This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Supplement to NBER Report Seven

Volume Author/Editor: NBER

Volume Publisher: NBER

Volume URL: http://www.nber.org/books/reus71-1

Publication Date: March 1971

Chapter Title: Fiftieth Anniversary Colloquia Address: What Kind of Growth?

Chapter Author: Henry S. Reuss

Chapter URL: http://www.nber.org/chapters/c4223

Chapter pages in book: (1 - 14)

supplement

Fiftieth Anniversary Colloquia Addresses

U. S. Congressman Henry S. Reuss Commissioner Richard B. Smith, S.E.C.



NATIONAL BUREAU OF ECONOMIC RESEARCH, INC. NEW YORK, N.Y. 10016

National Bureau Report and supplements thereto have been exempted from the rules governing submission of manuscripts to, and critical review by, the Board of Directors of the National Bureau. Each issue, however, is reviewed and accepted for publication by the Research Committee of the Bureau and a standing committee of the Board.

Copyright © 1971 by National Bureau of Economic Research, Inc. All Rights Reserved

Printed in the United States of America

NATIONAL BUREAU OF ECONOMIC RESEARCH COLLOQUIUM ON ECONOMIC GROWTH Bank of America Center - San Francisco December 10, 1970

Remarks of Congressman Henry S. Reuss (Democrat-Wisconsin)

What Kind of Economic Growth?

I welcome the opportunity to join in celebrating the National Bureau's 50th Anniversary. I am happy to observe that no one seems to be suffering from "future shock." It is a mark of spryness and confidence that you have chosen to close out your 50th year and launch into your 51st with a colloquium on economic growth.

A growing economy is good for the nation - at least almost everyone has long accepted this idea. If we have had articles of faith, they are to be found in the Employment Act of 1946, which enjoins the Federal Government to promote "maximum employment, production and purchasing power." We have set our sights on steady growth to meet the goal of full employment, and on steady price levels for maximum purchasing power.

And how we have grown! But even during the early 1960's, when we achieved unprecedented prosperity and approached full employment, a doubt began to gnaw at our faith. Could we indefinitely sustain growth and full employment and undiminished purchasing power too? When inflation was not racking us by day, it stalked our dreams at night.

May Cause Inflation

We are reasonably certain of the techniques to stimulate growth. We know the simple antiinflation steps we should have taken in 1965 and 1966, and failed to take in time as Vietnam engulfed us. But even assuming an economy free of the strains of war and unproductive spending, we have feared that growth may cause inflation.

Now this familiar fear has been joined by two other fears:

Fear No. 1. We look around us and see that as we have grown, we have laid waste to our environment. We have produced and consumed mightily without stopping to calculate the costs — in plundered wetlands and wildernesses, in streams poisoned by chemicals and skies clouded by fumes, in freeways littering our cities, in trash littering our freeways, in irreplaceable resources squandered. As we begin to measure the task of restoring what is not irretrievably lost, of

preserving what we have left, some have been tempted to conclude that zero economic growth is the only way to save the environment.

Fear No. 2. The voices of our young have swelled the challenge to our faith in growth. "Growth for what?" they ask. "So we can produce ever more infernal machines of war? So we can have more assembly lines and dreary jobs to produce more shiny bathroom fixtures, and better ads for dogfood, and endless paper?" The antimaterialism our young preach is not always what they practice. But the doubts they articulate speak buried ones of our own. Is a growing economy, in this day and age and country, a dehumanizing economy?

Social Dynamite

But let's look at the other side of the coin. There is much to be said against growth. I think there is more to be said for it.

First, we need the jobs and advancement opportunities for an expanding labor force that only a robust and growing economy can provide. The growth in the number of labor force entrants under 25 years old will be less in the 70's than it was in the 60's. But the number of early career workers, 25 to 34 years old, will increase sharply. We can ill afford to let the talents found in this age group go underutilized. Nor can we afford the social dynamite which is created when the costs of unemployment fall most heavily, as of course they do, on the unskilled, on minorities, and on the young.

Second, a stagnant economy gives us little hope of eliminating poverty and improving income distribution. Yet it is unthinkable that the wealthiest nation on earth should abandon these goals. Twenty percent of our populace is still poor; many are undernourished; many have lost any hope that they can change their situation. We need continued growth to improve the standard of living of those left behind while the rest of us rose to new heights of prosperity.

