of the minor branches of the industry do involve seasonal operation such as radio goods, and their growth adds somewhat to the normal reserve of labour although they are not sufficiently important to produce a great range in the seasonal index. Immigration of new workers into such an expanding industry would seem to be natural enough, but it is possible that this process has been unduly enthusiastic.

Of the nine industrial groups, engineering has received most

(i) Mauldon ibid p. 136
(ii) Ibid p. 149

assisted immigrants, totalling 8,560, during the period 1913-28. The progress of the industry as measured by the number of establishments, number of employees, and value of output has been considerable, but this has not saved it from an increasing normal reserve of labour, nor from the effects of business cycles. Examination of Chart III suggests that the rise in secular trend is due in part at least to the severity of the 1921-22 crisis in this industry, which probably suffered more from overproduction than did "consumption goods" trades. It is impossible to determine whether the gradual process of mechanisation has been a dominant factor in producing the upwards trend, because our information is so scanty.

How is it that the cycles in the mining industry are less violent than in wood, furniture, etc. and clothing ? Most students agree that the fluctuations in instrumental trades are greater than in consumption trades. This would probably be less true of Australian mining, in view of the rapid rate at which expansion and mechanisation are taking place in the industries that use its products. In statistical terminology the amplitude of fluctuations in unemployment may be less because the secular trend of the demand for its products despite transient fluctuations, rises steadily. This apparently is in Mr. Mauldon's mind when he writes: "Coal as a commercial product, has an inelastic demand".(i) Consequently it appears, the depression in mining is less intense than in some industries, although its emergence from depression is retarded, judging from our coefficient of asymmetry (Table VIII

Such seasonal demand for the products of mining as is reflected in the index of seasonal unemployment is easily

(i) Ibid p. 146

explained. Seasonal unemployment is heaviest in the summer quarter, centred at February (Table IX). The important factor would appear to be the diminished seasonal demand by consumers for heat and light, almost any form of which requires coal, directly or indirectly.

7. Printing.

We have grouped printing with building, on Chart XII, because there is more similarity in such a grouping than in any other involving these two industries. The agreement is not so close however, as in the other two groups we have been considering. Building activity is often taken as an index of business conditions, and with the growth of modern publicity methods, printing may be equally sensitive to the temper of business. There is more similarity in the part played by these two industries in economic expansion than is apparent at first glance. But it is not easy to explain why they should both experience cycles of somewhat shorter duration than the other groups we have been considering. Perhaps ~~it is~~ they are more responsive to small variations in the business situation than are the others. The question is not worth pursuing further in view of the less satisfactory secular trend in the case of building than of other industries.

The printing industry has made considerable progress since 1913 but it is still the smallest group numerically, although it bids fair to outstrip land transport (other than railways and tramways) in ~~this regard~~ numbers. It is the happiest of the nine groups so far as unemployment is concerned. Not only is the normal rate generally lower than in other industries, but the

secular trend has unmistakably fallen during the period under consideration. The low normal rate of unemployment is a world wide characteristic of printing trades. Fluctuations are not great for the actual standard deviation is 1.0% although that of the ratios is 37. It is notable that the actual amplitude of the cycles appears to be diminishing. This may explain the falling secular trend, for an industry with little instability requires only a small reserve of labour as a rule. The seasonal range (Table IX) is considerable, namely, 36, but this is based upon ratios, and in view of the low values for the secular trend, does not represent a great actual variation. Nevertheless, in such variation as does occur seasonal factors are prominent. The May quarter is the slackest, while the November quarter is most brisk. Apparently the Christmas demand is more important than the onset of winter. The coefficient of non seasonal fluctuation (Table XI) is identical with that for other manufacturing. In only two industrial groups is it smaller.

The industry covers occupations well distinguished from each other in craft skill, wages are high relatively to other industries, having increased by 85% since 1914, and the union organisation is strong. But the range of different trades involved is not nearly so great as in the other industries we have been discussing [redacted]. This is one factor making for stability of employment. But probably a more important factor is the part that labour plays in printing Out put in this highly mechanised industry must be considerably restricted before a reduction in staff is warranted. Similarly it is possible to increase the output considerably so far as reproduction is concerned, without engaging many more

workers. Consequently the demand for labour varies much less than in other industries where output varies in similar proportions. The industry consists mainly of large publishing firms, large commercial printers and small jobbing presses. In the latter the processes involve more labour and are less highly mechanised, but the staffs are so small that, so long as a press can run at a profit the staff does not vary much in size with fluctuations in business. Apart from the publication of journals and newspapers, which afford comparatively steady employment, most of the printing done is of a commercial nature: catalogues, prospectuses, advertising, stationery, and the like. In these the industry is, to a great degree, sheltered from overseas competition. This is probably of less importance than the other factors mentioned.

The trade union organisation is rather more efficient than in some industries, in so far as regulation of the supply of labour is concerned. ~~We noticed in an earlier chapter an example of this~~ For instance care is taken to warn members when trade is slack in one part of Australia. The apprenticeship system works rather more effectively in this industry than in some, keeping the inflow of new labour within reasonable bounds. Neither has the industry been flooded with assisted immigrants, for only 704 workers and dependents entered it from abroad between 1913 and 1928.

8. Building

We have already referred to the relation between building and printing as regards the indexes of cyclical unemployment. The incidence of seasonal unemployment is not dissimilar, for November is the best quarter, but February has the heaviest

~~(1) C.S.O. p. 125~~

seasonal unemployment (Table IX) In building, however, the range of the seasonal index (16) is less than half that for printing. But it must be remembered that the normal rate of unemployment in building is greater, so that the actual amount of seasonal unemployment is greater than this comparison might suggest. Non seasonal factors as indicated in Table XI are of equal importance in both industries, so far as the ratios to trend are concerned.

The two striking things about the building industry are,
a) The small range of the seasonal index
b) The peculiar secular trend (Chart VIII)

a) In most parts of the world building is regarded as a seasonal trade. "Building trades workers in most American cities are employed less than three-quarters of the year. As a result the trades are fully employed for only three to five months"(i). In Great Britain and on the Continent the same problem presents itself, and the International Labour Office has selected building as a special subject of enquiry in seasonal unemployment. The explanation usually offered is that bad weather makes building almost impossible. It has been established, however, that in the United States "bad weather is not the principal cause of seasonal idleness ....For most types of construction it is now possible to build the year round in all parts of the United States"(ii), because of the changed methods of construction. But custom still enforces seasonal variation. Australian weather is not subject to such extremes as occur in Great Britain and North America, and this may be the important source of difference. It is possible, too, that custom has not had such a binding effect in Australia. The peculiar thing is that the February quarter

(i) Seasonal Operation in Construction Industries p. vii
(ii) Ibid.

experiences the most seasonal unemployment. (i) As November is the best quarter it appears that building slackens in the new year. 98

b) The secular trend of unemployment in this industry is clearly different from the others. The period is too short for us to assert that there is a secondary cycle in the secular trend itself. Moreover, a simpler and more plausible suggestion is that building trades felt the war years severely. This might be expected, for building is concerned with the production of durable goods, that is, fixed capital of which the consumption is very gradual. Production of durable goods cannot go on unless paid for by savings made from the national income. The war years diverted the savings of individuals into channels in which, instead of producing durable goods, they were quickly dissipated and consumed. It is inevitable that if savings are used in other ways they cannot be turned into fixed capital. Under the circumstances a restriction of building activity was ineluctable, and not only was new building enterprise discouraged, but more depreciation was allowed to take place than would be the case in normal times. This tendency was strengthened by the operations under "fair rents" acts. The economic function of high rents is to stimulate building. If rents are kept down by artificial means, while costs of production rise, building activity will not expand. House rent did not rise much during the war, although other prices did. With the relaxing of rent restrictions rents began to overtake other prices, and building became more profitable. At the same time there was, with the coming of peace, the task of making up what had been lost during the war and consequently the normal rate of unemployment was remarkably low. As time

(i) See Table IX

went on this equally abnormal phase came to an end, and the secular trend began to rise gradually. It is interesting to note that these changes in conditions affected the secular trend. The cyclical fluctuations continue in much the same way over a long period. From this it is clear that business cycles are something more than a series of discrete events produced by spasmodic changes in national life. Even when war and peace disturb the employment situation, on top of such disturbances are superimposed these normal fluctuations due to business cycles. This is a finding of great importance, and justifies our giving such scant attention to the war as a cause of the cyclical variations in unemployment. The normal rate of unemployment in building appears to be about 7 or 8%, but the abnormal war conditions distorted this normal rate, in the way that we have shown. But the business cycle continued the uneven tenor of its way, and caused fluctuations with a standard deviation from the normal rate of 2.3% (actual) and 34 (ratios). Thus the amplitude of these fluctuations was less than in most industrial groups. In this industry the secular trend or the normal rate is the most important aspect of the problem, although, given a period of peace, it may attain a steadiness not experienced since 1913. The building industry is the third largest of our nine industrial groups, so far as trade union membership is concerned, and employs 6.6% of the total of trade unionists. Consequently, its fluctuations and trend have an important bearing upon the general unemployment situation.

9. Food, Drink and Tobacco

This industrial group experienced a great depression in 1915, and again during 1920-21, but as Chart XIV indicates,

cyclical fluctuation is not so evident, apart from those two crises, as in other industries. This is also reflected in t the index of "non seasonal fluctuations", which is the lowest of the nine groups (= 25).(i) Consequently we cannot group food, drink and tobacco with any other industry, on the basis of cyclical unemployment. The secular trend has been the same throughout the period, the normal rate of unemployment being rather high, namely 11%. It appears from Chart IV that, except when an unusually violent disturbance takes place, short period oscillations are the dominant type of fluctuation. The range of the seasonal index(ii) is only 21, but it is important to remember that where the index of non seasonal fluctuation is low, the seasonal movement is more regular. For instance, although the clothing industry has a normal seasonal movement of greater range, non seasonal fluctuation, due to business cycles, is much greater, too, than in the case of food, drink and tobacco. Consequently the seasonal movement does not appear so clearly in the actual figures for clothing, as does the more regular but less violent seasonal movement in this industry. In statistical terms, the normal seasonal movement is greater in clothing, but the variability of seasonal movement is less in food, drink and tobacco.

The presence of this regular seasonal movement is not difficult to explain, for this industry includes the aerated water trade, flour milling, jam making, meat packing, ice refrigerating and cream making, and wine and spirit making. The Statistician published in 1929, a list of certain seasonal trades(iii) arrived at after special enquiries, and the above

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(i) Table XI
(ii) TableIX
(iii) Labour Report No. 19, 1928 p. 132

mentioned trades are all included. Confectionery, too, is subject to some seasonal variation, and already in an earlier chapter, we have drawn attention to seasonal operation in the sugar industry. The index of seasonal variation would be much greater if we could study some of these particular trades separately, for, to some extent, the fluctuations counteract each other in the total figures for the industrial group. The first quarter of the year has less unemployment than any other for the whole industry, but this is not true of all the particular trades. In some cases the season movement is due to the conditions of production, and in others to the seasonal nature of the demand for the products. This seasonal variation, somewhat greater than the seasonal index suggests, is partially responsible for the high normal rate of labour, since each seasonal trade attracts a reserve of labour. But there are other sources of intermittency in the demand for labour, in this industry. Foodstuffs, are like clothing, but in a lesser degree,subject to fashions and fads, and frequent changes in demand. This intermittency encourages the formation of a large labour reserve. Moreover, while there are many large sized industrial concernsin the industry, there are many small enterprises,and their economic ups and downs tend to enlarge the normal reserve of labour still further. Then, internal mobility of labour is not great, and the changes in demand for labour in different trades are not met, to any great extent, by the transfer of individuals from one to another. Greater mobility from trade tontrade would probably effect more improvement in this industry than in most.

Wages, immigration and industrial disputes are apparently unimportant factors in this case. The business cycle has less

influence than in other industries because the consumption of these commodities continues without great non seasonal variation unless a very serious general depression occurs. The cycles of smaller amplitude are not felt much. During the period under review the normal situation has remained unchanged and in this the industry provides a contrast with such groups as mining, engineering, other manufacturing and printing. It is unique in that during 1928, unemployment was below normal.

10. Other Land Transport

The largest industrial group in Australia, other than "Miscellaneous", is that covering "Railway and Tramway Services". This is not included in our enquiry because no figures of unemployment relating to it are published separately, since "employment is unusually stable", (i) in these services. Hence our industrial group is known as "other" land transport. Conveyance of passengers in buses, and of goods in lorries and drays, together with elevator driving, employ 20,632 trade unionists. Unemployment is normally worse now than at the beginning of the period under consideration, for the secular trend rises at approximately the same angle as in the case of mining, and engineering. Cyclical fluctuations as shown in Chart XIV are not closely correlated with the index for any other industrial group. The most striking difference is that the peak in cyclical unemployment since the war is not in 1921, but in 1924, as in that year the highest figure of 12% was reached. The normal amplitude of the fluctuations, as measured by the standard deviation is 1.5%, so far as the actual

(i) Labour Report No. 19 p. 130

figures are concerned, and 36 for the ratios to trend. Thus the industry is less unstable than most of the nine groups.

The range of the index of seasonal variation is not great, namely 15, but, as in the case of food, drink and tobacco, the seasonal movement is more regular than for most industries. (The index of non seasonal fluctuation is ± 26). The busiest time of the year is the November quarter , ~~and Christmas we know is most regular in its occurrence.~~

This industrial group has apparently felt the effects of rapid mechanisation. The working capacity of a large motor lorry, allowing for its greater pseed, is equivalent to that of a number of tip drays or horse drawn vehicles. It requires one, or at most two men to handle. The industry has expanded considerably in sixteen years, in the amount of business done and the quantity of goods carried, but the numbers employed have advanced less rapidly, and the normal percentage of unemployment has increased. This situation does suggest some considerable displacement of labour, and the inevitable course of progress involves, in this case, the price of increasing unemployment.

11. Conclusions.

We have now briefly surveyed the nine industrial groups to which our figures refer, and have shown, as well as the available information will allow, what factors are of dominant importance in each case. We may now endeavour to sum up the position in Australian industry as a whole.

Our figures do not cover all the trade union members in all industrial groups. In some industries the omissions are smaller than in others. It is fair to assume that so far as these

industries are concerned our figures do represent relative changes in the course of unemployment fairly well.(i) We cannot, however, assume any close correspondence between its course in these industries and in the other industrial groups for which figures are not published separately, because the industrial groups we have considered differ considerably among themselves. The Statistician combines such figures for these other industries under the total of a group labelled, "Miscellaneous and Other", but no useful purpose would be served by statistical treatment of such an ill defined group. We may offer some general comments upon the unemployment problem in relation to these other workers, although we have not exact data.

The important industry of railway and tramway services provides steady employment. Men do lose their position now and then, and sickness exacts its toll here as elsewhere, but no considerable reserve of unemployed yet hopeful workers is attached to the industry, as is the case in all trades where the demand for labour is subject to intermittency. The group known as "shipping", wharf labour etc" is of fair numerical strength and includes two diverse types of worker: those who go down to the sea in ships and those who go down to the wharves. The former is an occupation which is casual in the sense that there is a good deal of luck in the matter of employment, but not casual in that the period of employment is normally longer than the term of the wage contract in most trades. Without a special sociological enquiry it is difficult to say just how much unemployment there is among seamen. Wharf labouring, is of course, the notorious casual trade, with a

(i) For a discussion of this see Appendix II

heavy rate of unemployment. It is a seasonal occupation, and follows the export seasons in wool, wheat, fruit and meat.

Rural industries, pastoral and agricultural experience seasonal unemployment and cyclical fluctuations correlated with harvests and wool clips more than with commercial conditions. There is however, a good deal of occupational mobility in these industries. It is not difficult to pass from shearing (i) to harvesting, fruit picking or sugar cane cutting, while general labouring in towns and on railway and other construction work is another alternative. This does not always make things easier for the workers in these alternative occupations. "During the past year", wrote the Officer in Charge of Unemployment Insurance in Queensland in 1927, "owing to the adverse weather conditions, many small farmers and selectors who ordinarily are engaged working their properties were compelled by stress of circumstances to seek employment with local authorities, on railway works, and in the seasonal industries. This of necessity resulted in a diminution of the work ordinarily available to the unskilled worker." (ii) The movements of employees would have similar effects to that of small working proprietors or tenants. But this was an abnormal situation owing to a bad season. Normally this mobility of labour enables the rural industries as a whole to get along with a smaller reserve of labour than would be required if such transference were not possible.

Domestic, hotel employees etc. experience some intermittency of work each year being "subject to unemployment for varying periods, particularly in the winter months," (iii) but in the absence

(i) In shearing the average period of employment is about 20 weeks per annum.
(ii) Fourth Annual Report p.5.
(iii) Idib p.5.

of figures we cannot go further into the matter. The miscellaneous group, including 228,417 trade unionists, covers commercial occupations and the Public Services. The latter offer continuous employment. While a certain amount of unemployment exists among shop assistants, clerks and the like, it is impossible to estimate its extent and course.

Of these industries not covered by our statistics it seems, then, that a large proportion of the employees do not suffer greatly from unemployment, while perhaps little less than a quarter of them are engaged in work in which there is more or less seasonal variation.

For the nine we have been studying, it is clear that business cycles provide the most important factor affecting the volume of unemployment. Such violent disturbances of the economic situation as occurred in 1914 and 1921 left no industry undisturbed, and most were kept fairly busy during t the war period. The post war years have brought difficulties to some industries yet the peculiar conditions in printing, and building have worked in a happier direction, and in two great industries, wood and clothing, the general unemployment situation seems unchanged. It would appear tha increasing mechanisation and the rapid growth of enterprise(especially the multiplication of small employers) must share part of the responsibility for the rising secular trend in industrial unemployment as a whole, but this special problem will receive our attention in Chapter IX Wiser selection of immigrants and somewhat less enthusiastic assistance might have prevented unemployment to some extent. Industrial disputes except in mining and the maritime industries might be ignored, so far as factors in unemployment are concerned. We have yet to be

convinced that a different wages policy would have been of great importance. Seasonal unemployment affects a much larger section of our industry than is generally realised, but its presence is often obscured by cyclical fluctuations. Occupational mobility of labour is difficult to assess, and its improvement would diminish unemployment, perhaps but not greatly.

Any attempt to give a numerical value to the comparative importance of these factors would be hopeless and not very useful. The discussion in this chapter should give us a better appreciation, however, of their varying incidence in different industries, and of the complicated nature of the whole problem. Vague though some of our conclusions may be, the discussion that we have followed gives us much better grounds for approaching the problem of outlining a policy, than we had at the commencement of our study.

(i) Development and Migration Commission: Report on Unemployment.

Unemployment in Australia

Chapter VII

Business Cycles in Australia

1. Cycles in Economic Activity.
2. The Measurement of Business Conditions.
3. Factors in the Cyclical Demand for Labour.
4. The Influence of Prices.
5. Banking Policy.
6. The Psychological Aspects.
7. Industrial Disputes.
8. International Business Cycles.
9. Conclusion.

Chapter VII.

The Business Cycles in Australia.

We have seen that particular industries have their own peculiar problems. Mechanisation in land transport is a matter distinct from mechanisation in engineering trades, for instance. And seasonal unemployment presents a different problem in each industry we may consider. But the business cycle influences practically every branch of industry, and in most industries it is directly responsible for the most severe periods of unemployment. It will be profitable then, to discuss it as a general problem, without explicit reference to particular branches of industry, and this chapter will be devoted to an examination of Australian business cycles.

1. Cycles in Economic Activity.

In this chapter we are concerned with transient changes in the demand for labour, but only with those that follow the cyclical fluctuations in general business conditions, which have attracted so much attention of recent years. Despite the rapid growth of literature on the subject, the business world and the labour movement both fail to realise how great is the evil which these business cycles produce. The figures and graphs in this book, however, bear testimony to its effects upon unemployment in most industries, and this alone brings it to the forefront of modern economic problems. Naturally enough its influence upon production is similar, but not so violent, because the less efficient workers bear the brunt of unemployment, and management is more efficient during a business depression than during the boom. In Chart XV the curve for production, like that for unemployment, is plotted in units of one standard deviation, and was obtained by the methods explained in relation to unemployment, in earlier chapters, except that the secular trend was worked to a rougher approximation. To make comparison easier, the curve is inverted. The curve for the more important section of rural production(i) was obtained in the same way. The other types of production are not shown separately, because they are not subject to such obvious cyclical fluctuations. The fall in mining production has been fairly constant, and the rise in manufacturing has been even more regular. It is clear enough, however, that

(i) Agricultural and pastoral.

cyclical fluctuations are important in production as well as in unemployment and it is obvious that the cycles are related. The correspondence is not close from year to year, but the major movements are similar. Sometimes production lags behind unemployment, and sometimes precedes it, but it is undeniable that both experience the same cyclical fluctuations. (As was explained in an earlier chapter the statistical methods here adopted reduce the cycles in the different series to a common amplitude.) It may be objected that fluctuations in rural production are not evidence of a business cycle but merely the effects of good and bad seasons. In reply to this two points may be made. It is possible that this variation in seasons plays some considerable part in producing the business cycle. Secondly, other factors than natural forces affect the fluctuation in the value per head of rural production. One other factor is prices, and fluctuation in prices is one aspect of the business cycle. Another factor is the decisions of primary producers regarding area sown and similar matters, and these decisions are business judgments. But before going any further, it is advisable to discuss just what we mean by business cycles, and to describe them in general terms. Then we may be in a position to consider them as they appear in Australia.

Professor D.B.Copland quotes with approval Sir W.Beveridge's definition of the business cycle: a "rythmic movement,...an ebb and flow of economic life and activity taking several years to complete".(i) Cyclical fluctuation, be it economic or otherwise, does not necessarily involve a constant periodicity, but

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(i) Development and Migration Commission Report on Unemployment p. 30

certainly an alternation of successive "phases", always in the same order of succession. The concept implies a certain regularity, and by consensus of opinion it is agreed that this regularity relates to the temporal succession, but not necessarily to the duration, of the particular phenomena from which we infer the presence of fluctuations. Earlier writers such as Jevons and Marx focussed their attention upon crises. But by a "crisis" is meant a disturbance sufficiently extraordinary to merit that term, and its denotation must be necessarily subjective and correspondingly indefinite.

Recent writers prefer to distinguish four separate phases, which are quite different from each other, but overlap somewhat in time, so that the point of transition from one phase to the next is not very clear. The most favourable phase is known as "prosperity", and is characterised by great business activity and correspondingly low unemployment. These good times, however, come to an end, and the phase known as "recession" ensues. This merges into "depression" which is followed sooner or later by "revival" or recovery. Revival leads to prosperity again, and so the cycle continues. We cannot pick out the initial phase. Each precedes one and follows another. Nor can we consider any phase as separate from the others and independent. One phase merges into another, yet certain stages of each phase produce phenomena that are characteristic of that phase alone. Recession and revival may be regarded as periods of transition between prosperity and depression. It seems that the duration of the separate phases is no more fixed than that of the complete cycle. Only their order of succession is constant. If the recession is of short duration, it may be accompanied by such

a disturbance as merits the name of "crisis". This is more likely if the recession occurs suddenly and before the waning of prosperity has been widely recognised. The modern tendency is to emphasise the continuity of the cycle, the four phases being singled out for convenience in description and comparison. Dr Thorp has compiled "Business Annals" for seventeen countries including Australia. These annals are the result of "an attempt to summarise and depict the business conditions.....as they appeared to intelligent and expert observers"(i). For each year are given, in tabloid form, notes on industrial, commercial and labour conditions, they money, security, and foreign exchange markets, agricultural production and prices, and various non-economic factors such as politics, civil strife etc. In addition the whole situation is summed up by classifying it as one of the four phases of the business cycle. A special term "war activity" is used in certain years for obvious reasons. Judging from the bibliography given by Dr Thorp, the sources of information used for the Australian annals were not very comprehensive. Nevertheless, it is interesting to compare the allocation of the years to different phases with our figures of cyclical fluctuations in unemployment and production, and this is made possible in Chart XV. It should be borne in mind that unemployment figures would form part of the data on which Dr. Thorp based his annals. The annals as published do not cover the period 1926-28.

It is possible to base some statistical analysis upon these annals. For instance, the duration of each cycle may be measured by the number of years between recessions. The

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(i) "Business Annals" p. 103

following statement for the whole period covered by the Australian annals (1890-1925) was compiled by Professor Copland (i).

Dates of Recessions	Duration of Cycles.
1890 January	...
1901 January	11 years
1908 January	7 "
1913 January	5 "
1914 Autumn	2 "
1920 November	6 "
1924 January	3 "

It would appear from these figures that the business cycles now tend to be of shorter duration than formerly. Taking "war activity" as synonymous with "prosperity", we may arrive at the following statement regarding the frequency of the different phases over the period we are considering (1913-1925)

Phase	No. of Years in which phase occurs
Recession	4
Depression	3
Revival	5
Prosperity	7

Reference to Chart XV will show that in some years more than one phase makes its appearance, so that the numbers here given exceed 13, although only 13 years are considered. Furthermore, we have ignored the fact that Dr. Thorp sometimes qualifies a phase with the adjective "mild" or "slow". It is noteworthy however, that these figures are consistent with the results of our enquiry into the asymmetry of distribution of the fluctuations in unemployment, which indicated that "good" periods have predominated over bad. (ii)

(i) D. & M. Report on Unemployment p. 31

(ii) see above, Ch. III

following statement for the whole period covered by the Australian curve (1890-1925) was compiled by Professor

Dates of Recessions	Duration of Cycles.
1890 January	
1900 January	10 Years
1908 January	8 "
1913 January	5 "
1918 August	4½ "
1920 November	2¼ "
1924 August	3¾ "

It would appear from these figures that the business cycles now tend to be of shorter duration than formerly. Taking "war activity" as synonymous with "prosperity", we may arrive at the following statement regarding the frequency of the different phases over the period we are considering (1913-1925)

Phase	No. of Years in which phase occurs
Recession	4
Depression	3
Revival	3
Prosperity	2

Reference to Chart XV will show that in some years more than one phase makes its appearance, so that the numbers here given exceed 13, although only 13 years are considered. Furthermore, we have ignored the fact that Dr. Thorp separates quantifies a phase with the adjective "mild" or "slow". It is noteworthy however, that these figures are consistent with the results of our enquiry into the symmetry of distribution of the fluctuations in unemployment, which indicated that "good" periods have predominated ever bad. (ii)

(i) D. of L. Report on Unemployment p. 31

(ii) see above. Ch. III

It is possible too, by studying the descriptions given in these annals, to detect some possible causal relations. But no definite hypothesis can be defended unless we have more exact and precise accounts of what has happened, in the form of actual statistics and a piece of theoretical analysis which shows that the causal relation suggested is reasonable, and not based upon a mere coincidence.

For example, the frequency distribution of cycles according to duration suggests that their causes are many in number.

2. The Measurement of Business Conditions.

We need then, some quantitative measure of Australian business conditions, for otherwise our references to the business cycle can only be in descriptive and qualitative terms. "There is no index of general business conditions in Australia, such as exists in some other countries," writes Professor Copland (i), but the Alexander Hamilton Institute publishes a chart monthly, on which bi-monthly movements in "general business" are shown as well as a "banking index" and an index of share price movements. These are part of a business service made available to subscribers, and are not so well known as an index published by some public authority would be. The curve for general business is based upon bank clearings, the assumption being that the course of business is reflected in the volume of payments, and bank clearings may be supposed to vary proportionately with the total volume of payments. One objection sometimes urged against such an index is that it may be unduly sensitive to mere speculation, which does not always vary in close agreement with general business activity. In the original Harvard Indexes, to which we shall refer in more

(i) D & M. Report on Unemployment. p 31

detail later, bank clearings within the city of New York were taken, until recently, as an indication of speculative activity, while outside bank clearings were regarded as a better test of general business activity.

But when we seek for an index of general business, what do we mean ? What should be included as general business conditions? Are general business and industrial activity one and the same thing ? Apparently not, for the business of selling may go on while production of goods slackens. Conditions are seldom the same in all types of business. Some trades are busy when others are slack. Certainly unemployment cycles are not felt equally in all industries. In some ~~cycles~~ cases the cycles are very prominent, but in others they are much less apparent, as a glance at Charts II to X will show. This of course may not be due to the varying incidence of general business conditions upon the activity of different industries, but to differences in the organisation of the labour market in different industries, such as will be discussed in Chapter VI ~~This, however, will be discussed in subsequent chapters.~~ Definite evidence that business cycles react differently on different industries, is presented, however, in Charts XI to XIV, where it is clear that in timing, duration, and comparative amplitude, the swing of the curves is different. Professor Pigou finds that this is the case in Great Britain too. Of course we have not yet offered evidence to prove that these cyclical fluctuations in unemployment are all due to the changes in demand produced by some single universal cycle in business. It is conceivable that the cycles in different industries might be unrelated, although students

XI

of business cycles in other parts of the world do not hold this view, and our own studies do not support it. ~~To see whether we can settle this question, so far as Australia is concerned, is one of the tasks of this and later chapters~~. The points just referred to, at least make us rather more critical of this concept of general business conditions. A brief survey of the various attempts that have been made to develop measures of business conditions should help to clear our minds on the matter.

In France, Spallart and de Foville in the eighties; in England, Beveridge in 1908; and in Austria, Sorer in 1913 produced series and charts showing the cyclical movements in different aspects of social and economic life, such as prices births, deaths and the like. In Belgium, in 1911, Julin, and in Italy, Montao in 1913, went a step further and combined a number of separate series to form a single "composite line". In America in 1919 ,Warren Persons and the Harvard Committee of Economic Research produced three composite indexes each based upon closely related but separate series, and showed that these three indexes varied in close agreement, but with some months "lag" between their movements.

Here in the work of these investigators, are illustrated the three general methods of formulating indexes of business conditions, and each method has its disciples. The principle of the composite index is that by averaging a number of series, particular idiosyncracies are eliminated and the result gives a general indication of the central tendency of business activity. The best known American index of this type is that of Babson's Statistical Service which is an

average of 11 (formerly 12) separate series, and is claimed to reflect <u>future</u> business conditions. The series included refer to immigration, new building, business failures, bank clearings, wholesale prices, foreign trade, foreign money rates, domestic money rates, crops, railroad earnings and stock market conditions. Another index which, it is claimed, forecasts the course of business, is published by the Brookmire Economic Service, but the exact composition of the index is not revealed. It is stated that it covers six factors,—speculation, physical volume (of production?), ratio of imports to exports, turnover of bank deposits, commercial paper rates, and foreign money rates. Professor Copland's index of trade for Australia (i) is a composite index, "embracing a combined measure of internal trade, overseas trade, transport, and communication".

The Harvard Indexes were arrived at after examination of a number of series over the period 1903-14. Those selected fell into three groups. In each group the particular series were closely correlated with each other, and were combined into three corresponding composite indexes, one based on each group. The constituent series have been altered a little, in the light of experience, but at present they are as follows.

<u>A. Speculation</u>

1. Price of Industrial Stocks
2. Price of Railroad Stocks

<u>B. Business</u>

3. Bank debits, selected centres outside New York.
4. Wholesale commodity prices

<u>C. Money</u>

5. Rates on short time money

Ind Econ J. Dec 1920.

(i) Development & Migration Commission: Report on Unemployment p.31 <u>See also</u> Copland: "Commerce & Business"

The business curve followed the speculation curve closely but with an average time lag of eight months, while the money curve toiled along four months later. But the agreement between them was such that business and money could be forecasted from the movements of speculation. Unhappily this agreement has been disturbed, for during 1928 and 1929 speculation departed in a northerly direction with great determination, and neither business nor money displayed any tendency to follow. Probably the indexes will be revised again. The principle is, no doubt, sound, but the selection of actual series that meet the needs of forecasting may be a long task.

All these methods reveal the presence of cyclical fluctuations in the various series studied, and they suggest that a definite relationship exists among some at least of the series. But in Australia we have not even this much completely established. Professor Copland has shown that (ii) the Harvard method is probably applicable to Australia for the period 1919-24, but recognises that the period is too short to serve as a basis for definite conclusions. Yet politicians and business men assert causal relationships most dogmatically ~~that this factor influences that, and that this depression is the result of so and so~~. The plain fact is that we know very little about the determinants of the current business situation. Just how much influence do harvest conditions play? Just how important are wool and wheat prices, and banking policy and trade balances? Before we can hope to find accurate answers to these questions we must know more clearly what we mean by this "business situation". But, in studying

(i) contd.) and in the Economic Journal Dec. 1922
(ii) "Commerce and Business" p. 20

unemployment, decision on that matter is not so essential, if we can find some relation between the cyclical fluctuations in particular series and those in unemployment.

It does not matter, for our purpose, whether there is any fundamental unity among these fluctuations in various aspects of economic life such as would justify us to speak of it as "the business cycle". The important problem for us is to discover in what particular aspects of economic life there are cyclical fluctuations which do cause, directly or indirectly, cyclical unemployment. Our interest in the relations between the cycles in different sections of economic activity is based, not on an attempt at their synthesis, but on an attempt to find the particular causes of cyclical unemployment. When we refer to "business cycles" or to "business conditions" we mean the particular aspects of economic activity and not any generalised abstraction.

3. Factors in the Cyclical Demand for Labour

Since we realise that most aspects of economic activity are subject to cyclical fluctuation, the task confronting us is to assess their comparative importance as affecting the demand for labour and so cyclical unemployment. It is easy enough to pick out a number of aspects of economic life whose fluctuations might be expected to have some influence upon fluctuations in employment, but it is more difficult to arrive at definite conclusions regarding the proportion of cyclical unemployment that should be attributed to each. Certain of these factors have been discussed by Professor

Copland, and we may briefly summarise his findings, which represent the most definite and authoritative views so far published. He considers that statistical evidence "con firms the view that weather conditions and the yield of primary production, though of great importance, constitute only one of a number of influences causing variations in business prosperity.....As other influences operate to cause variations in business activity, the prospects of controlling these variations are greater than they would be were weather conditions the only influence at work"(i) Professor Copland is not satisfied with the view that imports cause cyclical unemployment, and "it is no solution of the unemployment problem to seek to control imports by levying higher duties, or imposing prohibitions. Indeed, it should be added, that the tariff cannot be used in any way to reduce the incidence of cyclical unemployment". (ii) But Professor Copland affirms that more statistical research is needed on the effects of imports. It is important for the reader to remember that the question of whether imports affect the cycles in unemployment generally, is distinct from that regarding their influence upon the secular trend of unemployment in particular trades which we discussed in Chapter VI (On the tariff question, however, it will be pointed out that if protection be the settled policy of Australia, as we are so often told, then the tariff might be used to discriminate between industries subject to great fluctuations in their demand for labour and those that provide steady employment. The former have a less con-

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(i) D & M. Commission Report on Unemployment p. 32
(ii) D & M. Commission Report on Unemployment p. 34

vincing claim for protection.(i) Professor Copland does think that "the flow of imports can, however, be controlled so as to respond more quickly to changes in internal business conditions".

"It does not seem.....that there is any immediate connection between exports and the state business as indicated by the incidence of unemployment",(ii) in spite of the fact that the contrary opinion is very prevalent in the community.

"It is not easy to say whether ....variations in credit conditions are a direct cause or a consequence of variations in business prosperity", and Professor Copland considers it impossible to obtain a complete understanding of this aspect of the problem until much more research into the organisation and functioning of the Australian money market has been carried out. Banking funds in Australia are, in their turn dependent upon the balance of payments abroad, and the latter is "a prime cause of the fluctuations in credit conditions in Australia". From Professor Copland's analysis "it would appear that the influence of an adverse balance of payments shows itself first in a decline in the excess of deposits over advances, and a decrease in the ratios of reserves to deposits in the banks of Australia. This forces banks to impose restrictions upon overdrafts and generally to adopt a more stringent credit policy. This, in turn, is followed by a recession in business and an increase in unemployment." (iii)

(i) e.g. The sugar industry is probably our worst seasonal trade and is heavily protected.
(ii) Ibid p. 34
(iii) Ibid p. 35 see below p.

So far as the effects of changes in the general level of prices is concerned "it is clear that violent movements" (in the post war period) "are inversely correlated to movements in unemployment". Indeed, "it is highly probable that movements of prices have a more serious influence on Australia than on older countries with a more complex economic organisation."(i)

These findings are important but it is apparent that the matter is still left rather indefinite, and we are not yet in a position to assess the comparative importance of these several factors in Australia. Professor Pigou has ventured to do this with fluctuations in unemployment, ~~in Great Britain.~~ He estimates that if price stabilisation could be carried through successfully, fluctuations might be reduced to half their present amplitude.(ii) If all errors of judgment by business men could be eliminated, "the normal range of fluctuations would be reduced substantially, perhaps to the extent of one half".(iii) If the yield of crops per acre were somehow rendered stable, and if everything else remained the same, "the amplitude of fluctuations might be cut down by "something like one quarter."(iiii) The unwillingness of business men to cut their selling prices in time of depression may be responsible for one sixteenth of the amplitude of the business cycle, and the rigidity of wage rates for about one eighth.(v) It is not likely that all authorities would agree with Professor Pigou regarding the relative importance of these factors,

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(i) Ibid p. 32. Our own investigation does not support this view. see below p.
(ii) "Industrial Fluctuations" p. 198
(iii) Ibid. p.199
(iiii) Ibid. p. 203
(v) Ibid. p. 204

but his extimates, "guesses" though they be, are based on considerably more evidence than is readily available in the case of Australia. We cannot hope to understand the Australian business cycle and so cyclical unemployment unless exhaustive research is undertaken. The account of cyclical unemployment given in this book must, then, be necessarily incomplete. On some points however, it is profitable for us to carry the matter further than has yet been done.

4. The Influence of Prices

At the International Labour Conference in 1929 the International Labour Office presented a report on unemployment, and a large section of this deals with the relation between price fluctuations and cyclical unemployment since 1920-21, in seventeen different countries. A price change of 4%, or a variation in unemployment of up to 20%, from the figures of the previous year are regarded as comparatively insignificant. On this basis the conclusions are summed up as follows:-

> "Of the forty one cases in which there was a fall in the general price level(of more than 4% as compared with the level of twelve months earlier)twenty-five were accompanied by an increase of unemployment, and only seven by a decrease.
>
> Of the thirty-three cases in which there was a rise in the general price level (computed in the same way), twenty-one were accompanied by a decrease of unemployment,and only six by an increase.
>
> Of the fifty one cases in which the general price level neither rose nor fell by more than 4%,twenty-six were accompanied by a decrease in unemployment, fifteen by stationary unemployment,and only ten by an increase" .....
>
> ....."It seems possible to declare emphatically that abrupt, or even slow but prolonged, variations in the general price level...play no small part in determining the alternating acceleration and retardation of economic activity and are hence an important

"cause of the recurring unemployment crises which mark one phase of the cycle". (i)

From Dr. Thorp's "businessAnnals" it would appear that periods of depression are relatively longer when the secular trend of prices is falling, and relatively shorter when prices are rising. (ii) The matter appears to be fairly definite, although the exceptions to the rule, according to the International Labour Offices' report, would appear to be rather too frequent for scientific certainty. But this may be due to the admitted crudity of the "short cut" statistical methods adopted in that enquiry, for the data for the same month was considered in consecutive years, instead of the monthly figures for both series, which, are not available in all countries. It is probable that the fault lies less with the statistical method than with the inadequacy of the economic theory that underlies the statistical comparison. It is generally accepted that rising prices bring greater profits to those engaged in making and selling goods, and that falling prices tend to reduce profits. The reactions of these two situations upon unemployment through the demand for labour are equally obvious. But a more penetrating analysis is required. Business men base their operations upon estimates as to what will happen in the future. If conditions, even though more favourable than the past, turn out to be less favourable than had been generally expected, a check to business expansion is inevitable, and a recession may ensue, since some business men will have expanded their operations on a scale that has turned out to be uneconomic. Thus though

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(i) Unemployment. 1920-1928: Studies and Reports Series C, No 13.
(ii) Op. cit. p.71

prices rise, this will not ease an expansion of business if the rise in prices be rather less than business men generally had anticipated. Complementary results might follow from a fall in prices which was rather less abrupt than business men had generally expected. This might check a business recession or even facilitate a revival of activity, with corresponding reactions upon unemployment. We may state this thesis in a slightly different form. Business men attempt to adjust their scale of operations (including their demand for labour) to conditions as they foresee them. One set of conditions is the course of prices, and business men adjust their operations to the anticipated rate of price change. If the rate at which prices rise is greater, or the rate at which prices fall is smaller, than was expected, business will tend to expand. If they rise at a smaller rate, or fall at a greater rate than was anticipated, business expansion will be, to that extent, checked. That is, we would expect to find a greater degree of correlation of unemployment with the rate of price change than with the absolute course of prices. Chart XVI includes a curve showing nine months moving averages of the percentage that the wholesale price index number for each quarter bears to that for the previous quarter.

It will be seen that the correspondence between cyclical unemployment and rate of price change has not been of a high order throughout this period. Certainly the price slump and recovery of 1920-21-22 is reflected in the unemployment figures, and one is inclined to relate other

movements on the two graphs, but the differences in timing and amplitude are such that it is difficult to say which series lags behind the other at some stages of the period. It will be noticed that the secular trend of the rate of price change has fallen since the war years. On the inverted graph this appears as a rise. It is possible that this accounts in some measure for the rising secular trend of unemployment, as shown on Chart I. But in view of the close relationship between unemployment and price changes in Great Britain revealed by Professor Pigou (i), it does not seem that price fluctuations are so important as affecting the business cycle in Australia as in the old world. In any case there is some doubt whether small fluctuations in prices are the causes or the effect of the business cycle, for the attempts of entrepreneurs to liquidate their stocks as a depression approaches may well produce a fall in prices. The importance of great fluctuations in the purchasing power of money as a factor in the unemployment problem cannot, however, be denied.

5. Banking Policy

It is generally recognised that the policy of banks and other credit institutions is intimately related to the general business situation, for "business is conducted largely upon borrowed money" (ii). When money can be borrowed easily, the business outlook is to that extent more favourable than when money is "tight", and this depends to a

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(i) "Industrial Fluctuations" p. 194 etc.

(ii) Copland: Commerce and Business p. 16

(1) "Imaginary Illustrations" p. 164 etc.

(2) Compare: Commercial Bulletin p. 13

great extent upon the policy followed by the banks although the banks themselves may base their policy upon other factors which in turn must be examined if the credit situation is to be properly understood.

From another point of view banking operations may be taken as indicating, the amount of general business activity We have noticed that the volume of bank clearings is often taken as an index of business activity or speculation, according to local conditions. It is interesting to note that whereas the Alexander Hamilton Institute takes Australian bank clearings as a measure of business activity, Professor Copland preferred to combine Melbourne clearings with an index of share prices to form an indexof speculation for the period 1919-24.(i) Chart XVII includes an index of the rate of change in deposits activity which is probably a better guide to the general business situation than the crude figures for bank clearings. Our index is obtained by dividing the total of Australian bank clearings for each year by the deposits "not bearing interest", since these are the only ones normally transferable by cheque. This method gives us a series which is influenced by the normal growth of business transactions but it eliminates the effects of the growth in deposits upon the volume of the clearings. To allow for the normal growth in the turnover of deposits we might express our figures in terms of their standard deviation from the secular trend, but the simpler method of expressing the figure for each year as a percentage of the previous year has been followed. When the curve (inverted) falls, this indicates that the growth

(i)"Commerce & Business" p. 21

in the turnover of bank deposits in connection with business or speculative transactions is more rapid than in the previous year. It will be seen that the curve somewhat resembles the major movements of the cyclical unemployment curve, and this suggests that our index measures general business rather than speculative activity. Probably the correspondence would be still closer if the index were based on quarterly, instead of annual figures.

