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IMPORTANCE OF SAVINGS IN OUR ECONOMY

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UNITED STATES SENATE

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IMPORTANCE OF SAVINGS IN OUR ECONOMY

TUESDAY, JANUARY 31, 1995

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, DC.

The hearing was convened, pursuant to notice, at 9:30 a.m., in room SD–215, Dirksen Senate Office Building, Hon. Bob Packwood (chairman of the committee) presiding.

Also present: Senators Moynihan, Baucus, Bradley, Moseley-Braun, Chafee, Grassley, and Simpson.

OPENING STATEMENT OF HON. BOB PACKWOOD, A U.S. SENATOR FROM OREGON, CHAIRMAN, COMMITTEE ON FINANCE

The CHAIRMAN. The meeting will come to order. This is one in a series of continuing hearings on the subject of savings and investment and whether or not we need to save and invest or whether it makes any difference, and will it increase our productivity. There are some who say it is not necessary. I think the bulk seem to indicate that it is necessary, but there is a respectable body of opinion that says we can be consumption driven.

If we are going to move towards savings and investment, then at some stage I would like to find out what the best way to do that is. We are considering the Nunn-Domenici bill. Senator Moynihan and I were at a meeting the other morning with Senators Nunn and Domenici. They have a form of tax bill heavily tilted toward investment with, I assume, a tax at a low enough rate that would tilt toward investment, or at least neutral investment.

And, if not that, do we want to take the Tax Code and, bit by bit, piece by piece, attempt to tilt it toward investment? But, of course, that means that every group in America will be here, convinced that they are the lynch pin of savings and investment in America. It does not matter what their business is, they are the lynch pin and will lobby us to be included in some kind of tax preference for savings.

All of those are open, but today we are specifically here to find out about our savings rate; should it be increased, and if so, perhaps, how?

We have with us Dr. Gail Makinen from the Library of Congress, Dr. Eisner, whom I do not see but who has testified here a number of times before, and Dr. Dale Jorgenson, who has testified before us also, and, I might add, is from Reed College in Portland, OR.

I told him one of the things I liked about Reed, and still like about Reed, is that during all the flaps of relevance that go on from year to year, protests that rise up and the next year they are gone,

I always found that Reed had more balance. And Dr. Jorgenson said, yes, it is because they emphasize the classics.

Senator MOYNIHAN. And they do.

The CHAIRMAN. They do. Indeed, each problem that comes along is not really a new problem, it has happened at some time in the past and they were always much more tolerant of differences of opinion on even current passionate issues than I found in almost any other college.

We will start with Dr. Makinen. But, Pat, do you have an opening statement?

OPENING STATEMENT OF HON. DANIEL PATRICK MOYNIHAN, A U.S. SENATOR FROM NEW YORK

Senator MOYNIHAN. In fact, you, Mr. Chairman, are getting us off on a level of general inquiry as against specific issues, particularly with today's hearing. It is, I believe 18 years that I have served with you on this committee.

We have been hearing about savings almost from the first; during expansions and during recessions, with big deficits, and with no deficits. I have wondered, and I do not know if it is the particular province of economists—but, yes, why not—are there cultural shifts in disposition to accumulate as against to consume?

Does capitalism go through an early period of accumulation which is only thereafter rewarded by the consumption of products that capital produces, such that you have a long, secular trend? Is that not what you all say, Mr. Chairman, that we would just be tinkering with long-term trends and not be very effective. I am here to learn, and am learning. Thank you for this distinguished panel.

The CHAIRMAN. Dr. Makinen.

STATEMENT OF DR. GAIL MAKINEN, SPECIALIST IN ECONOMIC POLICY, CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

Dr. MAKINEN. Mr. Chairman and members of the committee, I would like to thank you for the invitation to appear before you this morning to discuss issues related to U.S. and selected foreign saving and investment rates.

As we meet today the U.S. economy is, according to most measures, at full employment. The issue of the hour is how rapidly aggregate demand should grow to keep the economy fully and continuously employed.

Current estimates place this growth rate at about 2.5 percent, yet 25 years ago the rate would have been closer to 3.5 percent. Over the past 20 years, the rate of productivity growth for the U.S. economy has fallen. While we do not fully understand the reason for this fall, we do know what works to enhance productivity.

Equipping our work force with modern, up-to-date plant equipment and tools, ensuring that the work force is educated and properly trained, and putting resources into research and development will enhance productivity.