We Need Revenue

Third, growth yields revenue. We need revenue - more of it - for health care, for education and manpower training, for repairs to our ravaged environment, for mass transit and housing. We won't get anywhere near the revenue we need without growth, and a better rate of growth than we have at present.

It appears that the Administration may be gingerly coming around to this view. Back in February of this year, they were talking about mid-1973 as the earliest we could hope to get unemployment down to the 4 percent or so which we loosely refer to as "full employment." Now I understand that the President has called Mr. McCracken in and gently pointed out that the elections are in

1972, not 1973. "A record of zero growth might win over the flower children, but it would raise hell with the silent majority!"

Sleight-of-hand

Of course, the "full employment budget" we have recently been hearing about for next year is a far cry from a full employment economy. (I note in passing that the "full employment budget" – counting unhatched chicks along with the hatched – is a far more ingenious accounting sleight-of-hand than the "administrative budget" – counting the brood hens along with the chicks – that we Democrats bequeathed to Mr. Nixon!) Given the current rate of unemployment, and an inflation more stubborn than the Administration was willing to admit last February, even mid-1973 is a highly optimistic estimate for a return to full employment under present economic policies.

So let us assume that the Administration, for reasons of its own, may develop a belated interest in stimulating growth and in some alternatives to present policies. For myself, growth – sensible, environment-enhancing, widely distributed growth – does seem to be about the only way, within existing institutions, that we have to solve our problems.

What Kind of Growth

The question we should ask then is not "Do we want growth?"; it is, "What kind of growth?." How can we direct growth so that it will improve the quality of all our lives and of our surroundings? How can we vanquish the legitimate fears that growth has aroused?

Here is where I count on the National Bureau to help us, as it has so capably in the past. So let me add a word on some research areas which I am happy to see you already tackling, and mention a few which perhaps you have not yet considered.

First, growth and the environment. Zero economic growth might help our environment. But the social costs are unacceptable. If we want a habitable planet and growth too, we have to start by redefining growth to reflect improvement in the quality of life as well as material increase. If we stop polluting Lake Michigan, we'll be able to use our beaches again. But current economic indicators don't reflect such tradeoffs.

Develop an Accounting System

We need to develop an accounting system of environmental gains and losses and make this an integral part of our national accounts. We won't be able to

make intelligent choices until we know how much we could save in resources and space by new methods to recycle wastes, as against how much time we could save, and noise we could create, by flying the Atlantic faster than the speed of sound. I know the Bureau has work under way to factor environmental concerns into a revised system of national accounts. I urge you to press ahead.

We also need to know more about the economics of pollution control and of reuse of waste materials. Who should pay for cleaning up our lakes and rivers, for better processing of industrial effluents? The industrial user? The general taxpayer? The consumer? And how much? Pollution control may mean that we will have to pay more for many of the goods we consume. But how are we to ensure that the unnecessary costs of various market imperfections are not passed to the consumer disguised as environmental clean-up costs? I suspect that we are currently a long way from having the precise cost data we need to detect unjustified price hikes.

National Addiction

At present, steel companies apparently find it uneconomic to use steel scrap, and paper companies find it uneconomic to reprocess old newspapers. Can we change this situation by changing the price system? Or is something much bigger involved here, such as the national addiction to planned obsolescence? I hope you can tell us, and if necessary, prescribe some wholesome cures.

I turn to a second area of concern: full employment without inflation. We have to keep up our search for new ways to attain this goal. And here I am not sure our professional economists are tackling the problem with the energy and enthusiasm that are required.

Take for example, incomes policies, or more familiarly, "wage-price guideposts" and "jawboning." The subject has generated a lot of heat in recent years, and not nearly enough light. We have any number of studies evaluating incomes policies in various countries. We have evidence showing that incomes policies have been less than totally successful. But we have a paucity of suggestions on ways to make incomes policies work.

Barriers to Efficiency

Is the approach worthless, or does it just need to be perfected? My own bias is toward the latter conclusion, but I would like to see the question addressed as objectively, and as vigorously, as possible.

And what about better tools to fight inflation on the supply side? By all means continue your efforts to persuade policymakers to do away with such

barriers to efficiency as import controls and fair trade laws. But marshal your evidence effectively, and in a timely fashion. For example, we have stood in sore need of some quantitative estimates of what import restrictions on oil and beef, and the pending ones on textiles and shoes and lord knows what else, will cost the American consumer.