Some have suggested that the ratio that deposits subject to cheque bear to fixed deposits may serve as a measure of business activity, since in time of depression, people might be expected to place their money in deposit to earn interest rather than to let it remain on current account for use in business operations. The Australian figures, however, do not show any ~~definite~~ clearly defined relation between this ratio and our other indexes of cyclical fluctuation, so we shall not consider it further.

The most vital question is whether the credit policy of the banks is to any great extent immediately responsible for the cyclical fluctuations in unemployment. There are various indexes which may be regarded as indicating the policy of the banks. One of these is the ratio of cash holdings to deposits. This may be referred to as the "proportionate reserve". Chart XVII includes an index of cyclical fluctuations in the annual proportionate reserve. The figures for each year are expressed as percentage deviations from the secular trend and divided by the standard deviation for the whole series. Some degree of correspondence with the major fluctuations in unemployment

is apparent, but the smaller cycles between the peaks of unemployment in 1914-15 and 1920-21 are not reflected at all. Towards the end of the period the proportionate reserve index lags behind the unemployment curve. Here again, quarterly figures might give a better basis of comparison than annual ones. The secular trend of the proportionate reserve has been downwards. This is probably due to the fact that since the war it has been possible, in the opinion of bankers, to hold a proportionately smaller cash reserve without undue risk. Our graph suggests however, that if this reduction had proceeded steadily, instead of oscillating about the secular trend, the fluctuationsin unemployment attributed to the business cycle would have been of less amplitude. These oscillations about the trend are not the result of bankers' whims but of their attempts to adjust their policy so as to avoid financial embarrassment when a depression is threatened, and yet to make such profits as are possible.(i) As Professor Copland has pointed out,(ii) one possible source of embarrassment is in the fluctuations that occur in the banks' London balances in the course of dealings i_n foreign exchange. Chart XVII includes an index of cyclical fluctuations in the foreign balances of Australian banks, which are mostly held in London. The basic figures for our index are not published but were estimated by using the formula

Foreign balances = Total Liabilities in Australia
plus Capital and Reserved Profits
Less total assets in Australia.

The figure obtained in this way represents the surplus of assets over liabilities outside Australia. The effects of

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(i) For a discussion of the factors determining the size of the proportionate reserve see Mills & Benham: Money Banking & Foreign Exchange. Ch VI.

(ii) Econ. Record Vol. I No.I

normal growth are eliminated by expressing the figure for each year as a percentage of the secular trend. For convenience in comparison the results are converted into terms of the standard deviation from the trend.(i) Such an index is a better guide to cyclical movements in overseas balances than is the commodity "balance of trade", for other financial transactions affect London balances, in addition to those connected with international trade. Faced with falling London balances, banks take measures to discourage the demand for money in London by Australians. One measure is to raise the rate of exchange on London. Another is to contract their advances or sell securities in Australia. In this way the proportionate reserve is raised so that if there has to be an export of gold to restore the London balances, the local cash reserve will not be too low. In practice the contraction of advances to customers tends to check business expansion. This is reflected in reduced imports and so relieves the strain on the London balances. But the restriction on credit causes more unemployment. This theory is substantiated by a comparison of our index of foreign balances (inverted) and the curve for cyclical unemployment. Allowing for some occasional lag, the major movements of the two lines are correlated to ~~a fair degree~~ some extent. The amplitude is rather different in the case of some fluctuations. On these occasions other factors were more dominant in the business situation. For instance the fall in London balances throughout 1917-18 and 1918-19 did not produce a great increase in unemployment since it coincided with the begin-

(i) The figures for 1915 and 1927 are approximate.

nings of the peace boom, and an increase in the rate of price increase. 1920-21 saw London balances falling, and prices doing likewise. The increase in unemployment was accordingly much greater on this occasion, and the demobilisation period had not made things any easier.

Enough has been said to show the close relation between banking policy and cyclical unemployment. and we cannot in this book, pursue the business cycle any further into the still somewhat mysterious recesses of banking. It should be clear, however, that the banker's policy is not based upon any deliberate attempt to control the local business cycle and even if it were, the complications introduced by international transactions would render such a policy rather difficult. In Part III we shall again refer to the problem of credit control.

6. The Psychological Aspects

Reference has already been made to the estimates and decisions made by business men, and to Professor Pigou's "guess" that is these were never erroneous the amplitude of business cysles would be reduced by about one quarter. This problem of the subjectivity of individual judgments in economic life is well known to students of the business cycle, and the view that attributes supreme importance to this matter is known as the psychological theory. The term is not altogether a happy one, as most psychologists will claim that all human behaviour is psychological data, accurate and/estimates are just as much a psychological fact as errors. The apparently serious introduction of the

absurd term "trade psychle" by a recent writer,(i) makes the psychologist shudder nearly as much as the linguist. But in adopting the term economists are following popular usage, for by"psychological" most people mean "dependent upon 'incalcuable human behaviour". The emphasis is upon the difficulty of forecasting just how a man will behave, or what decision he will make. A business man will not always make the same decision on similar or even identical propositions. The factors determining one's choice between buying and selling, or any other alternative avenues of behaviour, are wider than the objective facts available about the probable consequences of both. There is also the general mental attitude of the individual, his frame of mind,or "aufgabe". This may be determined by logically irrelevant events. The weather, his digestion, his domestic circumstances and other factors in personal experience all go to produce a general attitude of optimism or pessimism which is to a certain extent independent of the facts upon which he believes he is making his estimate. Of special importance are the factors produced by social life, suggestibility, imitation and crowd contagion which often turn a slight revival of business into an unhealthy boom, or a slight recession into a crisis. The very term "business panic" suggests crowd psychology.

Success usually breeds optimism, and undue optimism begets errors of judgment. In this way prosperity sows the seeds of depression. As an illustration of the erroneous judgments that business men may be led to make we may quote from Dr. Kuznet's realistic study of retail and wholesale

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(i) Miss D. Sells in "The Hibbert Journal" 1929

trade.(i) "If there is one thing an established retailer is afraid of, it is to remain without adequate stocks and not to be able to satisfy the patrons.....If there is any prospective scarcity of goods the retailer will hasten to cover up and order somewhat above what he actually desires to get, to insure the receipt of this latter amount in case the order is only partially satisfied. This leads to what T. W. Mitchell called "competitive illusion" a situation in which the wholesalers (and the manufacturers) begin to receive increased orders and fall victims to the illusory impression that there is an actual increase in demand, while it is only over-ordering done for fear that the orders will not be fully and promptly executed." Errors of this nature are magnified by the tendency of optimistic dealers and manufacturers to be convinced that they can obtain rather more of the increased demand than can their competitors.

During a depression the unhappy outlook induces careful management and caution, and these in turn facilitate the return of more profitable conditions which again generate that optimism that hastens the boom. This explains why periods of recession and revival, according to Dr Thorp's "Business Annals", are generally of shorter duration than prosperity and depression,(ii) although it should be remembered that the denotation of these terms is somewhat arbitrary. It also appears that periods of depression are generally of shorter duration than periods of prosperity.(iii) On this point our own study of the "asymmetry of distribution" of

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(i) Cyclical Fluctuations, Retail & Wholesale Trade. p.178
(ii) Op cit. p.71
(iii) Ibid p.

the fluctuations about the secular trend (Ch.III) supports the evidence of the Business Annals. A hypothesis to account for this might be found in the greater readiness with which optimism replaces pessimism than the reverse process occurs, although we have only general grounds for this assumption, and it well might be called in question.

It is a mistake to attach undue weight to these psychological aspects but it is clear that given an appropriate psychological background, a comparatively small change in economic conditions may initiate considerable fluctuations. If the emotional background is lacking a great change may have little effect upon business activity. The effects of a Government deficit, an increase in taxation a fall in wool prices or a bumper wheat harvest will depend upon the psychological situation in which they take place, while they go, in their turn, to help to determine the psychological outlook of the near future. There is no doubt that the post war boom was partly due to a psychological reaction, and the optimists were sadly disillusioned. The banks have a great influence on this emotional factor because they have built up a prestige which makes their judgments on financial matters carry undue weight with the business community. But our understanding of the psychological aspect of business cycles is still backward, and even the psychologist does not give us much help.

7. Industrial Disputes.

We noticed in our first chapter that the time lost through industrial disputes is insignificant compared with that lost through unemployment. But the view is wide-

spread that industrial disputes are a serious factor in the unemployment situation. It seems best to discuss this question under the heading of cyclical fluctuations because the prospects of industrial peace and war would naturally enter into the determination of those psychological attitudes the importance of which we have just discussed. We would expect more optimism among entrepreneurs and employers generally when the industrial horizon is unclouded. The only theoretical qualification that we need make to this view is that industrial disputes if they occur when the outlook is otherwise favourable might not counteract the enthusiasm already prevailing throughout the business community. Conversely, it may be that not even the settlement of an important dispute will offset some other factor, financial, physical or psychological, which engenders pessimism and depression. In practice this qualification is more important than the view that disputes discourage expansion of business. For convenience, a graph showing the number of days lost per worker each year for the period 1913-1928 has been included in Chart XV. For the first four years cyclical unemployment varies inversely with the frequency of disputes. Then come two years of great industrial strife, in the midst of the "war activity-prosperity" phase of the cycles. The industrial situation was much easier during the unemployment crisis of 1920-21. Some might claim that the 1919 strikes caused the 1920-21 crisis, but it will be remembered that this crisis was world wide. In any case that claim would be discountenanced by the opposed movements

of the two curves for the remainder of the period.

Our conclusion is that the importance of industrial disputes as a factor in business fluctuations and unemployment crises, has been grossly exaggerated, although this source of political red-herrings will probably continue in popularity. A reduction in disputes would make industrial stability somewhat easier to obtain, but its net effect upon the unemployment situation would not be consistent with the frequent promises of politicians. In this matter Australian experience substantiates the conclusions which Professor Pigou (i) draws from British figures, that "in recent times at all events, industrial disputes have not played any significant part in causing industrial fluctuations."

8. International Business Cycles.

One of the most striking facts presented in the Business Annals is that there is considerable agreement among business cycles in different countries. While the periods of severe depression, for instance, vary from country to country, there is sufficient evidence of an international pattern of cycles to make one sceptical of an account of the business situation in any country that concentrates attention upon domestic factors. There are only two possible explanations of this international similarity. One is that the causes of business cycles, although independent and domestic, are temporarily synchronised in most countries. The other is that changes in business

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(i) Industrial Fluctuations pp 45-7

activity in one country inevitably spreads to other countries with whomit has economic relations. Probably there is some truth in both hypotheses. We know that monetary disturbances are seldom restricted to one country, and that the prosperity of many an industry depends not only on the favour but on the affluence of foreign markets. We know too, that climatic factors, like wars, often affect several countries similarly, and that the foibles of human psychology are not restricted to any particular country. The experience of the post war years, however. does suggest that the transmission of business fluctuations from one country to another is a much more potent factor than is generally realised. Our knowledge of the actual process by which this transmission takes place is as yet fragmentary and accordingly it is difficult to decide, in any particular instance, whether local or foreign developments are more important in the current business situation.

A comparison of theAustralian Business Annals with those of England shows that from 1890 to 1915 the course of business in these two countries was almost parallel, there being but little difference in the timing of the various phases of the cycles. With no other country is Australia's agreement so close, and this is not unexpected, since with no other country did her international trade assume such proportions. Such similarity as this is certainly impressive. After the war the resemblance is less. In 1925 (the last year covered by these annals) England had not emerged from the depression that commenced in 1920, while in Australia the depression was followed by revival as early as 1922, which merged into prosperity in 1923. In 1924

Dr. Thorp records a marked recession which was followed in 1925 by vrevival. Apparently conditions did not recede deeply enough to earn the more doleful title, although our figures of cyclical unemployment suggest that 1924 might well be called a year of depression. Is there any significance in the fact that the United States emerged from the 1921 depression at the end of that year to enter into another depression in 1924? Only Canada and Russia may be added to the list of countries experiencing depression in that year. Until 1914 Australia's business cycle did not resemble closely that of the United States, although the depression of 1908 was shared in common with all countries.(i) This post war development is contemporaneous with a notable increase in trade between the two countries, and the growth of some measure of capital dealings.

The matter requires more investigation before a definite conclusion can be arrived at. At least it appears that international repercussions are to be reckoned with, and the mechanism through which they strike Australia should be ascertained and studied.

9. Conclusion.

. Enough has been said to indicate that the problem is complicated, our knowledge is incomplete and much laborious research lies ahead of those who seek its understanding. We cannot essay to estimate the comparative importance of particular factors in the Australian cycle as does Professor Pigou for industrial fluctuations in general. We cannot even assess the relative influence of overseas and domestic

(i) Except the Argentine which was satisfied with a recession.

factors. It is probable that our banking policy is very largely determined by the consequences of variations in our international transactions. These variations are in turn dependent partly upon the output of Australia's rural industries from which her exports are drawn, and partly upon business conditions in England and America. It is possible that the effects of variations in rural production are more important in this indirect fashion than through their direct impact upon secondary industry. In any case the output in rural industries is probably more significant for Australia than for the world as a whole. The price level appears to be less important. Industrial disputes are insignificant except in the mining industry. Psychological factors are all pervading. Perhaps they are somewhat susceptible to political changes, but otherwise the latter are probably less significant than industrial disputes.

But until more statistical data are available and until the statistical analysis which this type of research demands is carried out; our knowledge of this important factor in the unemployment situation must remain somewhat vague.

Unemployment in Australia.

Chapter VIII

Wages and Unemployment.

1. The Theory.

2. Statistical Verification.

Wages and Unemployment.

1. The Theory.

In Chapter V. we referred to the view that unemployment may be due to the maintenance of a high level of wages. In a thoughtful section of the Australian public this belief is held strongly, and most employers, and many business men are in this, if in nothing else, orthodox followers of some English economists. Labour, as a whole, however, is steadfastly opposed to such a doctrine, and suspects those who expound it of wishing to launch an attack upon the living standards of the workers. This cleavage of opinion is the deeper, because wage disputes figure so largely in Australian industrial relations, and although not averse to disobeying the awards of industrial tribunals, workers regard any attempt to alter the principles on which these operate as a direct onslaught on the labour movement. The relation between wage rates and unemployment is not hotly disputed. The protagonists of one view are convinced that the other parties are hopelessly biassed, and since this feeling is reciprocated, little argument of a theoretical nature takes place. It is left to the economist to attempt an impartial investigation into the matter, with the probability that his findings will be repudiated by both parties. The problem is so fundamental to the unemployment question, however, that we must endeavour to clear the issue. If, as is alleged, the crux of the unemployment situation in Australia lies in an uneconomic level of wages, the remedy is, in theory, simple, but the prospects of achievement, in practice, gloomy indeed.

The doctrine must be carefully stated. It is not just an

assertion that high wages cause unemployment, but rather that unduly high wages increase the amount of unemployment. Its basis is the modern theory of wages, or at least that portion of the theory which may be outlined as follows:-

Wages are regarded as the market price of labour, and tend, if perfectly plastic, to settle about the level at which supply will be equal to demand, that is, at which all those offering for work will be employed. (The unemployable may be left out of account.) In any particular trade the wage will not fall below the figure that can be obtained in some other trade open to the workers, but it will not rise to the figure which will raise costs of production to the level which makes employment of labour unprofitable. Between these two figures there is a margin, and the collective bargaining strengths of the two parties determine the exact position of the wage within this margin. Competition among producers will tend to narrow this margin down to a minimum. Now, if by legal enactment, or trade union action, or any other means, the wage demanded be higher than the maximum mentioned above, the demand for labour will contract and unemployment will increase. Conversely, if the workers are prepared to accept lower wages, this will cause an extension of the demand for labour, and there will be a reduction in unemployment. Only when his production increases proportionately can the worker's real wage be raised without causing unemployment. Such a brief statement is crude, and does not do wage theory justice, but it suffices to make clear the general basis of the argument. Writing in 1913, Professor Pigou explained that if, in an otherwise static condition of things, wages in an industry be artificially increased by 10% this would cause an increase in unemployment amounting to

probably more than 10%. (i) The application of this theory to cyclical fluctuations in unemployment is fairly obvious. Although the business cycle is ever present, theoretically "there is no necessity that such fluctuations should involve unemployment, for the wage rate that workpeople ask for at every point in the industrial field might so vary in response to variations of demand that there were never anywhere more work people than employers were willing to engage."[2]

(i) Unemployment p. 54 ff

(2) Ibid p76

"~~to engage~~". (ii) In practice, of course, wages are not perfectly plastic, and consequently unemployment does occur, and does increase in periods of business depression. Wage rates have a certain rigidity, because workpeople, "at every point in the industrial field" will not accept reduction readily. This is put succinctly by a recent critic (~~i~~i) of the modern theory of wages. The wage earner "regards unemployment, not as a sign that wages are out of adjustment with the derived demand for labour, but as a pestilence outside his control. By long experience trade unionists have found that once wage rates are lowered, it is very difficult to raise them again, and consequently the theoretical argument that, as a body, the wage earners in an industry would be better off if they consented to a reduction in wage rates, because trade would be stimulated by the resulting ability of employers to lower prices, has never carried conviction." Another but less important factor preventing a fall in wages, is public opinion. In Australia the living wage principle, and the margins for skill, stand as a barrier to reduced wages even in time of trade depression, and although Commonwealth tribunals are now instructed to consider the economic effects upon industry of proposed awards, the slowness of procedure and the difficulty of proving a case for a wage reduction on such grounds effectively hinder plasticity of wage rates. In spite of this it is extremely doubtful whether the plasticity of wages in our major industries would be any greater in the absence of State

(~~i~~) ~~Ibid p. 76~~

(ii) Rowe: Wages in Practice and Theory p. 152

regulation, for it is still debated whether the State tribunals have more power than the strongest trade unions.

A recent example of the dogged insistence of workers that wages shall not be reduced, even in time of depression, is the plight of the coal industry in New South Wales. Following a period of great prosperity for all in the industry, came the loss of overseas markets, and even of some domestic trade. But to the plea for wage reductions the miners turned a deaf ear. In the lockout that ensued the issue was complicated by various events, such as the operation of a colliery by the State Government, with volunteer labour, but the dominant feature of the stoppage was the sustained refusal of the rank and file to accept lower rates of pay, even against the advice of their officials. The labour press made much of the claim that that a reduction in miners' wages would prove to be the thin end of the wedge, resulting eventually in a general reduction of rates throughout all industries. But it is probable that this "class solidarity" was a less important factor than the psychological attitude bred in the miners by years of disputes with the management. In these circumstances the process of convincing workers that a wage reduction is essential is naturally a slow and painful one.

But the important question is whether, in fact, greater plasticity of wages would reduce unemployment to any notable extent. Trade unionists, we are told, "have often found that in practice a moderate wage reduction, such as they might conceivably entertain, does not result in an appreciably increased demand and less unemployment." (i) Professor Pigou has (ii)

(i) Rowe op cit p.
(ii) Industrial Fluctuations p. 474 et seq.

qualified his theory to cover this contingency by reference to the obvious importance of another variable factor. In discussing prices, economists usually point out that the elasticity of demand for different commodities varies. That is, a given fall in the price of one commodity may not cause as great an extension of demand, as a similar fall in the price of another commodity. Where a small change in price evokes a great change in demand, we say the demand is elastic. This concept of elasticity is applicable to the demand for labour. "Demand can be extremely inelastic in times of severe trade depression"(i), Professor Pigou suggests that we can conceive of such inelasticity of demand that conditions might arise in which workpeople would have to pay the employer to keep them on. What a "perfection" of wage plasticity! Since it is quite out of the question to expect workers to consent readily to very considerable wage reductions, the important question is just how much reduction in unemployment a given wage cut would produce, or, how heavy a wage cut would be required to produce a given fall in unemployment. Professor Pigou estimates that about one eighth of the amplitude of cyclical fluctuations in unemployment is due to the rigidity of wage rates, but this does not help to answer our question. What we are concerned with is the extent to which, assuming a fair degree of plasticity, wages would have to be lowered to reduce unemployment fluctuations by one eighth? In any case, it is admitted that "one eighth" is at best an "intelligent guess".

The problem is, in technical terms, to determine the elasticity of demand for labour. It is questionable whether we may legitimately speak of it in these general terms, suggesting as they do, that the demand for labour is homogeneous. It

(i) Rowe op cit p.

would, in fact, be surprising if the elasticity of demand did not vary with time, place and occupation. Labour is demanded because its employment appears profitable. Therefore the business outlook for the near future is an important factor affecting the elasticity of the demand. During a period of recession and depression, the employer, faced by falling markets, defaulting debtors, and generally unfavourable conditions, must choose between a safe policy of retrenchment and continuance at some risk. If the outlook is black, a small wage reduction will be cold comfort, but if the recession is but mild, this may be all the encouragement he needs. But the psychological factors referred to in our discussion of business cycles are of importance here, and make it impossible to predict with certainty how much unemployment will be prevented, or eliminated, by any given wage reduction. Professor Pigou has suggested that, as in the case of prices, substantial wage cuts would prove more effective than a more gradual series of reductions. But it must be admitted that the economist is unable to give a convincing a priori answer to this question of elasticity. Its importance lies in the fact that every time a wage reduction, sought as an alleviation of unemployment, does not effect an appreciable diminution in unemployment, the workers' scepticism is strengthened, and the rigidity of wages becomes more pronounced. There is, among many writers, both expert and popular, too ready an assent to the view that wage reductions will prove a real panacea for unemployment, and if their optimism proves unfounded, lower wages may be a heavy price to pay for little progress. Even when it is true that a wage reduction is all that is needed to facilitate the recovery of a trade, it does not follow that

when actually made, the reduction will be economically desirable. For there is a distinct possibility that it will be made after the psychological moment when it is required. Our own statistical enquiries have shown that in all industries the period of depression is normally of shorter duration than that of prosperity, and it is conceivable that by the time even the most tractable workers were convinced that wage reductions would be to their own benefit, the revival in business might have commenced. Substantial wage cuts made at this stage would facilitate recovery, and in fact might increase the amplitude of the boom. This would possibly end in an even more profound depression than that from which it emerged.

The elasticity of demand for labour depends upon the nature of an industry. If machinery can be readily substituted for labour, a progressive employer will reduce his staff during the depression and install machinery, so that when the recovery comes, he may not require so large a number of employees. It is probable however, that an employer so efficient and far-sighted as to make the most of the depression, in anticipation of a subsequent boom, will be in a position to employ still more men. Labour saving devices, in the hands of efficient management, often lead to such expansion of business that the employment offered by that firm is actually increased.

But in addition to the part played by rigidity of wages in causing unemployment in times of depression, there is the question of wage increases, when employees endeavour to force up their wages, despite warnings that such action will lead to increased unemployment. The general argument here is similar to that in the case of wage rigidity in times of

depression, and the theoretical qualifications noted above, are valid. The argument is frequently ventilated, that collective bargaining, and public regulation of wages, cannot raise wages above their true economic level, except at the cost of additional unemployment. The "economc level" of wages is something of an abstraction, although in popular discussion it is seldom admitted that the existing level of wages may be below it. More often it is claimed that existing wages exceed the true economic level. The practical question arises, every time, whether an increase above the existing wage will cause increased unemployment. This will depend upon whether it be a considerable increase or not. It is obvious that there are some limits to the wages that can profitably be paid, at any particular time and place. But there are circumstances in which a moderate wage increase may cause little additional unemployment. // In some cases profits are so great that a higher wage can be paid without ruining the industry. But such a state of affairs is usually short lived, since the competition in such profitable trades usually becomes very keen. Combinations and partial monopolies of course are not unknown in Australia.

But apart from this, if the outlook for the future is bright, the increase in wages may stimulate the employer to greater efficiency. It cannot be denied that economists generally have ~~xxxx~~ given too little attention to this admittedly psychological problem, namely, the intensity with which management strives after efficiency, under different stimuli. Why should it be assumed that competition in prices is a more effective stimulus to efficiency than higher costs? It is probable that collective bargaining and public regulation of

wages have accomplished more of a positive nature than economists generally admit, and it is possible that while such action may have caused temporary increases in unemployment, there may have been no permanent effects making for greater unemployment. Dogmatic conclusions are not warranted, at any rate, and more definite evidence is required.

There is one rather foolish doctrine, however, that should be noticed in passing. It is sometimes urged that a reduction in wages, far from checking unemployment, can only increase it, because the purchasing power in the hands of the people is thereby diminished, and the difficulties of employers correspondingly increased. The absurdity of this doctrine is apparent if it be followed to its logical conclusion. The obvious cure for unemployment would be to raise all wages! This would increase the demand for goods, industry would prosper, and unemployment would diminish. And we could go on raising wages until unemployment disappeared, until, if we liked,, there was a great scarcity of labour, as in the days when Wakefield wrote of the plight of Australian industry!

Where lies the fallacy in this argument? It does not follow that lower wages reduce the purchasing power in the hands of consumers, for fewer workers at higher wages may earn less in the aggregate, than more workers at lower wages. In any case, if certain factors have brought a depression, some reduction in production is inevitable. The demand for goods depends not upon the actual money in the hands of consumers, but upon the <u>real</u> income of the community, and this will be diminished when production is reduced. This argument against wage reductions may be unhesitatingly rejected, as fundamentally unsound.

Our provisional conclusion then, is rather indefinite. The thesis that lower wages decrease unemployment, is of theoretical validity, but even on theoretical grounds two important qualifications must be made. One is the possibility that higher labour costs stimulate greater managerial efficiency, and the other is the possibility that the demand for labour may be so inelastic that a very considerable, and so practically improbable, change in wage rates may be required to provoke any significant change in the volume of unemployment.

Only enquiry into historical facts and appeal to actual experiences can determine which in practice is more important, the general thesis or its qualifications.

2. Statistical Verification.

Dr Benham has no doubts on the matter, and presents statistical data to convince the reader that the rigidity of wages is a prime cause of unemployment. Table XVIII is taken from this book, "The Prosperity of Australia". Commenting thereon, Dr. Benham says, "It would be hard to find a clearer proof of our thesis" (that "an increase in average money wages unaccompanied by a corresponding increase in the value produced per worker will tend to cause unemployment"). "From 1916 to 1921 the rate of wages was continuously increasing relatively to the value produced per worker, and consequently unemployment was continuously increasing also. In 1922 the value produced per worker was little higher than in the previous year, but the percentage of unemployment fell from 15.5 to 10.0. What relieved the situation was not more favourable seasons or other causes beyond human control, but a lowering of average wages by about 3 per cent. In 1923 and 1924 the value produced per worker continued to increase relatively to average wages per worker and the percentage of unemployment continued to decline. It is futile to blame "bad seasons" or "trade depressions" for a long continued high percentage of unemployment. These things cause unemployment by reducing the value of production per worker. But after a time that unemployment can be quickly removed, or at least greatly diminished, if average money wages are lowered. Workers in employment will lose a little; workers enabled thereby to gainemployment will gain a great deal." (i)

A further appeal is made to statistical evidence, by comparing Unemployment percentages with an index of the proportion of the value added to materials

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(i) Op cit p. 210

in the process of manufacture that goes in wages. Since the industries covered by our unemployment figures are largely manufacturing industries, such a comparison is valid.

Chart XVIII shows the relation between Dr Benham's index (i) which we have brought down to 1927-28, and the quarterly figures of unemployment. There is no denying the similarity of the movements of the two graphs. In both cases there is a distinct upwards trend over the period, and the major fluctuations are correlated fairly closely. Indeed the agreement is more obvious than in the case of the financial and production figures discussed in Chapter VIII. Only in the first two years is there no correspondence. Thus Dr Benham's thesis is consistent with the figures.

These statistical comparisons represent an attempt to give some explicit and measurable meaning to the term "economic level of wages". Dr Benham's emphasis is laid upon the relation between wages and the total value of production. If, over a period of time, he assumes, wages take an increasing share of the total value of production, then wages are growing higher in relation to the true economic level of wages. Indeed, his argument is based on this proportion throughout. It is clear that such a comparison is more accurate than those made in Chapter VII between the increase in money wages in various industries. But it is not clear the the movement of the index of wage rigidity is entirely due to the maintenance of the wages at an uneconomic level. There seems no doubt that the major cyclical fluctuations in the share going to wages and the rate of unemployment are causally related, but it is not easy to assert which is cause, and which, effect. The graph

(i) See Appendix I. for basic figures

does not reveal a definite and constant lag of either curve, for, in 1924-25 the changes in unemployment preceded the changes in wages and production. Neither is the issue clear, theoretically. It may be that when wages are high relatively to production unemployment increases. But it may be that during a depression, accompanied by increased unemployment, only the best paid members of the various manufacturing firms are retained, so that, while production is diminished, the average wage is paid increased -- a point noted by Dr Benham, who did not develop its full significance. Of course, it may be urged that this would not account for the amplitude of fluctuations in the index of wage rigidity, as we have called it. Nevertheless it is clear that the thesis that unduly high wages cause unemployment is neither proven nor disproven by the similarity of the fluctuations in this graph.

What of the similarity of the rising secular trends? This too, is open to more than one interpretation. It may be that there has been a tendency to force up wages too quickly in years of prosperity and to maintain them in the years of adversity - a view popular in business circles. But it may be that the rise in secular trend in the case of the share of production going to workers is due to changes in the structure of industry, but it is not possible to determine whether Australian manufacturing is developing along lines that require more labour than at the beginning of the period. A priori, we would expect a tendency in the opposite direction, owing to the growth of mechanisation. It must be admitted however, that there is little exact information on this matter.

The main point of this discussion is to emphasise the

difficulty of obtaining statistical evidence of unequivocal nature to support the doctrine that wage increases, and the maintenance of high wages in time of depression, cause increased unemployment. It is equally difficult to disprove this theory by statistical comparisons. Unfortunately data are not available for a more detailed study of particular trades. The whole position is difficult to sum up, but we may venture to suggest a tentative conclusion. In most depressions wage rigidity is a contributing factor in the unemployment situation, but greater wage plasticity would reduce unemployment rather less than its Australian advocates believe.

The Economic Commission on the Queensland Basic wage (1924) urged that there is need to give more weight to the principle of capacity to pay, in public regulation of wages, but found difficulty in devising a satisfactory guide to this type of wage policy. It has been suggested that wage fixing bodies might base their judgments largely upon the course of unemployment. But where the figures of unemployment are provided by the trade unions, such a procedure might yield strange results, and even employers might find it to their advantage to restrict employment as the time for a revision of the basic wage drew near. Thus there are considerable difficulties to be overcome on the practical side, before wage fixation can be regulated with a view to minimising the unemployment that is due to the imperfect plasticity of wages. The Commonwealth Arbitration and Conciliation Act 1928, in section 25 D "provides that the Court shall, before making any award or certifying any agreement, and in proceedings for the variation or cancellation of an award or agreement, take into consideration

"the probable economic effect of the agreement or award in relation to the community in general". (i) This should obviously include any reactions that the agreement or award might have upon the unemployment situation, but the task before a judge who endeavours to follow the instructions of this section is not an easy one. Careful and detailed as were the investigations of Mr Justice Lukin into the economic position of the timber industry in 1928, and of Mr Justice Beeby into the engineering industry in 1929, the economist will not be satisfied that a satisfactory technique for assessing the economic effects of a proposed award has yet been developed.

But the most serious obstacle in the way of any attempts, through conciliation or arbitration, to induce greater plasticity of wages, is the determined opposition of organised labour to wage reductions. Even if workers could be persuaded that plasticity means wage increases as well as decreases at the appropriate times, the surrender of the principles involved is unlikely. This is especially the case among those who believe that fluctuations in business and so in the demand for labour, if not due to the machinations of individual capitalists, are at least the product of an economic system designed to exploit the wage earner for the benefit of the capitalist. Without joining this radical school, it is surely legitimate to urge that the employer might well exert himself to greater efforts towards stabilising employment by other methods. According to the thesis we have been discussing, wages need to be more plastic because production fluctuates considerably. An alternative solution of the problem would appear to be the reduction of fluctuations in production.

1. Anderson: Fixation of Wages in Australia p 529.

This is a tremendous task, but is it more difficult than to convince workers that wage plasticity is in their own advantage? It must be remembered that their scepticism regarding the promise of plasticity in both directions i.e. upwards as well as downwards, is historically well founded. In the past wage increases have been won by fighting and arguing, and while it may be that the employer will grant higher wages in prosperity more readily if he knows that he can reduce them in adversity, his resistance in the past to almost every attempt for better conditions is now bearing fruit.

But a very important question arises. Is it desirable that wages should be the first point of attack whenever the economic situation is difficult? A reduction in wages is not obviously a progressive measure.

There is an important principle involved here, not only of equity, but of economy. If employers may take refuge from the difficulties of enterprise by reducing wages whenever a depression is threatened, they have little incentive to develop other methods of meeting the vicissitudes of business. From the point of view of economic progress, even if conceived merely as the growth of the national income, it is highly desirable that every avenue be explored that may lead to a less disturbed development of productive effort and to the stabilisation of industry, with a consequent reduction in the margin of risk. But employers tend to seek the easier paths, as we all do, and plasticity of wages may well develop into a mere escape from our economic incompetence. There is every reason to believe that a considerable degree of industrial fluctuation can be conquered, but if it came to be regarded as the normal state of affairs for wages to vary freely with the phases of the business cycle, these

variations would not present the same urgent problem as does the complete destitution that follows cyclical unemployment, and they would accordingly offer less inducement to the community to seek and remedy their causes.

There is no denying that the business community is not so plentifully endowed with initiative and imagination as to take kindly to the proposals ~~of~~ for stabilising business, that are coming forward in various countries, but the development of these methods would undoubtedly accomplish rather more than the attainment of wage plasticity.

There is another point regarding wage plasticity that demands attention. Suppose there is a tendency for unemployment to increase in an industry because, owing to secular changes in the conditions of that industry, it is now considerably overstaffed. Assuming that wage reductions would make possible the continuance in employment of the surplus of labour, it is doubtful whether such a development is desired. It might be urged that, recognising the need for industrial transference, the lower wages would give a greater impetus to the external occupational mobility of labour than would increasing unemployment. This is very debatable, and the position would vary according to the nature of the industry. Increasing unemployment would be a less effective impetus to mobility if intermittent unemployment were a normal feature of the industry in question, than if unemployment were hitherto of small dimensions. In any case, we are discussing our unemployment policy as a whole and, with the measure of state control, and supervision over industrial transferences that we contemplate, it would seem that the growth in the normal rate of unemployment would provide

a better indicium than a fall in wages. These observations have some bearing upon the coal problem, for it is clear that industrial transference is here required, and wage reductions may, by reducing unemployment, merely cloak the otherwise obvious need.

It must be remembered that the imperfect plasticity of wages is not due merely to wage regulation. The resistance of workers to wage reductions would not necessarily be less if they were made by industrial tribunals than if suggested by employers in direct negotiation. Dr Benham says: "It is not contended that wage regulation has led to much greater unemployment than would have occurred under collective bargaining".(i) In view of these considerations it would not appear wise to suggest any alterations in the methods and principles of wage fixation, as a remedy for unemployment. Undoubtedly some changes in our system will be made in the future, and from various points of view such alterations may be urgently required. Possibly such changes will react upon the unemployment situation at the time. But as our concern, in this book, is with those measures that may effect considerable reductions in unemployment, we shall leave the problem of wage regulation in the hands of those who want changes made on other counts.

At the present time there is a considerable body of opinion in Australia, which fears that the economic situation of 1928-29 heralded a permanent decline in prosperity. If this be the case, there will be a period of painful readjustment, and a general wage reduction may be necessary to facilitate such readjustment. But this view presupposes that long term influences are at work, and our study so far, has not covered this possibility. We have seen that the long term trend of unemployment has risen

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(i) Prosperity of Australia p. 213

over the period we have been reviewing, and the explanation of this increase is of great importance. Is it due to factors that can be counteracted by wage reductions, or is some other type of public policy required, or is it an inevitable development of modern industry ? To these questions we now turn.

Unemployment in Australia

Chapter IX

The Post War Increase in Unemployment

1. The Post War Problem
2. Theoretical explanation of the Increase.
3. The Effects of the War upon Population.
4. Long Term trends since the War.
5. Industrial Change and Adjustment.
6. The Tariff and Economic Instability.
7. Concentration of Unemployment in Certain Industries.

1. The Post War Problem.

One of the most significant facts that has emerged from our statistical analysis is the rising long term trend of unemployment for "all Groups". Figures published since the completion of this analysis showed the maintenance of this tendency. Unemployment fell to 9.3% in February, 1929, but rose to 10% in May and to 12.1% in August of that year. It is indisputable that the normal rate has been higher throughout the latter half of the period, we have been studying, and that compared with the years before 1914, the post war period has experienced a definitely increased aggregate of unemployment. The <u>average</u> percentage of unemployment for the years 1906-12 was 5.7%, but since 1920 the rate has fallen this low only once, namely, at the end of 1926. The highest percentage recorded during the period 1906-12 was 6.7% yet, since 1920, this rate has been exceeded almost continuously, and 10% has come to be regarded as nothing unusual. It would be folly to attribute great accuracy to these comparisons, because the basis of the figures has been extended since the pre war figures were collected, and, since 1913, quarterly figures have been published instead of annual figures. But this is not a case for nice discrimination. The differences between the pre-war and post war periods are crude but unmistakeable, and there is no hope that this is merely a spurious statistical tendency. The ineluctable conclusion is that the post war problem presents novel features.

In this Australia is not alone among the nations. In Great Britain "the Government Actuary, using trade union records of

"unemployment and such other material as the Ministry of Labour could collect, estimated the <u>average</u> rate of unemployment before the war, for the trades now insured, at a little over 4½ per cent, the equivalent of rather more than half a million persons. The average since the end of 1920, when the extended insurance scheme came into operation, has been 12.1 per cent, the equivalent now of 1,450,000 persons. The difference between the official estimate of pre-war unemployment and this post war average, 7½ per cent, representing 900,000 persons ~~x~~ in the insured trades, is as good an indication as we can get of the magnitude of the specific post war problem". (i) It is clear that Great Britain faces a more severe problem than Australia. But there is cold comfort in this, for our own problem appears to be quite beyond the understanding of the leaders of our community, and government and industry seem equally impotent to effect any considerable improvement.

The movement of the secular trend is open to three alternative interpretations.

a. It may be that Australia is passing through a period of post war readjustment, from which, sooner or later, she will emerge. If this be the sole problem, we may expect the normal rate of unemployment in future years to fall to pre-war proportions. Such an interpretation is quite consistent with the course of unemployment as shown in Chart I and is tantamount to the assertion that the post war depressions in 1920, 1925, and 1928 have been deeper than those experienced before the war, or that the prosperity phase of the cycle has been of shorter duration and has experienced less complete recovery than was normally the case in pre-war years.

b. It may be that the war and consequent adjustments have brought about semi-permanent changes in the structure, organisation and operation of industry, or in other economic conditions, which have established a new and higher level

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(i) Clay: The Post War Unemployment Problem pp 46-7

about which future fluctuations in the reserve of labour will take place. This is quite consistent with the course of the figures,which as yet offer no indication of a fall in the secular trend.

c. The third alternative interpretation is even less palatable. It may be that the rising secular trend marks the commencement of a period of change in industry that will continue. In this case the secular trend may continue to rise in the future, so that the reserve of labour will fluctuate about an increasing normal rate.

Which of these alternative is the true one? Our answer to this question is fraught with important implications, for upon it depends our choice of public policy. For instance, if the third interpretation be true, further evidence is available for those who predict the gradual decay of capitalist civilisation, and this tendency would appear to be inherent in our present form of social and economic organisation. The acceptance of this view would challenge us to examine the present system with a view to its speedy replacement or modification. The least pessimistic interpretation of the three is the first. If it be true that the rising trend of unemployment merely reflects a temporary phase of readjustment, there are grounds for believing that the situation will "right itself". That is, if business and industry are carried on with normal care and efficiency, the necessary adjustments will be made by degrees and a gradual improvement will be experienced sooner or later. The optimistic policy of laissez faire follows naturally from this interpretation. On the other hand, if the secular trend reflects a permanent change in industrial conditions, already accomplished, such as involves a permanently higher normal rate of unemployment, it is probable that the best policy to follow would be an intensification of that which

economists might have recommended before the war, but which government have never consistently followed, namely, an attack on fluctuations in the demand for labour and the improvement of mobility of Labour.

Each of these conceivable situations would produce a rising secular trend such as that shown in Chart I. From study of the graph alone, it is not possible to choose between these alternatives. If the post war increase in unemployment is due to a passing phase of reconstruction, the secular trend in future years will fall, but this will not be discernible in the statistice until after the event. So far as the other two alternatives are concerned the distribution of cyclical fluctuations about the rising secular trend may help us to choose between them. This may be illustrated by reference to specific industrial groups.
(Chart VII)
In other manufacturing the shape of the whole graph suggests a comparatively sudden transition from a constant low level to a constant high one, rather than a gradual increase in the normal level throughout the whole period. On the other hand in mining (Chart IX) and "other land transport" (Chart X) the actual percentages of unemployment reveal a wavelike movement which is disposed fairly regularly about the rising secular trend throughout the whole period. In these cases the graph suggests a gradual (and presumably continuous) increase in the normal rate of unemployment, rather than a sudden transition to a higher constant level. But the graph for All Groups (Chart I) does not reveal such unambiguous tendencies, and only when the next few years have shown the actual trend of post war development, can any

conclusion be arrived at. The post war period, so far, is too short to allow us to infer, from the statistics alone, whether the present problem is symptomatic of a passing phase of readjustment, a permanent transition to new conditions, or gradual and continuous growth of the normal rate of unemployment. Some other approach is necessary, and it may be profitable to examine the problem in the light of the economic theory discussed in Chapter V.

2. Theoretical Explanation of the Increase.

If our economic theory of unemployment is correct (and its applicability to nine Australian industries in Chapter VI would suggest that it is,) it should assist us to ascertain the causes of the post war increase. We would then be in a better position to judge which of the three interpretations of the statistical movements discussed above is true. We may set out briefly several factors that might conceivably produce an increase in the normal rate of unemployment, and then our enquiry disolves itself into the questions, "Which of these has actually operated during the period"?and " How important have these factors actually been in recent years?"

a. A growth in the proportion of unemployable workers, or a general lessening of the economic quality of the people.

~~b. An increase in the variability of the demand for labour, either from time to time, or from place to place.~~

b. A considerable and long term decline in the country's economic activity (as contrasted with the shorter depression phase of the normal business cycle).

c. Semi-permanent changes in the distribution of the demand for labour taking place more rapidly since, than

before the war, and rendering adjustment more difficult.

d. A diminution in the mobility of labour, so that adjustment to changes in the demand for labour involves more unemployment than before the war.

e. An increase in the variability of the demand for labour, either from time to time, or from place to place.

Three of these, b, c, and e, are usually confused in the popular mind, but it is important that they be clearly distinguished, for their basic causes are quite different and if its effects are to be remedied, each demands its own peculiar policy. The distinction may be clearer if we consider a smaller community than the whole nation. Sometimes a district containing a homogeneous set of industries experiences a permanent decline. The fate has overtaken several mining towns in Australia, when their mineral deposits have been worked to such an extent that the cost of further mining renders operation unprofitable. But this is quite a different thing from the change that takes place when new trades oust old trades; a process continuously involved in industrial progress. In this case there is still employment available, but the distribution of the demand has altered, so that unless labour is sufficiently mobile increased unemployment results. Again, if industries for whose products the demand is constant give place to seasonal trades, unemployment will increase, because seasonal trades, with greater variability in their demand for labour, require a greater reserve of unemployed labour. Whatever the cause, increased variability in the demand for labour tends to increase the normal rate of employment, even if, at the same time, there is considerable expansion in general industrial activity.