To do these things, a nation must save some portion of its output. This, in America, we have not been doing at the same rate during the 1980's and 1990's as we did in earlier decades.

The U.S. experience in the post-World War II period is shown on Table 1. Let me rise to explain the table. This is the personal savings rate, which is the savings rates from households.

Next, we have the business saving rates, and these are all percents of GDP, which are basically corporate business. This is the public sector saving rate, which is the State, local, and Federal Government rates combined. Adding all of these three across gets us to Net National Saving Rate.

Finally, the final column is the Net Saving Rate from abroad. Where the numbers are negative, this means we are supplying savings to the rest of the world; where the numbers are positive it means we are absorbing savings from the rest of the world.

You can take a look at this table and you will notice that what we have been doing in the decade of the 1980's is substantially different than the decades of the 1950's, 1960's, and 1970's. In particular, the Net National Saving Rate has declined considerably.

The importance of the Net National Rate is that these are the savings that allow us to add to our capital stock. It is not the gross savings rate, it is the net saving rate that is important for net additions to the capital stock of the country.

During the 1950's, 1960's, and 1970's, we were saving roughly 7 to 8 percent of GDP. During the decade of the 1980's, this has fallen to 4.5 percent, 3.5 percent in the last 5 years of the decade. And during the 1990's for the first 4½ years, the rate has fallen to 1.7 percent.

Now, the basic culprit in this is the saving rate of the public sector. The saving rate of the public sector was very small up until the 1970's when it became negative. It became increasingly negative during the 1980's. The real culprit in this is the budget deficit of the Federal Government. That averaged about 3.5 percent of GDP per year during the decade of the 1980's and into the 1990's.

The reason why this is smaller than 3.5 percent in the table is that the State and local governments had budget surpluses and those surpluses were offsetting the Federal Government budget deficit by about a third, so rather than having these at 3.5 percent, they are more like 2.5 percent.

As the decade of the 1980's progressed, one of the things we began to notice is that the private sector saving rate began to fall as well. The private sector saving rate is the sum of the personal and the business rates, and those rates begin to decline also. There are various reasons for it. I will be happy to discuss those with you. But, anyway, as the decade of the 1980's progressed we began to see that the private sector saving rate began to fall as well.

Now, the fall in the national saving rate would have had it counterpart in the fall in net investment. That is, if we do not save as much we cannot add to the capital stock, and the rate of net investment would have fallen as well. To a degree, that did not happen because we were able to borrow abroad. Between 1982 and 1994 we borrowed over $1 trillion abroad. That is, the net inflow of capital to this country was about $1 trillion. This shows up as a large inflow as a percent of our GDP.

So, the capital stock of the country continued to grow, but basically it grew because we absorbed the savings from the rest of the world at a rate that I do not think anybody thought was possible

in the early part of the 1980's. The total net inflow is approximately $1 trillion over the course of 12 years.

Now, one reason that foreigners have the ability to invest in the U.S. is that they save at a higher rate than we do. The next chart compares the saving rates of the two largest G–7 countries outside of the United States, Germany and Japan. There are a number of things to notice about these data, but before I do I would like to issue a word of caution.

These GDP numbers are all compiled according to the United Nations' methodologies. That methodology has in it some inconsistencies. The basic inconsistency in these numbers has to do with depreciation allowances. The number that I said earlier is important is the net saving rate. You go from the gross savings rate to the net savings rate by subtracting depreciation from it.

Now, according to the National Income Accounts of Japan and the U.S., we account for depreciation differently. The Japanese base their depreciation allowances for GDP purposes on historic cost or original cost of the equipment, where our GDP accounts are valued on the basis of replacement costs.

The decade of the 1970's into the early part of the 1980's was a decade of high inflation. It makes a difference which of these methods you use, historic cost or replacement cost, so these numbers tend to overstate the Japanese saving rates.

That is, they make the personal saving rate higher and the Japanese Government saving rate higher because of the way depreciation allowances are calculated. How much the overstatement is, I do not know, but there are ways to get at it indirectly and I will be happy to talk about them later.

But let me conclude my remarks by noting four different aspects of these data. First of all, there is a great disparity in private sector saving rates. The Japanese private sector saving rate is much higher than the U.S. or German.