More, we need your assistance in devising ways to help communities and industries adjust to competition from abroad, and decreases in spending on space and defense, before serious injury sets in. This task especially may offend devotees of the free market mechanism. But I am sure you will agree, that an ounce of prevention is worth a pound of cure – particularly when the President weighs in with a Southern strategy including textile protection, and 200-plus Congressmen decide that every region and industry should enjoy equal protection under the law!

Abolish Regulation?

Let's look at some other supply problems.

Our nation ought to be able to use every scientist and school teacher we can produce. But we are told they are becoming a glut on the market. At the same time our medical costs are contributing to inflation, we don't have nearly the number of doctors and para-medical personnel we need.

And as for transportation, take our railroads. We regulate rates, and look where it has gotten us. Our passenger trains wither away, our rail freight prices continue to soar, and the Penn Central goes bankrupt.

Should we abolish regulation? Did we overreact to Sputnik, and could we overreact to our current health care crisis? Let's not leap to the conclusion that government stimulation of supply, and interference with market pricing mechanisms, produces mostly bad results. Let's first make a good faith effort, with your research help, to see if we can be less clumsy when we intervene; to see if we can inform public policy with better predictions on the consequences of this or that kind of intervention.

Misallocation of Credit

I turn to a third and related area of concern: growth and the money market. How can we grow and not overstrain our resources of capital and savings? Our housing industry and state and local governments are starving for financing. Yet in our current money market these clients stand at the end of the line, while conglomerates get free rein to work themselves into a liquidity crisis. And here is another example of misallocation of credit: Our airlines and aircraft industry have jumped into jumbo jets without knowing how they are going to pay for them. So the government is asked to put up the venture capital for a still newer generation of aircraft – supersonic transports.

It has puzzled me that economists could accept market decisions on credit allocation with such resignation. We need some mechanisms for channeling funds to areas of high social priority. Will selective credit controls help? Surely, we need more research on how to structure our financial institutions to better serve our social objectives.

Far Short of our Goals

And what of areas where government financing has been forthcoming, or is contemplated, to stimulate certain activities – for example, minority enterprise, or housing construction and rehabilitation, or home ownership? We have fallen far short of our goals. Is the level of our efforts too low, or are they misdirected?

I would like to see you take a hard look at the housing market and how it is affected by government-insured mortgages and interest subsidies. I would like to hear what you have to say about minority-owned businesses. Can they get assistance from the Small Business Administration and expect to survive? Where can they be implanted — in the center city or the suburbs — and hope to thrive?

So, I am led to a fourth area of concern: the quality of growth. It comprises the other areas I have mentioned. The centers of our cities are dying, and the countryside is being eaten away by urban sprawl. We can't move the goods cities need into them efficiently, and we can't move the workers most in need of jobs out to the places they can find them. The costs of land are rising, and our zoning regulations screen out socially productive bidders. Our property taxes have become unbearable, and our states and cities still hurt for revenue.

We Need Growth

"Ah," you say, "but all that is someone else's nightmare, not ours." "Not true," I respond. If you share my conviction that we need growth, then you ought to have convictions not just about how fast we should grow, but about the kind of growth we should have and how to get it.

Our planners lack credibility and influence partly because they haven't had the hard-nosed assistance you economists can provide. Our policymakers venture out on their own, rudderless, because they know that, in theory, you will disapprove of almost anything they want to do as an interference with free market forces.

I enter here a plea not just for more "engagement" and pragmatism on your part, not just for more applied research, but also for better communication between economists and the policymakers.

The Lights Went Out

Policymakers do not always look very far ahead and economists, however hard they may have tried, have not always succeeded in prodding us to do so. If they had, we would have recognized the tremendous costs of Vietnam much sooner than we did; we would not presently be so slow with measures to combat rising unemployment; we would have recognized the possibility of an energy shortage before the lights went out and the heat was turned down.

The Joint Economic Committee of Congress, of which I am a member, has served as a relatively good channel of communication between economists and policymakers. With your help and suggestions, it can serve as a better one.

