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1819 BROADWAY, NEW YORK 23, N. Y. - Columbus 5-3615-6; 5-3644

Dear Sol:

July 30, 1945

Many thanks for your encouraging comments on my memorandum on the study of comparative growth. As you must have gathered, it is more of a declaration of intentions than a description of a definite project. And sometimes as I think of it, the magnitude and the possible meagerness of valid results (in the way of establishment of an orderly pattern) appall me. Yet I am very reluctant to limit the scope at the outset; and make the whole undertaking more comfortable by dealing only with the more recent periods for which data are more abundant or with the few countries for which they statistics are relatively rich.

I am anxious not to extend Phase A at the expense of not ~~being~~ being able to do anything in B and C. Yet Phase A is a necessary preparatory stage--a sort of purgatory. And in so far as this purgatory must have its full effect on my own mind, I am reluctant to abbreviate it by shifting too much of the ~~work~~ burden to a large staff of assistants and reducing too much the time of trial. Maybe these noble and ascetic sentiments will vanish after a year or two of struggle -- but we can wait and see. Meanwhile, my own reading is slow and halting--partly the result of having to deal with national income manuscripts; partly because of a lack of technique to deal with some of the nonquantitative literature (which often seems interesting, but exceedingly difficult to grasp in a tangible way).

I am glad to see from your letter that you are having a holiday in the cool spaces of Vermont. Here are best wishes for a pleasant rest

yours cordially



Siasconset, Mass.

Copies for REL 12/11/81

NATIONAL BUREAU OF ECONOMIC RESEARCH, Inc.

July 11, 1945

MEMORANDUM

To: Members of Research Staff

From: W. J. Carey  
*WJ*

For your information I attach a copy of Simon Kuznets' Preliminary Notes on the Study of Comparative Economic Growth. He is interested to develop a program of research along the lines set forth in these Notes and is now exploring possibilities for a recommendation to the National Bureau. He hopes to complete his exploration during the summer and to submit his recommended program in the autumn. Any suggestions and criticisms you may care to submit on the basis of his Notes will be appreciated.

Copy to: Messrs. Copeland  
Fabricant  
Hultgren  
Moore  
Saulnier  
Thompson  
Mrs. Mack

*Whole thing necessarily  
preliminary just because  
not all detailed analysis  
completed. Cf. US - Burns,  
Productivity, Kuznets, etc.*

*1) Differences in econ.  
status at a moment  
in time  
2) If measures must be  
based on partial indices -  
e.g., mfg alone, etc. -  
problems raised thereby.  
(Also, if need to measure  
differences in productivity  
levels.  
3) Hours of labor?  
fully occupied?*

Camp Albee, Lake St. Catherine,  
Poultney, Vermont. R.F.D.  
July 25, 1945

Dear Brinon,

I read your memorandum on the study of economic growth with keen interest and, I must add, laid it down with due admiration for your vision and daring.

My own feeling is that very much detailed spadework still remains to be done before you will have all the data you now want, or will eventually want, for Phases A & B. All the work that has been done at the Nat'l Bur. on trends in national income, production, & productivity, for example, covers only one country and has yielded information for a period more limited than the one with which you are concerned; yet information for other countries is even scantier.

This does not mean to me, however, that the study you propose would be premature. On the contrary, I think it is highly desirable that it should be begun now. It would provide a far better guide than we now have to what additional & further work is needed if we are to deepen our understanding of economic growth. This thought leads me, however, to <sup>the</sup> belief that: (1) Phase C should be planned (as well as it can be at this time) as an integral part of the study. The value of the study in indicating future lines of work — not only in economics but also in other disciplines — would be much more if a synthesis were not left to the indefinite future. (2) The whole study, even when completed, would be just one step on the road to knowledge of economic growth under modern capitalism. A large part of the value of the job would inhere in its being, in a sense, a survey of the presently available data preparatory to laying out future work. (3) If this view is correct, too much time (single dimension) should not be spent on the study; though it



should be made as extensive in scope as funds permit.