The second thing to notice is, the personal or private saving rate fell in all three countries as the 1970's gave way to the 1980's. The private sector saving rate declined in all three countries. Relatively speaking, the private sector saving rate fell more in Japan than it did in either the U.S. or Germany.

However, the other side, the government saving rate, the Japanese government saving rate did not decline; U.S. Government or public sector saving rate declined considerably, and the Germans did also, to a degree.

But the fall-off in the private sector saving rate was in some sense offset by the fact that the government or public sector saving rate did not fall in Japan as it did in the U.S. and in Germany.

Now, when you combine both sectors together to give you the net private sector saving rate, the private sector saving rate between the 1970's and 1980's fell in Japan about 18 percent; in the United States it fell about 45 percent.

Thank you very much for your time.

The CHAIRMAN. Doctor, thank you.

Welcome, Dr. Eisner.

Dr. EISNER. It is a pleasure to be here.

The CHAIRMAN. Glad you got to be with us this morning. Why do you not go next?

STATEMENT OF DR. ROBERT EISNER, WILLIAM R. KENAN PROFESSOR OF ECONOMICS, NORTHWESTERN UNIVERSITY

Dr. EISNER. Fine. I would like to begin by emphasizing that saving and growth are inextricably intertwined; you cannot have one without the other.

Next, I would like to emphasize the old, familiar identity of saving and investment. You cannot, for an economy, have saving without investment. That investment, that saving, then has to involve the acquisition of real assets, either real assets in the United States or the title to assets abroad.

The next underlying principle I would like to point out is that investment involves the acquisition of productive assets, increasing our capacity, our productivity, and business cannot continue to undertake that unless it has a demand for the goods that the new investment will produce.

Now, we frequently talk of trying to increase saving directly by having some kind of incentive for saving, tax incentive, IRAs, you name it. These, I would argue, are essentially futile, aside from wrecking the tax system with its various loopholes, and aside from the possibility you may simply create churning, people investing in one asset instead of another.

There is an essential fallacy in the notion that asking individuals to save more will increase national saving. The fallacy involves the fact that for an individual to save more out of his or her income means that he or she spends less.

Now, remembering that saving equals investment, you have to ask yourself how individuals spending less will bring about more investment. If you decide not to buy a new Ford, Chrysler or Buick, will that encourage the automobile makers to invest more or invest less? It will generally lead them to invest less.

The old classical argument is, not to worry. If you decide to save more and not to consume and simply go ahead and lend your money to a businessman or to a bank, that will lower rates of interest and bring about more investment.

In fact, that connection turns out to be a weak one. Lower interest rates will presumably raise investment, certainly in housing. However, the effects in total are not all that great and they usually tend to be overwhelmed by the negative effects of an attempt to increase saving, the negative effects involving a reflection of the fact that people saving more simply consume less.

Now, that leads into the next inference that perhaps the thing to do is to approach this saving/investment identity from the investment side; let us try to raise investment. That leads us to proposals for investment tax credits, or accelerated depreciation, which we have had, or a so called "neutral recovery system" now under consideration again, which may not be all so neutral.

I have argued and done work over many years suggesting that these various tax incentives may have some effect, but the effects, again, are very limited. In studies I did for the Treasury with Robert Chirinko a decade or so ago, and I have done other studies over many years, I found that you could estimate perhaps that each dol-

lar of Treasury revenue lost by one of these tax incentives created about 40 cents of new investment.

I suggested we would be better off if we simply bought the equipment, the machinery itself, and gave it away to business, and that would be a cost-effective way of doing things.

Now, it is frequently complained that our saving rate is too low. We have just seen some interesting figures and charts on that. As has been pointed out, there are problems of measurement in making these comparisons.

I might point out, however, that, again, we have a problem of, which is cause and which is effect? You cannot have net saving, that is, a net acquisition of capital stock, unless there is some use for it. You do not need additional factories, additional machinery unless you are producing more in the main.

Now, countries then that have been growing more rapidly will have positive and higher net saving ratios. If we are not growing at all, for example, net saving has to come down to zero. Well, the question may be not how to have more saving to get more growth, but how to have more growth which will, in turn, generate more saving.

Now, it is also frequently lamented and is very topical today that the problem we have is with the budget deficit. People are saving enough, we are told. We are saving roughly $1,000 billion a year, but roughly, as of last year, $200 billion of that was going not to invest in real productive assets, but to buy the additional Federal Government debt. Those numbers are, of course, approximate.