Next year, the Joint Economic Committee will celebrate its 25th anniversary. I extend an invitation to you now, on this condition: that you join with us to restore confidence in economic growth – not helter-skelter growth; but growth without inflation, growth without destruction of the environment, growth that exalts the human being rather than economic man.

NATIONAL BUREAU OF ECONOMIC RESEARCH COLLOQUIUM ON FINANCE AND MONEY MARKETS Delmonico's Hotel – New York City October 22. 1970

Remarks of Richard B. Smith, Commissioner, United States Securities and Exchange Commission

Some Reflections on Economic Research and the Stock Market

The appearance of a lawyer - and at that one from a government agency often claimed to be too law-oriented - before a group of economists under the auspices of the NBER may be something of an exceptional event, totally apart from the persons involved. It is also heartening. Lawyers and economists can tend to be alien to each other, but tonight I am happy to say I am here by invitation, not on a visa.

Our professions have both had their detractors — yours has been called "a dismal science" and mine "a hocus-pocus science." Both of us I assume can live with the fact that our respective disciplines are exacting and yet not exact. But perhaps the most painful charge has always been that we are at times irrelevant. At one time or another the legal system, or a subpart of it, has been claimed to be either disregarding of the needs of those most in need of the protection of the law, or obstructive of the needs of economic efficiency, or both. Economics, at one time or another, has been accused of positing or focusing on such an abstract market-place model that real, non-market factors and activities and objectives, important to most people, are disregarded. Perhaps a major basis for irrelevance claims against either lawyers or economists has been that we know or appreciate so little about the other's field.

These 50th Anniversary Colloquia of the National Bureau, and the recent report by John Meyer on research projects presently under way at the Bureau, show clearly its concern for relevance. A number of projects of the American Bar Association and other legal groups also demonstrate lawyers' general concern for making the parts of the legal system responsive. So there is some basis for being heartened ... and a great deal remaining to be learned.

Substantial Progress

Today you have been exploring what is relevant research in the financial markets. I applaud that exploration because officials in government are remarkably dependent on the understanding of economic developments that grows out of research projects such as those sponsored or stimulated by the NBER. Substantial progress has been made during the last fifty years in an understanding of the forces at work in many, indeed most, of the nation's capital markets. Studies by the NBER – in capital formation and financing, in the processes of savings and intermediation, and in the measurement of national wealth through national income accounts, flows of funds and balance sheets – have all contributed enormously to understanding of most of these markets, especially those for credit and debt, and the important institutional intermediaries operating in them.

I acknowledge the value and necessity of looking at all the financial markets and their interrelationships, but tonight I would like to narrow the focus to the stock market, to the different types of intermediaries that service that market, and to the individuals and institutions that participate in it. (These are of particular SEC interest, although I emphasize that the Commission does not purport to be an economic policy setting agency.) With some noteworthy exceptions and at least until the very recent outpouring of econometric analysis, the stock market has been something of a stepchild all these years in terms of organized, systematic economic research.

Generally Low Opinion

In large part, I suppose, this state of affairs results from the generally low opinion most economists have held of the importance of the stock market in the economy. It is true that it is largely a secondary transfer market, as distinct from a primary issue market, and that underwriting firms associated with the stock market have been called on to produce in the postwar period relatively small amounts in new equity investment, when compared to the massive volume of direct and underwritten debt financing. It is also probably true that stock pricing is more affected by the vagaries of public psychology than is the pricing of other financial instruments. And most of the funds attracted into the stock market have, in the past at least, come from relatively limited upper-income and large wealthholding groups. The argument is that the stock market is not a force itself but only reflects, sometimes sooner, sometimes later, the underlying real production, where policy-oriented economists must center their attention. I'll come back to these points later.

It is also likely, of course, that until the age of the computer the volume of stock market price data (and corporate financial data) was just too large and too expensive to manage for economic research. The well known stock indexes, valuable as they have been as the only available time series measurements, hardly seem adequate even to a layman for obtaining an understanding of the pricing

functions, behavior and mechanisms of the whole stock market, let alone the institutional structure of equity investing. There is an enormous expense involved in primary data collection in this area, characterized by so many inherently different security types, requiring data from so many sources, some of which have never been publicly available and most of which have not been conveniently available in machine usable form to private sector researchers.