As I see it, this field is no ripe for a "definitive" analysis than was the business-cycle field before 1913; but it is ripe for a real job, such as you can do.

All this you have thought of. But here it is, as one man's reaction.

I hope you & your family are having as good a time as we are.

Cordially,

Ed. Laumann

P.S. I suppose hours of labor will be covered in Phase A.

It would be interesting to study Spain & the Balkans as examples of backwards countries, if date permit; and Turkey might be interesting, also, owing to its recent "westernization."

S.



## PRELIMINARY NOTES ON THE STUDY OF COMPARATIVE ECONOMIC GROWTH

### 1 Statement of the Problem

The basic question to which the study will address itself can be stated as follows: why and how did the different national units grow at different rates during the last century and a half to two centuries? "Grow" means the increase in population, national product, and product per capita. "How" means the different ways in which such growth could be, and was, attained: warlike and pacific; constant or changing composition of industries; constant or changing distribution of product among various classes or between consumption and saving; constant or changing structure of organization within the business sector; different relations between the state and private enterprise; and the like. "Why" means the factors that can be considered truly causative, in both the permissive and the determinative sense -- making growth possible and at the same time constituting the drives toward realizing it.

### 2 Some Preliminary Questions

The above statement raises and also partly answers some of the questions that come immediately to mind, and that must be answered at least tentatively before the study can be properly defined.

(a) The first relates to the methods of attaining economic growth. The discussion of the problem in the economic and sociological literature seems to be directed mostly to the pacific methods -- the increase of population through natural forces and through voluntary immigration; the increase of the product via peaceful growth of the country's gainfully occupied population and rise in the productivity of the latter due to

technical progress, more efficient social organization, etc. Growth by extensive expansion, which is ordinarily accompanied by the use of force (minor when the expansion is over so-called virgin territory; major when a clash with another strong national unit is involved), is ordinarily omitted as not being an economic process proper.

But in actuality national units did expand (or contract) by external pressures, which in most cases involved use of force. And it seems undesirable to exclude these methods from the study. True, the chances of establishing persisting patterns of growth are diminished thereby; or at any rate securing invariant patterns becomes more difficult. But at the same time, the validity of any possible conclusions and the utility of any factual record that may be secured is enhanced by defining the study at the outset to include all methods by which national economies wax and wane. Naturally, the distinction among the various ways by which economic growth is attained, and in the first order, between the pacific and belligerent, should be observed.

(b) The second preliminary question relates to the definition of "nation"; and arises in the case of compound units, best illustrated by Great Britain and the British Empire. Should we deal with England, Great Britain, the United Kingdom, the United Kingdom and Ireland, or should we also include the Dominions (Canada, Australia, etc.)? The answer obviously depends upon the degree of economic cohesion and the extent to which the economic growth of England can be understood without considering that of other parts of the British Empire.

Here again, an inclusive treatment, coupled with the necessary differentiation within the inclusive unit, seems most reasonable, at least at the start. The empirical information should be assembled in such a way that



both the narrower and broader definitions can be used; and in any selection, necessary for limiting the study to practicable dimensions, we should give priority to such units as will later on permit the establishment of growth of nations both narrowly and broadly defined.

(c) Economic growth was described above in terms of increase in population and product. Other measures may be suggested, e.g., increase in wealth or capacity. Also, if we consider the possible variant definitions of national income or product, particularly those that depart widely from the ones commonly used (e.g., some measure of psychic income, or a total such as advocated by Irving Fisher), the way is open for a number of different quantitative appraisals of economic growth. Finally, some nonquantitative tests may be considered, although in that event it is difficult to see how differences in the extent of growth could reasonably be approximated.

The question implicit in such a variety of possible ways of measuring economic growth should to my mind be answered quite simply. In view of the importance of securing at the outset of the whole study a satisfactory quantitative record of economic growth that does in fact characterize various national units, the only thing to do is to select criteria of measurement that are comprehensive and feasible. Population and national income, as the latter is customarily defined, are such criteria. The others that may have specific values of their own can, and should be, brought in later, in some of the more analytical phases of the study. Many of these will be used even in preparing the basic quantitative record, as subsidiary quantities (e.g., estimates of wealth). The significance of this decision will become clearer, as the possible sequence of steps in the study is unfolded below.