Well, the conclusion from that, I have to emphasize—and it is very important to realize that today with the subjects at hand in the U.S. Senate—that you will increase national saving by reducing the deficit is based on very fallacious reasoning.

It argues, look, we are saving $1,000 billion, $200 billion is going to finance the public deficit. If we eliminate the public deficit instead of having only $800 billion left, we will have $1,000 billion left. Well, that is sort of playing with numbers, assuming other things remain the same.

Suppose, in fact, you do eliminate the deficit, let us say, by raising taxes by $200 billion. I know most of you will say, oh, we will not do that. But if you did that, what would happen? Would you raise saving or would a lot of that increase in taxes come out of people's saving? Would it not reduce their income so that they consume less, and, again, if they do not buy those new cars, will that not reduce investment?

In fact, I have done work with correctly measured deficits adjusted for inflation—I have that in my book, I have it in a professional article recently—which indicates that inflation-adjusted structural deficits over the last 30 years or so have been followed by more, not less, gross private domestic investment and more, not less, national saving.

Now, on the question of what is happening to saving and investment, I should point out some of the recent figures. There is a moral to that. That is, if you take the figures in constant dollar terms, in 1990's, fixed investment was 15.1 percent of GDP, in the third quarter of 1994, it was 17 percent, and the figures just out on Friday indicate that it is up to 17.2 percent.

That tells you, of course, the major thing that affects investment and saving is the state of the economy. When the economy improves, you have more investment, more saving, and a higher percentage of the output going to saving and investment.

Then the next thing, of course, affecting saving and investment, if you want more of it, is lower interest rates. And I have to tell you that, as of now, what I heard on the radio as I came here in the cab is, the Open Market Committee is expected to move to raise interest rates again. That, if you are interested in saving and investment, is certainly a counterproductive thing to do.

I am not one that argues that interest rates have an overwhelming effect on the economy, but you keep raising them, you keep knocking the economy on the head, you are going to hurt. You will be hurting investment, you will be hurting the economy, which will then, in turn, again hurt investment.

Just two more things. Both are in the way of fundamentals. Back on this Balanced Budget Amendment, one of the curious elements of it is that it asserts that outlays will not exceed receipts. And, as I keep pointing out, it is like commanding that the tides cease, that they recede and not come back.

I have suggested you might perhaps have an amendment to the constitution which will mandate prayers in the public schools for a Balanced Budget because you are going to require divine intervention to maintain this.

Suppose you start with a balanced budget at the beginning of the year, and suppose now unemployment goes up by 2 percentage points, which will drive it up only to where it was during the Bush Administration in 1992. It was lower early in the Bush Administration.

So, it goes up 2 percentage points, the deficit goes up $100–$110 billion. What do you do? Do you arrest the tax collectors, do you pray, or do you start holding up Social Security checks, lay off the border patrol or furlough our soldiers, or raise taxes?

Now, the irony is, aside from the pain of any of these things, they will make the economy much worse. They will clearly deepen the recession. What will that do to saving and investment? That will drive us through the floor.

Now, finally, what can we do to increase saving, investment, and growth at the same time? I would argue that it is not a matter of giving incentives to business. I am a great believer in a market economy.

I think business should be left free to invest in what it considers profitable without special tax incentives, but these decisions should be made in an economy as close to full employment as you can get it, with adequate aggregate demand, with real interest rates as low as possible.

But the real engine of growth will be the part of saving and investment that we rarely talk about. By my estimates and other work, the gross private domestic investment we are talking about is just about 25 percent of total comprehensive saving and investment.

The total investment includes investment by government in infrastructure, it includes investment by government, non-profit institutions and business in research in intangible capital, and, most

important, it includes a vast investment in human capital, in education and training, without which the economy cannot proceed.

I would say you are not going to have any adequate growth as long as you have a situation over the long run where 20 percent of our labor force is growing up functionally illiterate, going to schools where it is difficult to just to stay alive if they get there, in a situation where even our kids in good, suburban schools take tests in math and science at the age of 13 and come out, in comparison with other countries—Japan, Korea, Europe, Canada—last. In that situation, we are not going to grow adequately.

If you invest in human capital, if you invest in research, if you invest in the public capital as necessary, then you are going to have growth and that growth will pull along private investment and saving as well.

I thank you.

The CHAIRMAN. Doctor, thank you.