It is conceivable that changes of one or more of these five types have taken place in Australia during the war years and since. But what are the facts? To assess the value of the explanations that may be offered under these factors it is necessary to review the trend of general economic development in previous years. Our best procedure is to take each of the five factors and enquire whether, in fact, changes have taken place along that line such as to account wholly or in part, for the post war increase in unemployment. Such an enquiry should enable us to come closer to a decision on the problem set out in the last section, and should throw some light upon the future trend of unemployment in Australia.

3. The Effects of the War upon Population.

We have seen that some proportion of the unemployed workers upon which our statistics are based, are out of work through illness or accident, although it is not possible to determine definitely how great this proportion is. There is no reliable evidence that illness is more prevalent among workers today than at the beginning of the period under study. Nevertheless, there are ~~groups~~ grounds for believing that the rising trend of unemployment may be due, to some slight extent, to physical deterioration following the war.

The death roll of the A.I.F. numbered 59,342, and although this seems insignificant in comparison with the immense losses of Great Britain and other European nations, there is no denying that to lose some 3% of the total male population

of working age, is to render some economic set-back almost inevitable. Moreover, these were men picked for their virility and physical fitness. Consequently the average standards of the nation must have suffered to a slight extent. But to this must be added the toll of sickness and weakness that the war years brought for many who escaped death. The physical effects of ~~the~~ a war take some time to work out, and the ten years between 1918 and 1928 form a period in which the price of international rivalry continued to be paid. Unemployability is a relative matter, for without being totally unemployable, a man's uncertain health and general weakness may render it difficult to find continuous work, and limit his periods of employment to those occasions when the demand for labour is greater than usual.

The increase in the proportion of such workers on the borderline of efficiency is a post war factor that is often overlooked.

But even more important are the less obvious psychological consequences of war upon the population. War produces not only broken bodies, but broken spirits and warped minds. War neuroses still claim victims, and many who were able to stand the strain sufficiently to avoid breaking, have suffered from minor psychological weaknesses as a result. The dangers of psychological maladjustment were of special importance among those who enlisted before adult hood, and who spent their formative years in the army.(i) The period that would normally have been occupied in completing their

(i) 32% of enlistments were at less than 22 years of age.

training and in the orientation of their outlook upon civilian life, was preoccupied with things having little contact with the workaday world. Demobilisation, for these men, involved beginning their adult life too late. The maladjustment has been obvious in many branches of life, but nowhere has it had greater effects than in the economic world. In times of peace there are too many workers doing a life sentence in some occupation to which they are not suited. Four years of war increased the proportion of such misfits, and this inevitably reacts upon their chances of continuous employment. It is probable, too, that the proportion of unskilled labour is greater than would otherwise be the case, for it is obvious that four years of war experience does not fit a man for a delayed apprenticeship. We have already seen that the incidence of unemployment is heaviest among unskilled workers.

It is difficult to appreciate the importance of this factor unless one realises the subtle psychological effects of military life, especially upon those who have not yet found their feet in civil life. The private soldier is relieved of the responsibility of finding for himself food and clothing. His day is ordered for him, his travelling arrangements are not his concern, and his only chance of developping resourcefulness and initiative occurs in circumstances totally cut off from the problems of economic existence that confront the civilian. The effects of this experience are ~~practically~~ particularly obvious in some returned soldier communities, where government assistance is given to help develop a new industry. Many find it difficult in such circumstances, to learn to do things for themselves,

and expect assistance from higher authority whenever economic difficulties have to be met. The problem has been severe enough for those who had interests in civil life to come back to, but for those who came back to a world they had not yet entered, economic success was an achievement of no mean order. Many of those who failed have helped to swell the post war unemployment figures. The selection exercised by war is indeed unnatural, for in general, it was the virile, patriotic, and energetic men who rushed to join the earliest contingents, that are most needed in our civil life today, and it was upon these that the brunt of the war fell most heavily, subject as they were, to the longest period of strain and risk.

It is impossible to make a quantitative estimate of the extent to which post war unemployment is increased by the effects of the war upon the Australian population, but there is no doubt that this partially explains the existence of the post war problem. The situation, in so far as it is due to this factor, should correct itself with efluxion of time, but it will take longer for the effects of the war to work themselves out than is generally realised. Those who were thirty years of age when the war ended, could look forward, on the average, to about another 38 years of life, and even those who finished the war at the age of 45 years had a further expectation of life amounting to 26 years. Even assuming that those who saw active service died earlier than others, it would seem that we may feel these effects of the war for a few more years. Of course, such an assumption may well be called in question.

But it is not likely that herein lies the complete explanation of the post war increase in unemployment. Before coming to any such conclusion we must investigate other suggested explanations, for it is quite possible that the combination of several factors has produced this post war problem.

4. Long-Term Trends since the War

The rising secular trend of unemployment might conceivably be due to some long-term worsening of the economic position of the Australian community. There is little or no corroborative evidence of such a tendency in Australia during the period 1913-1928. Pessimists make their voices heard during periods of depression, but the latter, occuring in the normal course of the business cycle, are but transient, and should not be confused with a long term decline in prosperity. The extent to which such confusion does, in fact, exist in the popular mind is symptomatic of the general ignorance that prevails regarding the relationship between short term fluctuations and long term trends.

The most comprehensive study of long term trends in Australian economic development is to be found in Dr Benham's work on "The Prosperity of Australia". His calculation of the course of the national income since 1901 gives us an index which is the most suitable test yet devised for long term trends in prosperity. Dr Benham's index "showed considerable variations between years but a general upward trend until the outbreak of war, a downward trend until about 1920, and then an upward trend again. Broadly speaking,

"average real income per head seems at present[1] slightly lower than during the three or four years before 1914, but at least 25 per cent higher than at the beginning of the century"[2]. Moreover, supplementary tests, such as National assets per head, working conditions, and the inequality of incomes, support the view that "steady progress has been made since 1920, and (despite occassional droughts) may well continue". Much attention has been drawn to Australia's National Debt, but Dr Benham has shown that "the real burden of the External Debt (per head) is appreciably less than at the beginning of the century, whilst 'capacity to pay' is greater. External interest payments take only about 5 per cent of 'home produced income' now, as compared with 8 per cent at the beginning of the century, and the 'real burden' per head is considerably less"[3]. Nevertheless, "a comparison, either direct or of trends, between Australia and a 'new' country, such as the United States or Canada, gives results far from favourable to Australia, especially during the post war period. .....Australia's progress since the War has been unduly slow. From 1923-1925 the prices of exports were rising and those of imports falling. The price of wool, especially, was far higher than before the War, both absolutely and as compared with most other commodities. Increased prosperity based upon improved 'real terms' of external trade is upon an insecure foundation, and cannot be expected to continue indefinitely, as 1925-26 showed.[4] Production, or rather the average volume of production per

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(i) 1926
(ii) Op cit p 216
(iii) Ibid p 218
(iv) Still more convincing is the experience of 1929-30.

"head ..... The volume of production per head is not as great as before the war ..... It seems that something has been amiss with public policy, or private enterprise, or both ..... One important reason why Australia has not made more economic progress is to be found in her policy of High Protection."

This conclusion of Dr Benham's is based upon general reasoning and theoretical analysis, supported by relevant data, and raises many problems that cannot be enquired into here. His two chief arguments may be summed up as follows:-

a. The tariff interferes with the normal working of the price mechanism, and diverts labour and capital into less productive enterprises.

b. The tariff fosters inefficiency of labour and management.

Both these tendencies, it is argued, check the progress of production. The findings of the Tariff Committee, in 1929, appear to conflict with this view, for while this Committee recognised the costliness of protection, and even estimated this cost,(i) it concluded that "the evidence available does not support the contention that Australia could have maintained its present population at a higher standard of living under free trade".(ii) But it should be pointed out that the Tariff Committee did not attempt to meet the argument that industrial efficiency has not improved under protection as might have been expected, although this is of fundamental importance.

It must be ~~confessed~~ admitted that authorities are still divided on the question of whether the Australian tariff has checked the expansion of production per head. But whatever, the explanation, there seems no doubt regarding Dr Benham's contention

(i) £36 million in 1926-27. See The Australian Tariff
(ii) Report: The Australian Tariff p 1.

that the progress of production has been less satisfactory since the war, than in the earlier years of this century. It does not necessarily follow, however, that this has been an important factor producing a rising normal rate of unemployment. For it is not altogether clear whether the mere absence of progress in economic development would produce more unemployment, unless undue progress were attempted in wages and working conditions. It is possible that Australia has endeavoured to raise wages and to shorten hours with too little examination of her economic position. But, as we saw in our last chapter, it is very questionable whether such a situation could be improved by initiating wage reductions. This problem is obscure, and will probably remain so, until the importance of economic research is more generally recognised.

In any discussion of England's post war difficulties, some consideration is usually given to the effects of monetary policy. Some writers place considerable responsibility for post war unemployment upon the deflation that followed the boom of 1919, and again, the return to the gold standard. Since the purchasing power of the pound was slightly less than that of the dollar, pre war parity of the exchanges could not be established without reduction of the British price level. In this way, in addition to the smaller fluctuations of the price level that are related to cyclical fluctuations in business, Great Britain has experienced a long term deflationary tendency, which has inevitably reacted upon economic activity. There is some difference of opinion as to whether this has been an important cause of post war unemployment, although there is no denying its importance in the years immediately following

Continued

1919. Professor Clay, following Mr. Keynes and Professor Gregory, recognises that the changes of 1924-25 worsened "the competitive position in world trade of the English exporter"[i]. "The fall in prices, however, is not a sufficient explanation by itself of the increased unemployment"[ii]. "Deflation .... was inevitable; certainly it is not fair to attribute to it all the unemployment that the country has suffered from since 1925"[iii].

So far as Australia is concerned it is doubtful whether deflation has been responsible for the continued post war increase. While prices have fluctuated somewhat of recent years, the period of deflation came to an end by 1924, judging from the course of wholesale prices. At the same time, it is not easy to understand why the note issue was reduced by 25% in the following five years[iv]. It is conceivable that this reduction has been somewhat precipitate. The banking and currency situation has been somewhat intricate, of recent years, and there appears to be scope for some important research on this problem.

It is difficult then, to arrive at a definite conclusion regarding the possibility of there having been some decline in Australia's general economic position over this period, and it seems that we must seek still further if we are to find a complete explanation of the post war increase in unemployment.

(i) The Post War Unemployment Problem p. 72
(ii) Ibid p 75
(iii) Ibid p 80
(iv) i.e. from £56 m in 1924 to £42m in 1929

5. Industrial Change and Adjustment.

We suggested that an increase in the normal rate of unemployment might be due to such rapidity of change in the distribution of the demand for labour, that maladjustment and dislocation arise. Industrial change may be due to alteration in the wants of consumers, (or in their incomes) or to the introduction of new methods of production. Is there any evidence that the changes that have taken place since the war have been more sudden than those that form part of normal industrial and social development?

The major difficulty in attempting to answer this question is to find some indicium, or better, several indicia, of the rate of the industrial change. In so far as we are concerned with mechanisation (which is only one form of industrial change), we may consider the quantity of horsepower per head, and the value of plant and machinery per head, used in manufacturing. Both show considerable increases since 1913, and this might lead us to attribute some importance to mechanisation as a factor in the rising secular trend for All Groups. But before accepting this conclusion it were wise to check it, as we did our general theory, by comparison of the various industrial groups. Some material for such a comparison is to be found in figures relating to factory production, which are classified so that some sections resemble some of our industrial groups. As the correspondence is not exact, comparisons based on Table XIX must be accepted with reservations, but they are of some value for four industrial groups. Of these

the greatest increase in mechanisation, according to these tests, was in clothing and in printing. Yet the normal rate of unemployment in clothing remained constant throughout this period (Chart V) and in printing (Chart VI) it fell appreciably! If these indicia of mechanisation have any validity, it would seem that increasing mechanisation has not caused increasing unemployment in these two industries, at all events. Of course, these tests are crude, but it is difficult to find others. There is real need for a detailed study of the changes in process that have taken place in each industry. In our ignorance, we can only affirm that there is no clear evidence that mechanisation is responsible for the rising secular trend of unemployment, and some evidence that it is not.

We have no way of measuring other changes in industrial methods, which do not involve increased use of power or machinery, and in the absence of detailed information, can come to no conclusion. The same is true of industrial change due to alterations in consumers' demand. Such alterations may come from changes in the distribution of income. The only change of this nature that has taken place during this period is the transfer of some income from rural producers to city workers, as a result of the Australian tariff. But this has not been so rapid as to disturb the labour market. The only important changes in the demand for labour have come through the development of consumers wants. The years since 1913 have seen the substitution to a considerable extent, of silk and mixtures for wool, the popularisation of radio, player pianos, phonographs, automobiles, and short hair

(i) A "factory", for purposes of these statistics, is an establishment employing 4 or more hands, or using power. Trade unionists are not confined in this way. Moreover, the demarcation of trade unions would not correspond exactly with the statistician's classification of production.

for women, and the virtual abolition of the moustache. But it does not seem that this process of change has been appreciably different from pre-war experience. Nevertheless, in the absence of objective indicia of the rate of change in consumer's demand, it is practically impossible to draw definite conclusions.

Even if the rate of industrial change has increased, with consequent effects upon unemployment, such change is inevitable. The important problem is that of adjusting the labour supply to such changes. There is no evidence that the mobility of labour from trade to trade has diminished, except some changes due to the effects of the war upon the working population. Unless further information of a different kind be forthcoming, we are fairly safe in assuming that the problems of industrial change and industrial transference are no more acute than before the war. The immediate post war years were probably more difficult in this respect, but those years are now behind us. For example, the war time expansion of munitions industries, such as they were, involved a period of post war adjustment, due to the diminution in demand for such things in time of peace. But this problem was insignificant when compared with the same problem in Great Britain, for example, and for Australia that difficulty would appear to be passed.

6. The Tariff and Economic Instability.

A possible explanation of the post war increase in unemployment is that the variability of the demand for labour, from time to time, and as among different employers, may have increased. There is no convincing evidence that the

amplitude of the business cycle has increased since the war, although it may have been of shorter duration,and to that extent more violent, than in pre-war years. There is, however, evidence that the prosecution of the national policy of high protection has increased the variability of the demand for labour among individual employers.

In an industry with no variation in the total demand for labour, if such there were, no unemployment would be likely to occur,provided there were only one employer. The competition of several employers,however,introduces the possibility of variation in their individual demand for labour,because competition usually involves the worsting of some of the competitors,if only temporarily. When competition is keen, it presents us with a struggle in which fortunes fluctuate. This type of variation in the demand for labour is as real a cause of the reserve of labour as variability from time to time. Consequently,whatever adds to the number of establishments competing for a given quantum of trade,inevitably adds to the size of the necessary reserve of unemployed labour. This will be added to still further if the increase in the number of employers is made up largely of inefficient or inexperienced men, or men who have not sufficient financial backing to carry them through the momentary difficulties that face most growing businesses at some stage or other. From the viewpoint of industrial stability it is desirable to develop large industrial units so that the demand for labour can be coordinated and regularised.

The tendency in Australia is towards the growth of many small employers, sheltered from overseas competition by a beneficent tariff. This has called forth protests from some

who are not blind to its consequences. Sir George Julius, in his presidential address to the Institute of Engineers, in January 1926, mentions "the starting up of a host of small and ineffective organisation"(i). "Our Customs Tariff encourages any small factory to start that undertakes to make anything at all --- necessary or otherwise"(ii). Moreover, the statistical evidence appears to be conclusive on this point. The Tariff of 1921 was considerably higher than that of 1907, even with the war time revisions, and may be taken as the commencement of the high tariff policy of the nation. From h this year a change in the course of the development is quite obvious. Until 1919-20, the average size of factory was increasing and in that year reached 23.13 hands. But thereafter, following the introduction of the new tariff, the average size decreased, until, in 1927-28, it reached 20.38 hands. But still more convincing is the evidence provided by the distribution of factories by size. Until 1919-20 the proportion of the total number that employed less than four hands had decreased. In 1916, these factories were 19.64% of the total number of establishments, but in 1919-20 they comprised only 17.67%. With the 1921 tariff, however, their percentage increased until by 1922-23 it was 21.08%, and by 1927-28, it was 26.92%. It is true that the percentage of the total hands employed in these small establishments diminished slightly, and the percentage employed in factories of more than 100 hands decreased but slightly, to 1922-23, and then recovered again(iii). But the important figures are those

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(i) Transactions of the Institute of Engineers. Vol VI p.CVIII
(ii) Ibid p. CVIII
(iii) Figures from Commonwealth Production Bulletins.

relating to the proportion of small establishments to the total, for it is the multiplicity of small employers that adds to the variability of the demand for labour. In the absence of any other reasonable explanation, it seems clear that the multiplication of small establishments has been due to that great extension of the tariff in 1921. It is often urges that the tariff adds to the stability of industry by reducing the preponderance of rural industries, dependent as these are upon seasonal factors. For instance the Tariff Committee adopts this view (i). But against it must be set the facts outlined above, and accordingly it would seem that the tariff is partially responsible for the post war increase in unemployment. Such a conclusion is rank heresy in Australian circles, but is none the less true for that.

There is one aspect of the tariff that has an important bearing upon cyclical unemployment. The Tariff Committee prepared a table showing the proportion that customs and excise revenue bore to the total receipts from taxation in different years. For the commonwealth the percentage total revenue raised in this way, gradually decreased until 1920, when it had fallen to 51%, but thereafter it has increased again until in 1928 it comprised 73%. This is not a stable source of income. Not only should it begin to dry up if protection became truly effective, but it tends to fluctuate with cyclical movements in the growth of external trade. This fluctuation has led in the past to deficit, and a Commonwealth deficit has deleterious effects upon the business situation, more especially because of its psychological repercussions.

(i) The Australian Tariff p. 5

This, given other contributing factors, may give rise to more unemployment. True it is that (i) better forecasting by the Commonwealth Treasurer would render such a deficit less probable. Nevertheless, dependence to such an extent upon so variable a source of revenue continues to be a dangerous practice. Here is a real case, on financial grounds, for a gradual reduction in the tariff. Any sudden and considerable reduction in protective duties would, of course, have disastrous effects upon unemployment. But there seems little hope of reducing protection in Australia even moderately.

But even if the community feels committed to a tariff policy, it should attempt to secure such a distribution of the burden and benefits of the tariff as will facilitate its own handling of the unemployment problem. It is desirable, for instance that encouragement should be refused to, and even disabilities placed upon, those industries which hitherto assisted by our protective policy, cannot carry on without a great deal of seasonal and intermittent unemployment. The outstanding example of this nature is the sugar industry, to protect which the Australian consumer has to provide each year from one to two million pounds, and which drew £137,000 in two years from the Queensland Insurance Fund (ii) to support its unemployed workers. It is generally recognised that in this instance we have protection at its absurdest, but the unemployment aspect is usually overlooked. A protective system must inevitably discriminate between industries in the measure of protection afforded. Surely it is not asking too much to suggest that assistance be not bestowed on those industries that produce a

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(i) see the author's: "Business Forecasting", Australian Quarterly No 2. 1929

(ii) 1926-28.

considerable reserve of labour. Again, in applying the policy, it is advisable to discourage the mushroom growth of small businesses where possible. If the New Protection, which gave rise to the Harvester Judgment, had not proved to be ultra vires the Constitution, it might have been possible to introduce some form of impost upon employers, small or large, who fostered an unnecessarily high rate of labour turnover, and through intermittent operation, increased the normal rate of unemployment. But as no obvious way of achieving this presents itself, we may be content with the observation that its encouragement of small and inefficient concerns is a strong argument for a reduction in the height of the tariff wall.

Our discussion has led us to some conclusions regarding the causes of the post war increase in unemployment, but has been in some respects inconclusive. We have found that the post war problem is partly due to the evil effects of war upon the population, and partly to the tariff. But whether the tariff must also ~~shulde~~ shoulder the blame for a general decline in economic progress, and accordingly a further share of responsibility for the increase of unemployment, is difficult to determine. Again, the importance of industrial change cannot be accurately assessed. It is questionable whether our two certain conclusions, relating to the effects of war upon the population, and to the tariff influence upon variability of the demand for labour, are in themselves adequate to account

for the whole of the post war increase. Our handicap is the shortness of the post war period. Many points, now obscure, will be clearer as the trend of unemployment becomes more evident.

7. Concentration of Unemployment in Certain Industries.

There is another line of approach to this problem. In the foregoing discussion we have endeavoured to find specific causes for a general worsening of the unemployment situation. But we must remember that the rise in the secular trend in "all groups" is but a compound of the individual movements in the separate industrial groups. Nor is the upward trend universal, for, as we saw in Chapter II, in "books and printing" the secular trend has fallen, and in "wood, furniture etc", "clothing", and "food, drink and tobacco" no rise is discernible. In the building industry there is the peculiar trend discussed in Chapter VI. As this rises towards the end of the period we are studying, building contributes something to the persistence of the post war problem. But the post war increase in unemployment is concentrated in four trades, "other manufacturing", "engineering", "mining", and "other land transport". The comparative importance of these four industries in the figures for "all groups" may be inferred from Table XVIII, but will be clearer still from Table XX. Engineering and building are not only the strongest of the five, but have increased in importance since 1913. The figures for all groups are weighted according to the strengths of the unions reporting. Consequently the post war increase in unemployment is due to the post war increase in

these five industries, and, in particular of those that carry most weight, building and engineering. Explanations of the general increase in unemployment will be valid only in so far as they take account of the course of unemployment in particular industries. It is quite possible that the general increase in unemployment is due to the operation of different ~~factors~~ causes in the different industries. In fact this would appear to be the case. There is little doubt that the secular trend in "other land transport" is due to increasing mechanisation in that industry. The secular trend in building is due to the peculiar nature of that industry and reveals direct effects of the war and post war adjustment. Probably the tariff is most important in the case of "other manufacturing", according to the line of reasoning worked out above. The post war increase in mining is indisputably due to the gradual growth of overcapacity, the loss of overseas and local markets, and the general unrest throughout the coal industry.

But the most important contributing industry in the Australian post war unemployment problem is the engineering industry. This is significant, for this industry is of major importance in Great Britain's unemployment problem, too, Professor Clay has demonstrated that the post war increase is concentrated in five industries. "Building has been in the past, and is at present, an important contributor to unemployment, but its unemployment is due to causes peculiar to the industry". In the dock industry, "unemployment has no doubt been influenced by the decline in the physical volume of foreign trade; but apart from this, there is nothing new in the situation... Apart from these two industries the main contributors to the mass of

"unemployment has been as follows: in the earlier periods, the metal, shipbuilding and engineering group, in the later period coal, and intermittently, without much relation to the other two, the great textile industries". (i) Australia differs from Great Britain in that the engineering group has continued to be the factor of dominant importance.

It is more difficult to assess the causes of the rising secular trend in this industry than in the others mentioned above. Mechanisation would not appear to be so important a factor in this industry as in some, according to Table XIX. It is fairly heavily protected by the tariff, if we take the average ad valorem rate of duty collected on imports. The Tariff Committee calculated this for minerals, metals and machinery at 19.43% in 1927-28, while for all imports the average rate was 21.31%. The heaviest rates were, as we might expect, upon unimportant industries. But the rate on metals in 1911 was 9.09%, compared with 17.72% for all imports so it is clear that the degree of protection given to this industry has increased considerably with the 1921 tariff. There remains only the general economic position of the industry to be enquired into. Mr Justice Beeby in his judgment on the Metal Trades case in 1929, surveyed the recent fortunes of the industry ably, except that he did not distinguish clearly between long term trends and shorter term fluctuations. "The inference to be drawn from the whole figures (relating to the industry) is that while the metal making and manufacturing industries generally made satisfactory progress consonant with increases in population up to the end of 1925-26, since that year they have become stagnant, the progress made in some directions being more than outweighed by decline in others". (i)

(i) Loc. cit p.8

The problem would appear to have its roots in the gradual recovery of British engineering trades. Their recovery is taking place slowly, and some say, unsurely, only by re-organisation and a drastic deflation in the selling prices of their products. Despite its tariff the Australian industry cannot shut out this overseas competition. But it is questionable whether we are faced with a long term decline. The recovery fm of the British engineering trades is of such recency that many still doubt its permanence. Moreover, Judge Beeby apparently did not study the figures for the years before 1920. Again, our own study of the unemployment figures revealed the important influence upon the secular trend, of the slump of 1922, yet no reference is made to that difficult year in the discussions of the present position of this industry. The obscurity of the problem demands intense research, and until this has been accomplished, opinions lack conviction.

It seems thatvupon the basis of our present available knowledge, it is yet too early to explain fully the post war increase in unemployment. Our discussion tends to point to the necessity of analysing industries separately. Such an approach should yield more light and fruit than the search for universal causes of the post war situation. It is only when a series of separate studies has been made of the economic fortunes of these several industries over a long period, that we shall be in a position to understand com-pletely the causes of the post war increase in unemployment.

Chapter X

Public Policy.

1. A Policy -- Not a Panacea.
2. Aims and Objectives.
3. The Apparent Impotence of Government.
4. Features of an Effective Policy of Stabilisation.
5. Industrial Transference.
6. Conclusion.

1. A Policy -- not a Panacea.

These pages are being completed just after an election. The defeated party, among other promises had undertaken to abolish unemployment, apparently by the simple expedient of reducing the Commonwealth Arbitration Court to a shadow of its old power. The victorious party, if we may take the words of its leader as expressing its viewpoint, does not believe that, under the present system, unemployment can be completely done away with, but promises to reduce it to less formidable dimensions. A little while ago the N.S.W. State Treasurer was reported to have said that the present unemployment situation is due to factors largely beyond the control of his government.

Here are three attitudes towards unemployment. One suggests a simple remedy. Another is sceptical of any remedy, unless it be a new social system, but is prepared to ameliorate the situation. The third disclaims ability to do anything of significance in the matter. Are any of these viewpoints consistent with our study of the causes of unemployment?

Clearly, there is no simple remedy for unemployment. Our discussion has shown that it is a many sided problem, the roots of which penetrate many departments of our economic organisation. The delusive aspirations of reformers often fail just because they do not recognise that a diverse problem demands not one, but many solutions. We naturally seek a

panacea, for partial measures create impatience. But most panaceas are themselves either partial measures or false scents and their effects fall far short of their pretentions. It is only the path of many steps that leads to the heights of attainment. Yet that view which sees through panaceas, and denies that much can be achieved without a new social system, ~~itself~~ tends to fall into the attractive company of those who seek deliverance through catastrophe. It is an easy way out to blame everything onto capitalism, for then, so long as we retain capitalism, we need not attempt to rid ourselves of the difficulties that we attribute to it. Yet it is hard to believe that any formal scheme of socialist organisation for industry that has yet been expounded would abolish unemployment. The socialist shelves too many problems in an uncritical faith in his gospel, but he must learn to face such an issue as this: If some of the causes of unemployment are found in the human behaviour, why wait for a complete social revolution, before we attack them? But a still easier way out for the politician is to give an uncompromising answer to this question and to affirm that the causes of unemployment lie outside the scope of his activity. This can only mean either that he is ignorant of the breadth of the control he might exercise, or that he is unwilling to exercise it. The former position is more typical of our political luminaries.

Because a problem is complex, it is not easily solved. But it is not therefore insoluble. Its complexity demands sustained resourcefulness, and an attack from many angles. If appreciable progress is to be achieved, the problem of unem-

ployment must be approached on its many sides, and this involves a coordinated policy rather than a cut and dried set of remedies. It seems that this policy must come from the government, for while some of the necessary measures lie outside the province of the State, their initiation and encouragement do not, and cooperation between individual and community enterprise is essential. This, then, would appear to be our problem in these concluding chapters, to sketch the outlines of a policy that will materially reduce, if not abolish casual unemployment, seasonal unemployment, cyclical unemployment, and every other kind of unemployment, except that due to sickness, personal inefficiency and the like. The latter must be approached along other lines.

2. Aims and objectives.

But it is important that we should have a clear conception of what we desire to achieve. Do we wish to abolish all unemployment, at whatever cost? It must be remembered that unemployment is an evil, not per se, but because of its economic and psychological consequences. If an occasional spell of unemployment were nothing more than a cessation of work it might be welcome, but it brings poverty with it. The successful professional man is glad of an occasional slack period, which gives him opportunities for rest and recreation, but it would be unwelcome were his earnings less generous. It is clear that in the case of the worker, if the cost of finding him continuous employment were greater than the cost of maintaining him during spells of economic idleness, then, up to a certain point it would be economically desirable to be resigned to that ~~much~~ degree

~~phenomena~~ of unemployment. Of course the maintenance of an idle worker raises many problems that must be considered at a later stage, but our concern at this point, is to qualify the extreme view, that no unemployment can be justified. The function of economic organisation is not to create employment for its own sake, but to add to the material welfare of the community. The chief tests of this are the real income (goods and services) of the normal member of the community, and the working conditions under which he labours. If material welfare, judged by these tests, would be greater under a form of economic organisation that required and could afford to support a large reserve of labour, than under a system, with a smaller reserve of labour, then the former organisation might be preferred, and the unemployment problem would be so to arrange the distribution of the additional but necessary idleness, among the members of the community, so that it would effect the greatest good and the least evil. Such a situation is not imaginary. We have shown how changes in the demand for labour add to unemployment. Such changes in demand as come from the dynamic nature of human society are desirable, and preferable to stagnation. The community still has some distance to go before we will be prepared to resign ourselves to the stationary state envisaged by John Stuart Mill. We might create employment, by destroying labour saving devices, but we would all be impoverished as a result. We might refuse to entertain new ideas and to develop new wants and tastes, but it would go sorely against the grain. No, ours must be for some time at least, a dynamic society, of which a characteristic feature will continue to be industrial

change, and for this some degree of unemployment is a worthy price. But if we adopt this view, it would appear only 189
reasonable that the whole community should bear the cost, or reimburse those upon whose shoulders it falls, for in this case it is the community as a whole that benefits.

Again, we have shown that the competitive organisation of business adds to the intermittency of the demand for labour, through the fluctuating fortunes of individual firms. In this way competition adds somewhat to the reserve of labour normally required in an industry. While the matter is disputed, there is still strong evidence that such a competitive system leads to more productive efficiency and so greater material welfare (assuming that working conditions are not worsened), than would a system of public operation or monopolistic control. If this view be the true one, then the additional unemployment involved may be regarded as part at least of the price of the otherwise more advantageous system. Accordingly the cost should be born by those who benefit, that is, bythe community as a whole. These readjustments of the cost of economic progress do not take place automatically, but would involve the joint action of the members of the group. Of course much unemployment cannot be regarded as the legitimate price for necessary institutions. For instance, if some unemployment is due to inefficient management in a seasonal trade, or to the refusal of management to reorganise in the face of overseas competition, then whoever bears the cost of unemployment, workers or community, is subsidising from their own income, that inefficient management.

From these comments, two important conclusions emerge. Where unemployment is inevitably linked with some otherwise

satisfactory institution or form of organisation we should not attempt to abolish it unless it is clear that this institution or form of organisation can be replaced by a suitable substitute. Such unemployment as it involves, however, should be reduced to the minimum. The second conclusion is that in all such cases the cost should not fall on the shoulders of those whose unfortunate lot it is to be wage earners in the trades concerned, but should be distributed among those who reap the benefits, and these are generally the community as a whole. We might develop this point further, and urge that where unemployment is not essential to the economic progress of the community, its cost should be thrown upon the shoulders of those who have the power to prevent it. It is clear that to allocate the cost in this way demands rather more knowledge of the specific causes of unemployment in Australia, than we have been able to summon to this discussion, and here we may introduce our plea, to be amplified later, for more research so that the community might obtain this knowledge. It is clear too, that such knowledge, coupled with the point of view expressed above, should guide us in planning how to finance a system of unemployed insurance, for this, as we shall see, is the best method, from all viewpoints, of distributing the cost of unemployment throughout the whole community.

From our references to competition it would appear that there is some truth in the view that the complete abolition of unemployment is, under capitalism, impossible. For it is difficult to conceive of capitalism without competition. But the existence of some unemployment due to capitalism does not necessarily prove that capitalism must be replaced by communism

or another form of socialism. The view that looks to the dictatorship of the proletariat, or to nationalisation of industry, as to a Messiah, is as naive as that conservatism which regards the present as the eternal and considers nothing more sinful than a proposal to alter the status quo. The best path to economic progress is through deliberate and continuous choice as to what changes in our organisation are desirable, and a determination to make them as opportunity offers. If some of the proposals in this book come to be characterised as socialistic, it will not be because it advocates a new social "order", but because its suggested changes may conflict with the interests of some for whom the status quo is a continuous source of profit. But the abandonment of competition, or of some other features of capitalism is not advocated, because it has not yet been proven that their loss would produce more economic good than evil. Until such time as this is done, let them remain, although regulated in such ways as prudence and experience indicate, and let such unemployment as they involve be regarded, not as the unfortunate malady of the poor, but as an opportunity for rest and recreation, the cost of which is to be borne by the whole community. At the same time, such aspects of our economic organisation as are responsible for unemployment, and are not indispensable, must be vigorously attacked and ruthlessly changed.

3. The Apparent Impotence of Government.

Whatever may be the creeds of differing political parties it is plain that in the past, Government has achieved negligible success in controlling the fluctuations of unemployment, and has been powerless to effect any visible reduction in the normal rate. In the post war period,with its increased unemployment, the whole community has virtually confessed that it is unable to better conditions. The futility of public policy is due to the ignorance of statesmen,and to the strangle hold of party politics upon constructive action.

Consider the problems that have emerged from our studies of unemployment. While upon many points we have not been able to arrive at definite conclusions, owing to ~~xxpaxxixy~~ paucity of information, we have arrived at some findings of considerable importance in relation to public policy for the amelioration of unemployment. It is indisputable for instance, that under present conditions, some degree of unemployment is inevitable. This is not the fault of the unemployed individuals, as a rule, but is due to the organisation of industry. Some provision must be made for the support of these unemployed, and in place of our present haphazard administration of relief by many independent organisations, public departments and individual philanthropists,there should be instituted for the whole Commonwealth a system of unemployment insurance, similar in principle to that already in operation in Queensland. The problems involved in such a plan are so little understood in Australia that we shall devote a special chapter to them. The position is, that although a Royal Commission has recommended the institution of insurance, and although the Labour party has promised it, no

action has been taken, except in Queensland.

Another point that has emerged from our study is the fundamental importance of industrial fluctuations, and of every type of variation in the demand for labour. But no attempt has been made by public bodies to effect a considerable reduction in such variation, while private enterprise has been backward in adopting those methods of business stabilisation that have proved effective in some other countries. Yet there is reason to believe that much could be accomplished, if the Governments of Australia would avail themselves of the advice of expert economists, and make a determined effort to diminish economic instability. This inactivity is due in great part to the fact that statesmen have not even an elementary understanding of these problems, and are generally too preoccupied with party strife and ministering to sectional interests to spare the time required to inform their minds. This deficiency, so far as knowledge is concerned, might have been remedied to a great extent, if the Bruce Government's proposal of an Economic Research Bureau had come to fruition. But the short sighted economy of the Scullin Government effectively disposed of this possible line of progress, for the time being. But the problem is not merely one of ignorance. The impartial observer is led to doubt whether the Australian community, and its political leaders of all parties are really possessed of a sincere desire to reduce unemployment. At any rate, there is little evidence of such sincerity in the form of works. And faith, political or otherwise, without works, is dead.

Another conclusion that emerges from this study, is that the problem of industrial transference demands immediate

attention from the Governments. The process of industrial change renders occupational mobility essential, even in times of comparative stability. But when the employing capacity of a great industry declines, the transfer of the surplus labour becomes an immediate necessity, and its postponement must be paid for in privation and industrial unrest. In 1929 there appeared to be some 5,000 employees attached to the coal mining industry, in excess of the available employment. This overcapacity is of too fundamental a nature to be remedied by mere wage reductions and government subsidies. Such palliatives merely postpone the evil day, and in this way involve a double economic loss.

The problem of transference is twofold. It involves finding new employment for the surplus workers, and then changing them over from the old to the new. It is difficult to say which of these problems is the more formidable. But it is clear that they demand public attention, for in such circumstances as surround them, they cannot be trusted to "solve themselves", without considerable hardship and social friction. It is quite clear, too, that the Governments of Australia have but an incomplete understanding of the factors involved.

In the light of these considerations, the futility of much of Australia's recent economic policy is apparent. Politicians have pinned their faith to protection and "development". The tariff of 1921 and that of 1929 represent the highest ideals, apparently, of Australian economic statesmanship, and were both proclaimed as effective remedies for unemployment. Yet we have seen that the tariff can in no wise prevent cyclical fluctuations in unemployment, nor seasonal variation, and these are more important causes of unemployment than over-

seas competition. Our study has rather discredited the tariff as an unemployment policy, for we found that it has increased the proportion of small employers, and so added to the variation of the demand for labour, and that it has diminished the stability of public revenue so as to add to the factors that make for economic fluctuations. The devotion of statesmen to their faith in protection blinds them to such facts and even leads them to rejoice in the progress, under absurd protection, of the sugar industry, despite its notorious seasonal unemployment. Even the Country Party has "moderated" its views on the tariff, and offers little opposition to its extension, while the Conservative Party and the Labour Party are at one in this matter. Our quarrel is not only with the extravagances of protection witnessed by the post war period, but with the sublime assurance with which politicians proclaim it as a sufficient remedy. Faith in the tariff appears to render interest in other remedies for unemployment unnecessary. The truth us that the other remedies are neither so easily applied, nor, in the early stages, so spectacular, and are consequently not pursued. Unfortunately there are no indications that the future will not witness a still more enthusiastic tariff policy, lauded and applauded by statesmen and publicists in all the arrogance of their ignorance.

The economic policy of "development" has not been so clearly conceived as the more obvious policy of protection. In the popular mind the two are closely connected, the tariff being regarded as a barrier behind which industries are developed. But the term "development" has come to be used more

in connection with the opening up of new land and the settling of immigrants. In the popular mind there is no conflict between the two ideals of immigration to develop the land, and development to provide employment for the increasing population. The Labour Party, however, has set its face against "assisted" immigration. Under the conditions existing in Australia at the present time such an attitude is quite reasonable. Given publicity, the best inducement to the right type of immigrant is the prospect of steady, remunerative employment. From this point of view a vigorous policy of development by the building of roads and railways, the conservation of river waters, the improvement of ports and industrial research to find new opportunities is desirable, although in the past such efforts have been ill coordinated, and in some cases loans have been expended unwisely. Such development is valuable in opening up new employment for those workers who are displaced from declining trades, and for immigrants. But unless the new industries exercise a stable demand for labour, unemployment will continue with little or no diminution. New industries do not as a rule reduce the variability of the demand for labour. While on general grounds a wise policy of developmental public works is to be desired it must be realised that this can never effect great permanent reductions in the percentage of unemployment.

From this brief survey it is clear that public policy in Australia has made no appreciable impact upon the unemployment problem, because the measures adopted have had no bearing upon its fundamental causes.

4. Features of an Effective Policy of Stabilisation.

a. Public works policy as a corrective for fluctuations.

It must be realised from the outset that while Australia has commercial relations with the World, it is almost impossible for her to escape some repercussions from changes in overseas business conditions. These, and her own dependence upon primary industries, subject not only to fluctuations in world prices but to local weather, are probably the most important factors in her business cycles. We cannot hope, at this distance to do much to lessen the amplitude of the business cycles of other great commercial nations. Everything we can do, however, to stabilise rural production, will not only bring greater stability into our own business life, but will help to remove one probable source of world fluctuations. From this point of view agricultural research and education assumes great importance in relation to unemployment. In this respect great progress has been made with methods of coping with droughts and other seasonal disturbances, but there is still room for improvement. Whatever

further advances are made in this direction, however, will not relieve us of the burden of business fluctuations due to other causes. In so far as these arise from overseas dealings, our best line of attack is not to attempt to reduce their original amplitude, but to initiate compensatory movements in the opposite directions. In this way depressions may be avoided by "damping down" booms. It is clear that this is the position with regard to seasonal fluctuations. Public action cannot prevent seasonal changes but it can, within limits, adjust the demand for labour that is normally independent of the seasons so that it is increased during the slack period and decreased during the brisk period. In so far as such a policy is effective it should tend to even up employment throughout the whole year. Similar adjustment of the demand for labour over long periods exercised by public authorities should do a good deal to smooth out the waves in unemployment due to business cycles.

The Minority Commission on the Poor Law in 1909 recognised the possibility of diminishing unemployment in Great Britain by such a policy, and it has been advocated by Sidney Webb and many prominent reformers and economists. Said Sidney Webb in 1911, "It is calculated by Dr. Bowley, who is undoubtedly the greatest living authority on the subject, that, if only 3 or 4 per cent of the Government orders year by year were reserved, to be executed all together when trade began to falk off, this would counterpoise the cyclical fluctuation, so far as all the industries are concerned in which cyclical depressions are at present met by dismissal of hands instead of going on short time. The rearrangement in this way of no more than forty millions of expenditure during the whole of the decade 1897-

"1906 would have smoothed out all the yearly fluctuations in the volume of business during this period, and would have made the national aggregate demand for labour in these industries approximately uniform one year with another",

With the quantative accuracy of Dr Bowley's estimates we are not now concerned. The important thing is to decide whether this principle, recognised now for a number of years, might achieve important results if put into practice in Australia today. Loan expenditure itself has importance as a source of the demand for labour. Table IX shows Commonwealth and State loan expenditure in the years in question, but the amount actually spent might be a little different from these figures, from year to year. It is clear that here is a fund that theoretically, at least, could be adjusted to serve as a counterpoise to cyclical fluctuations. To this should be added the expenditure by local government bodies and by central authorities out of revenue upon constructional and other works. The total would at least be little under £40,000,000 per annum, of which probably 80% would go in wages. Without a detailed study an accurate estimate is difficult to make, in view of the complications of public accounts.

It does not require any elaborate statistic enquiry to ascertain whether government orders are in fact adjusted to fluctuations in the prevalence of unemployment.

With the exception of the State Government of Western Australia, which endeavours to allocate expenditure on public works so as to counteract the seasonal unemployment of the period May to September each year, no Australian Governments have explored the possibilities of this policy.[1] The heights of achievement appear to be "to expedite the putting in hand

1. Commonwealth Year Book, 1929 p 567

of public works by providing special votes to be expended on relief works. The necessity for such action is generally brought under the notice of the Governments by deputations representing the unemployed". In other words, such relief works are mere palliatives, coming too late to serve as a counterpoise to the depression, and are really dictated by political expediency. It is not unusual for Governments to borrow so freely during a period of prosperity that by the time the depression arrives, their overseas credit is weakened, and programmes for loan expenditure are actually reduced, with consequent aggravation of the depression.

The greatest difficulty in the way of using public expenditure as a counterpoise to business cycles (and to a less extent, to seasonal operations) is the political one. The difficulty is, not so much to induce governmental authorities to spend heavily when a depression is threatened, as to adopt a policy of abstinence during prosperous years, such as will render the subsequent expenditure not only financially possible but all the more effective. Changes of government introduce a most unstable element into the problem, for this policy requires planning ahead for a period rather longer than the term of office allowed to most Australian Parliaments by their fickle electors. This political difficulty, however, is not necessarily insuperable.