### 3 Phases of the Study

Basic to the whole plan is a distinction between the first phase in which

measures of the extent and character of economic growth of different national units are secured; and the second in which the analysis is pushed deeper, down to the factors that may indicate why the growth observed was at different rates and of different character for the several national economies. We designate the first phase A; the second, B.

The distinction between the two phases comes perilously close to one between collection of data and analysis and interpretation of the latter. This is not the intention here; nor can collection and interpretation be kept separate. The difference rather is between establishing (and measuring) differences in extent and composition of economic growth -- with the various explanations already available kept in mind as guides to the very measurement of national differences; and establishing (and measuring) the various factors that may explain the differences recorded in Phase A. In one sense there is no analysis in either phase; in another, there is analysis in both. If by analysis is meant a final explanation, an experimentally secured revelation of the ultimate causes, there will be no analysis in the study, whether in Phase A or B (or any other). In the sense that analysis consists of unfolding, rearranging, classifying empirical evidence so that various hypotheses can be checked, there will be analysis in both phases: but in Phase A the hypotheses will deal with comprehensively defined categories whereas in Phase B they will dig down to the more narrowly defined factors, and hence closer to individual and smaller group motivations.

This distinction can perhaps be made more intelligible by specifying the aspects of economic growth proposed for study under each of the two phases.



#### 4 Aspects Covered in Phase A

The three major aspects proposed under Phase A are: (a) population; (b) national income or product; (c) inter-unit relations.

(a) Under this head are included the basic measures of population change: total increase or decline; the division between migration and natural change; the division of natural change between death rates and birth rates. Next, the changes in the gainfully occupied population and in its occupational-industrial composition should be studied, thus linking changes in population with changes in national income or product.

*need notes  
by HK  
groups.*

(b) Under national income we include not only the totals adjusted for price changes, as gauges of the net real output of a nation's economy; but also all the significant breakdowns that have become customary and that are the first step in answering the question "how". This means the breakdowns by industrial source and between consumption and capital accumulation -- as the basic ones. Another distinction, important for the analysis under (c) below, is between foreign and domestic sources. Finally, the available data also will provide some picture of the income money flows -- with the attendant distinctions by type and by size.

(c) The aspects mentioned under (a) and (b) would, if measured, provide gauges of economic growth and its composition within each of the several national units, but little specifically on the relations among them. These are included under the present head, and should cover not only the pacific relations -- exemplified by the flow of people (migration, see under (a)); of commodities -- in foreign trade; of services; of capital (on the flow of funds level). They should also comprise the armed conflicts with an indication of their economic costs and of the resulting gains and losses to the national units involved.

## 5 Aspects under Phase B

An assembly, organization, and a proper summary of the record for the various aspects listed in Phase A should result in a broad picture of the different trends in the extent, composition, and sources of economic growth for the several national units; as well as of the various processes, peaceful and warlike, that link them. At the present stage of my thinking, even a tentative definition of the aspects to be studied in Phase B is more difficult. Those discussed below are intended primarily as an illustration rather than as an exhaustive outline.

(a) Under population, the analysis in Phase B should consider more closely the causative factors of birth rates, death rates, and migrations; take into account the birth and fertility differentials among various classes of the population in the various national units; associate death rates with controllable and uncontrollable factors; and consider the various factors constituting the push and pull in the international migration process.

*How measured*  
(b) With reference to industrial sources of economic growth, analysis in Phase B should consider: (aa) the effects of technical progress and of natural resources; (bb) the effects of the changing organizational structure of different industries; (cc) effects of foreign competition. Like the aspects under (a), each of these involves an extension of the volume of measures already secured in Phase A as well as their refinement closer to the factors at play.