[The prepared statement of Dr. Eisner appears in the appendix.]

The CHAIRMAN. Dr. Jorgenson.

STATEMENT OF DR. DALE JORGENSON, FREDERIC EATON ABLE PROFESSOR OF ECONOMICS, HARVARD UNIVERSITY

Dr. JORGENSON. Mr. Chairman, it is a very great privilege for me to testify before the committee this morning. I see here the architects of the Tax Reform Act of 1986, which was the last great, successful effort at reform of our Federal tax system.

I am going to advance the view that the time has come to take the next step. We need to move from a system of taxation that is based on income to a system that is based on consumption. Obviously, this is going to take time, but economists have to be patient, I have learned.

This idea of a consumption-based tax was first advanced more than a century ago by Irving Fisher of Yale, our country's greatest economist. However, as you pointed out, Mr. Chairman, in your opening remarks, the Senate and the House of Representatives have already been presented with two, relatively fully-worked out proposals for a consumption tax that have historical antecedents, going back into previous discussions over tax reform, including the discussion that preceded the Tax Reform Act of 1986.

You alluded to the Nunn-Domenici proposal, which is already worked out in considerably detail, and I think it is fair to say that that goes back to ideas that were developed at the United States Treasury in a famous document—at least famous to economists—referred to as the Blueprints for Tax Reform—required reading for tax reformers of any sort.

Another proposal has been advanced by Representative Armey and that is the Armey flat tax approach, which is also basically a consumption tax.

The CHAIRMAN. Let me ask you a question there, if I might.

Dr. JORGENSON. Please, please.

The CHAIRMAN. Because it is a tax on income, but you still would count that as a consumption tax.

Dr. JORGENSON. Exactly. In other words, the Nunn- Domenici proposal is a system for essentially removing all of the part of income that is saved.

The CHAIRMAN. I meant the flat tax.

Dr. JORGENSON. The flat tax.

The CHAIRMAN. Yes.

Dr. JORGENSON. The flat tax is a similar proposal, if you look at the essence of it. It is a way, as the Nunn-Domenici proposal is, for removing saving from the tax base. In other words, it is essentially an alternative way of achieving the same basic objective as Nunn-Domenici.

So the way to look at these proposals is that they both embody the principles of a consumption tax. They have solved the problem which I think has prevented the consideration of consumption taxation before this body in past tax reform efforts, namely the issue of regressivity.

That is a problem that has been addressed in both the Nunn-Domenici proposal, and also in the Armey Flat Tax proposal, and I am sure that there is going to be ample opportunity to debate the details.

But the issue we are here to discuss this morning is not the details of these proposals, that is a matter which I am sure will come before you in due time. The issue we are here to discuss is, will it matter?

In this testimony I want to make three points. First, I would like to introduce a distinction between investment and productivity as sources of economic growth. In my testimony I am going to make use of the charts at the end of my written testimony. Each one of you, I hope, has a copy of the testimony. In due course, I will refer to these charts.

The distinction between investment and productivity growth is critical for economic policies, and especially for the policies that are under the jurisdiction of the Senate Finance Committee, namely Federal tax policies.

In order to contribute effectively to economic growth, investors in human and non-human capital must be able to appropriate the returns. That is the key feature of investment as a source of economic growth.

Tax policies obviously affect the returns from investments in tangible assets, as Professor Eisner has just told you, but they also affect returns from investment in formal schooling and in on-the-job training.

It turns out, however, that our current tax structure is one that treats investment in human capital by the principles of a consumption tax. In other words, we are already there, as far as a very important part of our investment is concerned.

Second, I would like to show that investment in tangible assets have been, by far, the most important source of U.S. economic growth in the post-war period. Investment in human capital through schooling and training has also been a significant source of economic growth.

Together, the relative importance of these two forms of investment greatly outweighs that of productivity. In order to foster an economic environment that is conducive to economic growth, future tax reforms should shift the burden of taxation away from these investments which have been the source of our economic growth to all types of consumption.

Third, I will argue that the international economic environment has changed irrevocably. Investment in tangible assets has been even more important for our major economic competitors than for ourselves. Convergence of productivity levels among the major industrialized countries has exhausted an important source of growth for our competitors.

Future international competition will depend critically on investments in human and non-human capital. As we adapt our economic policies to the new environment, we must focus on enhancing the opportunities for private investors.