A satisfactory policy would involve borrowing abroad in years of prosperity, and when conditions are favourable, money which would be utilised for public works during subsequent years of adversity. The borrowed funds should not be transmitted immediately to Australia but re-lent on short term loans, in London. When the depression is imminent,

these funds should be deposited with the Commonwealth Bank in London. On this basis the Bank could issue notes in Australia to the Australian Governments, and the expenditure of the money could be undertaken. Such a policy would serve to build up London balances at a time when they are normally weaker than usual. The details of such a policy involve a good deal of attention, but here it is possible to indicate only the broad outlines.

b. Financial control of business fluctuations.

We have seen that banking policy is an important factor in the business cycle. If we are to reduce unemployment it is essential that steps be taken to ensure that the banks will take action in the early stages of a boom, to reduce its enthusiasm and then, when a recession in business appears to be imminent take action to ease the financial stringency that usually occurs. We have seen that in practice, the policy of the banks tends to be just the reverse of this. Influenced by the bright outlook of the immediate future, banks do not impose credit restrictions until the boom has reached such proportions as to render a recession in business inevitable. Then the banks adopt a cautious policy that, coming when it does, makes the depression all the deeper. The cycle goes round, and as soon as conditions favour another boom the banks ease their credit restrictions and foster the trade revival.

We have seen that the policy of Australian banks is necessarily influenced in some measure by the requirements of foreign exchange transactions. There are apparently three problems to be faced.

1. To ensure that all the banks will cooperate in the desirable policy.

2. To determine the methods by which credit control can be made effective.

3. To handle the exchange problem so that it will not render the desirable credit policy impossible.

These three problems might well form the subject of a special treatise, but our concern is with the half hearted attempts that Governments have made to meet them. Australia's urgent need is an effective Central Bank, which could impose upon the trading banks a policy of caution during booms, and could assist them, with its centralised reserves, during periods of depression. Despite the changes made in 1924, the Commonwealth Bank in no wise performs this function. Founded in 1911 to compete with monopolistic trading banks, it has developed ordinary commercial business until it occupies an important place among no competitors. ~~trading banks~~. This is an obstacle to its development as a central reserve bank, since it might use its central reserves in competition with the other banks. It is only natural that the trading banks have not been eager to hand over their gold reserves. The issue is plain enough. If a central reserve bank is to have the willing cooperation of the trading banks it must not compete with them for ordinary banking business, but must confine itself to being "a banker's bank". The Commonwealth Bank cannot hope to do both, although the discussion on the Bill introduced in 1929 revealed that such is the belief of the Labour Party. The best plan would be to set up an independent Reserve Bank, and to transfer the Note Issue Department of the Commonwealth to it The trading banks should then be required to keep deposited a certain proportionate reserve with the Reserve Bank.

Against this advances might be made, or preferably bills discounted, by the Reserve Bank at whatever rates the economic situation required. The Commonwealth Bank would remain on the same footing as the other trading banks. But the Reserve Bank would soon become the dominant power in the money market. The details of such a system cannot be worked out here. Our purpose is to emphasise that this line of development would render possible much better control, in the community's interests, over the general financial situation, than is possible under the present situation. This should lead to a reduction in the severity of industrial fluctuation and in the normal rate of unemployment.

c. The field for private enterprise.

The Development and Migration Commission's Report on Unemployment stressed the "national responsibility of the business manager", but Governments have been no more active in awakening his sense of responsibility for business fluctuations than in counteracting their effects through their own policy. An adequate unemployment policy involves the encouragement of all movements towards stability, and the Government should take definite steps to spread knowledge regarding the potential value of better business and industrial management.

Individual business firms can often adjust their own operation so that, despite the seasonal demand for, or production of, their separate products, their employees may be constantly employed throughout the whole year. The advantage of this to the management lies in the reduction of

labour costs through a smaller labour turnover, and in lower overhead costs per unit of output.

Where the demand is seasonal, it is sometimes possible to induce the consumer to use the product throughout the whole year. Apparently a considerable proportion of the American people have learnt to wear light-weight underwear all the year, thus eliminating seasonal operation in that industry. Advertising and price policies may be effective in securing this end. But where this is impossible, or where seasonal operation is due to the conditions of production it is often quite feasible to provide stability of employment by diversifying the products so that the employees are busy on one set of products for part of the year, and on other products for the rest of the year. The problem of securing occupational mobility of labour certainly complicates this in some industries, and probably it has less potentialities in industries such as sugar milling, than in definite secondary industries such as clothing. Nevertheless there is considerably more scope for developments along this line than management generally recognises.

Of course if extremes of changing fashions which are superimposed upon normal seasonal variation could be reduced, employment would be less irregular. Here, however, the interests of designers and sellers conflict with those of the working operatives. Speaking at the third International Congress of the World League for Sexual Reform, in 1929, Professor Flugel said, "If women stressed male approval rather than female rivalry they would be freed from the tyranny of commercialism. Women's attire needs purging from plutocratic snobbery, stressing costliness and novelty rather than suitability and beauty". (i)

(i) Sydney Sun 12/9/29 p.1

But this would be difficult to achieve. Simplification of styles would prove of value in other industries than the clothing trades, and would often not only help to stabilise employment but would result in a saving to management, and at no aesthetic sacrifice. Governments should add their weight to the movements already afoot in this direction. Of course, when a seasonal product is, as it were, in the experimental stages, and new models are frequently necessary, seasonal irregularity presents a more difficult problem. An example of this is the radio industry. Here is a seasonal demand, intensified by the fact that each season sees new and more progressive models. Moreover, it is impossible to work steadily all the year and to manufacture stock to be sold during the busy season, for the goods would then be out of date. In such a case more hope would lie in the development of side lines, or as the Americans persist in unharmoniously calling them, "fillers".

When goods are not, as in the case of fashion goods, perishable, manufacturing for stock enables regular production to continue throughout the year although sales may fluctuate with the seasons. In this practice, even more than in the others mentioned, exact knowledge of the seasonal demand is essential. This cannot be stressed too much. The great need in an industry with a seasonal market is an efficient statistical service. Only in this way can it avoid mistaking seasonal movements for booms, and vice versa, or manufacturing far in excess of actual requirements.

This brings is to long range planning to avoid the usual effects of business cycles. The only way to avoid being caught in a general depression is to plan business expansion on a scale that extends beyond short period fluctuations, and this involves not only adequate forecasts of the general business situation, but intensive study of the past and probable future course of sales and costs in the particular industry in question.(i) In the light of the guidance obtained by these means, the business can plan its buying and selling, its hiring and training of workers, and even its building operations, to take place during the most advantageous phases of the business cycle. These are not always the times when these activities are psychologically easy. The policy may involve postponing building, for example, when competitors are expanding madly, and then going on when they are sitting tight. It may involve an extensive selling campaign just when less enlightened and less far sighted competitors are economising in every possible item. But if the situation has

(i) See an article by Richardson: "Business Forecasting in the United States", (International Labour Review Vol. XIX No. 2 Feb 1929) for a description of the progress made in this direction by some firms.

been sized up properly, taking such long views is good business From our immediate viewpoint,its importance lies in the fact that it tends to stabilise employment. For every firm that adopts these methods leaves one less likely to throw a number of employees out of work, at the first sign of a general depression.

The ordinary business manager, especially in Australia and similar conservative countries, affects scepticism regarding these "American" methods, but the verdict of impartial experts supports the claims made regarding their efficiency.

To encourage the adoption of such methods, some form of machinery is required, and Stability Committees in each State as recommended by the Development and Migration Commission, or a National Employment Council, with local branches in industrial centres, should be instituted by the Governments of Australia.

d. Labour Exchanges.

It is desirable that Labour exchanges be developed to a much greater degree than that attained so far. With the exception of Queensland no state has a system of Labour exchanges that commends the respect and adherence of the majority of the unemployed. Various factors have militated against the Government labour exchanges. "Employers in some cases, hold the opinion that those who register at the exchanges are not the most suitable persons available, and those who may be considered the most necessitous are not always the most suitable for the work offered. They prefer to obtain the labour required through other channels, and this lack of co-

operation by employers has seriously restricted the operations of the Government exchanges. The exchanges, in fact,are now compelled to concentrate to a great extent on the placing of men in Government employment, as sufficient private employment is not offered. In many cases the trade unions do not look with favour upon the operations of the Government labour exchanges; their members, especially the skilled men, explore every other avenue for obtaining work before registering at the exchanges. Certain unions have their own labourbagencies which are fairly effective in obtaining work for their members in their own trades. Consequently, a very large percentage of those who register at the Government labour exchanges,especially during the winter months, are unskilled workers" ....."Experience has shown that many of those who register for employment will not be available for, nor accept the work offered; this being especially so in the case of country work".

~~Report~~. Royal Commission on National Insurance. Second Report P. 19

From this general account it is clear that the labour exchanges are not ~~so~~ as effective as they ought to be. The unwillingness of employers and workers to make full use of the facilities offered might be hailed with delight by the apostles of individualism, but it results in more unemployment than is required by the fluctuations in the demand for labour.

If unemployment insurance is to be established, it is essential that the labour exchanges should be extended to all centres where there is any considerable movement in employment. These exchanges should be linked up, as in Queensland, with "every clerk of petty sessions "in localities other than those covered by the central exchanges. In this way a network would embrace the whole labour market . In Queensland " no person is eligible to draw sustenance under the Acts unless first registered as a bona fide unemployed worker at a State Labour Exchange, and before an application is received the applicant must be able to produce his registration card showing that his registration as unemployed has been effected and is still current. Having been so registered, the applicant must renew his registration weekly while he continues to draw sustenance, and even after he has ceased to draw he is required to continue his weekly renewal of registration as long as he remains unemployed if he wishes to retain his priority of registration for the purpose of obtaining any employment that may be offering through the exchanges. Priority of registration is not, of course, a paramount qualification for securing any employment, as other factors are of primary importance, such as experience in and suitability for, the

class of work offering, but, other things being equal, priority of registration, which actually represents the period of unemployment, is regarded".(i)

But even in the State of Queensland, where registration by the unemployed is obligatory, the effectiveness of the exchanges is severely limited by the refusal of most employers to engage their labour through them. Thus the Director of Labour says:"If employers of labour would only make known their requirements to the State Exchanges, I am satisfied that a considerable amount of the unemployment now existing could be, and would be, eliminated, and similarly throughout the year, unemployment would be minimised if we only received full co-operation from employers of all classes who have work to offer. ..... I have expressed this view previously, but I regret to say without any marked response".(ii)

No doubt the reluctance of the average employer to engage labour through the exchanges is due to his desire for a free hand in the selection of employees. This could be met by giving him the choice of half a dozen men for each position, if he wanted it. The additional expense would be outweighed by the advantage of having his co-operation. Still some conservatism would hinder this co-operation, and it would appear desirable to make it compulsory for employers to notify the labour exchange before filling any vacancies. Indeed, they might well be forced to notify dismissals three days before the worker is to leave his position. Unpopular as the measure might prove at first, in the end it would have the effect of considerably improving the mobility of labour from employer to employer.

(i) Report of the Director of Labour 1928 p. 2
(ii) Report of the Director of Labour 1928.

5 4. Industrial Transference.

It has already been noted that industrial transference presents two distinct problems. The first is to find suitable employment for the displaced workers, and the second is to place them in the new positions provided. The first is the problem of development, and the second is that of occupational mobility of labour. The development of new avenues for employment involves the investment of new capital. Stabilisation of industry would encourage a greater influx of private capital from abroad, for not only profits but security would be improved. But there would still be need, in addition to this, for additional capital. This would involve further borrowing abroad by public authorities. The need could not be met by loans floated in Australia, for unless, as happens under patriotic emotion, people invest money in Government loans which normally would be spent on consumable goods, loans floated at home do not add to the total fund of capital available for investment. As a rule money invested in Government loans has to be diverted from other avenues of investment, and no advantage is obtained unless the Government expends the loan more profitably than would private entrepreneurs. This has not always been the case, so far as Australian experience is concerned. Unfortunately it is not generally realised that public loans floated in Australia cannot add to the general total demand for labour, unless at the same time, the community is prepared to save more of its income than it has in the past. New capital, and, indeed, the maintenance of old capital can only come from savings out of income, and unless Australians will do the saving them-

selves, they must borrow from the savings of other peoples. Sir Alfred Mond suggested another source of capital for Great Britain. Instead of spending money on "doles" or even unemployment insurance, we might make it available for investment in industrial undertakings and so increase employment, instead of subsidising unemployment. It is true that this scheme would add to the capital of the nation. But it would not achieve a great deal in the alleviation of unemployment, for in the absence of regularised employment, intermittent and cyclical unemployment would continue as before. There would still be many unemployed and their distress would have to be relieved. Probably the alternative forms of relief would diminish the capital available for investment almost as much as the diversion of the "doles" would increase it. There is no alternative to greater savings except borrowing from abroad.

This raises the whole problem of foreign loans. We saw in the last chapter that the borrowing policy of governments has been determined, in the past to a considerable degree, by the condition of the capital market, or "money market "as it is often incorrectly termed. Apart from the resultant irregularityof loan expenditure, which we saw could be remedied, this practice cannot be condemned. The economic function of the rate of interest is to limit the supply of capital to those uses in which it is most productive. It is regarded as bad finance to borrow capital for purposes that will not yield at least the rate of interest ruling when the loan is effected, and the only exception to this is when the investment yields an indirect return, perhaps immeasurable, as for instance, when the economic quality of the people is thereby improved.

Admitting all this, it is probable that borrowing abroad could be proceeded with more confidently, even, than it is to-day, provided that the regularity of employment was undergoing improvement and industrial fluctuations were being reduced.

Of course a rigid scrutiny of proposals for loan expenditure must be preserved. This has been the most useful service rendered by the Development and Migration Commission.

The other problem involved in transference is to fit the unemployed into the new openings. How difficult is this going to be? This question is not easy to answer because we know so little about occupational mobility of labour in Australia. It must be remembered that if the policy outlined in this book be proceeded with, we are to be faced, not only with the problem of transferring children from their parents' occupations to new ones, but with the problem of fitting into new positions the adults that are displaced.

The problem of occupational mobility of labour will remain obscure until research is carried out to trace the movements of workers from one trade to another. A system of unemployed insurance with efficient labour exchanges would render such research much more feasible than it is at present. We may illustrate this by reference to a study made in Chicago (i) in 1928.

Myers:
(i) "Readjustment of Displaced Skilled Workmen"
Journal of Political Economy Vol.XXXVII No. 4 p. 473

The clothing trade in that city has an effective system of insurance in operation controlled by the union and employers, which ensures that records can be kept of employed and unemployed. This made possible a survey of the occupational movements of 370 cutters who lost their employment between 1921 and 1925. In the early summer of 1928, only 20.3% of these were still working as cutters. Driving of trucks provided openings for 10.5%, while 7.0% became grocers or confectioners. The profession of politician claimed only 2.7% and 5.9% became real estate agents. No less than 14.6% took up salesmanship of other kinds. Only 6.5% (24 men) entered eleven other skilled trades, ranging from bakers and barbers to plumbers and printers. There were still 26 men (7%) unemployed and seeking work. This indicates that there is in Chicago, a considerable amount of external mobility from this particular trade. Only similar studies can give us comparable information regarding Australian workmen, but such research would be well worth while. The Chicago enquiry elicited some other interesting facts. Nearly half the men had worked at two or more trades since losing employment. 18% were out of work for twelve months or more before securing regular employment, while 40% lost lessthan one month. In 1928, 30.4% were earning more, 46.4% less than when they worked as cutters so that 23.2% were still receiving the same wage. It is notable that 61% wished to return to their original occupation. Clearly "the changes in the industry have been made at a heavy cost to the men forced out".(i) An analysis of the age distribution of 198 of these workers showed that those from thirty five to thirty nine years of age were most successful in making a satisfactory adjustment,

(i) Loc. cit p.480

"while remoteness from this age-group, in either direction, has been accompanied by a decreasing chance of securing satisfactory employment." (i)

This study concerns a particular group of workers. Many similar surveys are required before we can arrive at conclusions covering any considerable proportion of industry. A National Employment Council or State Industrial Stability Committee would be in a position to initiate such investigations, as the data could be collected in the operations of the insurance system and the labour exchanges. We would then be in a better position to decide how serious a social problem is raised by the necessity for industrial transference. "The mobility of labour in Great Britain is sluggish in comparison with that, for example, in the United States, (ii) "but where does Australia stand? Such investigations may tell us. In Great Britain, it has been suggested, "the chance of the operatives displaced in an industry being absorbed in another is steadily declining." (iii) "This view is by no means established, but the fact that it has received some attention urges upon us the need for the type of research suggested above.

Since we cannot at present determine just how serious a difficulty this aspect of industrial transference will prove to be, there is not point in detailing a scheme to handle it. We shall merely outline the preparations that should be made.

In so far as place mobility is concerned, we have referred to the need for labour exchanges and assistance in

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(i) Loc. cit p.489
(ii) Snow: Limits of Industrial Employment, Journal of Royal Statistical Society, Vol. XCII ppIII, p.339
(iii) Ibid p. 341 .

some of the costs of movement. In this and in the matter of occupational mobility the Council will be able to enforce its will upon the unemployed for their own good, since to draw benefits, claimants must not refuse suitable work, nor training. The Council should make available whatever vocational training is necessary. This is not easy in the case of adults, but it is surprising how much can be achieved. Vocational guidance is as essential as vocational training, and should of course come before it. Vocational guidance consists of selecting an occupation in which there is not only an opening for the worker, but in which such vocational aptitude as he may possess will be used to the best advantage. While it is important, even in the occupational transfer of displaced adult workers, it is much more successful if applied to children just before leaving school. Quite apart from the special problems of industrial transference raised by the policy of regularising employment, the universal development of efficient vocational guidance would do much to diminish unemployment. In this its effects would be similar to those of better personnel selection. Vocational guidance, however, demands not only a psychological examination to determine the vocational aptitude of the individual but advice regarding conditions of work, remuneration and the prospect of insecurity through sickness, accident or unemployment. Its effective prosecution would considerably reduce the number of young people finding their way into "dead-end jobs".

Vocational training too, should be made available during youth, although industrial transference would involve training for adult workers, as has been pointed out. In particular, it

would appear that there is some need for more effective commercial education for young people. This may be illustrated by quotations from the Annual Report in 1929 of the Australian Institute of Industrial Psychology, which has given vocational guidance to 600 cases in two years.

> "From a report by the Hon. Director, based on observation of the cases which pass through the Institute's examinations, the Council was concerned to note how few boys destined for business careers follow up any form of secondary studies systematically. It was decided to investigate the facilities existing, and to discover whether the lack was recognised.
>
> A research letter, in the form of a questionnaire, was sent to various business men and educationalists, in the city (Sydney). Answers received express the opinion that there is a crying need for better education in business, and draw attention to the dearth of youths who are well qualified for clerical or sales occupation. While suitable provision is provided for apprentices, nothing really constructive is offered for the post-school education of young people engaged in sales work."

But the courses of training that will prove necessary for adults will depend upon the outcome of our policy of regularisation of employment. It is apparent that our policy for industrial transference cannot be out and dried, for it must be determined to a great extent by experience and the particular problems that arise. This is inevitable, and it is as well to realise from the outset that the whole unumployment policy must be adaptable and elastic, for only in this way can so complex a problem be handled.

6. Conclusion.

In this chapter we have seen that the impotence of Governments in the unemployment problem is due to their neglect of the fundamental causes of unemployment. We have outlined briefly the chief measures in the policy that should be followed, if any considerable reduction is desired. These measures are well known to economists, but politicians are either entirely ignorant of them, or unwilling to experiment with them. A fundamental difficulty is the deplorably low level of economic education among the leaders of the community. But the facts revealed by our statistical analysis are plain and unmistakable, and the community cannot continue to be blind to the economic losses due to these fluctuations in the demand for labour, and the problems of industrial transference.

The prosecution of such a policy as we have outlined, must go hand in hand with detailed research into particular problems as they arise. In our own enquiry we were forced to indefinite conclusions, on some points, because of our imperfect knowledge. This can only be remedied by a series of studies by expert economists, for the work is plainly beyond the capabilities of one man. It is to be hoped that Mr Bruce's proposed Bureau of Economic Research will again raise its head, as the importance of our problems forces us to forget the petty jealousies of party politics. It may be helpful to set out what may be regarded as the most pressing problems towards which research should be directed.

a. The measurement of business conditions and the the possibility of forecasting.

b. A survey of the absorptive capacity of each of our great industries, with detailed study of the variability of the demand for labour in each case.

c. The effects upon unemployment of mechanisation and other new methods in industry.

d. The mobility of labour in Australian industry.

e. The seasonal trades.

f. The relation between local and international factors in the business cycle.

g. The relation between the movements of funds in London and Australian business.

h. The development of an accurate index of employment, as well as more accurate figures of unemployment.

With such research going on, and the policy outlined above vigorously pursued, we might confidently expect a gradual diminution of unemployment. At the same time the effective relief of distress demands attention, and this will be discussed in our concluding chapter.

Unemployment in Australia

Chapter XI

Unemployment Insurance.

1. The Relief of the Unemployed

2. The case for insurance.

3. Some Problems of unemployment insurance.

1. The Relief of the Unemployed.

Some form of unemployment relief is inevitable, so long as unemployment persists. A civilised community cannot allow large numbers to die of starvation. A few can meet this bitter end without attracting much attention, but its prevalence leads to civil unrest, and then steps must be taken to remedy the evil to some extent, at least. Unless the unemployed are to die of starvation, they must be supported from the incomes of others, for the incidence of unemployment is heaviest on that section of the community that would find it well nigh impossible to amass any reserve of savings, even if it were desirous of doing so. Consequently, it is upon the gifts of friends, charitable institutions and public authorities that the unemployed live. This is true, Whether a definite system of unemployment relief is in operation or not. If not, the relief comes from other types of poor relief or private and corporate charity. Whatever be the channels through which this relief flows to the unemployed, the problem arises: What are the economic effects of such relief? Since different types of relief are possible, that system is best which, on the whole has the best, or the least deleterious effects upon the recipients and the community in general.

Most modern economists are in agreement regarding the effect of various types of poor relief, and we need only summarise their conventional teachings on the matter. All such relief consists, in effect, of transference of income "from the relatively rich to the relatively poor," as Pigou has it, and we may

usefully distinguish between the effects of the fact of such transferences and the effects of future transferences. The problem of financing any system of relief lies in transferring income from the relatively rich without having their productive enterprise discouraged by the expectation of these deductions from their income. The ideal method of raising money for unemployment relief would be one in which, if it can be devised, the money is taken from the incomes of those who have the power to take action that might diminish unemployment, with the understanding that the severity of the impost will be reduced if unemployment is permanently decreased. Of course, where such transferences are voluntary, and not only voluntary, but willing, they provide an incentive to those who wish to make such transferences, to persevere in their efforts to amass wealth for such an admirable purpose. But it is unlikely that private benevolence is quite adequate for all necessary unemployment relief.

The fact of the transference of income to the unemployed will have beneficial results, for it will prevent that deterioration of body and soul that extreme privation usually entails. Theoretically it will achieve more if made in kind rather than in money, for there is less likelihood of extravagance if food and clothing are provided. In practice it is usually better for the grant to take the shape of money, as this is popularly regarded as less degrading than a "dole" of food or other goods. If the unemployed is intent upon spending his allowance on drink or some other luxury, a payment in kind will not prevent him from exchanging it for what he desires

The expectation of an allowance may discourage willingness to work, unless its payment is contingent on the fulfilment of

conditions regarding this matter. This is, perhaps, the most difficult aspect of all types of poor relief, and only experience can evolve a set of regulations which will render impossible, fraud, malingering, and imposition by those who could dispense with the relief if they chose to. In unemployment relief the problem is to ensure that the unemployed will not be deterred, by the expectation of allowances, from making considerable efforts to find employment again. Speaking at a Conference in 1924, Professor Cannan said, "Since the times before the war a certain change has taken place in the amount of encouragement which is offered to the unemployed. After all, unemployment is a profession like others. As we know, people choose various occupations according to the agreeableness and profit to be got thereby, and there is no doubt that things have been made easier for the unemployed than they were before the war.....I think that we should expect a considerably larger continuous average of unemployment in the future than in the past". (i) Any form of unemployment relief makes things somewhat easier for the unemployed and there is no denying that this tends to increase their numbers. Regulations may be developed, however, by which things are made considerably less easy for those of the unemployed who are out of work through their own action, or who refuse to accept suitable work when it is offered to them. Such regulations can be more universally applied if the relief of the unemployed is unified, and organised by one central authority.

In Australia there are various channels through which relief is available to some of the unemployed.

(i) Unemployment in its National and International Aspects (I.L.O.) p. 51

BIBL. UNIV. SYD.

Some trade unions make an allowance of £1 per week to un- 201
employed members, but some have regulations against this use of trade union funds. There is a considerable amount of private and institutionalised charity, while of the half million pounds spent annually by various of the Governments of Australia on outdoor relief, a considerable proportion must go to help those whose destitution is the result of unemployment. (i) Some witnesses before the Royal Commission on National Insurance argued that the 9s and 7d allowed in the Harvester judgment to cover miscellaneous items, included some provision for unemployment in the basic wage and all awards based on it ! But it cannot be claimed that this provision is at all adequate. Awards for some callings do make some allowance for unemployment, though this must be of a rough and ready nature. Examples are wharf labour, shearing, the sugar industry and meat packing. Evidence shows that in these cases the provision is, for most workers, insufficient to recoup losses through unemployment. Government relief works are still resorted to, on occasions. On the whole, these provisions are inadequate. Moreover, with many agencies at work there is more scope for fraud and inefficient administration. Furthermore we have no real knowledge of how much is being spent by the community on unemployment relief

2. The Case for Insurance.

There is a strong case for the unification of all forms of unemployment relief, and if this course be adopted, it should be possible to select the best system of providing the relief. A system of unemployment insurance is, without doubt, the most suitable suggestion. The basis of insurance is the pooling of risks. Unemployment may be regarded as a risk. Some

(i) Second Progress Report p.15

trades are comparatively free from it, while in others, an annual spell of unemployment is almost a certainty for most of the employees. But in the majority of occupations the worker is never sure that he will continue in employment. Consequently it is to his interest to pay a small premium regularly, to insure against the possibility of a period of idleness in which his earnings will be negligible. Schemes of this type have often been initiated by trade unions, sometimes under government supervision, and sometimes subsidised from public funds. In such cases the insurance usually covers workers in one particular industry. It is obvious that the cost of insurance to the worker in such a system depends upon,

(a) The amount of benefits payable
(b) The normal rate of unemployment in the industry
(c) The proportion of the cost born by public funds

From our own studies it is clear that the cost would vary as between different industries in Australia, for the normal rate of unemployment is not constant. Enquiries made in Great Britain showed that "43 trade unions, comprising 1,252,600 members decided in favour of insurance by industry; 21 unions, with a membership of 2,670,900 decided against; and 17 unions, with a membership of 978,900 expressed no opinion on the question."(i) It is only natural that where the cost would be lower than the average for all industries, insurance by industry would be preferred by the workers, and where the cost would be higher than the average, a national system with a flat rate of premiums would be more attractive. If the system is to be financed in its entirety by contributions from insured workers, it is clear that in a national scheme those employed in industries with stable employment are contributing something to

(i) Remedies for Unemployment (I.L.O) p. 13

bearing the risk of those in unstable industries. On the other hand insurance by industry might give workers a stronger incentive to seek work in industries with a low rate of unemployment instead of those where unemployment is normally heavy. But this would be desirableonly if the heavier rate of unemployment were due to a supply of labour in excess of the reserve rendered necessary by the organisation of employment in that industry. Again, since all members of the community, as a rule, benefit to some extent by having the industry in operation, it would appear to be unfair to throw the burden more heavily on those employed in it. Here is one argument for a uniform rate of premium for all industries. But it may also be used to support the claim that the State should bear proportion of the cost, because those members of the community, who are not wage earners have an obligation to assist in bearing the risks placed upon the wage earners by our organisation of employment and industry. Historically, the growth of public subsidies is to be explained not by an explicit acceptance of this view, but by the fact that trade unions and other workers' benefit societies have proved unable to cope with the problem when unemployment was unusually heavy. German municipalities were among the first public bodies to take this course, such as Cologne (1896),E langen (1909), Berlin-Schoneberg, Frebourg-en-Brisgan,and Gmunden Sonable (1911). In France,"from 1905,a credit of 110,000 francs was voted in the State budget in order to encourage unemployment insurance, and this practice has continued ever since. At that time two departments and fifteen towns accorded assistance for this object,and in 1910,the number of departments had increased to eight, and of towns to forty-eight. The State and the local

"authorities acted independently of each other." (i)

In the British Act of 1911, which established state controlled compulsory insurance in seven industries (building, construction of works, shipbuilding,mechanical engineering, ironfounding, vehical construction and sawmilling)part of the cost was placed on the shoulders of the employer. The principle underlying this step had a dual character. It is a recognition that the responsibility for unemployment lies partially with the employer. By forcing him to share the cost of insurance, it is claimed that a definite incentive is provided for him to take such steps as he can to reduce unemployment, and accordingly, the costs of insurance. The triple contribution, by employee, State and employer is still a feature of the British system and has been incorporated in the Queensland Act. Sidney and Beatrice Webb do not endorse the view that employers are stimulated to seek measures of reducing unemployment, by having to bear part of the costs of insurance, for "any particular employer will find himself paying only a fixed and uniform contribution, common to all the employers and even to all the insured trades....The chance of his ever having this contribution raised or lowered will appear to him very remote, and only to an infinitesimal extent,if at all, affected by any action of his own in any particular case" (ii)

There is some force in this assertion, but opinion is divided in this matter. Professor Commons (iii) takes the opposite view, and advocates unemployment insurance, financed by the employer as a method of inducing stability of employment, as well as of providing relief for those out of work

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(i) Remedies for Unemployment p.,19
(ii) Prevention of Destitution p. 193.
(iii) see Edie. Stabilisation of Business.

It is clear that the employer's share of the cost would be a stronger incentive if some fairly obvious steps were suggested to him by the National Employment Council or its State Committees, and still stronger if some system could be devised by which rebates would be allowed to such employers as did adopt these measures, or stabilised their own employment by other methods. But this would be a complicated and difficult problem, and no satisfactory system has yet been suggested Some experiments in this matter were contemplated in the earlier days of the British system, but the idea has been abandoned.

On the whole, it appears best that Australia should adopt the principle of triple contributions, employee, State and employer, each bearing one third of the total cost. This would throw some burden upon industry, but the advantages of the system would outweigh this. It might be asked, why should the worker be asked to pay anything? Has he planned the organisation of the labour market, or is he responsible for the many factors that affect the unemployment situation? The principal arguments for providing for contributions by the worker are summarised by Mr Morley (i) as follows:-

> "(a) to encourage a personal interest in the success of the experiment;
> (b) to prevent the payment of benefit having any charitable aspect;
> (c) to attempt an averaging of earnings between good times and bad."

The second of these is the most convincing, since the effects of contributing regularly, upon the morale of the worker, should make insurance preferable to any other form of unemployment relief. As against this, Mr and Mrs Webb assert that the in-

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(i) Unemployment Relief in Great Britain. p. 18

sured worker, especially if payment of premiums is compulsory, isndetermined "to have his money's worth" in the shape of benefits, which are regarded as his right, and not as a privilege. This might lead to more malingering than a system of charitable relief.(i)

Compulsory insurance, whatever its drawbacks, has grown in popularity, and "it is under the compulsory system that the greatest number of persons insured against unemployment are now included."(ii) A recent survey of the field shows that voluntary or compulsory insurance is in operation in at least twenty different countries, so our advocacy of this measure, suggested by the Royal Commission of 1927, is not a revolutionary proposal.(iii)

3. Some Problems of Unemployment Insurance

The most obvious problem associated with an insurance scheme is to prevent malingering. All systems include some provisions limiting the right of individuals to receive benefits. We shall set out briefly those that are essential, and discuss more fully the points that are doubtful.

a) Benefits should not be paid to those out of work through strikes, sickness or old age. The exclusion of the first is for obvious reasons, but those unemployed through a lockout should receive benefits. Sickness and old age are separate problems and demand separate treatment.

b) Benefits should not be paid to those leaving work of their own accord, at least until some considerable time has elapsed. The Queensland system has introduced this condition.

c) Benefits should not be paid to workers who refuse suitable employment when it is offered to them. The precise meaning of "suitable employment" will require

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(i) Prevention of Destitution p. 174-5
(ii) Remedies for Unemployment p. 8
(iii) Royal Commission on National Insurance, Second Progress Report p. 26 et seq.

careful definition.

d) Benefits should not be paid to those whose earnings normally exceed an amount adequate to allow for savings, unless destitution is proven.

e) Benefits should not be paid for more than 26 weeks in any calendar year.

f) Benefits should not be paid to those who, when in employment have not paid a certain number of contributions to the fund. This would be met by employees making the payments out of wages.

g) Benefits should not be paid to recent arrivals from abroad, as this would merely encourage immigration of a worthless type.

h) Benefits should not be paid to seasonal and casual workers in cases where wages are adjusted for intermittent work.

i) Benefits should not be paid until a week has elapsed from the date of becoming unemployed, except that in the case of casual workers, special arrangements are necessary.

j) It is desirable that in some cases the unemployed should undergo training to facilitate industrial transference. Benefits should be suspended if the unemployed are unwilling to be trained. This policy requires careful administraion, and is explained later.

k) The question of whether recipients of benefits should be expected to perform any work is debatable. It is generally agreed that the "labour test" of the old poor laws must not enter into unemployment insurance. Nevertheless it might be urged that some work should be done in return for the benefits. Obviously skilled tradesmen could not be put to labouring. Moreover, trade unions would steadfastly oppose the proposal, unless the unemployed were to receive full award rates of pay. On the whole it would not be wise to employ the recipients of benefits on temporary work.

l) The benefits paid should be decidedly less than the basic wage, for if they are unduly high, malingering will be encouraged still more. Some urge that the unemployed should receive the basic wage. This would considerably increase the cost of the scheme. Moreover, a man requires a higher wage to maintain him at work than in idleness. Child endowment, however, should be added to the benefits, unless this is already provided by the State. Following the Queensland system, adjustments in the rate of benefits should be made to allow for major differences in the cost of living in various localities.

Most of these provisions are in operation in Queensland.

The Bill to introduce the system was labelled by the conservative press as "the Loafers' Paradise Bill", but any loafer will be kept very busy in endeavouring to evade such provisions as the above if they are rigidly imposed. Experience would undoubtedly suggest modifications in these matters. The Queensland system, on the whole functions well. One result has been a greater use of labour exchanges, which is highly desirable. Another result is the most accurate statistics for unemployment that we have in Australia. To the other beneficial results of insurance, these must be added, and especially, the provision of much valuable data for serious investigation of particular phases of the unemployment problem. Some aspects of its financial operations may be open to criticism.

The financial problem to be faced by any system is to raise sufficient money to maintain the fund in solvency. This problem arises whatever general principles be adopted. Whether the fund be financed by employees, State or employers, or all three, it is desirable that the rates of contribution be adequate to make appeals to the Treasury unnecessary. The actuarial forecast of the probable amount required is a matter of the highest importance. If the fund proves insufficient to meet the demands made upon it, either the rates of contribution will have to be raised, or additional advances must be made by Government . The economic disadvantages of an unstable rate of contribution are obvious. The contributions of the employer form part of his labour costs. Uncertainty as to whether these will be increased or not has undoubtedly some deterrent influence upon enterprise. (This is one of the arguments against wage plasticity, too.) It is almost certain

that the increased rates of contribution will come into force at a time of economic depression, for it is then that the fund is subject to the greatest strain. This has been the case in Queensland. Operations were commenced in March 1923, with the rates of contribution at 3d per week for each employee, paid by worker, employer and State. The year1924-25 resulted in an excess of receipts over disbursements amounting to £44,567, but the excess was reduced, in the following year to £7,675. For 1926-27 disbursements exceeded receipts by £97,434. Accordingly the rates of contribution were raised to 4d per week. "It is anticipated that the ensuing financial year will witness a less heavy call on the Fund, and that the increase in the rate of contribution to 4d per week each for worker, employer and the State will allow of at least a small credit balance on the year's operations," reported the Officer in Charge in 1927.(i) But his anticipations were ill founded, for the sustenance payments in the ensuing year exceeded those for 1926-27 by £30,000. "The balance in the Fund at 30th June, 1928, was therefore quite insufficient to carry forward into the new year with a reasonable prospect of being able to maintain the solvency of the Fund on the existing contributions and, after careful consideration, the Council felt compelled to again increase the weekly contribution from 4d to 6d".(ii)

Commenting upon this, the Director of Labour said, "The rate of contribution to the fund will necessarily fluctuate according to general business prosperity or depression, and we have experienced two lean years in succession, necessitating increases in the contribution rates to preserve the solvency of the fund, but it is hoped that when a sufficient reserve has

(i) Fourth Annual Report p. 2
(ii) Fourth Annual Report p. 1

"been established on the present rates, and given good seasons, it might be possible to reduce these rates"(i) This is a recognition of a dangerous principle. If the rates of contribution are going to be higher during depression, and lower during prosperity, this variation will be a contributing factor to increase the amplitude and severity of the business cycles. The ideal arrangement would be to impose lower rates during depression, and high rates during the boom, thereby checking both movements, in some degree. Probably this would be impracticable, but the policy suggested in the above quotation can only be condemned. The rate of contribution should remain constant, at least over short periods of a few years. Unless additional subsidies are to be granted by the State, this involves a more accurate forecast of the future trend of unemployment than authorities have been content with in the past.

Unemployment insurance in Great Britain has proved a doleful business, according to its critics. The rates of contribution have not proved sufficient, even when raised, to keep the fund solvent. Perhaps no blame can be attached to those who failed to forecast the trend of unemployment. For, "on the basis of pre war experience, it had been estimated that the average of unemployment, taking good years and bad together, would be about 4%; in the 3½ years since November 1920 the average of unemployment has in fact been 12.1%"(ii) An expert writer, reviewing the British system of insurance in 1924, brought his treatment up to the beginning of 1924, at which time the turning-point in the great post war depression in that country was definitely past."(iii)

(i) Ibid p.4
(ii) Unemployment in its National & International Aspects (I.L.O.) p.107
(iii) Morley: Unemployment Relief in Great Britain p. XIV

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From these two examples it is apparent that accuracy in estimating the future cost of unemployment insurance is not obtainable by a superficial survey. The inadequacy of the British Fund was overcome by the expedient of Treasury Advances Although in November 1920, there was an accumulated balance of £22,200,000 this had disappeared by July 1921, and by the end of that year the Fund was in debt for £7,600,000. By March 1923 the debt had increased to £17,080,000. An improvement in the unemployment situation, and a revision of the rates of contribution enabled this to be reduced to £7,580,000 by February 1926, but by the end of that year the debt amounted to £22,040,000. This increase was due in part to the coal stoppage. Provision has been made for the Fund to borrow up to £30,000,000 from the Treasury, if necessary. "There has arisen a tendency to think of the fund as being in a hopeless financial position", says a recent writer (i), "There is no warrant for such an opinion." Surely this is an optimistic view.

The heavy demands made upon the fund were due in part to the relaxation of some of the conditions governing the receipt of benefits. "Uncovenanted benefit", now known as "extended benefit", was made payable at the discretion of the Minister of Labour, to insured workers beyond the amount to which their payment of contributions originally entitled them. This provision was virtually forced upon the system, because a vast number of the unemployed had been out of work for so long that there were no grounds on which they could be paid sustenance allowances. Almost half the payments made are in the form of "extended benefit", but this does not justify the

(i) Seymour: The British Employment Exchange p. 168

wholesale application of the term "dole" to unemployed insur- 212
ance payments. A dole is defined by dictionaries as "alms or gratuity". Even the Treasury advances are loans,not gifts,and ignoring them,four-fifths of the fund is contributed by workers and employers. Most of the recipients of benefits have, sometime in the past, paid a number of premiums into the fund. Examination of claims is not superficial and "there have been surprisingly few cases of actual fraud." (i)

The comments of an able critic are interesting:"It does not necessarily follow from the post war collapse of the national insurance that such an outcome was inevitable. The facts do not of themselves jeopardise the principle on which unemployment insurance is based. Theoretically,at least,it is manifest that lack of foresight and not extent of unemployment was the fundamental cause of the collapse...Not the tool,but the way it has been wielded,has made the work unsatisfactory."(ii)

Those who quote British experience as an argument against unemployment insurance in Australia reveal unqualified ignorance of the problems involved. Certainly the scheme needs careful planning,but that is not impossible. The statistical methods used in our own study would facilitate a better forecast than was made in Great Britain, especially as the immediate post war crisis is behind us. The institution of such a scheme is probably the most urgent piece of humanitarian legislation in this country, but it is to be hoped that it will be established under the guidance of the best expert advice. With it there must be an efficient system of labour exchanges, otherwise efficient administration would be impossible.

(i) Seymour: Ibid p. 172
(ii) Morley: Op cit. p.77

The advantages of this would undoubtedly offset the effects of diminished mobility due to the payment of benefits.

UNEMPLOYMENT IN AUSTRALIA

Appendices.

Appendix I Basic Tables

Appendix II The Accuracy of the Statistics

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Appendix I -- Basic Tables.

This appendix contains the figures upon which are based the graphs and indexes given to illustrate the text.

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Table 20

Wood, Furniture, etc.

Year 4 Qrs.	N.S.W.	Vic.	Tas.	S.A.	W. A.	Qld.
1913	0.8	13.9	0.	10.2	2.5	0.25
"	1.5	17.5	0.	10.7	3.9	3.2
"	1.1	12.7	4.6	10.8	4.8	0.8
"	0.6	6.1	7.7	13.2	0.4	0.7
1914	0.6	7.2	7.3	8.8	5.5	3.0
"	0.7	8.9	7.4	9.7	5.0	4.1
"	6.2	17.3	11.1	19.4	7.0	3.5
"	-	-	-	-	-	-
1915	3.9	25.6	17.1	32.3	18.4	9.1
"	-	-	-	-	-	-
"	-	-	-	-	-	-
"	1.4	11.7	0.	10. 5	4.4	2.3
1916	1.4	8.8	1.8	5.5	11.3	6.7
"	1.3	1.9	0.	6.1	3.3	6.1
"	1.5	3.3	1.1	4.4	3.3	1.3
"	1.7	7.5	0.7	5.5	3.7	2.7
1917	2.1	7.4	0.	4.7	3.9	2.5
"	2.2	6.4	1.6	5.3	3.1	0.
"	6.1	5.5	3.3	5.1	2.0	0.
"	15.8	7.3	4.8	1.5	4.0	0.2
1918	12.1	5.3	0.4	1.2	3.5	0.4
"	1.5	4.0	0.2	2.1	3.6	0.
"	4.2	3.6	0.6	1.4	3.5	0.
"	2.2	3.1	0.2	1.5	3.4	0.
1919	5.2	4.1	6.8	1.8	3.3	2.0
"	3.4	4.7	7.0	4.2	3.7	2.6
"	5.5	3.6	10.8	5.7	3.7	0.
"	8.5	4. 5	8.8	5.6	2.6	0.6
1920	2.9	6.5	3.5	0.6	2.2	0.
"	2.3	5.3	1.9	3.2	2.0	0.
"	1.8	5.4	0.7	2.3	2.8	0.8
"	2.8	7.3	0.4	2.7	2.8	4.3
1921	11.2	14.2	4.1	9.0	3.8	9.1
"	14.1	29.0	11.8	9.3	7.1	11.4
"	12.4	19.8	31.3	9.2	5.8	8.9
"	11.9	5.9	26.3	7.3	6.9	4.4
1922	9.5	8.1	25.2	10.9	9.5	9.8
"	9.3	8.9	25.4	6.3	18.0	1.8
"	2.2	3.1	6.4	3.8	17.6	0.9
"	1.4	1.0	5.3	2.0	9.2	2.2
1923	2.1	1.7	5.8	2.4	7.0	0.3
"	2.3	2.4	8.7	3.0	7.0	2.8
"	1.5	2.7	2.6	2.1	3.5	2.1
"	2.7	3.3	1.2	1.2	3.3	1.9
1924	3.6	2.8	1.1	1.1	3.4	3.0

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Year	(a)	(b)	(c)	(d)	(e)	(f)

Table 20 contd.