(c) It is also in Phase B that the effects of the money and credit mechanisms are to be considered. In measuring the extent and composition of economic growth, these mechanisms are not important. In analyzing the factors that impede or accelerate it, the structure and efficiency of the money and credit mechanisms are important.



(d) The role of the state can, and should be, more carefully analyzed and measured in Phase B. It is here that the importance of a sovereign state for an independent national unit and of the subordinate position for others (such as India, or in different ways, China) is to be examined. So far as possible, the quantitative magnitudes of state action are to be established, with reference both to internal processes and to international relations.

(e) Finally, either in this phase or in a possible Phase C (see discussion below), examination of the whole complex of social institutions, national "spirit", the scale of social values, and the place in it of economic success, is in order. A critical scrutiny of widespread generalizations concerning the influence of a nation's social philosophy and outlook on life in general upon its economic growth appears indispensable; if only to see whether, with the help of quantitative and other data, the grain of truth in these notions can be separated from the chaff.

#### 6 Scope of Study in Phase A

The aim in this phase is largely to establish and measure differences in extent and composition of economic growth among various national units; and the magnitude of the several types of international economic behavior. The temporal and spatial scope of the study is, therefore, determined to a considerable extent by the available data -- particularly the quantitative series. But in addition, two other criteria of delimitation should be employed. The first is the governing notion that the study is largely that of the emergence, spread, and impact of the system of industrial capitalism. The second is that the larger national units, because of their very size, are more important and have a first priority in selection for study even though some smaller units should be included, if only to permit comparisons.

In the light of these criteria, the following limitation is tentatively suggested. With respect to time, an attempt should be made to carry the measures and analysis back to the 18th century -- varying the period largely with the judgment as to when the given national unit entered the period of industrialization or was affected significantly by industrialization of other nations; and extending it far enough back to permit, if at all feasible, a picture of the state of the national economy prior to the impact of industrialization. This may mean that for a country like England, the record might be carried back to the end of the 17th century; whereas for Japan it would be sufficient to begin with the second half of the 19th century, after a preliminary rough outline of events prior to that date. For the various national economies the period selected would, then, partly depend upon the historical phase and available data; and a specific decision would have to be made in each case.

With respect to spatial coverage, priority in selection is to be given to the major national units, as measured by their present size. This would call for inclusion, in the first order, of the United States, the United Kingdom, Germany, France, Russia, Japan, China, and India. Judging by my present knowledge of available data, there is a good chance of building up a substantial quantitative record of population, national product, and international movements for all of these units, with the possible exception of China.

The group of second priority is partly determined by availability of data now known to me. It would seem feasible to include Holland and the Dutch East Indies, Belgium, Sweden and perhaps the other Scandinavian countries, Canada, Australia, New Zealand, Italy and Argentina.

*Main?*



Both lists are highly tentative and may differ considerably for the various aspects of economic growth listed under Phase A. Thus, for total population and its movements a much longer list of countries could be, and probably should be, studied. It would be impossible to cover as long a list of national economies in the establishment of secular changes in national income and its composition. The countries that can be studied with respect to their foreign trade are much more numerous than those that can be covered in a comparative study of changes in other significant categories of the balance of payments. How many of the armed conflicts will be covered and for how many countries is something that I will not even venture to guess in my present state of ignorance.

The difficulty at the moment of making a hard and fast decision concerning the spatial scope of the study in Phase A is not surprising, but it is a matter for some concern. The limitation to major national economies carries with it the danger of rendering it difficult later on to explain why some of what were in the 18th century minor units grew to major sizes; whereas others did not. But one can hope that the inclusion in the study of several smaller countries will provide the necessary background of comparison, which, if need be, could be broadened at a later date.

Nor is it necessary to insist that the spatial or temporal scope be identical for all aspects of economic growth. There is no harm in having records of population growth for more countries than are covered under national income. The danger to be avoided is frittering away resources in attempting a comprehensive coverage of one aspect, at the expense of possible completeness for another related aspect.