Institutional Investor Study

The difficulty faced by potential research groups in this area may be illustrated by some of the experiences of the Commission's Institutional Investor Study, to which I shall refer later. The Study sent out 54 questionnaires, in some 200 separate versions, resulting in 800,000 card records. Repeated follow-up and editing chores required the services of a sizeable staff over a period of fifteen months. Up to 150 hours per week on various computer installations were needed just to edit and output very basic summaries on quantities of money invested by various types of institutions, types of accounts managed, types of securities held, portfolio turnover, trading characteristics, price impacts, risk, returns obtained, fees, expenses and promotional methods, patterns of concentration and affiliations across institutions, and other business relations with portfolio companies.

If I have some small quarrel with John Lintner's excellent and comprehensive paper discussed this afternoon, it is only his possible underestimation of the continued needs for primary data collection and compilation of existing uncollected data, at least with respect to the securities markets. It is my impression that even the flow of funds accounts are based on a number of assumptions and interpolations that deserve retesting. I suspect that the absence of assembled empirical data on the workings of the stock market and on many of the firms and institutions participating in it has discouraged research that otherwise would have taken place. I do hope that the Commission's Institutional Investor Study will make a marked step toward supplying some of these data. The economists conducting the Study tell me that it will. Donald Farrar, its director, is here tonight. And I hope it will serve as a springboard that will lead to supplying of relevant information on a more continuous basis in the future.

Stepchild of Economic Research

I would like to come back to the other, perhaps more basic reason for the relatively limited basic research efforts undertaken on the stock market – the assessment that it is not of primary concern in the economy. I had called it

+

something of a stepchild of economic research, but it is useful to note that it is quite a child in size. New York listed securities alone weighed in at 630 billion dollars at year-end 1969. By way of comparison, all Federal, state and local debt issues and long-term corporate bonds, combined, amounted to about 630 billion dollars at year-end 1969. The total market for corporate equities is larger by far than the market for any other type of publicly held or traded security. And of the 1.8 trillion dollars in total financial assets held by households in 1969, 40 percent were in corporate stocks. Yet a question remains. Does the child's sheer size matter? It does not reproduce itself via new issues constantly, as do securities having fixed maturities.

While I would not presume to attempt to give this particular audience any arguments on the subject that would be new to you, there are several things that perhaps can be said to indicate that this market still can matter importantly.

Stock Market Levels

There are, for one thing, indications that stock market action has a strong effect on consumption. The proportion of household financial assets represented by corporate stock, to which I referred earlier, makes this understandable. Output from the FRB-MIT econometric model I am told tends to confirm it. You here who come from any of those private universities that decided in the last several years they should become "contemporary" in the management of their endowments – certainly you appreciate today how stock market levels can affect operating budgets!

For another thing, there are indications that stock market levels have marked effects on rates of business investment. There may be something of a chicken-or-egg question on that, but simply because the causative relationship is not clear, it warrants further study.

And then there is the liquidity of the stock market to consider. That has an effect on the cost of raising capital apart from the level of stock prices. While the degree of liquidity is related to price levels, it is also a function of the organization of the market, its structuring to efficiently bring potential buyers and sellers together and to provide adequate market-maker dealer participation. Discounts that exist on "restricted" equity securities (that is, stock that cannot be immediately sold in the secondary market) demonstrate that market liquidity has a value of its own. Those discounts amount to 20 percent or more from otherwise identical "registered" securities of the same company that are actively traded in the secondary market.

Having said that, I should add that the concepts of market depth and liquidity are not simple and deserve a great deal more study themselves. There are some, of course, who have argued that it is only oppressive SEC disclosure requirements that produce the discount. Those disclosure requirements, however, have contributed both to more accurate pricing, within the tolerances of supply and demand, and to the investor confidence that has contributed to public participation in those markets.

Secondary Markets

While I do not think that it has ever been empirically demonstrated, there seems to me to be an essential relationship between the liquidity and depth of the secondary trading markets and the willingness of American investors not to demand higher dividend payouts and instead to allow corporate management to retain and reinvest earnings of the enterprise. The capital gains tax, I believe, accounts for only part of this investor willingness. An equally strong factor is the confidence that American investors have that they will be reasonably well informed about what management is doing with the retained earnings, and that when they may wish to convert their stock holdings into money for whatever reason, they will be able to do so promptly and at a price representative at that time of the corporation's value (including the use of retained earnings).