Wood, Furniture, etc.

Year	(a)	(b)	(c)	(d)	(e)	(f)
1924	3.2	3.0	3.4	1.8	3.4	0.9
"	3.4	9.6	5.9	4.4	3.5	1.6
"	3.1	17.6	3.1	3.7	3.3	1.5
1925	3.9	19.3	3.4	4.1	2.8	1.6
"	4.5	3.0	26.6	6.0	3.1	2.2
"	4.2	7.4	1.3	4.5	3.3	1.2
"	3.6	20.0	2.0	2.7	3.3	2.1
1926	1.7	18.1	43.3	0.9	8.9	2.4
"	1.5	5.7	39.1	4.4	13.1	2.0
"	1.5	2.1	59.7	4.0	13.3	3.0
"	1.4	1.0	36.5	2.1	8.9	1.7
1927	1.9	0.9	17.5	5.1	8.1	6.0
"	1.4	4.3	15.8	5.5	4.7	4.6
"	1.4	5.4	2.8	5.0	15.4	5.0
"	1.9	7.2	27.8	9.1	4.6	7.5
1928	6.5	8.7	13.9	12.1	6.9	8.8
"	4.3	8.8	18.9	13.9	13.1	7.0
"	4.5	6.2	18.0	17.3	13.3	10.3
"	4.5	7.6	25.2	22.0	15.2	8.4

Table 21

Engineering, Metals etc.

Year 4 qrs.	N.S.W.	VIC.	TAS.	S.A.	W.A.	QLD.
1913	8.99	4.04	1.9	4.1	4.1	6.72
"	8.2	6.9	4.2	4.3	3.2	5.6
"	8.5	10.3	2.0	4.6	4.2	6.2
"	7.4	9.1	1.3	3.6	3.7	3.3
1914	7.5	6.8	2.5	2.6	5.0	3.0
"	7.9	5.7	1.5	3.9	3.5	2.2
"	12.4	14.2	4.2	9.2	6.6	3.8
"	-	-	-	-	-	-
1915	4.1	14.3	3.8	9.0	7.5	5.5
"	-	-	-	-	-	-
"	-	-	-	-	-	-
"	5.9	5.1	3.5	3.2	3.9	2.8
1916	3.0	5.1	2.4	2.2	2.5	3.4
"	2.9	7.7	1.8	2.3	2.6	2.9
"	2.7	12.4	1.4	3.1	3.9	3.3
"	5.7	13.1	2.4	6.3	2.2	3.1
1917	4.6	19.0	1.9	7.3	2.7	3.0
"	4.5	17.1	1.8	6.6	2.0	3.8
"	4.6	19.2	2.1	4.1	3.5	2.5
"	6.7	26.7	1.0	4.5	4.2	3.9
1918	4.5	17.3	1.6	4.9	3.4	2.9
"	4.3	19.6	1.4	4.2	2.9	3.5
"	4.0	18.1	1.3	1.8	3.4	2.8
"	3.1	17.9	1.3	1.5	2.0	4.5
1919	4.1	14.4	1.7	2.1	2.7	4.4
"	7.9	10.9	2.1	3.3	3.3	4.4
"	4.7	7.7	0.2	3.5	6.9	5.4
"	4.9	8.5	2.1	2.6	8.1	3.6
1920	5.1	7.3	1.8	4.6	2.7	3.5
"	6.2	7.8	1.6	3.3	2.9	2.0
"	4.8	3.0	0. z	1.6	1.6	1.8
"	5.6	4.5	0.	2.1	1.7	1.7
1921	7.1	4.6	1.6	3.2	3.2	4.0
"	13.4	8.2	1.9	4.0	4.7	9.5
"	11.2	8.2	3.4	4.4	5.2	7.6
"	21.7	7.3	1.9	8.2	5.4	6.2
1922	25.3	14.1	2.9	4.2	6.5	6.5
"	17.6	17.9	3.3	3.5	7.9	3.0
"	22.8	19.5	2.3	2.5	5.9	3.2
"	22.0	1.2	3.4	2.4	19.2	3.4
1923	15.1	8.0	0.9	1.8	12.8	3.2
"	13.5	7.1	2.3	4.4	6.3	2.8
"	11.1	5.9	1.6	3.7	3.9	2.4
"	14.2	6.1	0.6	3.3	4.0	3.1

Continued on next page in column

Year	(a)	(b)	(c)	(d)	(e)	(f)

Table 21 contd

Engineering, Metals etc.

Year	(a)	(b)	(c)	(d)	(e)	(f)
1924	17.5	6.2	1.5	2.3	5.0	2.9
"	13.4	7.8	5.2	2.0	5.2	2.1
"	12.9	9.8	1.4	3.0	5.4	2.1
"	23.1	9.8	4.0	4.3	5.0	3.3
1925	22.3	9.9	5.5	2.2	3.4	2.2
"	22.3	10.5	11.9	2.9	3.2	1.9
"	8.2	8.1	9.8	4.6	4.7	2.0
"	7.0	10.8	5.0	3.7	6.3	2.4
1926	6.6	7.3	13.5	6.9	7.3	3.5
"	2.2	8.0	7.6	4.4	5.7	2.0
"	2.8	7.0	4.3	8.9	7.1	3.4
"	2.9	2.7	3.7	10.1	6.8	4.1
1927	5.6	3.7	2.4	3.2	5.0	4.4
"	3.5	4.3	2.4	5.5	3.9	6.8
"	3.8	5.5	2.2	9.2	3.3	7.6
"	7.0	10.1	2.1	16.4	4.2	9.4
1928	15.2	10.7	2.6	22.5	5.6	7.5
"	12.6	11.3	2.5	22.9	4.6	9.3
"	14.3	9.7	2.7	16.4	6.6	7.0
"	14.2	13.6	3.0	15.1	6.3	6.4

Table 22

Food, Drink Tobacco etc.

Year 4 Qrs.	N.S.W	Vic.	Tas.	S. A.	W. A.	Qld.
1913	5.9	8.8	12.5	9.7	7.4	10.3
"	5.2	12.9	18.9	10.6	9.5	8.0
"	3.5	10.3	28.0	15.0	8.9	9.2
"	3.7	5.0	16.6	9.8	5.4	7.2
1914	9.1	4.6	1.9	7.1	7.1	12.9
"	9.5	8.1	5.5	15.7	12.1	4.6
"	15.3	14.1	19.6	18.3	10.8	2.9
"	-	-	-	-	-	-
1915	6.7	15.5	22.5	20.3	13.5	32.0
"	-	-	-	-	-	-
"	-	-	-	-	-	-
"	7.7	24.7	29.5	13.1	6.8	8.4
1916	6.6	6.6	1.6	7.7	3.0	9.4
"	6.5	11.5	1.0	8.2	7.8	14.9
"	7.7	9.5	2.7	10.2	7.8	16.9
"	4.8	11.7	1.3	7.7	8.3	4.6
1917	3.1	7.2	0.8	4.0	6.7	4.2
"	5.9	12.3	0.5	3.3	4.6	1.4
"	6.6	13.1	2.8	3.9	5.0	5.3
"	5.4	16.1	2.3	3.4	3.9	3.7
1918	4.7	5.7	1.8	1.7	4.0	5.7
"	4.0	11.8	1.6	1.9	6.1	6.0
"	11 2	11.0	1.6	3.0	6.7	5.5
"	5.6	10.5	0.8	2.5	4.4	9.8
1919	13.1	4.0	0.5	1.8	5.3	5.0
"	18.5	9.9	1.6	2.9	6.6	19.7
"	7.3	5.5	15.8	4.8	9.3	10.9
"	8.6	11.2	2.0	4.0	15.5	2.6
1920	11.5	5.0	4.6	4.2	8.0	19.8
"	7.7	12.1	2.2	5.3	7.4	24.0
"	19.6	11.6	3.1	8.9	6.0	36.3
"	20.7	12.2	2.2	15.7	22.7	52.3
1921	16.2	12.3	3.4	7.6	24.4	30.8
"	19.2	8.0	5.3	9.8	24.1	25.7
"	11.7	11.0	9.5	8.9	24.9	36.3
"	14.1	10.6	5.2	9.1	16.9	29.5
1922	5.2	4.0	2.3	8.8	9. 8	24.7
"	10.4	9.3	7.2	8.9	15.1	21.5
"	11.9	7.5	5.7	13.8	14.6	35.6
"	8.8	5.7	4.2	2.8	19.5	49.4
1923	6.5	5.5	2.2	2.8	11.4	36.2
"	9.5	6.6	4.2	6.5	8.3	30.5
"	5.3	11.2	7.8	8.0	9.3	2.7
"	10.4	6.9	2.0	7.4	10.9	21.5
1924	14.6	7.3	0.7	4.1	5.8	36.5
"	17.2	7.7	8.4	5.9	8.4	10.2
"	13.8	8.7	2.2	6.3	7.7	14.6
"	15.1	11.1	2.6	12.3	12.9	10.3

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(a) (b) (c) (d) (e) (f)

Table 22 contd.
Food, Drink, Tobacco etc.

Year	(a)	(b)	(c)	(d)	(e)	(f)
1925	11.4	9.4	2.5	8.4	6.3	7.9
"	10.3	10.5	1.4	7.9	9.4	15.0
"	4.8	10.7	8.0	8.1	9.8	10.1
"	7.3	5.6	1.9	9.2	10.2	31.0
1926	1.9	8.6	2.8	5.4	8.8	50.1
"	10.2	8.0	3.2	8.7	5.7	12.2
"	6.1	7.8	1.0	10.3	13.1	29.7
"	4.4	3.4	2.9	5.9	15.1	31.6
1927	8.1	3.2	2.3	3.9	7.8	24.6
"	11.7	6.3	3.5	10.3	10.4	6.1
"	8.3	7.4	22.2	12.4	10.6	8.6
"	4.6	10.3	19.2	10.1	15.2	6.7
1928	6.5	7.9	26.5	8.3	5. 3	10.8
"	9.7	13.5	2.8	9.1	3.5	8.3
"	6.8	8.8	3.4	15.8	8.2	9.1
"	5.8	7.3	5.1	8.0	12.9	15.8

Table 23

Clothing, Hats, Boots etc.

Year 4 Qrs.	N.S.W.	Vic.	TAS.	S. A.	W. A.	Qld.
1913	8.9	7.1	4.3	1.3	2.2	8.6
"	10.6	10.3	0.3	8.8	9.0	13.7
"	10.9	6.0	3.1	2.0	6.4	12.4
"	0.8	2.5	3.2	1.6	2.8	2.4
1914	9.0	3.0	0.6	1.0	37.5	18.5
"	4.2	1.5	0.4	1.6	9.5	2.1
"	9.8	11.0	35.7	16.1	39.6	31.5
"	-	-	-	-	-	-
1915	10.2	6.8	16.0	12.0	30.2	17.8
"	-	-	-	-	-	-
"	-	-	-	-	-	-
"	1.7	1.6	17.3	2.3	7.9	31.0
1916	3.3	8.0	13.7	3.7	16.3	32.4
"	1.3	0.8	12.0	3.1	4.6	2.9
"	5.2	0.8	7.3	4.4	5.9	2.4
"	1.9	1.5	3.3	2.8	4.1	16.6
1917	3.4	3.4	1.3	8.7	22.9	11.8
"	2.1	2.5	4.7	1.7	6.4	0.
"	3.1	3.6	2.5	0.3	13.3	00.5
"	1.9	2.7	3.7	1.3	13.9	2.2
1918	3.8	0.8	5.0	2.2	1.6	2.0
"	1.8	0.7	0.	0.9	13.1	6.6
"	5.8	0.7	10.9	3.6	3.6	8.1
"	7.5	3.4	2.5	3.1	5.9	2.9
1919	12.0	6.0	3.3	8.9	7.1	7.4
"	17.1	4.3	2.0	3.7	3.4	6.4
"	7.1	2.1	36.1	2.7	5.4	12.8
"	5.6	0.7	2.8	0.8	2.2	0.5
1920	0.8	0.4	6.5	1.2	1.4	0.5
"	4.9	1.0	8.3	3.0	3.5	0.6
"	2.5	3.3	12.9	27.6	5.1	1.8
"	16.9	5.9	3.3	5.4	5.7	2.1
1921	19.3	8.7	2.0	22.8	27.8	2.0
"	7.5	6.8	9.9	24.8	11.5	6.8
"	10.5	6.5	43.1	19.9	7.2	7.5
"	2.1	1.4	16.1	3.9	2.9	4.7
1922	2.3	0.4	3.2	1.0	9.8	1.0
"	2.3	1.1	3.2	1. 9	13.0	0.4
"	2.8	2.0	2.6	1.3	10.2	0.4
"	2.0	3.2	2.0	1.1	3.7	4.1
1923	5.8	1.5	1.2	0.6	12.0	0.2
"	12.0	4.7	2.2	7.9	8.2	2.8
"	11.2	5.6	6.3	5.9	7.6	2.4
"	8.2	3.4	7.2	5.8	1.9	2.0
1924	8.1	3.2	6.1	2.1	6.2	1.1
"	8.7	6.0	4.0	3.4	4.0	7.6
"	12.9	6.3	1.0	8.2	9.4	11.7
Continued on next page in column	11.3	11.1	6.2	15.6	9.5	11.6

Year	(a)	(b)	(c)	(d)	(e)	(f)

Table 28 contd

Clothing, hats, boots etc.

Year	(a)	(b)	(c)	(d)	(e)	(f)
1925	14.9	5.1	9.5	8.9	17.2	11.3
"	13.3	3.9	13.5	12.1	14.4	14.4
"	6.8	5.4	18.7	14.0	13.0	11.4
"	3.7	1.8	6.9	2.1	7.8	11.5
1926	1.0	1.9	9.2	11.6	14.1	1.0
"	2.1	3.1	12.3	2.8	11.7	2.7
"	2.8	3.1	16.3	18.5	12.7	3.1
"	1.7	1.1	12.2	0.9	2.9	4.3
1927	4.2	3.3	9.6	9.0	3.7	3.7
"	1.9	2.0	6.5	2.6	2.2	3.7
"	5.3	3.7	14.6	5.0	2.9	2.4
"	12.6	4.2	9.3	3.4	2.8	2.5
1928	18.3	5.6	15.8	7.7	2.4	4.2
"	18.9	6.8	6.0	25.9	3.6	10.0
"	20.0	7.0	5.8	27.7	3.3	12.7
"	14.6	3.8	4.5	6.3	3.9	11.3

Table 24

Books Printing etc.

Year 4 Qrs.	N.S.W.	Vic.	Tas.	S.A.	W. A.	Qld.
1913	1.5	4.3	1.5	6.1	4.2	2.5
"	3.7	5.4	2.1	5.6	6.7	3.5
"	2.4	4.7	1.5	2.7	7.1	1.6
"	1.6	3.4	1.5	2.0	5.2	2.2
1914	3.1	4.5	5.0	3.1	7.3	2.5
"	3.5	3.6	7.5	4.3	5.5	2.8
"	5.4	4.0	4.9	3.3	9.1	4.0
"	-	-	-	-	-	-
1915	5.4	7.4	5.0	9.2	11.0	2.9
"	-	-	-	-	-	-
"	-	-	-	-	-	-
"	1.4	3.7	3.2	1.0	6.3	1.1
1916	2.2	3.7	1.6	3.6	9.1	0.8
"	2.5	3.7	2.0	2.0	6.6	1.2
"	2.5	4.0	2.0	2.3	7.3	1.5
"	1.6	4.4	2.0	2.9	5.1	2.7
1917	5.8	4.6	3.6	4.1	3.9	1.1
"	4.9	4.2	1.4	3.6	1.6	1.1
"	3.5	3.4	2.6	2.1	1.8	1.2
"	2.7	3.6	4.1	1.5	1.6	0.8
1918	3.7	4.4	4.4	3.4	3.9	0.
"	2.9	4.7	5.0	3.7	3.9	0.7
"	1.8	4.0	3.8	2.0	3.2	0.6
"	1.5	2.8	2.9	1.9	2.8	0.6
1919	2.3	7.2	2.2	2.5	3.0	1.5
"	2.4	6.6	3.7	2.3	8.4	17.5
"	1.6	3.8	12.6	1.8	3.3	0.7
"	1.2	1.6	2.2	1.3	2.0	0.6
1920	0.8	2.2	2.2	3.2	3.1	0.4
"	1.8	1.3	2.8	2.1	2.3	1.1
"	1.8	2.5	2.1	3.0	2.1	0.3
"	1.7	4.0	1.4	3.2	0.8	0.9
1921	2.7	5.7	0.	4.8	2.7	0.9
"	2.9	6.7	1.7	4.5	4.6	1. 5
"	3.1	5.1	3.8	3.1	2.2	2.1
"	1.3	2.0	1.6	2.1	4.3	1.9
1922	1.1	2.3	1.7	1.8	2.3	0.8
"	2.1	1.6	3.6	2.3	3.3	0.6
"	5.2	1.6	2.6	1.2	2.9	0.5
"	3.6	1.1	1.3	1.0	3.7	0.5
1923	2.8	1.0	0.7	1.0	2.2	1.4
"	1.3	1.2	1.3	1.5	1.7	0.6
"	1.5	1.9	1.0	1.0	1.2	0.5
"	1.7	1.1	0.9	0.8	0.6	0.4
1924	2.3	1.9	1.0	0.6	0.8	0.3
"	2.0	1.5	1.1	0.5	1.1	0.8
"	2.4	3.1	3.0	7.5	1.1	0.5
"	2.0	1.3	3.9	6.8	0.8	0.7

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(a) (b) (c) (d) (e) (f)

Table 24 contd

Books Printing etc.

Year	(a)	(b)	(c)	(d)	(e)	(f)
1925	2.2	2.0	4.9	2.8	0.1	0.5
"	2.5	4.2	8.1	0.1	1.7	0.6
"	2.9	2.9	3.6	0.9	5.3	0.7
"	2.6	1.2	3.8	0.5	2.0	1.8
1926	2.3	2.9	3.6	0.6	4.6	1.1
"	2.6	2.2	0.	0.5	3.5	0.7
"	2.4	1.5	2.9	1.3	5.7	0.7
"	1.8	0.9	1.9	0.4	3.3	1.5
1927	1.5	1.3	2.7	1.4	4.4	1.8
"	1.8	1.3	2.1	0.8	3.3	1.6
"	1.8	1.5	4.1	1.5	2.6	1.7
"	2.1	2.8	2.9	1.0	2.7	1.8
1928	2.6	3.1	2.9	2.2	2.2	2.8
"	2.2	2.8	4.7	2.9	3.1	2.4
"	2.5	4.2	3.9	2.6	2.5	1.8
"	1.9	3.1	3.3	2.0	2.8	1.6

Table 25

Other Manufacturing

Year 4 Qrs.	N.S.W.	Vic	Tas.	S. A.	W.A.	Qld.
1913	6.8	5.1	1.6	3.0	3.2	16.9
"	6.9	6.5	2.2	5.9	4.0	16.7
"	3.8	8.2	0.	6.7	3.7	4.5
"	6.2	7.4	0.8	5.3	2.0	17.0
1914	5.1	2.6	0.8	5.9	3.5	5.3
"	4.3	6.2	1.7	4.0	4.8	17.2
"	10.4	12.7	5.7	11.0	6.5	7.5
"	-	-	-	-	-	-
1915	9.3	9.9	10.5	14.4	7.5	8.0
"	-	-	-	-	-	-
"	-	-	-	-	-	-
"	4.1	3.0	6.8	5.4	3.6	17.4
1916	7.0	4.2	0.	5.6	7.8	10.3
"	3.4	6.2	11.1	15.8	6.3	9.2
"	4.1	6.5	0.5	4.1	3.4	8.5
"	5.5	8.3	2.3	3.1	4.1	6.8
1917	7.3	6.0	13.8	1.6	3.0	5.4
"	2.3	8.4	0.6	3.1	7.0	6.8
"	3.5	12.6	3.5	6.0	4.5	4.3
"	5.5	14.0	1.8	1.0	4.1	8.5
1918	3.2	2.0	0.	0.7	7.9	5.3
"	7.2	5.1	2.8	0.9	4.0	7.3
"	5.9	4.6	1.3	1.3	4.5	3.8
"	5.1	4.8	0.	1.5	2.3	8.5
1919	5.5	3.5	0.	3.9	3.3	22.4
"	10.4	6.5	0.	3.1	9.5	20.0
"	9.2	7.3	1.1	3.9	8.2	6.0
"	5.0	2.2	0.	2.0	5.9	8.1
1920	7.9	2.4	0.	0.8	2.2	1.7
"	6.5	3.2	0.5	2.9	3.3	5.3
"	5.9	8.3	1.0	1.2	3.9	3.8
"	6.3	15.5	2.5	0.7	4.8	2.0
1921	12.9	17.1	2.1	2.0	3.9	8.0
"	18.7	22.6	3.3	5.0	11.4	25.5
"	24.0	23.8	6.8	6.5	9.3	19.6
"	16.1	11.1	4.7	2.8	5.8	10.7
1922	10.2	8.9	3.8	1.4	3.4	19.8
"	18.1	12.0	2.1	1.2	13.5	7.8
"	10.9	13.0	3.8	2.9	11.7	6.8
"	13.0	5.2	9.9	2.6	5 .1	7.1
1923	14.0	4.9	1.3	2.0	4.7	7.1
"	13.1	9.0	4.4	4.3	6.2	3.4
"	16.7	7.9	1.0	3.3	6.8	5.6
"	9.8	11.0	2.0	1.4	5.2	7.9
1924	13.4	7.9	5.1	1.4	6.9	5.3
"	14.0	12.3	6.6	1.0	6.6	5.1
"	14.2	13.7	9.7	14.1	6.9	7.2
					5.6	9.6

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(a) (b) (c) (d) (e) (f)

Table 25 contd.

Other manufacturing.

Year	(a)	(b)	(c)	(d)	(e)	(f)
1925	15.3	10.6	24.1	1.5	9.6	6.1
"	23.5	17.5	37.5	5.1	14.1	19.9
"	2.0	17.3	22.9	4.7	13.8	25.4
"	13.9	11.8	55.5	2.1	4.2	18.1
1926	13.5	12.0	19.5	1.7	4.5	8.9
"	26.1	13.5	13.9	2.8	4.8	15.2
"	20.8	17.8	9.0	4.6	10.1	5.6
"	17.3	4.9	8.3	2.0	5.6	17.6
1927	9.9	6.4	0.	1.3	7.0	7.2
"	11.0	12.1	2.3	3.4	5.4	6.1
"	15.3	21.7	6.5	9.5	11.6	9.8
"	20.1	15.6	3.9	5.0	10.3	7.7
1928	18.6	20.6	8.7	8.1	9.3	9.2
"	19.3	22.7	33.3	11.1	14.7	11.6
"	19.5	21.5	13.0	12.1	11.4	8.3
"	18.2	23.3	5.3	6.1	13.2	7.8

Table 26

Building

Year 4 Qrs.	N.S.W.	Vic	Tas.	S.A.	W.A	Qld.
1913	6.6	14.0	5.2	4.0	5.3	6.4
"	5.3	15.4	7.8	6.4	9.0	6.9
"	6.1	12.3	9.7	12.4	8.6	6.0
"	1.4	4.5	3.5	9.8	5.2	4.7
1914	1.9	4.7	7.4	6.8	4.3	4.9
"	2.0	1.8	4.6	6.7	1.9	4.2
"	6.1	8.3	6.9	11.6	20.8	4.5
"	-	-	-	-	-	-
1915	11.3	21.9	17.2	20.9	29.2	10.4
"	-	-	-	-	-	-
"	-	-	-	-	-	-
"	10.3	7.7	8.5	8.3	13.8	10.7
1916	8.4	9.4	2.7	11.6	12.4	9.0
"	9.8	10.5	0.	10.3	15.5	6.9
"	6.6	12.3	2.0	11.2	14.0	8.6
"	5.8	15.8	1.7	8.9	18.4	9.2
1917	8.9	15.4	2.9	9.1	20.0	11.8
"	8.2	16.9	3.8	7.3	8.6	10.0
"	9.9	15.8	4.1	5.8	15.5	8.5
"	6.9	11.0	1.7	5.6	9.1	6.8
1918	5.7	7.2	5.0	3.4	1.0	3.7
"	2.9	6.1	0.4	5.0	5.4	2.3
"	2.8	3.7	0.	3.1	13.5	2.8
"	2.6	3.1	0.	3.7	7.1	3.1
1919	2.8	3.4	0.2	2.9	9.0	5.2
"	3.1	2.9	0.2	3.9	4.5	6.7
"	3.0	3.4	1.6	3.9	10.3	7.5
"	2.5	3.3	0.2	2.2	7.2	2.3
1920	1.8	11.1	0.3	2.0	0.7	3.5
"	2.1	4.4	0.8	2.6	1.3	2.2
"	1.7	4.1	0.7	2.7	2.4	2.2
"	2.1	2.5	0.2	1.4	2.5	2.1
1921	3.3	5.6	0.5	2.1	10.1	9.1
"	5.5	7.8	3.8	4.6	7.9	8.3
"	6.3	8.3	14.0	6.7	10.1	11.7
"	5.7	4.0	3.4	2.4	8.8	11.5
1922	5.2	4.9	1.7	4.5	8.6	8.3
"	3.9	5.3	1.1	3.3	4.4	6.6
"	4.3	4.4	1.7	3.3	2.8	3.1
"	1.6	3.7	1.6	3.2	5.0	2.6
1923	1.7	4.2	1.4	2.5	1.8	2.6
"	1.5	4.4	0.3	5.7	1.9	2.0
"	2.7	3.6	1.2	6.0	5.9	3.0
"	1.8	4.0	0.3	0.4	2.5	3.3
1924	3.2	5.3	1.5	0.8	3.2	2.8
"	3.6	6.5	4.8	0.5	4.8	4.2
"	3.4	7.1	14.4	3.6	9.9	3.6
"	3.9	9.0	4.5	2.7	7.4	2.4

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(a) (b) (c) (d) (e) (f)

Table 26contd.

Building

Year	(a)	(b)	(c)	(d)	(e)	(f)
1925	4.4	9.8	7.8	3.0	6.5	3.0
"	4.4	15.1	9.5	3.1	5.2	3.8
"	4.5	18.1	9.6	2.8	7.5	3.6
"	3.1	7.4	9.6	4.0	5.9	2.9
1926	2.8	8.7	9.0	5.8	3.2	2.5
"	3.8	9.4	18.0	3.5	2.6	3.2
"	3.5	10.0	18.6	4.3	4.6	3.9
"	2.2	9.6	9.0	3.6	1.4	3.1
1927	3.6	10.2	8.2	5.3	1.3	0.7
"	2.8	14.6	2.5	5.0	1.2	3.1
"	3.4	9.7	4.6	10.9	3.6	5.4
"	3.9	16.2	10.4	15.8	1.2	6.9
1928	5.1	18.0	26.2	16.0	3.9	9.7
"	5.7	21.6	27.8	16.1	3.7	6.6
"	4.0	17.7	12.0	20.7	3.4	7.6
"	4.4	11.1	11.1	17.0	1.8	7.4

Table 27

Mining, Quarrying etc.

Year 4 Qrs.	NSW.	Vic.	Tas	S.A.	W.A.	Qld.
1913	9.5	6.4	0.	10.7	7.0	4.6
"	8.4	4.9	6.1	9.2	9.5	3.1
"	9.0	7.2	4.4	13.5	8.1	3.5
"	8.6	11.9	0.6	14.7	8.8	3.5
1914	12.6	9.1	1.3	14.4	16.2	4.1
"	9.3	8.0	8.7	12.8	8.2	3.4
"	7.2	10.3	25.7	20.3	7.3	3.0
"	-	-	-	-	-	-
1915	13.7	22.6	2.0	9.5	10.8	11.5
"	-	-	-	-	-	-
"	-	-	-	-	-	-
"	10.3	6.1	3.0	6.1	5.4	8.9
1916	13.3	7.4	5.7	6.3	4.8	9.0
"	5.6	7.0	2.9	1.4	4.2	3.8
"	3.6	6.2	3.5	6.9	6.7	3.3
"	4.0	13.0	2.0	4.0	5.0	3.3
1917	5.3	5.2	5.7	2.8	6.6	2.9
"	5.2	4.9	3.3	13.5	4.1	2.9
"	1.2	8.5	3.7	5.7	5.1	1.2
"	7.9	7.0	0.0	3.8	5.9	7.5
1918	7.5	6.1	10.0	4.2	5.9	1.5
"	12.7	5.1	1.3	8.0	7.9	19.4
"	16.4	6.2	0.2	4.3	6.3	6.7
"	6.4	4.7	3.0	2.8	7.7	4.7
1919	5.3	6.2	3.4	4.6	8.2	5.1
"	5.9	11.2	5.0	5.3	6.6	17.6
"	7.0	8.1	3.2	5.5	8.9	1.6
"	5.0	5.6	0.6	9.8	12.3	10.5
1920	5.3	9.5	4.9	11.1	5.6	2.5
"	3.4	7.5	2.0	17.6	4.9	15.8
"	2.7	5.6	2.6	5.7	3.5	6.8
"	5.4	9.4	7.8	4.1	7.0	5.0
1921	16.0	11.3	10.4	53.7	12.3	5.0
"	2.8	10.2	19.3	61.8	8.7	22.5
"	4.9	10.3	15.0	43.0	14.1	24.1
"	12.4	10.0	31.5	41.7	13.4	23.1
1922	9.1	10.3	29.6	52.5	14.6	15.0
"	13.4	10.1	13.6	83.2	27.8	13.6
"	6.9	5.0	13.5	87.2	29.3	13.4
"	13.4	10.8	1.1	31.0	16.7	15.9
1923	12.7	9.5	8.3	27.8	9.9	4.3
"	4.1	7.2	7.7	14.4	9.6	8.7
"	5.7	9.4	8.3	1.6	7.4	9.5
"	4.0	8.0	2.4	100.0	7.7	11.9
1924	8.9	9.0	2.5	75.9	9.7	27.3
"	9.8	6.2	7.2	25.3	7.2	16.7
"	14.2	13.1	1.5	18.8	7.8	8.3
"	9.9	8.2	3.1	6.3	8.0	10.4

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(a) (b) (c) (d) (e) (f)

Table 27 contd.

Mining, Quarrying etc.

Year	(a)	(b)	(c)	(d)	(e)	(f).
1925	8.9	3.9	0.5	6.3	7.1	12.5
"	9.6	15.0	4.7	5.0	3.7	6.3
"	7.1	7.2	1.5	3.7	5.6	8.3
"	6.9	12.0	3.8	6.7	4.1	8.3
1926	9.4	13.4	13.1	12.5	6.9	17.2
"	3.9	7.3	10.9	6.7	2.8	17.2
"	4.7	10.9	3.2	10.5	4.6	17.4
"	5.1	9.2	3.0	10.2	3.3	17.4
1927	11.9	7.3	2.0	15.3	4.8	8.0
"	10.3	6.0	6.8	45.9	4.0	20.0
"	8.6	7.5	5.6	30.6	4.4	8.0
"	21.2	9.9	4.1	51.0	6.7	15.4
1928	23.5	13.0	6.9	55.6	6.9	23.5
"	18.2	7.3	17.1	47.8	5.2	9.4
"	20.8	17.2	11.3	66.7	6.5	10.0
"	16.1	15.3	16.6	75.0	4.9	12.1

Table 28

Land Transport, Other than Railway & Tramway Services

Year 4 Qrs.	N.S.W.	Vic.	Tas.	S.A.	W.A.	Qld.
1913	0.7	2.5	3.7	4.1	6.0	1.8
"	1.4	2.8	1.2	3.8	2.6	2.7
"	0.4	3.1	4.5	10.6	3.2	1.6
"	1.1	2.6	4.8	3.2	1.5	1.6
1914	6.1	1.2	5.8	2.1	4.8	1.9
"	5.7	2.9	10.4	4.5	5.1	2.0
"	3.0	3.6	26.2	9.9	4.5	5.8
"	-	-	-	-	-	-
1915	1.9	10.3	24.0	9.6	4.0	4.2
"	-	-	-	-	-	-
"	-	-	-	-	-	4.2
"	1.4	6.1	5.5	3.0	5.6	2.4
1916	1.4	5.9	2.2	2.5	2.4	2.9
"	1.5	9.0	2.4	2.3	2.8	2.0
"	1.7	9.5	6.3	3.1	-	3.9
"	2.1	10.7	4.4	2.0	1.8	2.7
1917	6.9	7.6	4.5	7.5	1.4	5.8
"	0.9	10.9	0.7	2.6	1.6	2.6
"	3.5	5.9	6.9	5.0	6.7	5.4
"	1.3	6.5	6.2	1.9	0.	4.9
1918	4.4	4.7	4.9	0.9	1.6	3.8
"	3.0	5.0	3.8	2.2	8.9	1.6
"	1.3	4.1	5.0	1.7	7.8	2.2
"	0.7	4.9	0.9	0.8	-	3.2
1919	1.1	4.5	3.8	1.7	3.6	4.7
"	1.5	7.9	3.5	2.3	3.4	2.9
"	1.8	5.6	16.8	1.1	7.8	3.3
"	2.1	4.4	1.9	2.9	2.7	4.9
1920	1.5	9.0	3.2	3.2	3.8	3.5
"	2.7	4.3	3.1	0.7	1.8	6.2
"	1.9	5.4	4.0	3.9	3.1	12.9
"	3.0	2.6	4.0	4.7	1.9	9.5
1921	1.9	4.3	4.8	1.4	3.2	6.6
"	4.8	3.7	7.7	1.4	4.6	9.0
"	23.0	3.1	10.7	7.0	6.9	5.3
"	3.2	1.8	8.5	7.1	3.6	4.0
1922	7.8	4.8	9.5	1.2	3.1	2.9
"	4.5	4.1	5.8	1.1	11.1	2.9
"	4.7	3.0	8.1	0.6	2.8	5.6
"	2.6	1.6	7.0	5.2	2.8	2.4
1923	11.8	2.2	5.7	6.3	4.0	2.3
"	11.8	4.7	6.8	5.8	3.7	1.5
"	12.1	3.7	5.5	5.8	4.7	2.1
"	4.0	2.4	2.1	6.6	4.4	2.2
1924	4.0	2.4	4.5	2.2	3.9	2.9
"	7.3	4.1	4.5	4.2	4.5	2.0
"	2.4	5.4	7.8	5.2	5.6	2.5
"	16.6	4.3	8.7	4.5	4.2	

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(a) (b) (c) (d) (e) (f)

Table 28 contd.

Land Transport, Other than Tramway & Railway Services

Year	(a)	(b)	(c)	(d)	(e)	(f)
1925	8.0	7.1	6.0	3.2	4.1	2.3
"	8.7	4.8	13.5	3.5	5.4	7.3
"	6.5	4.0	12.0	1.4	7.4	3.7
"	8.5	2.6	5.4	1.2	5.2	3.0
1926	5.3	3.3	10.1	7.2	6.5	2.6
"	-	4.6	12.2	3.6	6.0	1.8
"	6.0	3.7	9.7	1.3	7.5	1.9
"	4.6	2.8	6.8	3.3	7.0	2.3
1927	3.8	2.7	5.4	1.3	6.5	3.1
"	4.7	6.6	4.9	4.2	7.5	3.1
"	5.6	5.3	7.7	13.2	7.3	4.6
"	5.7	5.6	3.8	11.3	5.8	4.6
1928	3.9	7.3	7.1	13.4	6.4	4.9
"	5.5	5.6	2.3	22.1	6.4	3.9
"	7.6	5.4	5.7	23.0	8.0	3.8
"	5.0	5.2	8.3	24.3	6.9	3.9

Table 29

All Groups

Year 4 Qrs	NSW.	Vic.	Tas.	S.A	W.A.	Qld.
1913	6.5	7.0	3.2			
"	6.4	8.5	4.3	5.6	5.0	6.6
"	5.6	8.3	6.6	8.8	6.5	6.6
"	4.5	5.8	4.9	10.4	7.1	5.1
1914	6.4	4.9	3.7	8.7	4.7	4.4
"	5.8	5.2	6.0	5.4	8.2	5.7
"	9.3	11.3	13.4	7.3	6.3	4.3
"	-	-	-	13.6	9.2	14.3
"	-	-	-	-	-	-
1915	8.3	14.6	12.0	14.2	12.9	17.9
"	-	-	-	-	-	-
"	-	-	-	-	-	-
"	5.5	7.9	8.6	5.4	6.3	10.0
1916	5.7	5.8	4.7	4.6	6.6	7.5
"	4.4	6.7	3.1	5.1	6.2	4.9
"	3.9	7.5	3.7	4.9	6.2	4.2
"	5.7	9.1	2.4	4.7	5.9	6.7
1917	6.5	9.0	3.6	5.1	5.5	10.6
"	5.5	9.4	2.1	4.9	4.1	5.1
"	5.9	11.4	3.4	3.5	5.6	4.9
"	6.4	10.6	2.8	2.6	5.1	7.5
1918	5.0	6.1	3.4	2.8	5.0	8.0
"	4.9	7.3	2.0	2.9	5.4	10.4
"	6.5	6.4	2.6	2.7	5.3	7.0
"	3.6	6.2	1.7	2.2	4.2	11.6
1919	5.6	6.0	4.0	3.5	5.7	12.4
"	8.4	7.2	3.3	6.4	5.4	14.2
"	5.6	5.2	3.9	6.7	6.8	9.3
"	5.0	4.3	3.6	4.2	6.5	8.5
1920	5.5	4.5	3.6	4.4	3.7	10.5
"	5.5	5.6	2.4	4.1	3.4	13.0
"	5.2	5.3	3.1	5.9	3.8	13.4
"	6.9	7.3	3.0	5.1	4.8	16.3
1921	13.7	8.7	4.8	7.9	8.9	15.5
"	13.5	9.8	10.3	9.1	8.3	21.8
"	12.3	10.2	15.7	8.5	9.2	13.5
"	11.9	11.3	16.7	6.1	8.0	11.3
1922	11.1	6.2	13.7	6.6	8.5	11.1
"	11.4	7.8	10.4	6.4	11.4	7.7
"	11.9	7.4	6.7	6.6	11.1	8.6
"	11.4	5.2	3.9	3.3	8.9	12.4
1923	10.2	4.4	4.2	2.7	6.9	8.0
"	8.8	5.7	4.9	4.9	2.2	7.3
"	9.3	6.4	3.9	4.6	5.8	6.6
"	8.4	5.2	2.0	6.1	3.8	6.3
1924	10.6	5.1	2.1	3.8	4.8	10.0
"	11.9	6.4	4.8	4.4	4.8	5.5
"	13.5	7.8	4.2	5.4	6.1	5.3
"	14.3	9.1	3.8	4.9	6.1	4.9

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a b c d e f

Table 29 contd.

All Groups

Year	(a)	(b)	(c)	(d)	(e)	(f)
1925	13.2	7.7	5.5	3.6	5.8	5.1
"	12.7	9.8	11.3	4.8	6.1	6.5
"	7.8	9.9	9.3	5.1	6.9	5.4
"	10.1	7.1	5.6	3.6	5.5	9.2
1926	8.4	7.3	13.6	5.0	6.9	12.8
"	7.5	7.1	14.2	4.4	6.7	4.3
"	7.4	7.3	15.0	6.6	9.2	8.3
"	6.2	4.2	12.6	4.4	5.8	8.5
1927	7.0	4.9	6.2	3.7	5.3	6.5
"	6.8	6.8	6.8	5.6	4.4	5.5
"	5.3	8.1	11.2	8.9	7.1	5.5
"	9.1	9.8	10.1	10.7	4.9	6.2
1928	11.8	10.6	13.3	13.1	5.2	7.7
"	10.9	12.2	10.7	16.1	9.5	7.1
"	11.9	11.2	8.2	17.6	8.8	6.8
"	10.6	9.6	10.0	13.3	9.2	6.4

Table 32 Commonwealth.

Wood, Furniture etc.

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
1913	5.1	78	----
"	7.0	106	0.18
"	6.2	95	0.08
"	3.6	55	-0.25
1914	4.4 2.2	67	-0.30
"	4.9 1.7	75	0.30
"	10.4 3.8	159	1.36
"	15.7 4.1	241	1.96
1915	15.1 8.5	232	2.64
"	15.9 9.3	245	2.19
"	10.7 4.1	165	1.55
"	6.4 .2	100	0.64
1916	6.0 .6	93	-0.11
"	2.4 4.2	37	-0.47
"	2.5 4.1	39	-0.59
"	4.2 2.4	65	-0.52
1917	4.3 2.3	67	-0.29
"	4.1 2.5	67	-0.14
"	5.9 .7	92	0.44
"	10.1 3.5	42	0.63
1918	7.4 .8	116	0.42
"	2.3 4.3	36	-0.26
"	3.4 3.2	53	-0.69
"	2.3 4.3	36	-0.53
1919	4.6 2.0	72	-0.39
"	4.3 2.3	68	-0.14
"	5.0 1.6	79	-0.01
"	6.1 .5	96	-0.17
1920	3.5 3.8	55	-0.28
"	3.2 4.1	51	-0.57
"	2.9 4.4	46	-0.44
"	4.4 2.9	70	0.02
1921	9.2 1.9	146	1.44
"	16.3 10.4	259	2.23
"	14.1 10.2	225	3.34
"	9.9 4.9	158	1.68
1922	10.2 4.3	163	1.47
"	11.2 5.3	179	1.05
"	5.3 0.6	86	0.62
"	2.7 3.2	43	-0.48
1923	3.0 2.9	48	-0.60
"	3.5 2.4	56	-0.63
"	2.3 3.6	37	-0.63
"	2.7 3.2	44	-0.79
1924	2.8 3.8	45	-0.64
"	3.2 2.7	52	-0.36
"	5.6 0.3	91	-0.10
"	7.0 1.1	114	0.23
1925	7.8 1.9	126	0.26
"	5.3 0.6	86	0.19
"	4.3 1.6	70	0.07
"	8.0 2.1	69	-0.04
1926	6.9 1.1	113	0.11
"	5.1 0.8	85	0.16
"	4.7 1.2	79	-0.14
"	3.4 2.5	56	-0.45
1927	3.1 2.8	51	-0.53
"	3.2 2.7	53	-0.37
"	5.1 .8	84	-0.01
"	6.3 .4	104	0.39
1928	8.3 2.4	137	0.86
"	9.3 3.4	155	1.18
"	9.6 3.7	159	1.38
"	9.9 4.0	164	----

14.0

14.0

4)213.3
9)53.325
5.9

Average σ

War: 6.6. 4.0

Post war: 5.9 — 3.7

29.4 = 23.5 dev.
3.7

Table 33 Commonwealth

Engineering, Metalworks, etc.