## 7 Scope of Study in Phase B

The scope of the analysis in Phase B is even more difficult to delimit at present; and will vary appreciably from one aspect to another. In general, an attempt would have to be made to utilize whatever data are available -- which will be much more scanty for the more incisive analysis of Phase B than for the more general treatment of Phase A.

Thus it is obvious that a careful segregation of the various factors in the long term movement of birth and death rates and of migration is possible for only a few countries, and for comparatively recent periods. By contrast, the impact of technical progress upon industrial structure can be studied for a long period; but again largely for the countries in which this impact occurred first. A still different impression of possible scope is secured when we consider the analysis of such factors as the sovereign state; or of the whole congeries of social habits and outlook that are subsumed under national spirit. Here, obviously, a most comprehensive coverage, including representatives of the distinct types of social organization now functioning and carrying them sufficiently into the past to lay bare their pre-industrialization roots, would be desirable and necessary.

At present, we cannot go beyond the few general comments above. Here, even more than under Phase A, the decision as to scope will have to be made in specific terms for each of several aspects studied -- after sufficient exploration of each field.

## 8 Statistics, History, and Theory

The emphasis on the need for a quantitative record, especially in discussion of Phase A, might give the impression that all that is wanted is a

statistical encyclopedia. While this is far from the intention here, I would like to reiterate the potential usefulness of the quantitative record, and the justification for devoting a goodly part of the available resources to its compilation. True, the larger differences in extent of economic growth and even in its composition among the several major nations are fairly obvious and need no demonstration by statistics. But a continuous, systematically organized and analyzed quantitative framework should go far beyond these well known differences. It should enable us to establish the phases of development; to compare the rapidity with which the phases unfolded; to find clues to the important differences in the economic and social structure that were determinative in holding one national unit back and producing extremely rapid growth in another. And it should provide a check upon hasty generalizations.

Naturally, in the organization of this record, even in Phase A, intensive use of the histories of the several nations will have to be made. Without this, the distinction of the several phases of development and of the several types of economies could scarcely be made intelligently. Just as in the business cycle study the purely quantitative record had to be supplemented, even in the initial phases, by nonquantitative data of the type embodied in business annals, so also here the large volume of available description contained in economic and general histories (and possibly also in economic geography and some of the literature classified under sociology) should be utilized. How far one can go, in combining the quantitative and nonquantitative data, toward a proper classification of phases of development and types of economies cannot be foreseen at present. But obviously the unfolding of subsequent analysis, and the usefulness of Phase A in laying down the framework which will direct subsequent work into

the most promising channels, is dependent upon a successful utilization not only of the statistical series but also of the historical data.

I am not as hopeful of the possible contribution of theories of economic and social growth, because of a suspicion, perhaps unwarranted, that the theories that have evolved so far rest upon comparatively narrow empirical bases and generalize from limited experience to conclusions that are either vague or are advanced with unwarranted claims of general validity. This, naturally, does not mean giving up at the start an attempt to learn from these theories anything that may be useful in them in the way of suggestions, hints, hypotheses, etc. Particularly, in Phase B, as the analysis in the study gets down to more narrowly defined institutional complexes, or possibly different phases of development and types of economies, the available theories may be more useful as guides (because they can then be used in full cognizance of the limits of the experience which they attempt to generalize). My doubt relates primarily to the value of spending much time and effort on a comprehensive survey of the theoretical literature in Phase A, with the idea of trying to distill some summary that may govern the final presentation of the results of Phase A. The doubt, to repeat, stems from a suspicion that for the variety of social and economic experiences that will be represented by the national units studied in Phase A, there is no helpful economic and social theory -- as distinct from grandiloquent linear or cyclical theories of history that either disregard the variety of experience or clothe the conclusions in terms too vague or symbolic to be of more than philosophic or poetic value. This, however, is a question to be answered more intelligently after some study of the literature -- which study should be part of the work in Phase A and should be continued, along lines indicated by the formulation of the separate bundles of problems, in Phase B.