Thus, strong secondary markets, buttressed by disclosure requirements, seem integral to a system that permits the massive reinvestment of corporate earnings. In 1969 earnings retained by corporations amounted to 24 billion dollars, compared to a gross of 9 million dollars received in cash from sale of new equity issues, and net new equity issues (after retirements, repurchases, etc.) of 4 billion dollars. The average annual figures for the preceding ten year period 1959–68 were 20 billion dollars retained earnings, 4 billion dollars gross new issues, and 1 billion dollars net new issues.

Sport for the Rich

There are other ways in which equity markets and their pricing matter. They can, and have, stimulated corporate mergers or take-overs and affected the terms on which they are consummated. I shall not attempt to pursue that line of inquiry this evening — except to note that by affecting the investors and the managers who control American business, a secondary market can have an enormous influence on the growth, development and character of the American economy.

Strangely enough the emergence of large institutional investors in the stock market, particularly the mutual funds and the pension funds, represents a great

increase in public involvement in that market. The mutual and pension funds, and, while still relatively small in terms of equity investment, the potentially large insurance companies and public retirement funds, hold savings of millions of medium and low income families. And as the level of affluence has spread in the country, the number of individual direct investors has substantially increased in the postwar period. So no longer, if it ever could have been, can the stock market be considered simply a sport for the rich. Large stock price fluctuations mean something real and important to many people.

Some have felt that there is too much psychology involved in the stock market to warrant serious economic attention. If one accepts the important functions of the stock market, it seems to me that the presently indefinable impact of public psychology is a reason for further study and attention rather than less. I liked John Meyer's report presented to the Board of Directors of the Bureau at its spring meeting that I interpreted to express this approach in a broader context. It is nevertheless pertinent here. He said:

"Concern with negative externalities, moreover, may lead us into some entirely new departures and research interests. We may be led to substantially rework our entire theory of consumer behavior, for example, to reflect new information and concepts on the allocation of time, or on the role of expectations in conditioning savings behavior under different regimes of price stability or instability. Perhaps, too, this new theory of consumer behavior might be more psychological and behavioral and less normative than the conventional theory."

Individual Investors

Individual investors are an important element in the liquidity of the market. Because of that and in view of the fact, according to the national flow of fund accounts, they own about 70 percent of all corporate equities (a somewhat lesser proportion of publicly traded stocks), it would be a fruitful area of research to get a better understanding of the activities of individual investors. How long do they hold stocks on balance? What are their investment returns? What proportion of them account for individual trading volume? What motivates most their allocation of savings and what are the time lags?

Further, systematic study of stock market organization and of the financial structure of securities firms is also warranted. The pending Securities Investors Protection Corporation bill in Congress, the pending commission rate structure proceedings, and the periodic broker-dealer financial statements that are now being submitted to the NASD will be providing a new reason and basis of aggregate information for such study. It is an industry undergoing relatively rapid transformation, from partnership to corporate form, from largely proprietary management to management separate from ownership, from manual paper operations to automated systems, to mention just a few. Better decisions by the industry itself and by government regulators would result from such economic research.

I would not want to close without expressing appreciation for the assistance and important contribution that the National Bureau and Ray Goldsmith have given to the Commission's Institutional Investor Study. Because the Study report is still in the writing and will not be sent to the Congress until the end of the year, it would be premature for me to discuss its findings tonight.

Paper Economy

What we asked the Bureau to do under the project direction of Dr. Goldsmith was to provide some aggregate background and time perspective by which to judge the importance of the stock market and the institutional participants in it. Existing statistics on saving investment and financing over long time series were supplemented by new and hopefully improved estimates of the value of corporate securities outstanding. New estimates of the assets of foundations and colleges, and of those managed by banks as personal trusts and estates were made. The availability of these estimates permits the household residual in the national flow of fund accounts to be somewhat more clearly a measure of the financial activities of individuals than was previously the case. Some attempt was made at disaggregating the corporate nonfinancial business sector by industrial group in order to observe differences in financing patterns. A new series was also developed on the replacement value of tangible assets, so that the relative sizes of the real and of the paper economy can be better assessed. The Study thought this background helpful to its new empirical work on current institutional investment.

I have strong personal hope that this first relationship on research between the Bureau and the Commission will not be the last, but instead will be the forerunner of systematic research and collaboration in research in the years to come.