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
1913	6.5	97	----
"	6.9	102	0.29
"	8.2	120	0.32
"	7.1	103	0.21
1914	6.3	91	-0.06
"	6.2	89	0.48
"	11.7	166	1.17
"	12.8	180	1.34
1915	8.1	113	0.64
"	5.8	80	-0.26
"	4.2	58	-0.45
"	4.3	58	-0.96
1916	3.5	47	-1.01
"	4.2	56	-0.82
"	5.6	75	-0.45
"	7.2	95	-0.04
1917	8.5	112	0.15
"	7.9	103	0.31
"	8.3	108	0.55
"	11.2	144	0.48
1918	7.5	96	0.37
"	7.8	99	-0.03
"	6.8	86	-0.12
"	6.7	84	-0.28
1919	6.5	81	-0.34
"	6.7	83	-0.50
"	5.4	66	-0.52
"	5.6	68	-0.77
1920	5.3	64	-0.71
"	5.7	68	-0.85
"	3.6	43	-1.04
"	3.3	39	-1.10

17.9

Year	%age Unemployed	Ratio to trend	Index of cyclical fluctuations.
1921	5.4	64	-0.54
"	10.2	119	0.03
"	9.0	104	0.82
"	14.4	166	1.44
1922	17.7	203	1.86
"	14.1	161	2.13
"	17.2	195	1.92
"	15.6	175	1.56
1923	10.6	118	0.83
"	9.5	105	0.19
"	7.7	85	0.10
"	9.3	102	0.14
1924	10.9	118	0.23
"	9.2	100	0.29
"	9.6	103	0.67
"	15.6	167	1.10
1925	14.9	159	1.55
"	15.6	165	0.89
"	7.0	74	0.26
"	7.5	78	-0.52
1926	6.5	68	-0.75
"	4.7	48	-0.93
"	4.7	48	-1.15
"	3.9	40	-1.17
1927	4.7	48	-1.29
"	4.3	43	-1.11
"	5.0	50	-0.81
"	8.7	87	-0.13
1928	13.5	134	0.42
"	12.5	124	0.73
"	12.2	120	0.59
"	12.9	116	----

4|342.5
9|85.6
9.5

6|159.8
4|26.6
6.6

4|158.8
6|39.7
6.6

War = 6.6. 2.3.

Post War: 9.5 4.4

Table 34 Commonwealth

Food, Drink, Tobacco, etc.

Year	%age Unemployed.	Ratio to trend	Index of cyclical fluctuations
1913	7.7	73	----
"	10.5	100	0.05
"	9.0	86	-0.34
"	5.6	53	-0.70
1914	6.5	62	-0.57
"	8.7	83	0.10
"	13.3	127	0.46
"	12.3	117	1.14
1915	15.8	150	1.67
"	16.4	156	2.72
"	24.1	229	2.52
"	15.2	145	1.56
1916	6.4	61	0.36
"	8.9	85	-0.24
"	8.8	84	-0.32
"	7.6	72	-0.68
1917	4.9	47	-0.72
"	6.7	64	-0.57
"	9.0	86	-0.31
"	9.7	92	-0.48
1918	4.7	45	-0.54
"	6.7	64	-0.54
"	9.6	91	-0.49
"	7.2	69	-0.47
1919	6.7	64	0.03
"	13.1	125	0.01
"	6.9	66	0.18
"	10.8	100	-0.26
1920	8.5	81	0.33
"	11.2	107	0.96
"	17.0	162	1.87
"	20.2	192	2.31
	230.0		
	55.0		
	9.1		

Year	%age Unemployed.	Ratio to trend	Index of cyclical fluctuations.
	56.9		
1921	15.8	150	2.26
"	14.8	141	i.73
"	14.4	137	1.38
"	14.1	134	0.70
1922	7.4	70	0.57
"	11.3	108	0.42
"	12.4	118	0.68
"	12.1	115	0.45
1923	8.7	83	0.36
"	9.8	93	0.23
"	10.6	101	0.12
"	9.6	91	0.35
1924	12.0	114	0.52
"	10.7	102	0.65
"	10.8	103	0.52
"	12.6	120	0.45
1925	9.6	93	0.69
"	10.6	101	0.15
"	7.9	75	0.07
"	10.9	104	0.39
1926	13.8	131	0.70
"	9.4	90	0.80
"	11.9	113	0.20
"	9.5	90	0.08
1927	8.0	76	-0.04
"	8.9	85	-0.05
"	9.2	88	-0.21
"	8.3	79	-0.22
1928	8.6	82	0.01
"	10.0	95	0.08
"	8.9	85	-0.24
"	7.2	69	----
	387.1		
	96.9		
	10.8.		

Wgt: 9.1 — σ 3.5

Position 10.8 — 3.1

Table 35 Commonwealth

Clothing, Hats, Boots, etc.

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
1913	7.4	137	----
"	10.3	191	1.27
"	8.2	152	0.70
"	1.8	33	0.30
1914	7.1	132	-0.13
"	2.9	54	0.82
"	12.9	239	1.34
"	10.3	191	1.99
1915	9.8	182	1.28
"	5.0	93	0.85
"	8.3	154	0.33
"	3.7	68	0.16
1916	4.4	81	-0.45
"	1.4	26	-0.77
"	2.7	50	-0.77
"	2.9	54	-0.54
1917	4.5	83	-0.42
"	2.4	44	-0.56
"	3.5	66	-0.43
"	4.2	77	-0.42
1918	3.4	64	-0.47
"	1.7	32	-0.83
"	2.8	51	-0.57
"	4.3	80	-0.04
1919	7.5	139	0.57
"	6.9	128	0.33
"	4.1	76	-0.14
"	1.7	32	-0.93
1920	0.7	13	-0.99
"	2.0	37	-0.87
"	4.8	89	0.02
"	7.3	135	1.10
1921	12.8	237	1.65
"	8.4	156	1.60
"	8.8	163	0.59
"	2.1	39	-0.28
1922	1.5	28	-0.88
"	1.9	35	-1.12
"	2.4	44	-0.77
"	2.6	48	-0.82
1923	2.6	48	-0.23
"	6.3	117	0.00
"	6.6	122	0.35
"	4.2	78	0.02
1924	4.4	81	0.15
"	6.3	117	0.57
"	8.0	148	1.29
"	11.4	211	1.39
1925	7.8	152	1.42
"	6.8	126	0.73
"	7.1	131	0.35
"	3.3	61	-0.20
1926	2.8	52	-0.47
"	3.3	61	-0.52
"	4.7	87	-0.49
"	1.6	30	-0.50
1927	4.1	76	-0.62
"	2.2	41	-0.53
"	4.4	81	-0.46
"	6.4	118	0.19
1928	9.1	168	1.14
"	11.6	214	1.33
"	12.3	228	1.56
"	7.4	137	----

War 6.4 — 3.3

Postwar 5.6 — 3.1

Table 36 Commonwealth

Books, Printing, etc.

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
1913	3.2	80	----
"	4.8	121	-0.30
"	3.5	89	-0.26
"	2.5	64	-0.18
1914	3.8	99	-0.27
"	3.7	97	0.19
"	4.9	130	1.03
"	6.4	171	1.86
1915	6.5	176	1.90
"	5.6	153	0.96
"	2.9	80	0.15
"	2.4	67	-0.36
1916	3.0	85	-0.45
"	3.1	88	-0.39
"	3.1	89	-0.18
"	3.0	87	0.39
1917	4.7	138	0.47
"	3.9	116	0.36
"	3.0	90	0.11
"	2.8	90	0.18
1918	3.6	111	0.19
"	3.5	109	-0.03
"	2.6	82	-0.29
"	2.0	61	0.01
1919	4.0	129	0.86
"	5.9	193	0.97
"	2.7	89	0.38
"	1.3	43	-0.77
1920	1.6	54	-1.24
"	1.6	55	-1.14
"	2.0	70	-0.61
"	2.6	92	0.25
1921	3.8	136	0.76
"	4.4	145	1.01
"	3.7	136	0.61
"	1.9	71	-0.01
1922	1.6	63	-0.78
"	1.8	69	-0.51
"	2.9	117	-0.18
"	2.0	79	-0.03
1923	1.8	72	-0.81
"	1.2	49	-1.10
"	1.5	62	-1.10
"	1.2	51	-0.77
1924	1.7	73	-0.90
"	1.5	65	-0.63
"	2.2	97	-0.59
"	1.5	68	-0.21
1925	1.8	83	-0.07
"	2.8	131	0.29
"	2.6	123	0.52
"	1.8	87	-0.18
1926	2.4	118	0.48
"	2.1	155	0.59
"	1.9	97	0.42
"	1.4	78	-0.10
1927	1.6	85	-0.36
"	1.6	83	-0.36
"	1.7	94	0.10
"	2.2	114	0.90
1928	2.8	162	1.27
"	2.6	154	1.80
"	3.1	188	1.87
"	2.4	149	----

4)88.4
6)22.1
3.7

4)77.3
9)19.3
2.1

War 3.7 1.3
Conflict 2.1 — .7

Table 37 Commonwealth

Other Manufacturing.

Year	%age Unem-ployed.	Ratio to trend.	Index of cyclical fluctua-tions.
1913	5.9	115	----
"	6.6	125	0.53
"	5.3	98	0.38
"	6.5	117	-0.02
1914	4.1	72	-0.02
"	5.4	92	0.81
"	10.7	178	1.50
"	9.7	157	2.31
1915	9.7	154	1.53
"	7.6	118	0.92
"	6.7	102	-0.25
"	4.2	62	-0.42
1916	6.0	87	-0.57
"	5.8	82	-0.52
"	5.3	74	-0.68
"	6.4	87	-0.50
1917	6.1	82	-0.48
"	5.3	70	-0.55
"	6.8	88	-0.50
"	8.0	101	-0.71
1918	2.9	36	-0.81
"	5.9	72	-1.29
"	5.0	60	-1.22
"	4.9	59	-1.20
1919	5.0	58	-1.04
"	8.5	67	-0.93
"	8.0	90	-1.11
"	3.8	42	-1.18
1920	5.1	55	-1.55
"	4.7	50	-1.35
"	6.4	67	-0.59
"	10.0	134	0.44
1921	12.6	128	1.81
"	19.0	191	2.60
"	21.3	208	2.47
"	12.4	121	1.34
1922	9.0	67	0.63
"	13.8	132	0.32
"	10.7	100	0.07
"	8.5	79	-0.34
1923	8.7	79	-0.39
"	10.0	90	-0.25
"	11.0	98	-0.43
"	8.9	78	-0.35
1924	9.4	81	-0.22
"	12.2	104	0.47
"	17.6	148	0.79
"	15.0	125	0.91
1925	12.0	99	0.98
"	18.2	52	0.98
"	16.4	68	0.97
"	10.9	77	0.41
1926	10.4	82	0.36
"	15.4	121	0.32
"	15.1	116	0.03
"	9.4	71	-0.59
1927	6.6	50	-1.03
"	8.8	65	-0.63
"	15.3	120	-0.15
"	14.6	106	0.57
1928	16.0	115	0.71
"	17.9	127	0.82
"	17.5	123	0.63
"	16.2	112	----

4 | 152.8
6 | 38.2
6.4

4 | 445.0
9 | 111.25
12.4

Ave = 6.4 2%
Position = 12.4 4.3

Table 38 Commonwealth

Building.

Year	%age Unemployed	Ratio to trend	Index of cyclical fluctuations.
1913	9.1	152	----
"	9.8	160	1.64
"	9.1	144	0.86
"	3.9	59	-0.23
1914	3.8	54	-1.34
"	2.5	31	-1.10
"	7.9	92	-0.12
"	12.9	141	1.29
1915	17.3	178	1.36
"	10.0	99	0.86
"	10.5	99	0.10
"	9.5	88	-0.70
1916	9.3	86	-0.11
"	10.0	95	-0.11
"	9.8	97	0.24
"	10.6	108	0.54
1917	11.9	130	0.93
"	11.3	136	1.25
"	11.7	150	1.30
"	8.3	112	0.77
1918	6.0	86	-0.70
"	4.2	65	-0.79
"	3.5	58	-1.00
"	2.8	51	-1.02
1919	3.5	67	-0.88
"	3.6	73	-0.61
"	4.1	87	-0.53
"	2.8	62	-0.27
1920	4.7	104	-0.49
"	2.8	64	-0.61
"	2.6	59	-1.04
"	2.1	47	-0.60

Year	%age Unemployed	Ratio to trend	Index of cyclical fluctuations.
	12.2		
1921	5.0	113	0.17
"	6.6	147	1.59
"	8.6	191	1.75
"	5.2	116	1.47
1922	5.5	122	0.57
"	4.5	100	0.22
"	4.0	89	-0.30
"	2.6	57	-0.76
1923	2.7	57	-1.02
"	2.9	62	-0.86
"	3.5	73	-0.73
"	2.8	57	-0.77
1924	3.6	62	-0.62
"	4.9	98	-0.29
"	5.1	100	-0.24
"	5.6	108	0.39
1925	6.2	117	0.91
"	8.4	153	1.44
"	9.4	165	1.24
"	5.0	84	0.53
1926	5.2	85	-0.22
"	5.7	89	-0.24
"	6.1	91	-0.28
"	4.8	68	-0.42
1927	5.9	81	-0.45
"	6.7	88	-0.33
"	6.9	87	0.21
"	10.0	122	0.64
1928	11.7	136	1.16
"	12.6	140	1.04
"	11.2	119	0.71
"	8.7	89	----

4|188.1
6|47.0
7.8

4|209.9
9|52.5
5.8

WM = 7.8 4.00

Portfolio = 5.8 - 2.7

Table 39 Commonwealth.

Mining, Quarrying etc.

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
1913	8.1	112	----
"	7.7	105	0.29
"	8.2	110	0.57
"	8.8	117	0.79
1914	11.8	156	0.85
"	8.9	116	0.76
"	8.3	107	0.55
"	8.2	105	0.80
1915	13.8	170	1.31
"	12.9	162	1.26
"	8.2	102	0.91
"	8.4	103	0.36
1916	10.4	127	-0.01
"	5.0	60	-0.46
"	4.6	55	-0.84
"	5.1	60	-0.77
1917	5.3	62	-0.74
"	5.0	58	-0.62
"	6.5	75	-0.45
"	7.4	84	-0.44
1918	7.7	87	0.07
"	11.6	130	0.52
"	12.2	135	0.57
"	5.9	65	-0.26
1919	6.0	65	-0.54
"	9.6	104	-0.54
"	10.2	109	-0.15
"	6.3	67	0.12
1920	8.0	84	-0.79
"	5.3	55	-1.09
"	3.5	36	-1.04
"	6.0	62	-0.37

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
	22.8		
1921	15.2	155	0.06
"	9.4	95	0.96
"	16.3	163	1.17
"	15.1	150	1.32
1922	12.8	126	1.31
"	16.5	161	0.96
"	11.7	114	1.25
"	13.5	130	1.01
1923	11.7	161	0.45
"	5.5	52	-0.15
"	6.9	65	-0.67
"	8.1	76	-0.41
1924	11.7	108	-0.13
"	10.2	94	-0.10
"	12.9	82	-0.07
"	9.2	83	0.26
1925	8.2	74	0.25
"	8.9	80	0.13
"	7.0	62	-0.56
"	7.2	63	-0.28
1926	10.7	94	-0.43
"	4.8	45	-0.49
"	6.7	58	-0.97
"	6.7	57	-0.33
1927	10.5	89	0.00
"	11.0	93	0.11
"	8.5	71	0.47
"	18.6	155	0.95
1928	20.8	172	1.61
"	17.4	143	1.67
"	20.1	164	1.63
"	17.1	139	----

4 | 209·3
6 | 52·3
8·7

4 | 391·7
9 | 97·9
10·9

War = 8·7 2·72.

Post War = 10·9 · 4·51

Table 40 Commonwealth

Other Land Transport.

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
1913	2.1	83	-----
"	2.4	93	-0.22
"	2.3	87	-0.18
"	2.1	78	0.10
1914	3.4	123	0.73
"	4.2	149	1.42
"	4.8	167	1.81
"	4.6	156	1.97
1915	5.0	167	2.05
"	5.2	170	1.24
"	2.6	83	0.62
"	2.9	91	-0.31
1916	2.3	71	-0.32
"	2.5	76	-0.47
"	3.0	89	-0.25
"	2.9	85	0.59
1917	5.8	167	0.34
"	2.0	54	0.42
"	3.9	108	-0.39
"	2.6	71	0.09
1918	4.0	108	0.00
"	3.5	93	-0.28
"	2.1	55	-0.85
"	1.5	38	-1.20
1919	2.2	54	-0.96
"	3.0	75	-0.69
"	3.3	81	-0.32
"	2.6	87	-0.37
1920	3.0	71	-0.45
"	2.8	66	-0.68
"	3.3	76	-0.49
"	3.6	83	-0.36

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
	12.7		
1921	3.6	81	-0.01
"	4.8	107	0.58
"	7.3	160	0.74
"	4.1	89	0.90
1922	5.9	126	0.24
"	3.9	82	0.01
"	3.8	79	-0.41
"	3.5	72	0.16
1923	7.1	144	0.87
"	7.4	149	1.43
"	7.4	147	0.69
"	3.3	65	-0.06
1924	3.6	70	-0.42
"	5.3	102	1.03
"	11.9	225	2.01
"	8.9	167	2.05
1925	5.8	107	1.18
"	6.8	125	0.41
"	5.4	98	0.37
"	5.2	93	-0.04
1926	4.7	83	-0.21
"	4.2	74	-0.49
"	4.4	76	-0.59
"	3.7	64	-0.76
1927	3.3	56	-0.64
"	4.9	83	-0.47
"	5.8	97	0.04
"	6.1	101	0.22
1928	6.3	103	0.44
"	7.1	115	0.58
"	8.1	130	0.76
"	7.2	114	----

4 | 79.9
6 | 24.0
3.3

War = 3.3 1.1
Post War = 5.4 2.0

4 | ~~186.7~~
~~46.7~~
~~7.8~~

4 | 195 5
9 | 48 9
5.4

Table 41 Commonwealth.

ALL GROUPS.

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
1913	6.4	93	----
"	7.3	106	0.21
"	7.0	101	-0.08
"	5.3	76	-0.33
1914	5.9	85	-0.59
"	5.7	81	0.51
"	10.7	156	1.39
"	11.0	156	1.92
1915	12.0	169	1.43
"	9.5	133	1.01
"	8.8	123	0.83
"	6.8	95	0.17
1916	5.9	82	-0.48
"	5.8	73	-0.75
"	5.3	73	-0.68
"	6.7	92	-0.27
1917	7.5	102	-0.08
"	6.3	86	0.00
"	7.1	96	-0.09
"	7.4	100	-0.23
1918	5.5	74	-0.39
"	6.2	83	+0.61
"	6.1	81	-0.69
"	5.5	73	-0.63
1919	6.5	86	-0.20
"	8.5	112	-0.07
"	6.2	81	-0.37
"	5.2	68	-0.87
1920	5.6	73	-0.87
"	6.2	80	-0.68
"	6.2	80	-0.39
"	7.8	100	0.52

Year	%age Unemployed.	Ratio to trend.	Index of cyclical fluctuations.
1921	11.4	146	1.59
"	12.5	159	2.21
"	11.4	145	1.80
"	9.5	120	1.25
1922	9.2	116	0.93
"	9.6	120	0.96
"	9.6	120	0.77
"	8.6	107	-0.39
1923	7.2	89	-0.03
"	7.1	88	-0.21
"	7.4	91	-0.39
"	6.6	81	-0.29
1924	7.6	93	-0.15
"	8.3	101	0.33
"	9.5	115	0.69
"	10.3	125	0.87
1925	9.3	112	0.99
"	10.2	123	0.62
"	7.9	95	0.35
"	8.1	97	0.04
1926	8.2	98	-0.16
"	6.7	79	-0.23
"	7.6	90	-0.71
"	5.7	67	-0.81
1927	5.9	69	-1.00
"	6.4	75	-0.83
"	6.7	78	-0.44
"	8.9	103	0.24
1928	10.7	124	0.93
"	11.7	129	1.33
"	11.4	131	1.12
"	9.9	113	----

9·3
10·0
12·4
13·1

14·6
18·5
20·5
23·4

1932 28·3
30·0
29·6

25·8
27·6
28·3
28·0

Table 40

Queensland Unemployment (Basis for Seasonal Index)

Month	1924	1925	1926	1927	1928	1929
January	-	6,700	8,000	11,132	12,737	15,884
February	-	8,000	9,000	11,761	15,689	15,819
March	-	7,900	8,900	7,912	12,915	14,553
April	-	6,000	7,800	8,784	10,888	12,977
May	-	7,300	6,800	8,214	9,809	11,559
June	-	5,300	7,000	7,010	9,961	10,717
July	5,570	4,700	7,320	7,652	8,770	9,900
August	5,500	4,700	8,910	8,126	8,325	
September	5,400	5,600	7,263	8,885	8,350	
October	5,900	5,600	6,432	9,285	9,829	
November	6,800	6,100	8,279	8,766	11,463	
December.	6,000	7,000	10,669	10,091	13,345	

Table 41

Production Per Head of Population

Year	Total Production per Head £	Secular Trend	Ratio to Trend.	$\frac{\Delta \text{ Deviation}}{\sigma}$
1912	44.1		106	+ 1.07
1913	45.1		103	- .54
1914	42.9		93	- 1.25
1915	51.4		104	+ .71
1916	53.3		102	+ .36
1917	56.1		102	+ .36
1918	57.4		97	- .54
1919-20	64.8		104	+ .71
1920-21	72.2		109	+ 1.61
1921-22	62.5		93	- 1.25
1922-23	67.3		96	- .71
1923-24	69.6		97	- .54
1924-25	77.3		105	+ .89
1925-26	72.0		96	- .71
1926-27	73.2		96	- .71

Standard Deviation = 5.6

Table 42

Rural Products Per Head of Population

Year	Total Production per head £	Secular Trend	Ratio to Trend	% Deviation δ.
1912	21.4	20.0	107	+ .79
1913	21.3	21.3	100	0.
1914	20.7	24.0	86	-1.57
1915	29.3	26.5	111	+1.24
1916	29.3	29.0	101	+ .11
1917	30.4	30.4	100	0.
1918	30.6	32.0	96	- .45
1919-20	34.6	32.8	105	+ .56
1920-21	37.5	33.5	112	+1.35
1921-22	28.5	34.3	84	-1.80
1922-23	32.1	34.4	93	- .79
1923-24	33.2	35.5	94	- .67
1924-25	39.8	36.0	111	+1.24
1925-26	33.8	37.5	90	-1.13
1926-27	34.3	37.8	91	-1.02

Standard Deviation (δ. = 8.9

Industrial Disputes

Australia

Year	Average time lost per worker 20yrs over Days.
1913	0.5
1914	0.9
1915	0.5
1916	1.5
1917	4.0
1918	0.5
1919	5.0
1920	1.5
1921	0.7
1922	0.6
1923	0.8
1924	0.6
1925	0.8
1926	0.9
1927	1.1.

Table 44

Rate of Price Changes (wholesale prices)

Year	Index No.	Rate	Moving Totals
1912	1065	-	-
"	1173	110	-
"	1229	104	311
"	1204	97	293
1913	1111	92	288
"	1095	99	289
"	1072	98	297
"	1072	100	299
1914	1085	101	299
"	1113	103	310
"	1185	106	312
"	1225	103	322
1915	1387	113	336
"	1660	120	343
"	1822	110	315
"	1544	85	282
1916	1502	97	281
"	1493	99	297
"	1505	101	301
"	1514	101	303
1917	1525	101	306
"	1587	104	313
"	1715	108	317
"	1804	105	317
1918	1877	104	312
"	1940	103	308
"	1954	101	305
"	1965	101	300
1919	1934	98	300
"	1956	101	305
"	2068	106	308
"	2262	101	301

Year	Index No.	Rate	Moving Totals
1920	2351	104	304
"	2567	109	316
"	2650	103	301
"	2352	89	284
1921	2164	92	269
"	1897	88	276
"	1822	96	279
"	1729	95	288
1922	1671	97	296
"	1743	104	303
"	1786	102	308
"	1821	102	305
1923	1851	101	309
"	1956	106	309
"	2003	102	306
"	1963	98	299
1924	1946	99	297
"	1880	97	297
"	1848	98	296
"	1866	101	298
1925	1848	99	299
"	1825	99	299
"	1848	101	300
"	1856	100	300
1926	1841	99	302
"	1892	103	299
"	1832	97	296
"	1764	96	291
1927	1737	98	294
"	1743	100	306
"	1882	108	309
"	1904	101	306
1928	1840	97	297
"	1830	99	293
"	1764	97	295
"	1744	99	299
1929	-	103	

Table 45

Activity of Bank Deposits

Year	(1) Deposits not bearing interest Am.	(2) Clearings Am.	( ) (relative)	Rate of Change
1912	65.4	782.1	119	
1913	62.0	801.8	129	108
1914	70.2	817.7	115	89
1915	75.4	814.4	108	94
1916	92.8	992.0	106	98
1917	105.3	1066.5	111	104
1918	112.2	1336.2	119	107
1919	119.0	1445.1	121	102
1920	133.9	1896.8	141	117
1921	127.8	1701.6	133	94
1922	123.8	1745.8	141	106
1923	126.6	1941.2	153	109
1924	129.4	2069.4	159	104
1925	131.4	2202.9	167	104
1926	134.8	2248.2	166	100
1927	130.5	2357.8	180	108
1928	126.6	2076.9	164	91

Table 46

Banks' Proportionate Reserve

30th June	P.R.	Trend	%age Deviation	%age Deviation σ.
1913	24.9	29.5	- 16	- 1.93
1914	26.5	28.5	- 7	- 0.84
1915	33.2	27.4	+ 21	+ 2.52
1916	28.9	26.5	+ 9	+ 1.08
1917	25.4	25.5	0	0.
1918	23.4	24.5	- 4	- 0.48
1919	21.6	23.5	- 8	- 0.96
1920	23.9	22.5	+ 6	+ .72
1921	22.5	21.5	+ 5	+ .60
1922	20.5	20.7	- 1	- .12
1923	18.6	20.0	- 7	- .84
1924	18.1	19.5	- 7	- .84
1925	20.3	19.1	+ 6	+ .72
1926	18.9	18.0	0	0.
1927	18.4	18.7	- 2	- .24

σ. = 8.3

Table ~~43~~.47

Foreign Balances, Australian Banks

June	Balances £m.	Secular Trend.	%age Deviation	% Dev. / σ
1910	29.8	22	+ 35	+ 1.84
1911	24.4	24	+ 2	+ 0.11
1912	22.2	26.5	- 16	- 0.84
1913	27.2	29.0	- 6	- 0.32
1914	34.6	31.5	+ 10	+ 0.53
1915	34.0 x	34	0	0.
1916	33.4	36.5	- 8	- .42
1917	56.4	39	+ 44	+ 2.32
1918	49.1	41.5	+ 18	+ 1.06
1919	33.1	44	- 25	- 1.32
1920	56.2	47.5	+ 18	+ 1.06
1921	39.9	49.5	- 19	- 1.
1922	56.4	51.5	+ 10	+ 0.53
1923	59.9	53.	+ 13	+ 0.68
1924	55.2	54	+ 2	+ 0.11
1925	60.0	54.5	+ 10	+ 0.53
1926	60.8	54.5	+ 12	+ 0.63
1927	40.0	54.5	- 23	- 1.21

x Estimated in part

σ = 19

Table 48. Wages & Production (Wage Regulation).

(after Benham p 210

Year.	(1) Value added less 10% (manufacturing) £1 000	(2) Wages £1 000	Wage Regulator (2) ×100 / (1)
1910-11	40,919	23,866	58·3
11-12	46,133	27,528	59·6
12-13	51,708	31,287	60·5
13-14	55,721	33,606	60·3
14-15	57,016	34,104	59·8
15-16	56,802	33,219	58·5
16-17	57,610	33,829	58·7
17-18	63,035	33,618	58·1
18-19	73,289	42,506	58·0
19-20	89,059	52,116.	58·5
20-21	99,391	62,932	63·3
21-22	109,507	64,051	62·1
22-23	118,579	71,133	60·0
23-24	127,118	77,279	60·8
24-25	132,423	81,360	61·4
25-26	139,879	86,724	62·0
26-27	146,093	90,575	60·6
27-28	150,462	91,365	62·1

APPENDIX II.

THE STATISTICS AND STATISTICAL METHODS USED.

Appendix II

The Statistics and Statistical Methods Used.

The figures that form the basis of our charts of unemployment in various industries have received so much adverse criticism that it is well to consider their claims to reliability. They were treated to scepticism by some witnesses who appeared before the Royal Commission on National Insurance, buttheir most formidable critic is Mr. J.L.K.Gifford of Queensland University, and the following points are taken from his book on "Economic Statistics for Australian Arbitration Courts" (Chapter II).

1. "The secretaries of many unions have no unemployment registers", and rely upon estimates.

2. It is "sometimes in the interest of some members to conceal unemployment if they are anxious to obtain an increase in wages from an arbitration court, and sometimes in their interest to exaggerate the amount of unemployment if they wish to close their books to new members or restrict the number of apprentices".

3. "The returns are only quarterly".

4. The figures for the separate States,as published are not classified according to industrial groups.

5. The industrial classification for the Commonwealth is too general.

6. "No information is collected about unemployment in the pastoral, agricultural, rural and horticultural industries".

7. The information regarding cause (or type as we have called it in Chapter VI) of unemployment is not available for the States.

8. There are discrepancies between these figures and those obtained (a) at the 1921 Census and (b) through unemployed insurance in Queensland, from which it appears that the recorded percentage of unemployment as given for all industrial groups does not reflect accurately even relative variations in the actual total of unemployed in Australia.

Accordingly Mr Gifford makes the excellent suggestion that

information should be collected from employers to make possible the compilation of an index of employment.

With points 3 to 7, one can only agree, for these do detract seriously from the value of the published figures. We have, however, obtained the unpublished figures for the Industrial Groups classified by States, and these are given in Appendix I. Then, in our discussion of the figures as a whole and by industries, we have not taken them as representative of the total community, but merely of the particular industrial groups. Where in discussing fluctuations in all groups, we have spoken of "all industry", this has been for brevity, and is intended to cover not the whole of industry, but all these nine groups and those miscellaneous trades for which information is available. For these nine industries, it may be claimed that the figures are not grossly inaccurate. ~~The following~~ Table XVII (p shows that they are based upon a large sample of the trade unionists.

Industrial Group.	Membership of unions reporting.	Total union membership.
1. Wood, furniture etc.	21,019	35,740
2. Engineering, metals	80,441	87,417
3. Food, drink.	32,320	71,994
4. Clothing, hats, boots	38,010	56,874
5. Books, printing	19,414	19,771
6. Other Manufacturing	39,006	46,779
7. Building,	53,876	60,416
8. Mining, quarrying.	29,000	43,044
9. Other Land Transport.	16,761	20,632
ALL GROUPS. (incl others)	423,422	911,541

Probably the farther back one goes, the less comprehensive the sample. This is one reason for not pushing our enquiries back beyond 1913. Another is that only Annual figures are available for earlier years and these were not collected by the

Statistician until 1912.

The first two points of Mr Gifford are not convincing. They are mere allegations that the trade union officials may be either unable, or unwilling to supply accurate figures. Even where there is no register of unemployed kept, "permanent secretaries and organisers who are in close touch with the members and the state of trade in their particular industries" (i) should be able to make fairly reliable estimates. Possibly there is a constant error tending towards slight exaggeration. Such inaccuracies as are unconsciously or wilfully perpetrated in times of political or other agitation would tend to compensate for each other when we consider the Commonwealth as a whole. Probably the figures for various industries in the separate states are less reliable than for the Commonwealth as a whole. Moreover, the constitution of the industrial groups by whose trade unions the figures are supplied varies from state to state in a manner regarding which we have as yet no information. On these grounds our limitation of our study of secular trends and seasonal and cyclical fluctuations is probably well advised. Within the limits here admitted, and assumed, and often referred to in the text of this book, our figures are sufficiently reliable for the purposes to which we have devoted them. It must be borne in mind that we are concerned not so much with meticulous accuracy in measurement, as in obtaining a basis for comparison of fairly crude differences.

Mr Gifford's discovery that the figures for All Groups do not agree with the other figures relating to unemployment throughout the whole population of Australia need not disconcert us, for, in view of the marked differences among the particular

(i) Labour Report 1928, p. 128

industrial groups included in our study, there are such divergences that we would not expect the industries not covered to follow the same course as the average of these nine and the few miscellaneous trades. Because figures for the section of industry we have studied do not agree closely with those for the other two thirds of the total working population, it does not follow that they are inaccurate in their own sphere. Actually they make possible considerable enlightenment regarding the facts of unemployment in these important industries. Some brief discussion of the position in other industries will be found in Chapter VI.

It may be well, too, for us to add one or two notes regarding the statistical methods employed in this book.

We have ventured to do what many statisticians would condemn, namely, in fitting lines of secular trend to series of observations covering the period 1913-1928. The method of least squares, used in seven of our ten charts of unemployment, assumes that the line of trend reflects a change that is a function of time. Indeed the whole concept of secular trend rests upon the assumption that a gradual development has taken place in one direction or another. But the period in question includes a World War and a post war crisis -- it is a period of transition, not altogether gradual. Nevertheless, in six cases a definite change has occurred, and while the secular trend may in some cases exaggerate the steadiness of the change, some type of quantitative measure is desirable, even if the margin of error be not inconsiderable. The lines of secular trend do give us a general indication of the direction of the change that has taken place, and for this they are valuable, provided undue accuracy is not attributed to them. Of course, in the

Table Illustrating the Text.

Index to Tables (illustrating the Text)

I Distribution of Period of Unemployment at 1921 Census.

II Distribution of Period of Unemployment in Engineering (Manchester).

III Distribution of Period of Unemployment in Queensland.

IV Average Unemployment Percentages: Industrial Groups and States.

V Unemployment in Various Countries.

VI Lowest Recorded Percentage of Unemployment: Industrial Groups and States.

VII Amplitude of Fluctuations.

VIII Good and Bad Periods: Asymmetry of Distribution.

IX Seasonal Unemployment: Industrial Groups (Commonwealth).

X Seasonal Unemployment in Queensland.

XI Non-seasonal Fluctuations.

XII Industrial and Other Unemployment at 1921 Census.

XIII Unemployed Labourers in Queensland.

XIV Types of Unemployment at 1921 Census.

XV Types of Unemployment among Trade Unionists

XVI Age Distribution of Unemployed at 1921 Census.

~~XVIII~~ XVIII Wages, Production and Unemployment in Queensland.

~~XVIII~~ XVII Numerical Strength of Industrial Groups (Trade Union Members)

XIX Indexes of Mechanisation in Certain Industries.

XX Relative Strength of Industries with Post War Increase in Unemployment.

XXI Loan Expenditure in Australia.

Note Appendix I contains the basic tables for the graphs and such of the above as are calculated indexes. An index is given at the beginning of the Appendix.

Table I.

Census of 4th April 1921.

DISTRIBUTION OF PERIOD OF UNEMPLOYMENT, AUSTRALIA.

Duration of Unemployment in working days	Males	Females	Persons.
Under 10	22,029 ..	3,419 ..	25,448
10-20	18,910 ..	2,870 ..	21,780
20-29	12,787 ..	1,983 ..	14,770
30-39	10,173 ..	1,591 ..	11,764
40-49	6,103 ..	997 ..	1,100
50-59	3,759 ..	624 ..	4,383
60-69	5,756 ..	917 ..	6,673
70-79	4,181 ..	673 ..	4,854
80-89	2,405 ..	341 ..	2,746
90 and over	30,901 ..	4,513 ..	35,414
Not stated	20,671 ..	3,477 ..	24,148

Table II.

Amalgamated Society of Engineers (Manchester and Leeds).

Distribution of Unemployment.

rcentage Employed for	1887	1888	1889	1890	1891	1892	1893	1894	1895	Mean for 9. years
ss than 3 days	60.5	67.5	82.0	78.6	61.2	60.2	73.6	72.5	76.5	70.3
days & less than weeks	16.1	14.4	11.4	14.1	23.5	17.4	5.8	8.3	7.2	13.0
weeks and les than weeks	7.2	5.5	3.0	3.5	6.2	6.8	2.4	2.6	5.0	4.6
weeks & less an 12 weeks	4.6	3.1	1.1	1.6	2.9	4.5	2.1	1.8	3.0	2.8
weeks & over	11.6	9.5	2.5	2.2	6.2	11.1	16.1	14.8	8.3	9.3

(Reproduced from Beveridge: Unemployment p. 73)

Table III

DURATION OF UNEMPLOYMENT -- QUEENSLAND INSURED WORKERS.

No. of Weeks Sustenance	No. of Persons. Year ending 31st March---- 1926	1927	1928
Nil	6,573	10,040	7,709
1	3,800	3,483	3,774
2	3,149	3,656	3,552
3	2,925	3,124	3,427
4	2,412	2,853	3,195
5	2.167	2,664	2,868
6	1,801	2,384	2,671
7	1,508	2,007	2,486
8	1,292	1,928	2,300
9	1,171	1,746	2,049
10	1,015	1,467	2,059
11	874	1,330	1,606
12	775	1,201	1,498
13	656	1,023	1,295
14	666	954	1,183
15	2,083	2,395	3,306
16	236	348	406
over16.	469	794	1,001

Note. The maximum number of weeks sustenance which may be drawn in any calendar year is fifteen. The above covers portion of two calendar years.

Table IV

Average Unemployment Percentages: Industrial Groups & States

(16 years)

Industrial Group.	N.S.W.	Vic.	Qld.	S.A.	Tas.	W.A.	Aus.
Wood, furniture etc.	4.0	8.0	3.2	6.4	10.3	6.1	6.3
Engineering, metals	9.5	10.0	4.1	5.4	2.9	4.9	8.5
Food, drink, tobacco	9.1	9.1	16.9	8.0	6.3	10.0	10.5
Clothing, hats, boots	7.3	3.9	7.1	6.9	8.4	9.1	5.4
Books, printing	2.5	3.2	1.6	2.5	3.0	3.7	2.8
Other Manufacturing	11.2	10.4	9.3	4.3	6.7	6.5	1.7
Building	4.4	9.0	10.1	12.9	5.5	7.2	6.7
Mining, quarrying	9.1	8.9	5.4	30.3	6.7	8.1	9.8
Other Land Transport	4.6	5.2	2.6	5.0	6.5	4.4	4.4
ALL GROUPS.	8.2	7.5	8.7	6.3	7.0	6.7	7.8

Table V.

Unemployment -- Various Countries.

Country	Classification	No. Unemployed	Date
Gt. Britain	Registered at Exchanges	1,434,000	Jan 1929
Germany	Receiving benefit	2,029,387	Jan 1929
Denmark	Trade Union returns	74,900	Jan 1929
Austria	Compulsory insurance	237,661	Dec 1928
France	Receiving benefit	1,664	Jan 1929
Italy	Registered	390,829	Dec 1928
Netherlands	Insurance	35,000	Dec 1928
Russia	Registered	1,374,000	Sept1928
Poland.	Registered.	161,189	Jan 1929

N.B. These figures are not comparable

Table ~~N~~ VI

Lowest Recorded Percentages of Unemployment

Industrial Group.	N.S.W.	Vic.	Tas.	S.A.	W.A.	Qld.	Common-wealth
1. Wood Furniture etc.	0.6	1.0	0.	0.9	0.4	0.	2.4
2. Engineering, metals	2.2	1.2	0.	1.5	1.6	1.7	3.4
3. Food, drinks	3.1	3.2	0.5	1.7	3.0	1.4	4.9
4. Clothing, hats etc.	0.8	0.4	0.	0.3	1.4	0.	0.8
5. Books, Printing	0.8	0.9	0.	0.1	0.1	0.	1.3
6. Other Manu-facturing	2.0	2.0	0.	0.7	2.0	1.7	3.1
7. Building	1.4	1.8	0.	0.4	0.7	0.7	2.2
8. Mining	1.2	3.9	0.	1.4	2.8	1.2	3.5
9. Other Land Transport	0.4	1.2	0.7	0.6	0.	1.5	1.5
ALL GROUPS.	3.6	4.2	1.7	2.2	2.2	4.2	5.2

Table VII

AMPLITUDE OF FLUCTUATIONS.

Industrial Group	Standard Deviations from Secular Trend (a) Actual %ages of unemployment	Ranking (b)	(c) Ratios to trend	Ranking. (d)
1. Wood, furniture	3.6	2½	57	1
2. Engineering, metals	3.7	1	43	3
3. Food, drink, tobacco	3.6	2½	34	7½
4. Clothing, hats, boots	3.2	4	56	2
5. Books, printing	1.0	9	37	4½
6. Other manufacturing	3.0	5½	32	9
7. Building	2.3	7	34	7½
8. Mining	3.0	5½	37	4½
9. Land Transport	1.5	8	36	6
10. ALL GROUPS	1.9	-	25	-

Table VIII

GOOD AND BAD PERIODS - - ASYMMETRY OF DISTRIBUTION

Industrial Group	(a) No of cases in which unemployment was - - Above Normal	About Normal	Below Normal	(b) Ranking	(c) Coefficient of skewness	(d) Ranking.
I. Wood, furniture etc.	21	4	39	9	-1.00	7½
II Engineering, metals etc.	23	12	29	2½	-0.14	1
III Food, drink, tobacco etc.	21	8	35	7	-0.74	3½
IV Clothing, hats, boots etc.	27	0	37	4	-1.02	9
V Books, printing etc.	24	4	36	6	-0.84	5
VI Other manufacturing	26	7	31	1	-0.19	2
VII Building	23	7	34	5	-0.74	3½
VIII Mining	26	5	33	2½	-0.88	6
IX Other Land Transport	22	4	38	8	-1.00	7½
ALL GROUPS	23	9	32	-	-0.52	-

Table IX.

SEASONAL UNEMPLOYMENT . INDUSTRIAL GROUPS

Industrial Group	Seasonal Ratios				Adjusted Seasonal				Indexes
	Feb	May	Aug	Nov	Feb	May	Aug	Nov.	Range
1. Wood, furniture etc.	91	74	84	84	107	89	101	101	18
2. Engineering, metals"	98	95	91	98	103	100	96	103	7
3. Food, drink, tobacco"	78	80	96	97	89	91	109	110	21
4. Clothing, hats etc	99	81	107	71	110	90	120	79	41
5. Books, printing "	99	112	94	78	103	117	98	81	36
6 Other Manufacturing	84	100	106	99	87	103	109	102	22
7. Building	99	95	95	86	105	101	101	91	16
8. Mining, quarrying etc.	116	89	90	88	121	93	94	92	29
9. Land Transport	94	93	99	85	101	100	106	91	15
10. ALL GROUPS	93	95	96	98	97	99	101	103	6

Table X

Seasonal Unemployment in Queensland.