## 9 A Possible Plan of Operation

If one may conjecture a feasible plan of operation -- and it can be no more than a conjecture at the moment -- I am inclined to suggest it on the following lines. The study in Phase A is best conceived as a single project, i.e., under a single head with whatever assistance is needed. The study would largely involve taking stock of already available data, but with considerable time spent on making the record continuous and comparable; on pointing it up in such a way that differences in phase, extent, and composition of economic growth become plainly apparent. The purpose would be primarily with the help of such a record, to define the problem to be investigated; while at the same time summarizing the basic aspects of economic growth in the observable past within the last century and a half to two centuries.

The product of this first phase is likely to bear some resemblance to Dr. Wesley C. Mitchell's Business Cycles: The Problem and Its Setting. It will describe the problem of economic growth, as suggested by international differences in its course, composition, and inter-unit relations. The need for treating the project as a single undertaking lies specifically in its aim to set a springboard and framework for other investigations, to follow in the subsequent phase or phases. It cannot, therefore, be easily divided into separate parts, for treatment by several, relatively independent, investigators. Nor should the project be so large as to make it too unwieldy for a single responsible investigator, with some assistance. The effort should be directed, as much as possible, at utilizing the immense amount of spade work already done in the field of population, national income, and international relations; and resources should be devoted only sparingly to the construction of new primary series. As a

pure guess, I am inclined to think that this phase could be brought to completion within about five years; with its product -- a summary of the problem, supplemented by collections of the basic series (properly reworked and annotated) completed within some such period as that.

As indicated above, the work in Phase A will go beyond the preparation of the statistical series. It should include the utilization of historical and other writings so that the quantitative record can be organized to indicate the different phases of economic growth, as well as the distinct types of national economies covered. And it should also include sufficient study of the existing theoretical literature to ascertain whether any hypotheses contained in the latter are formulated with sufficient cogency to merit using them in the organization of the data.

The planning of Phase B would necessarily be a by-product of phase A; and could be done most intelligently only in the last stages of the latter. This means that the several investigations that comprise Phase B should not be initiated before the first phase is near completion. But one may conjecture even now that the plan of operation in Phase B may be quite different from that in Phase A; that no single investigator may be able to handle the variety of problems and data that would have to be studied. The plan that, on the present outlook, seems more feasible is to break Phase B into a group of separate, if related, studies, whose cohesion would depend upon the common framework provided in Phase A; the close contact of the several investigators; and some synthesis that may become a separate and heretofore barely mentioned Phase C.

How the several investigations could most advantageously be formulated; and what time span could be guessed at for their reasonable completion -- such questions with reference to Phase B could be answered most intelligently

when the first phase of the whole undertaking approaches its termination. But it must be remembered that availability of data will impose unavoidable restrictions in some cases; and that there may be considerable elasticity in the comprehensiveness and thoroughness that will be required at this phase. One must necessarily compromise with unattainable ideals of perfection in a field as vast as the one under discussion; and one in which the extent and intensiveness of empirical and analytical work differ so markedly from one area in the world to the next, and from one historical phase to another.

#### 10 A Final Phase C?

It is probably premature at the present juncture to try to answer the question whether another level of analysis, another phase in the whole undertaking will be needed, to bring the results together and to place them within a broader framework than can be set in Phase A or refined in Phase B. It is even premature to try to decide now the character of that possible additional phase. Is it to be an attempt at a synthesis in which some combination of quantitative data, nonquantitative but reasonably empirical information, and inspired conjecture are to be joined in a final summary of the problem? Or should the investigation end with Phase B, leaving the synthesis to the efforts of individual scholars whose efforts could reasonably be expected to reach an appreciably higher and more acceptable plane because of the assistance and check that they will gain from study of Phases A and B?

It is sufficient at the moment merely to raise these questions, without trying to answer them. Here one may merely note the possibility of such an additional phase as an integral part of the whole undertaking; without deciding definitely that such a part will be feasible, and what particular direction and scope it need assume.

April 10, 1945

Simon Kuznets