Month	Index (Avge. of this column=100)
January	120
February	132
March	119
April	104
May	95
June	87
July	84
August	84
September	84
October	84
November	95
December.	108

Range : 48

Table XI

NON SEASONAL FLUCTUATIONS

Average Deviation of Ratios to Trend from Crude Seasonal Ratios

Industrial Group		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual Mean
1	Wood, furniture etc.	41	195	36	43	79
11	Engineering, metals etc.	31	31	33	37	33
111	Food, drink, tobacco etc.	24	24	26	26	25
1V	Clothing, hats, boots etc.	51	51	49	41	48
V	Books, printing etc.	30	35	18	23	27
V1	Other manufacturing	22	30	29	25	27
V11	Building	30	26	27	25	27
V111	Mining	39	34	31	29	34
1X	Other Land Transport.	20	31	33	21	26
ALL GROUPS		19	27	20	17	19

Table XII Unemployed at 1921

Usual Occupation	Males No.	Males % age of total members of group	Females No.	Females %age of total members of group.
Professional	2,647	3.0	2,021	3.7
Domestic	3,359	9.7	8,223	5.9
Commercial	13,868	7.2	3,658	5.3
Transport & Communication	10,944	6.3	98	1.4
Industrial	81,373	16.1	7,185	7.0
Primary Producers	24,354	8.4	59	2.0
Unspecified.	1,130		161	
Total	137,675	10.7	21,405	5.7

Table XIII Unemployed Labourers in Queensland.

Year	(1) Total Applicants for Sustenance	Labourers applying No.	Labourers applying % on(1)	(2) Total Sustenance Paid £	Paid to labourers Amt.£	Paid to labourers % on(2
1925	22,335	11,691	52%	134,674	80,434	60%
1926	34,766	19,289	55%	194,707	107,115	55%
1927	45,594	26,128	57%	299,301	173,648	58%
1928	47,728	24,357	51%	357,134	182,297	51%

Table XIV.

Types of Unemployment at 1921 Census

Class	%age of Unemployed Males whose unemployment was due to						
	Scarcity of Work	Illness	Accident	Industrial Disputes	Old Age	Other Groups	All
Professional	36.04	35.16	2.44	1.04	1.66	23.66	100
Domestic	40.04	33.51	2.92	2.01	2.33	19.19	100
Commercial	46.70	27.32	2.17	1.80	1.48	20.53	100
Transport & Communication	43.98	25.36	5.76	7.17	.99	16.74	100
Industrial	58.06	21.05	3.07	2.65	1.68	13.49	100
Primary Producers	43.33	21.52	4.69	4.66	1.45	24.35	100
ALL CLASSES	52.26	22.70	3.47	3.24	1.58	16.75	100
Females							
Professional	18.56	51.93	1.64	.34	.63	26.90	100
Domestic	16.76	59.96	1.80	.51	.54	20.43	100
Commercial	29.79	41.53	.51	.89	.03	27.25	100
Transport & Communication	20.20	41.42	0.	7.07	0.	31.31	100
Industrial	48.55	34.70	.80	2.96	.23	12.76	100
Primary Producers	30.65	20.97	1.61	3.23	1.61	41.93	100
ALL CLASSES	30.00	47.26	1.21	1.43	.36	19.74	100

Table XV

Types of Unemployment among Trade Unionists

Year (average)	%age Unemployed through-- Lack of Work	Sickness & Accident	Other Causes	Total
1924	6.9	0.8	0.2	7.9
1925	7.2	0.7	0.2	8.1
1926	6.3	0.6	0.2	7.1
1927	6.2	0.6	0.2	7.0
1928	10.0	0.7	0.1	10.8

Table XVI

Age Distribution of Unemployed at 1921 Census.

Age Group	Males	Females
10-19	14,284	6,064
20-29	39,101	8,767
30-39	28,850	3,195
40-49	21,631	1,797
50-59	19,371	1,147
60 and over.	16,201	548

XVII

Table ~~XVII~~

NUMERICAL STRENGTH OF INDUSTRIAL GROUPS (TRADE UNIONISTS)

Industrial Group	1913 Total membership of returns.	No of members covered by returns.	1928 Total.	Covered by returns
I. Wood, furniture etc.	19,913	17,904	35,740	21,019
II. Engineering, metals etc.	39,145	29,641	87,417	80,441
III. Food, drink, tobacco etc.	33,372	21,859	71,994	32,320
IV. Clothing, hats, boots etc.	18,217	16,126	56,874	38,010
V Books, printing etc.	9,318	8,137	19,771	19,414
VI Other manufacturing	27,010	21,307	46,779	39,006
VII Building	31,544	25,282	60,416	53,876
VIII Mining	40,449	24,605	43,044	29,000
IX Other Land Transport	18,369	13,719	20,632	16,761
Others	260,588	58,636	468,874	
X. ALL GROUPS.	497,925	237,206	911,541	423,422

Table XVIII

Wages, Production and Unemployment in Queensland.

Year	Average Wages s. d.	Value of Production per worker £.	Percentage Unemployed
1916	60: 4	287.60	5.8
1917	65: 5	325.19	7.0
1918	69: 6	316.62	9.3
1919	78: 7	305.40	11.1
1920	91: 6	362.57	13.3
1921	96: 8	338.91	15.5
1922	93:10	339.84	10.0
1923	94: 2	370.00	7.1
1924	94:11x	424.78	6.4

x Average for nine months.

(After Benham, op cit p.210).

Table XIX

Mechanisation in Australian Industry

Industry.	Value of Plant and Machinery per employee £.		Horsepower used per employee	
	1912	1928	1911	1928
Woodworking	8.0	20.8	1.36	3.5
Metals, Engineering	9.7	17.6	.88	2.0
Food & drink	19.3	26.1	1.57	3.85.
Clothing	1.9	15.5	.15	.44
Books, printing	10.5	27.4	.43	.99
All factories	10.5	23.7	1.2	3.35.

Table ~~XIX~~ XX

Relative Strength of Industries with Post War Increase in Unemployment.

Industry	Wage on total unionists covered by returns.	
	1913	1928
Engineering	12.5%	19.0%
Other Manufacturing	9.0%	9.2%
Building	10.7%	12.7%
Mining	10.3%	6.8%
Other Land Transport	5.8%	4.0%

XXI

Table ~~XX~~

Estimate of Loan Expenditure

30th June	Commonwealth and States
	£m.
1922	37.3
1923	35.7
1924	35.5
1925	36.3
1926	40.0
1927	43.7

Table contd

Engineering, Metals etc.

Year	(a)	(b)	(c)	(d)	(e)	(f)
1924	17.5	6.2	1.5	2.3	5.0	2.9
"	13.4	7.8	5.2	2.0	5.2	2.1
"	12.9	9.8	1.4	3.0	5.4	2.1
"	23.1	9.8	4.0	4.3	5.0	3.3
1925	22.3	9.9	5.5	2.2	3.4	2.2
"	22.3	10.5	11.9	2.9	3.2	1.9
"	8.2	8.1	9.8	4.6	4.7	2.0
"	7.0	10.8	5.0	3.7	6.3	2.4
1926	6.6	7.3	13.5	6.9	7.3	3.5
"	2.2	8.0	7.6	4.4	5.7	2.0
"	2.8	7.0	4.3	8.9	7.1	3.4
"	2.9	2.7	3.7	10.1	6.8	4.1
1927	5.6	3.7	2.4	3.2	5.0	4.4
"	3.5	4.3	2.4	5.5	3.9	6.8
"	3.8	5.5	2.2	9.2	3.3	7.6
"	7.0	10.1	2.1	16.4	4.2	9.4
1928	15.2	10.7	2.6	22.5	5.6	7.5
"	12.6	11.3	2.5	22.9	4.6	9.3
"	14.3	9.7	2.7	16.4	6.6	7.0
"	14.2	13.6	3.0	15.1	6.3	6.4

case of Building, the line of secular trend is merely an arbitrary leveling out of the cyclical fluctuations. The lines of secular trend make possible the isolation of the other fluctuations, and the discussion in the text should demonstrate the value of this. Such error as arises from any infidelity of the secular trend fitted by least squares would not seriously disturb the relation between series of such dissimilarity. In this connection it should be pointed out that the secular trends for the other series discussed in Chapter X were derived by carefully drawing a curve by eye, and are therefore only approximate. Again the error involved is too small to disturb the theoretical conclusions to which the admittedly rough comparisons point.

We have not calculated coefficients of correlation for these cycles, because despite the claims of many statisticians, there is still much doubt whether such mathematical expression does give the theoretical economist any more assistance in his analysis than a visual comparison of the curves. This at any rate, it cannot replace.

APPENDIX III. BIBLIOGRAPHY.

I. Statistical Method.

The following books were found useful in the choice and applications of the methods of statistical analysis.

1. Bowley — Elements of Statistics.
2. Bowley — An Elementary Manual of Statistics.
3. Chaddock — Principles and Methods of Statistics.
4. Crum and Patten — Economic Statistics.
5. Day — Statistical Analysis.
6. Jerome — Statistical Methods.
7. Mills — Statistical Methods (probably the best book of these)
8. Rietz. — Handbook on Mathematical Statistics.
9. Secrist — Introduction to Statistics.
10. Thorndike — Mental and Social Measurements.

II. Official.

11. Commonwealth Year Books.
12. Commonwealth Labour Reports.
13. Commonwealth Production Bulletins.
14. Commonwealth Demography Bulletins.
15. Commonwealth Finance Bulletins.
16. Commonwealth Census Reports, 1921.
17. Royal Commission on National Insurance, Second Progress Report.
18. Development and Migration Commission, Report on Unemployment.
19. Report of Economic Commission on the Queensland Basis Wage.
20. Annual Reports of the Director of Labour, Queensland.
21. Annual Reports of Operations under the Unemployed Workers Insurance Acts, Queensland.

22. N.S.W. Year Book.
23. N.S.W. Industrial Gazette.

III. Others. The following list includes only such works as are quoted from, or referred to, in the text, or were definitely studied in connection with this thesis. In addition, there are the standard treatises on general economics, and articles in various journals, but these are not listed here.

24. Astor and Others. The Third Winter of Unemployment.
25. " " " Is Unemployment Inevitable?

26. Bellerby. Control of Credit as a Remedy for Unemployment.
27. " Monetary Stability.
28. " Stabilisation of Employment in the United States.
29. Benham The Prosperity of Australia.
30. Beveridge. Unemployment, A Problem of Industry.
31. Brigden, Copland, Dyason, Giblin and Wickens. The Australian Tariff.
32. Brissenden and Frankel, Labour Turnover in Industry.
33. Cassel. Theory of Social Economy.
34 Chapman and Holdsworth Unemployment.
35 Cohen Insurance Against Unemployment.
36 Copland. Commerce and Business.
37 " Australian Banking and Exchange(Econ. Rec. Vol I. 1.)
38 Economic Barometers (International Labour Office)
39. Feldman Regularisation of Employment.
40. Edie The Stabilisation of Business.
41. Gifford. Economic Statistics for Australian Arbitration Courts.
44. Kuznets Cyclical Fluctuations.
45. Lavington The Business Cycle.
46. Mauldon The Economics of Australian Coal.
47. " Labour Mobility in Australian Industry (Econ. Rec. IV 6)
48. Mills and Benham Money, Banking and Foreign Exchange.
49. Mitchell Business Cycles.
50. Morley. Unemployment Relief in Great Britain.
51. Persons etc. The Problem of Business Forecasting.
52. Pigou Unemployment.
53. " Industrial Fluctuations.
54. Robertson A Study of Industrial Fluctuation.
55. " Banking Policy and the Price Level.
56. Rowe Wages in ~~Theory and~~ Practice. and Theory.
57 Rees Unemployment as an International Problem.
58. Rowntree and Lasker Unemployment, a Social Problem.
59. Seymour The British Unemployment Exchange.
60. Snow. The Limits of Industrial Employment (J.of Royal Stat. Soc. XCII, Pt iii)
61 Snyder Business Cycles and Business Measurements.
62. Statistics of Unemployment in Various Countries(Internat. Lab. Office)
63. Thomas Social Aspects of the Business Cycle.
64. Thorp and Mitchell, Business Annals.
65. Unemployment in its National and International Aspects (I.L.O.)
66 Unemployment, Some International Aspects 1920-28.
67. Webb. Seasonal Trades.
68. " Prevention of Destitution.
69. Anderson Fixation of Wages in Australia.
70. Remedies for Unemployment (I.L.O.)
71. Walker. Business Forecasting (Australian Quarterly I.3)
72. U.S.A. Presidentss Conference on Unemployment.
Business Cycles and Unemployment.
73. " " Seasonal Operation in the Construction Industries.
74. " " Employment, Hours and Earnings in Prosperity and Depression
75. Myers. Readjustment of Displaced Skilled Workmen, (J. of Pol. Econ. XXXVII, 4.

76.

		Vol.	No.
76.	Articles in the International Lbour Review. Prevention of Unemployment	X.	4
77.	Unemployment in Hungary(Vagao)	XII.	3
78.	A Systematic Scheme for an Unemployment Policy	XII.	5
79.	Statistical Relation between Unemployment and Price Changes (Fisher)	XIII	6
80.	Unemployment in Russia 1917-25	XIV	5
81.	Correlation between Seasonal Unemployment and certain Social and Economic Phenomena.	XVI	2.
82.	Money and Unemployment(Fuss)	XVI	5.
83.	Provision for Prolonged Unemployment.	XVI	6.
84.	Seasonal Fluctuations in Unemployment.	XVII	3.
85.	Rationalisation and Unemployment (Fuss)	XVII	6.
86.	Seasonal Unemployment in Clothing Industry. I.	XVIII	1.
87.	" " " " " II.	XVIII	2.
88.	Seasonal Unemployment in Building I.	XIX	1.
89.	" " " " II.	XIX	2.
90.	Business Forecasting in the United States.	XIX	2.
91.	Seasonal Unemployment in Building.	XIX	3.

CHARTS ILLUSTRATING THE TEXT:

I. Unemployment in Australia.

II. Unemployment in Wood, Furniture etc.

III. Unemployment in Engineering, Metals etc.

IV. Unemployment in Food, Drink etc.

V. Unemployment in Clothing, Hats, Boots etc.

VI. Unemployment in Books, Printing etc.

VII. Unemployment in Other Manufacturing.

VIII. Unemployment in Building.

IX. Unemployment in Mining, Quarrying etc.

X. Unemployment - Land Transport other than railways etc.

XI. Cyclical Unemployment, Wood, Clothing, and other Manufacturing.

XII. Cyclical Unemployment - Building, Books, Printing etc.

XIII. Cyclical Unemployment - Mining and Engineering.

XIV. Cyclical Unemployment - Other Land Transport and Food, Drink etc.

XV. Cyclical Unemployment, Production, Industrial Disputes and Business Annals.

XVI. Cyclical Unemployment and Price Changes.

XVII. Cyclical Unemployment and Banking Policy.

XVIII. Rigidity of Wages and Unemployment.

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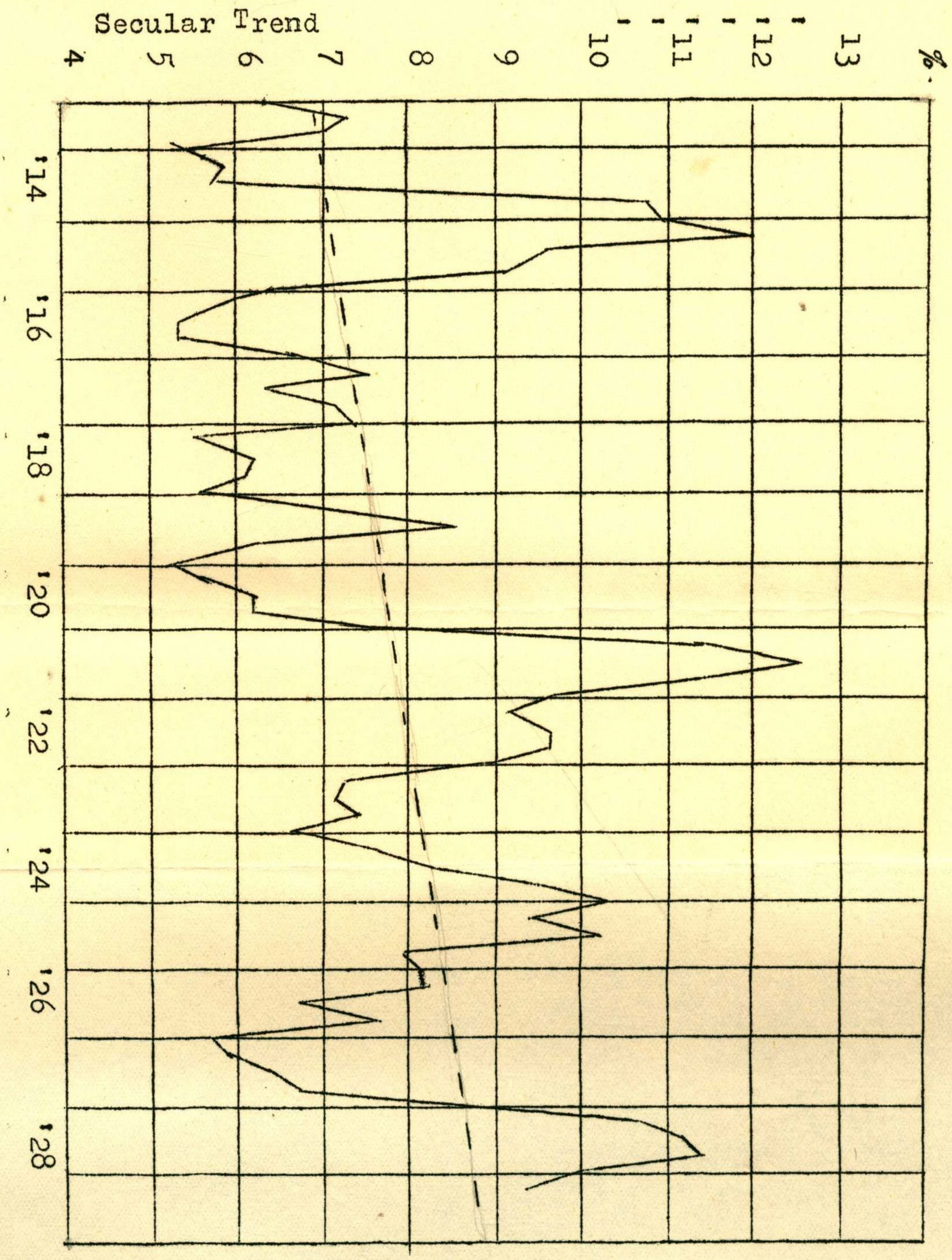
CHART I: Unemployment in Australia.

%age Trade Unionists Unemployed XX (quarterly)



Excludes Unemployed in Railway Camps &

Unemployment about 1/3 of working Population of Qld.

CHART II. Wood, Furniture etc.

Percentage of Unemployment _____

Secular Trend - - - - - -

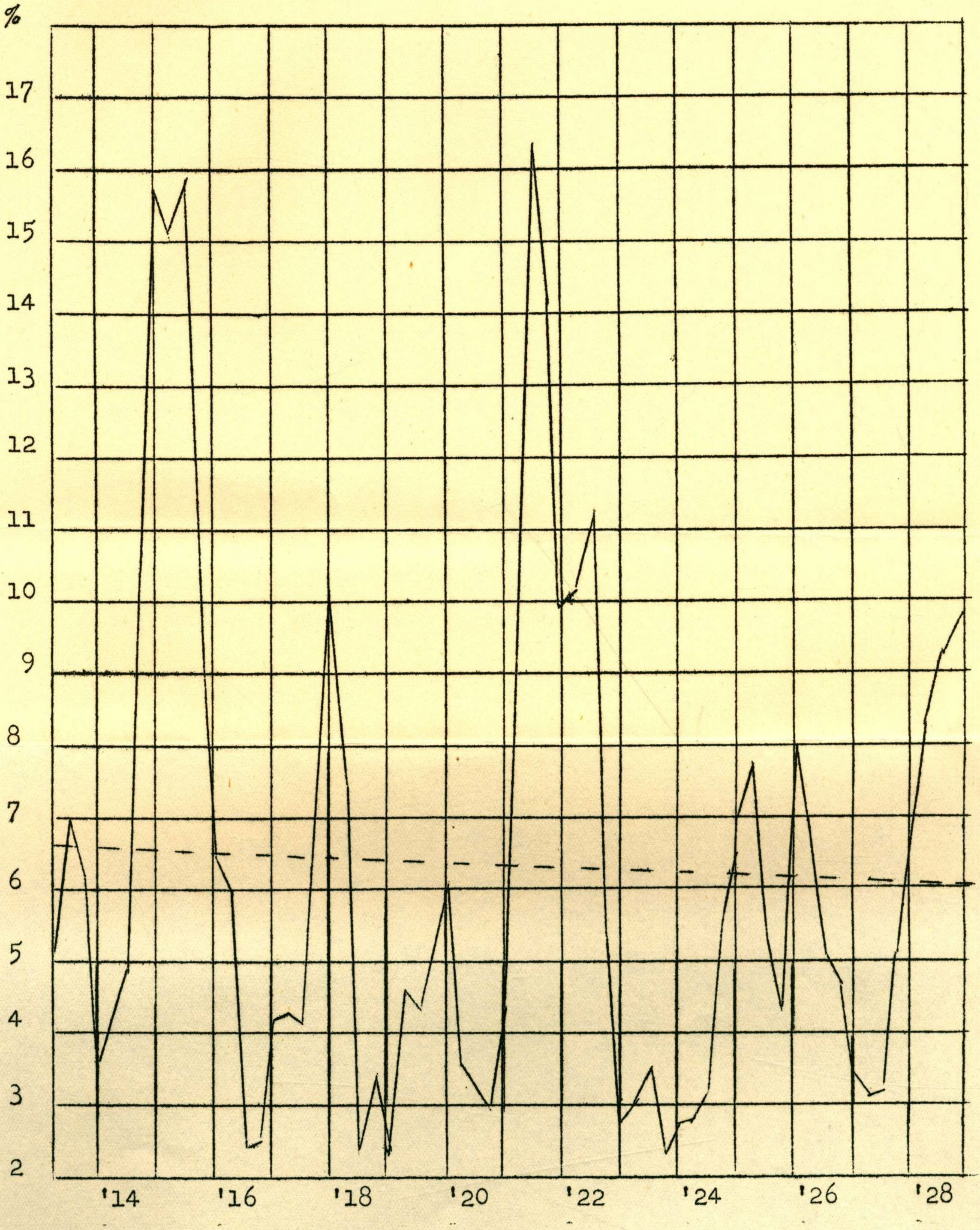


CHART III: Engineering, Metals etc.

Percentage of Unemployment ———————

Secular Trend - - - - -

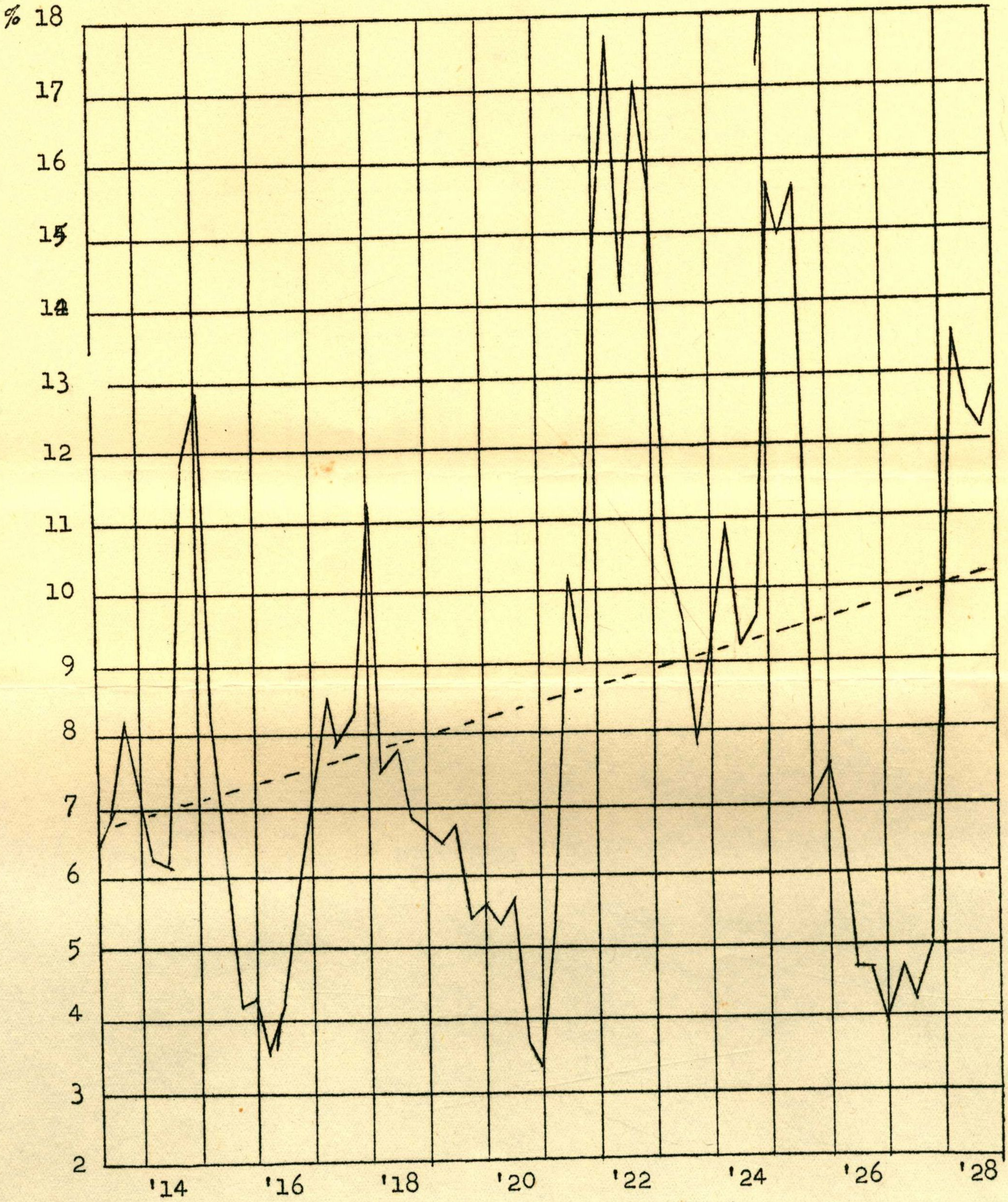
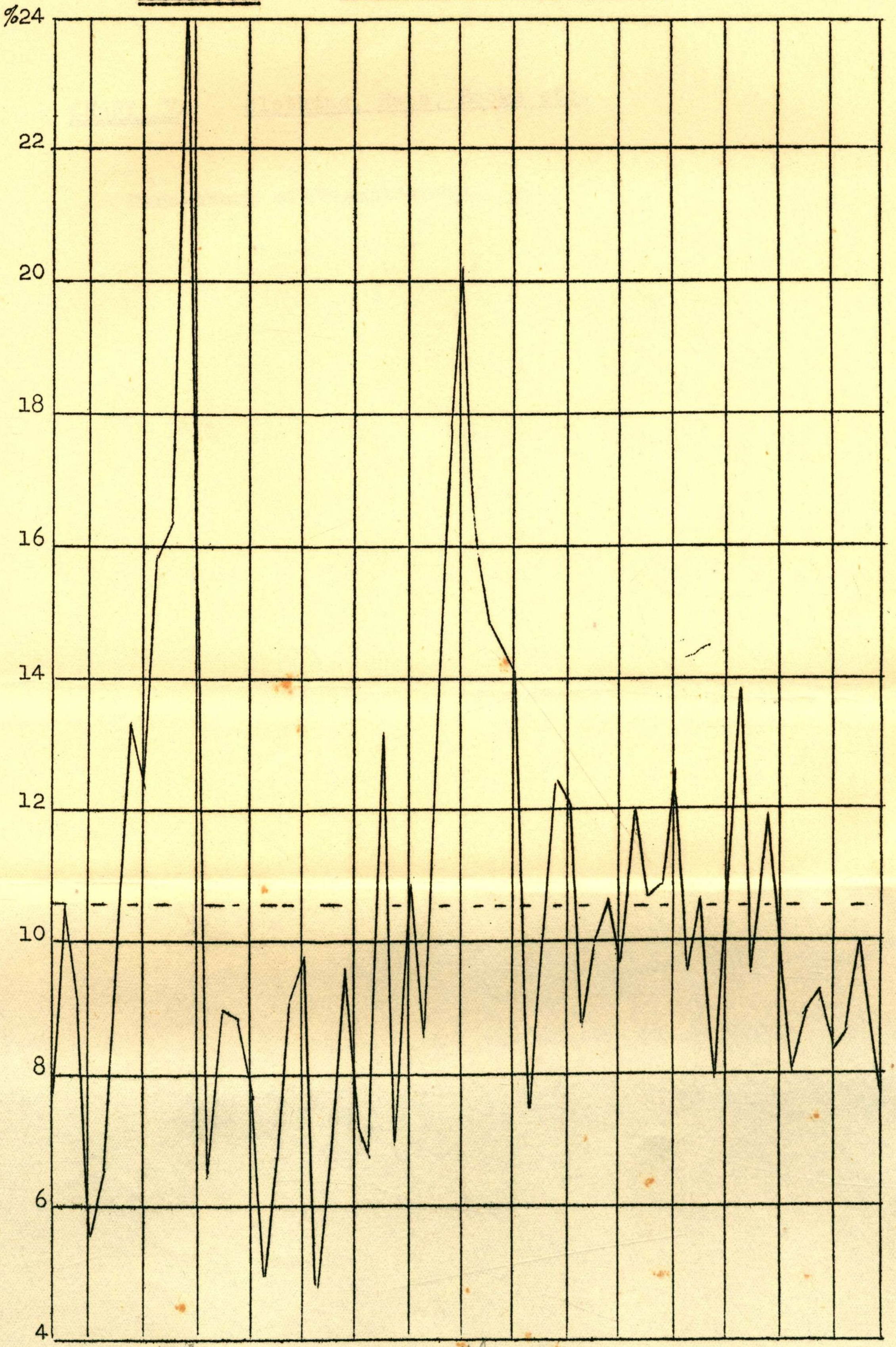


CHART IV: Food, Drink, Tobacco etc.



Percentage of Unemployment _____

Secular Trend (average) - - - - - - -

CHART V: Clothing, Hats, Books etc.

Percantage of Unemployment _____

Secular Trend (average). - - - - - -

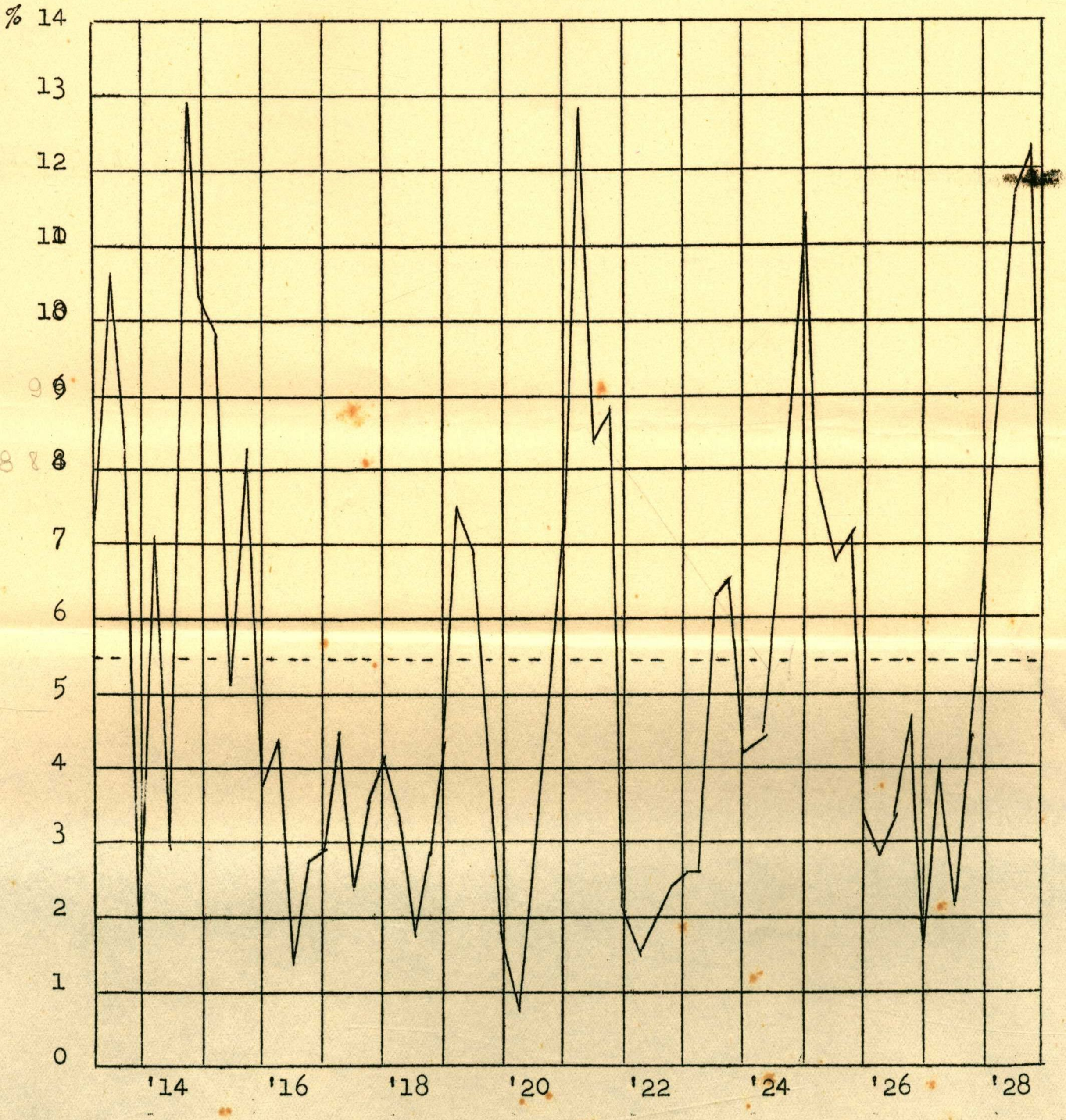


CHART VI: Books, Furniture etc. Printing

Percentage of Unemployment _____

Secular Trend - - - - - -

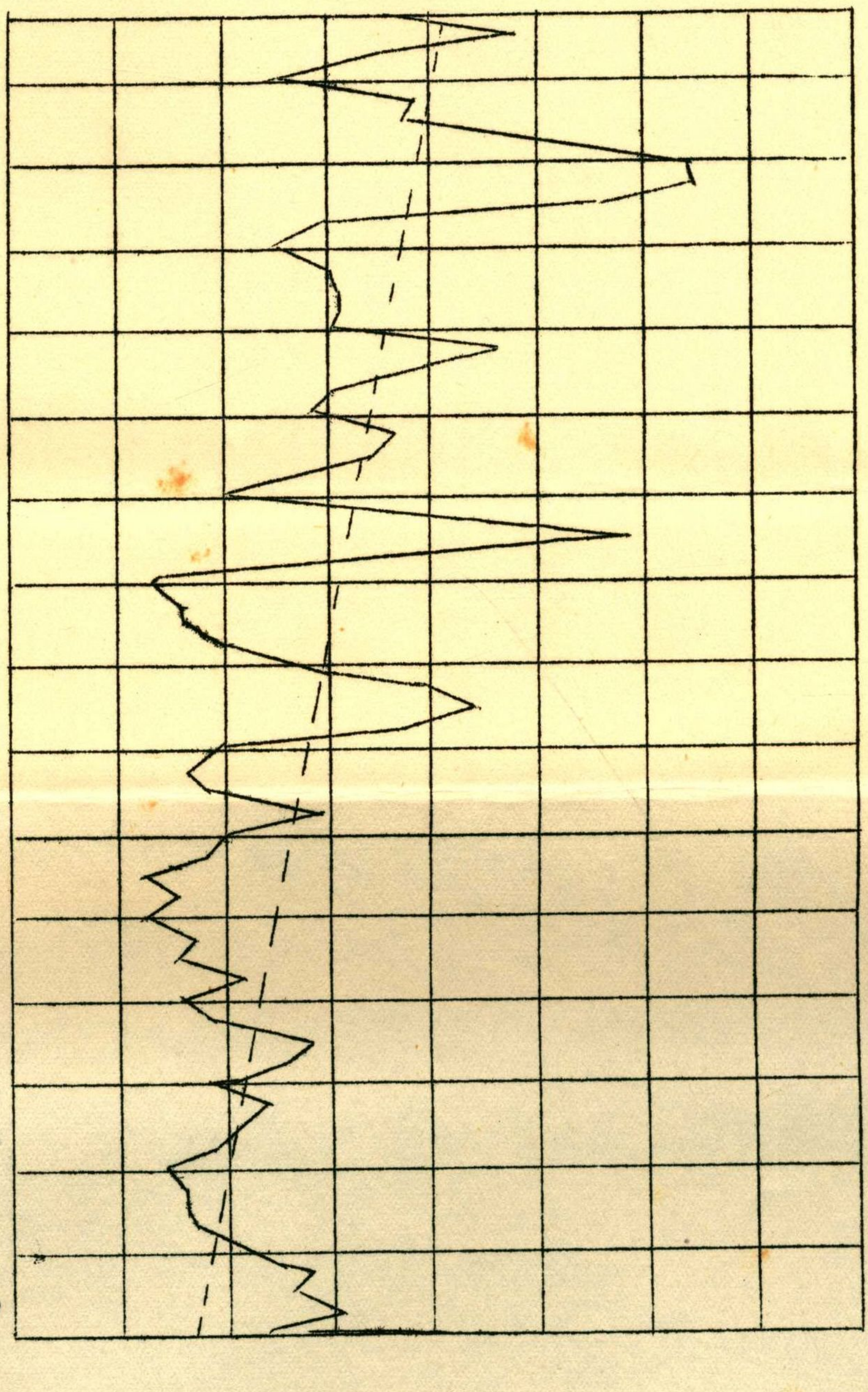


CHART VII: Other Manufacturing.

Percentage Unemployment ———————

Secular Trend - - - - - -

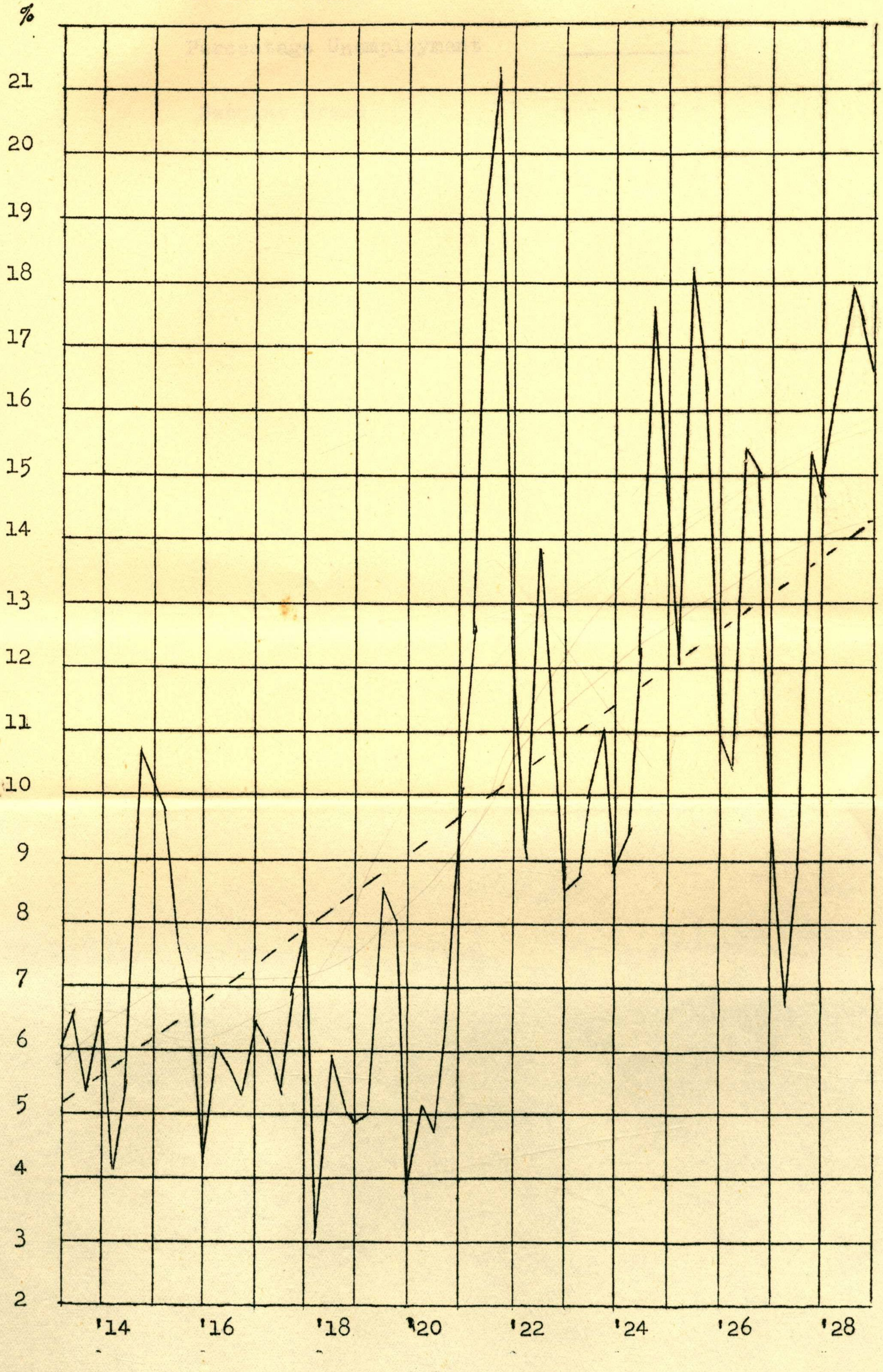


CHART VIII: Building.

Percentage Unemployment _____

Secular Trend - - - - - -

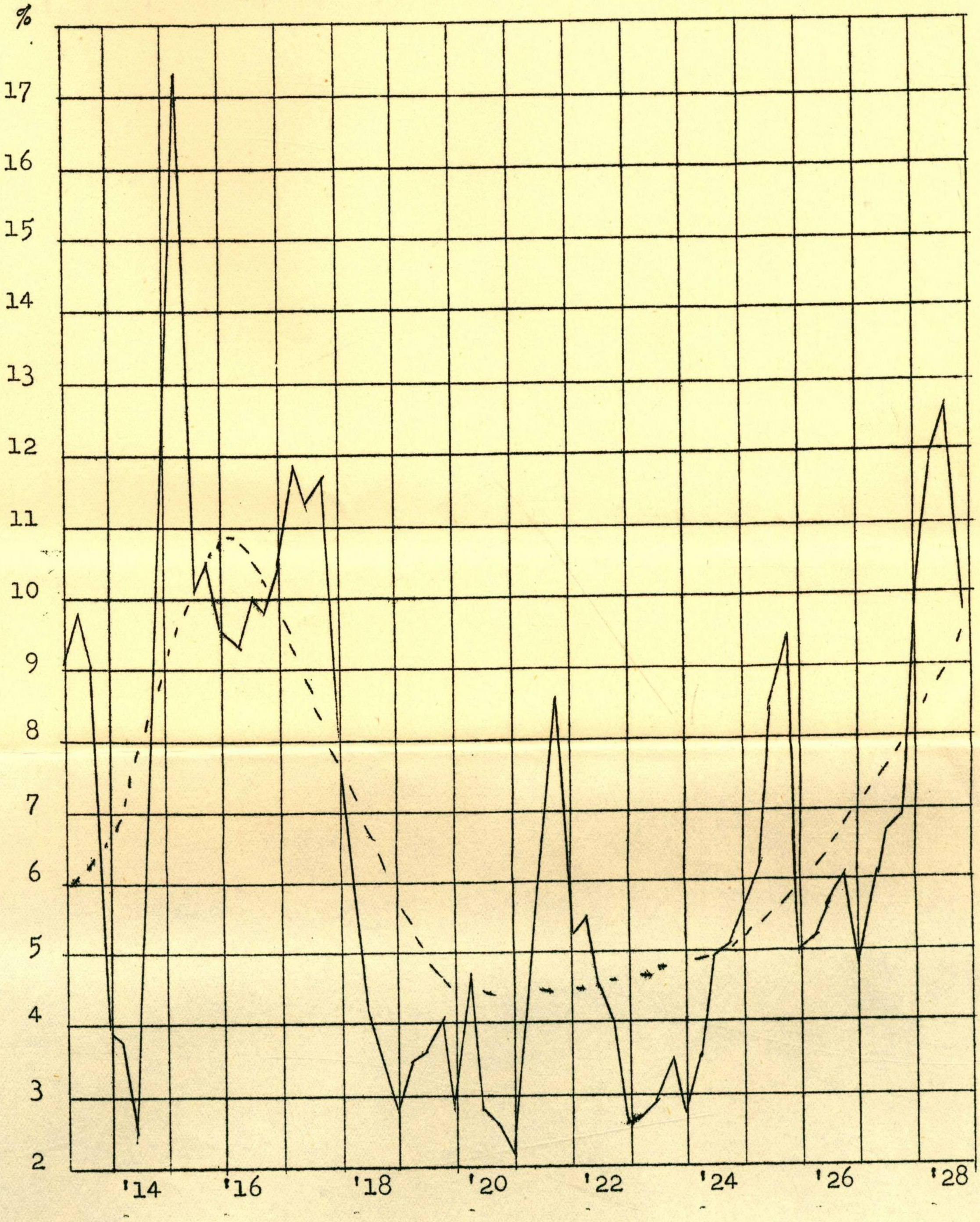


CHART IX: Mining and Quarrying.

Percentage Unemployment ———————

Secular Trend - - - - - -

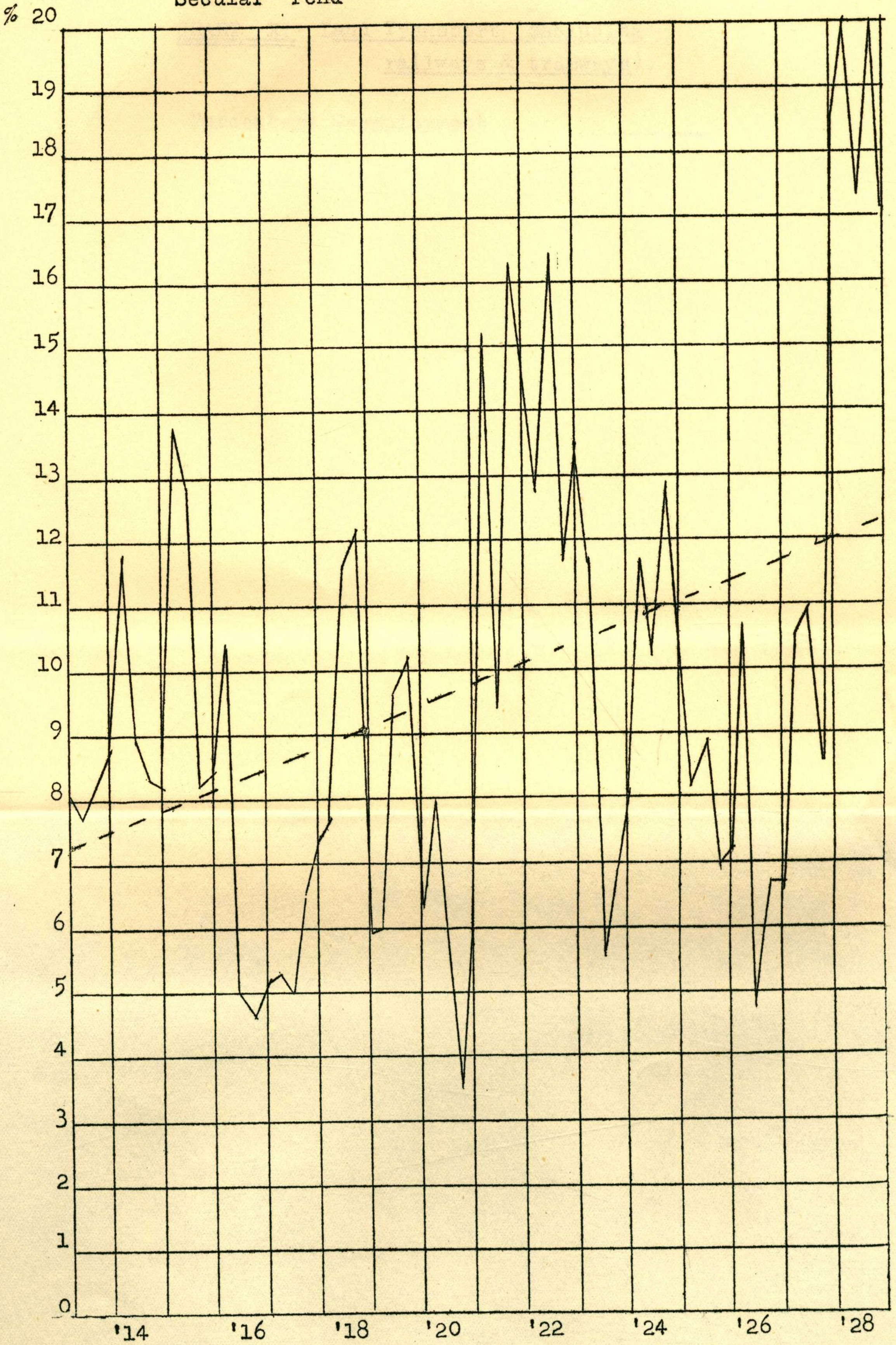
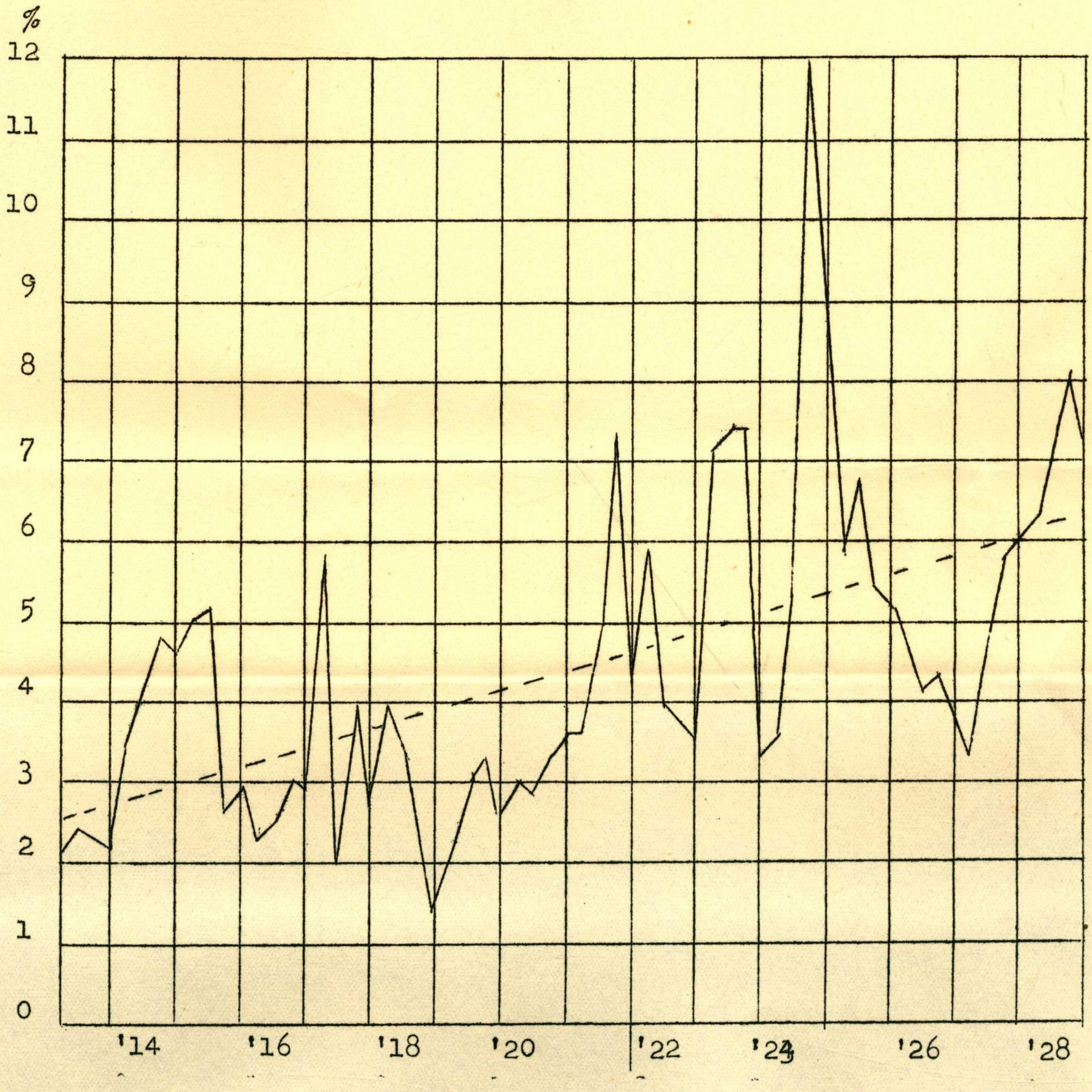


CHART X: Land Transport (~~including~~ Ex railways & tramways).

Percentage Unemployment _____

Secular Trend - - - - - -



X1

CHART XIII: Cyclical Unemployment.

Wood, Furniture - - - - - -

Clothing, Hats etc. ————————

Other Manufacturing —— —— ——

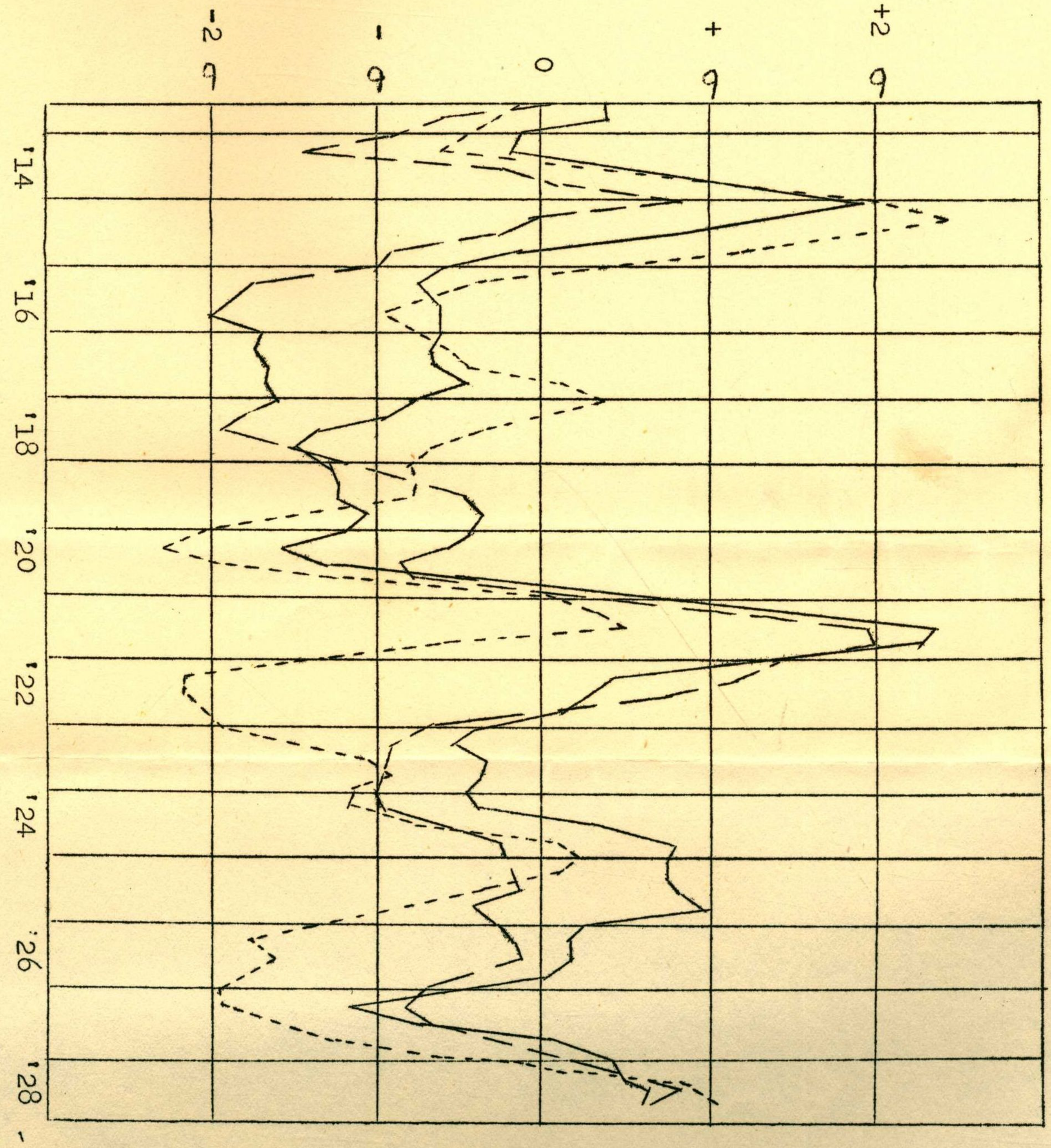


CHART XII: Building —— Books, Printing etc. - - - - -

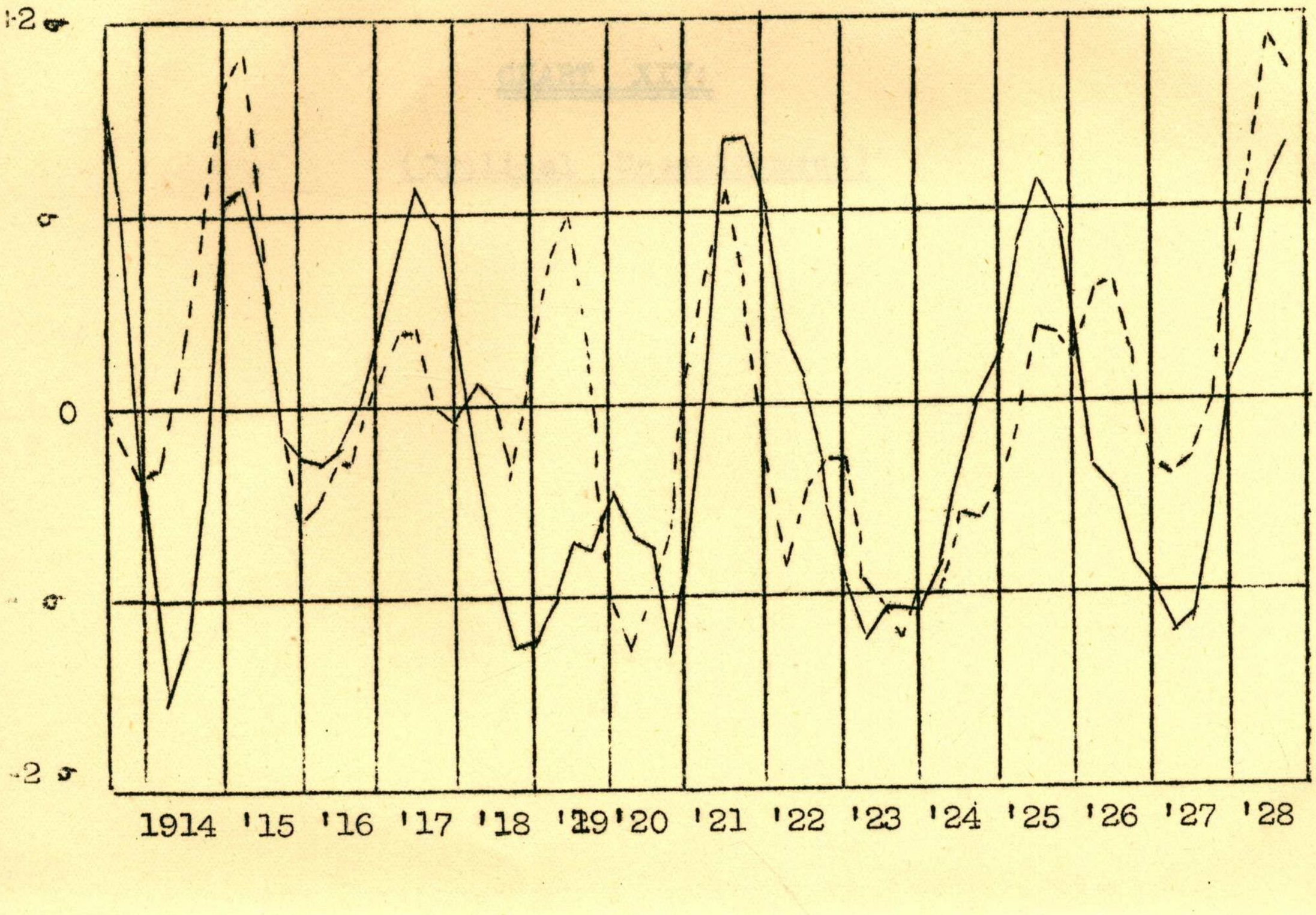
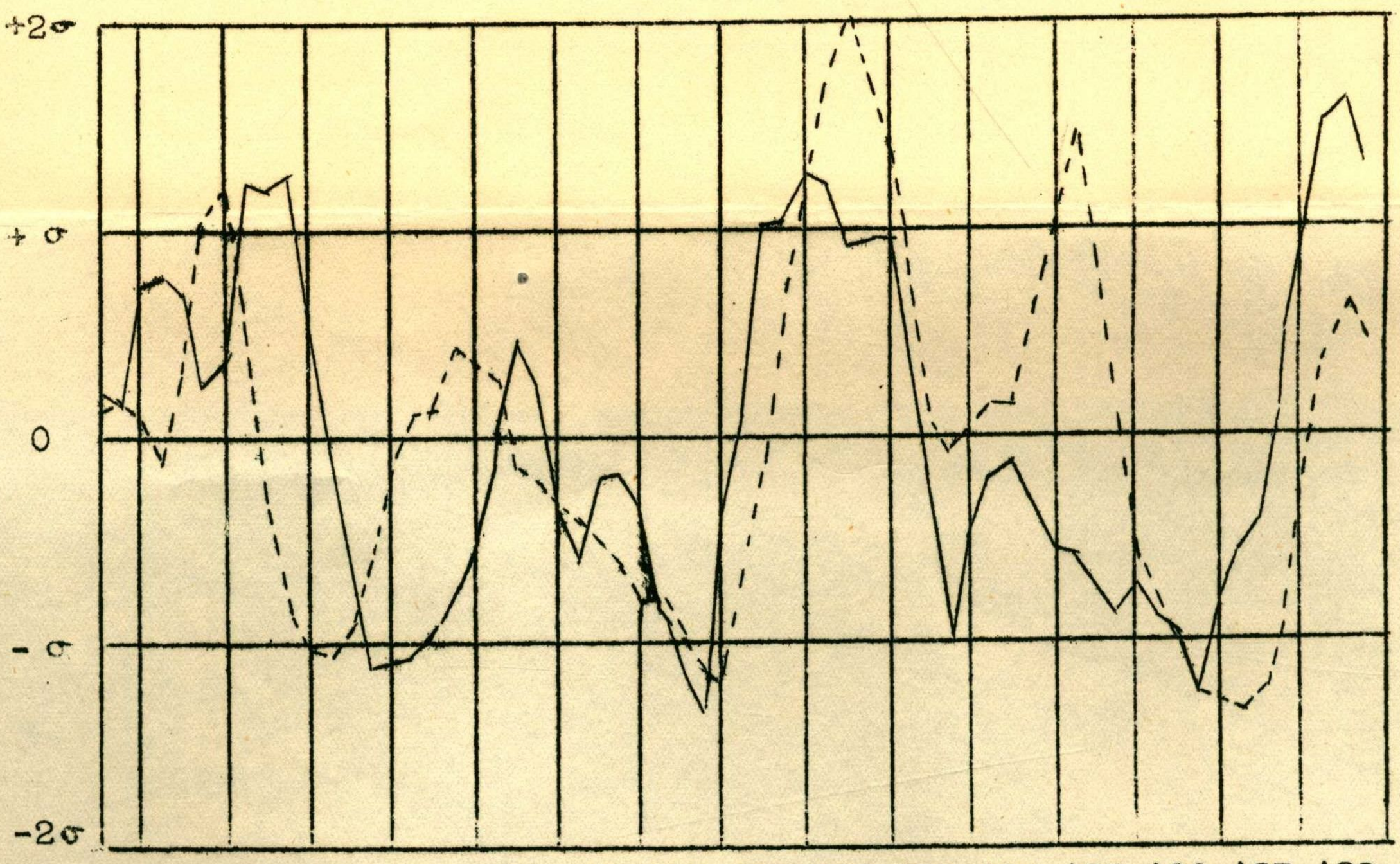


CHART XIII (Cyclical Unemployment)



Mining —— Engineering, Metals - - - - -

Food, Tobacco, Drinks etc. - - - - - -

Other Land Transport ————————

CHART XIV:

(Cyclical Unemployment)

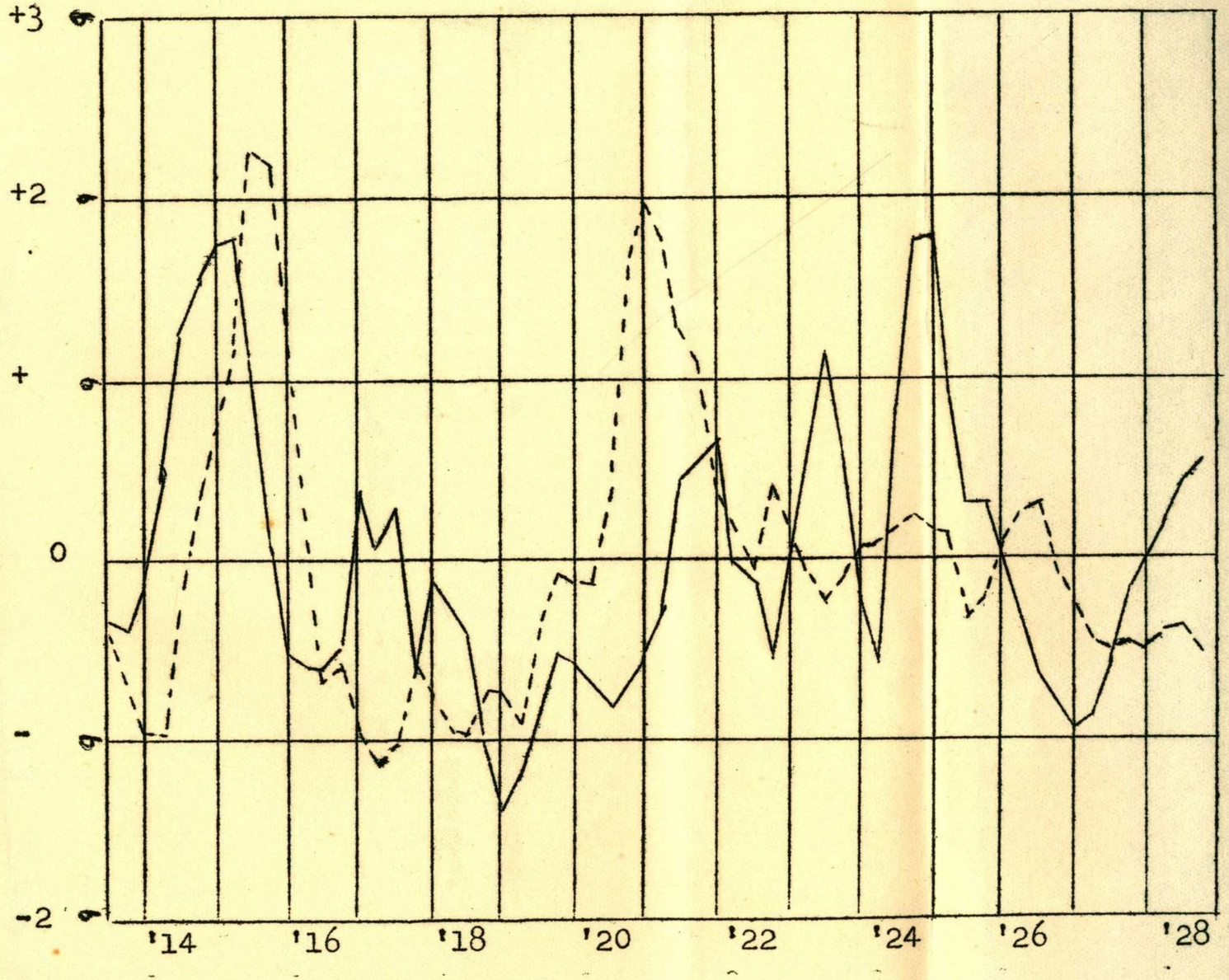
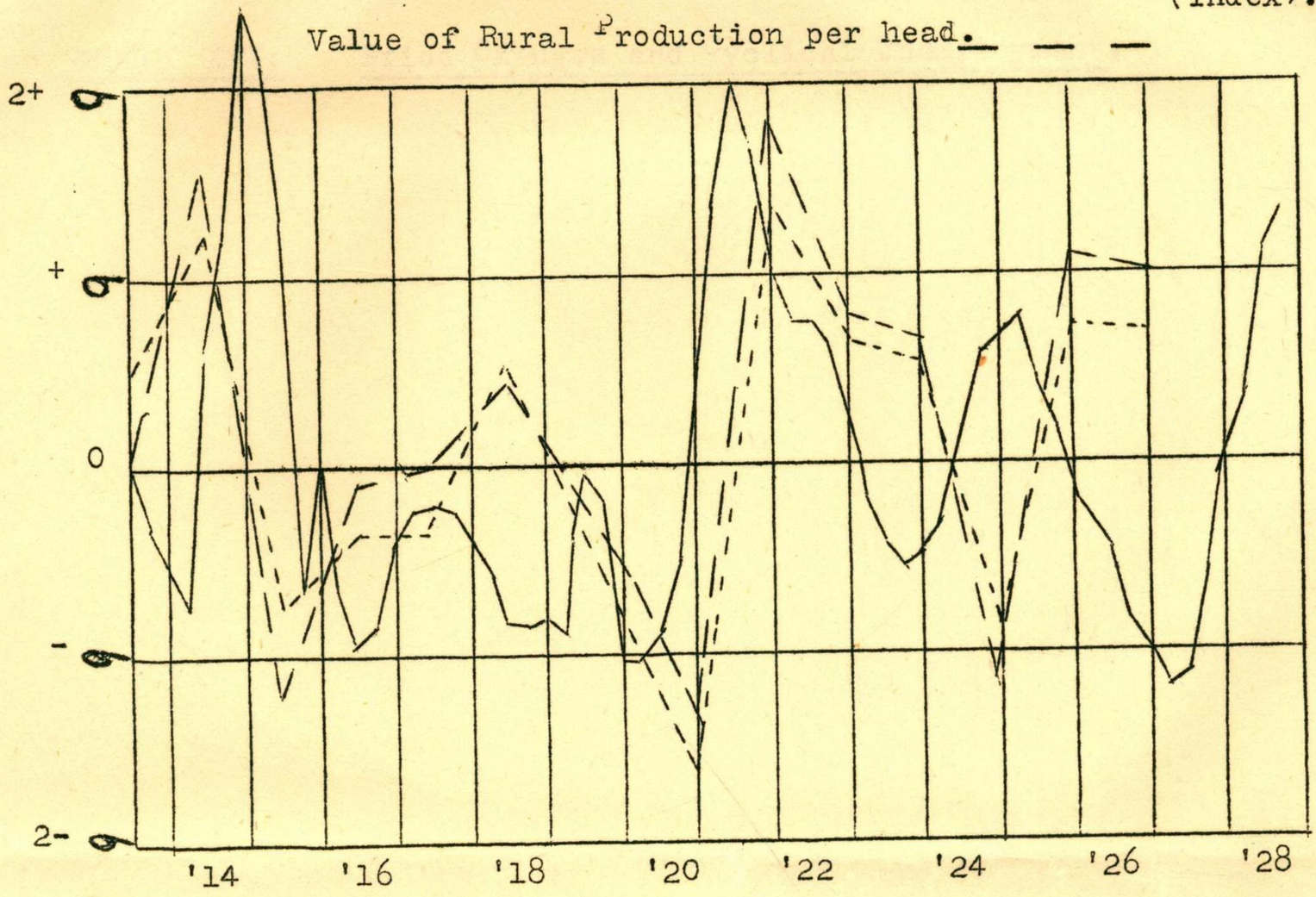


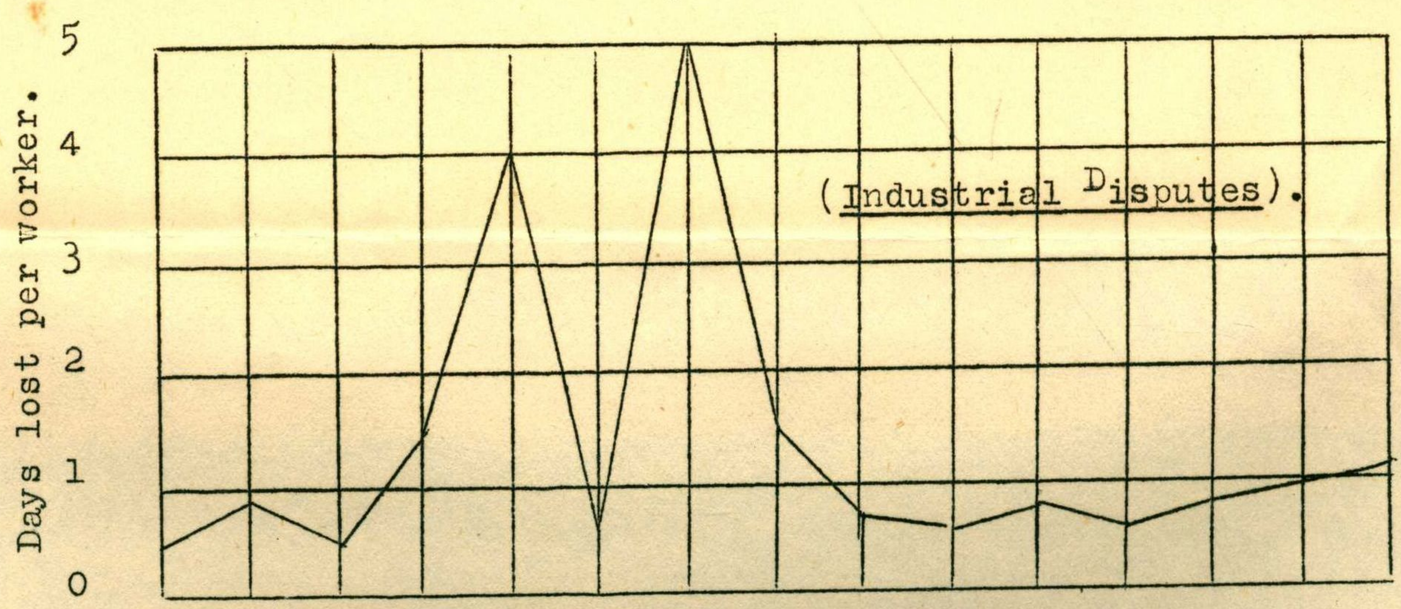
CHART XV: Cyclical Unemployment, Production, Industrial Disputes.

Cyclical Unemployment ————————

Value of Production per head ---------- (adjusted index).

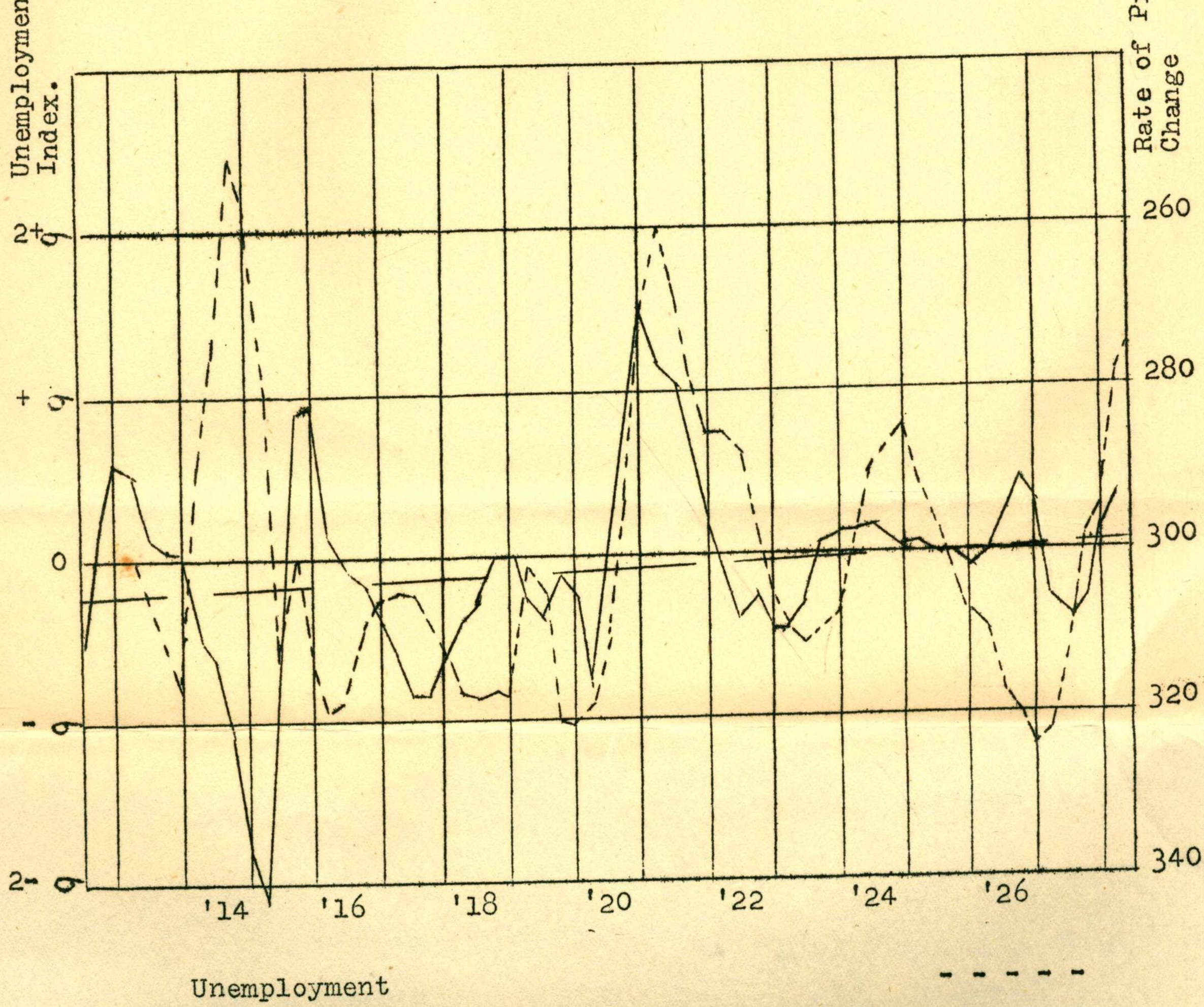
Value of Rural Production per head. — — —





Mild Recession	THORP'S Business Annals.
Revival; recession; depression	
Mild depression; revival	
War activity	
War activity	
War activity	
War activity	
Prosperity	
Prosperity; recession	
Depression	
Slow revival	
Revival; mild prosperity.	
Mild recession	
Revival; prosperity.	

CHART XVI: Price Changes and Cyclical Unemployment.



Unemployment - - - - -

Rate of Price Change ————

Secular trend of Rate of Price Change. —— ——

CHART XVII: Cyclical Unemployment & Banking Policy.

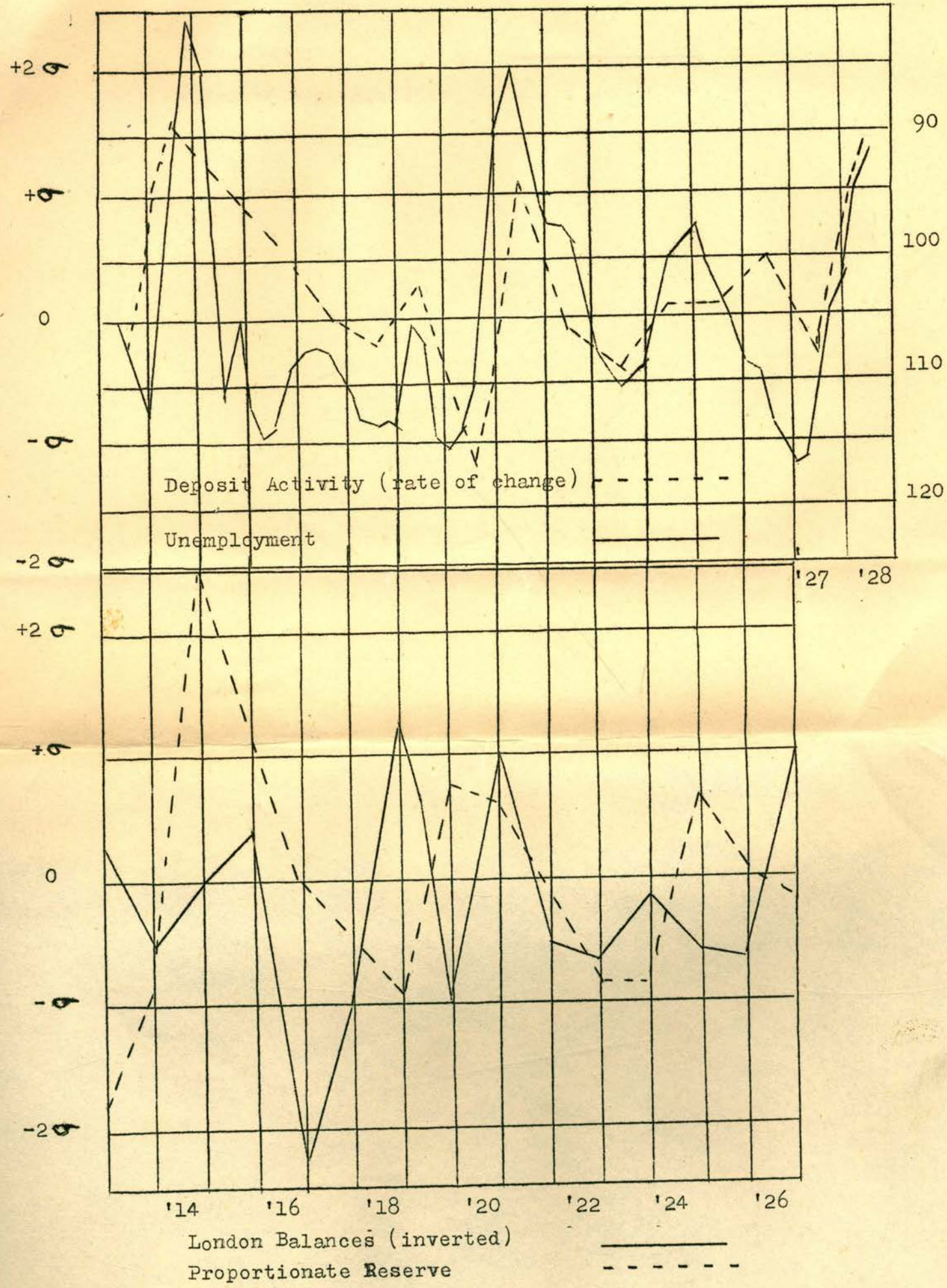
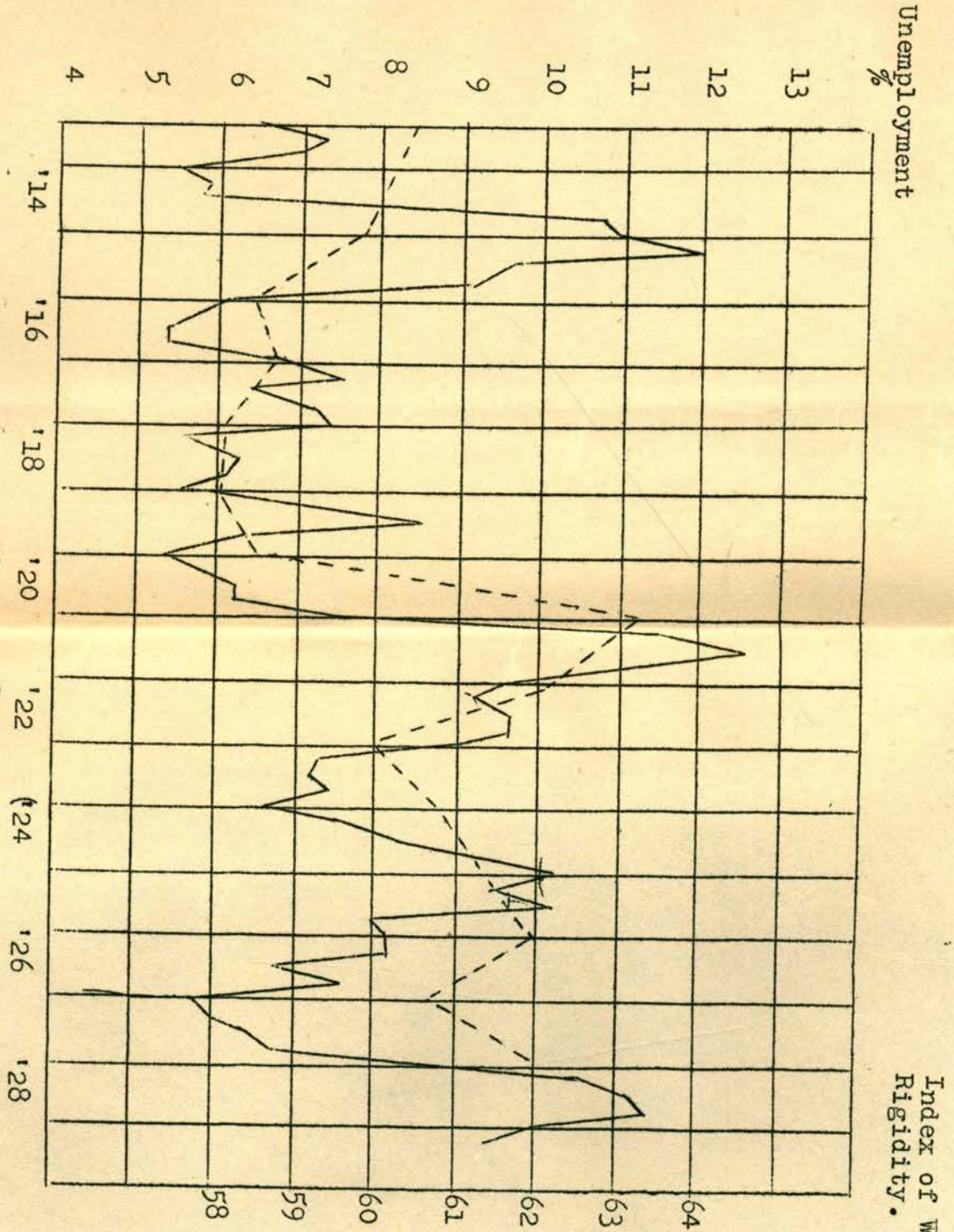


CHART XVIII: Wage Rigidity and Unemployment.

Unemployment ————————

Index of Wage Rigidity - - - - - - - -