Let me begin then by introducing the distinction that I mentioned between investment and productivity growth. This is essential for an analysis of economic policies that relate to stimulating economic growth.

However, the term productivity has a number of different meanings and I would like to distinguish between two of them. The one you read about in the business press is the notion of labor productivity or output per hour worked.

This is an economic indicator that is reported every month by the Bureau of Labor Statistics and is reported in the business press, the Wall Street Journal, the New York Times, the business magazines.

The Bureau of Labor Statistics, as you know, is the government agency with official responsibility for the productivity statistics, but it also reports a more comprehensive measure of multi-factor productivity.

This broader notion is the one that is relevant for economic policy, and that itself is the source of some confusion. As I said, labor productivity is reported monthly—that is the one we see in the business press—but multi-factor productivity is reported once a year and I think it is, for all practical purposes, invisible. But, nonetheless, that is the notion that is relevant for economic policy.

The notion of multi-factor productivity is defined as output per unit of all inputs, both labor and capital, so that now the contrast between investment and productivity growth involves, on the one hand, the relative importance of investment in human and nonhuman capital, and on the other, the growth and effectiveness with which these resources are used.

If we now turn to the policy implications, investment is the commitment of current resources in the expectation of future returns. That definition goes back to Irving Fisher.

However, investment can take a multiplicity of forms. The distinctive feature of investment as a source of economic growth is that the returns can be internalized or appropriated by the investor. That is the key idea.

Since the returns of investments in human and non-human capital can be internalized by the investors, the role of economic policy, and tax policy in particular, is to assure that private investors can appropriate those returns, whether they are from investments in tangible assets or investments in human capital.

For investments in tangible assets, a critical role is obviously played by tax policy at the Federal level. In fact, Professor Eisner has described for you a number of the measures that have been considered in the past.

I believe that the Tax Reform Act of 1986 made very important progress in leveling the playing field on different types of investment in tangible assets. That was one of the prime objectives of the tax reform measure, and I believe that has been achieved.

The way that I like to put it in more colloquial terms is to say that the important thing is not to invest more, the important thing is to invest smarter. That, essentially, is what was achieved by the Tax Reform Act of 1986.

Federal tax policy also affects, however, the appropriability of investments by individuals in their own human capital through formal schooling and on-the-job training. However, anybody who follows the development of tax policy realizes that the main forms of investment in human capital are outside the market. I mentioned formal schooling and on-the-job training.

I heard testimony the other day at the Committee on Ways and Means in which the Chairman of USX pointed out the in building a new plant for the production of steel in this country, USX had to spend more than $50,000 in training for every worker that was going to be employed in that plant.

That investment, gentlemen, and Senator Moseley-Braun, was expensed, subjected to consumption tax treatment. That is what I mean by saying that investment in human capital is already treated by consumption tax principles.

Now, let us turn to productivity. The defining characteristic of productivity, in the sense of multi- factor productivity as a source of growth, is that the incomes generated by higher productivity are external to the economic activities that generate growth.

In other words, the distinction between investment and productivity is between returns that can be internalized and returns that are external to the economic activity that generates growth.

The benefits of productivity then spill over to income recipients not involved in the economic activities that generate growth. This, of course, severs the connection between the creation of growth and the incomes that result. Since the benefits of policies to create externalities cannot be appropriated, the role of public policy is to provide government programs or public subsidies to support the activities that generate the externalities.

Well, we are now ready for the first chart. I would like you to turn your attention to the chart at the end of my testimony which has the label, "Sources of U.S. Economic Growth From 1947 to 1992."

What you can see here is the result of the accumulation of many, many years of work in this area, including work at the Bureau of Labor Statistics that I mentioned previously. And you can see that in this chart productivity only accounts for about 30 percent of the growth of the U.S. economy over the period from 1947 to 1992.

Do not forget for a minute that this is a period of great success in our economic growth. We have more than doubled the per capita level of income in this country and that has resulted from a substantial program of investments of the type that you see summarized in this chart.

So the growth of capital and labor inputs—capital accounting for 43 percent and labor for 27 percent—represent the consequences of investment decisions by the private sector.

Well, the conclusion then is that the empirical results that are presented in this chart greatly restrict the role for spill-overs and place the primary role for stimulating economic growth on private investors, both investors in tangible assets, represented in blue, and in human capital, represented in red.

I would now like you to turn, if I may ask you to do so, to the last chart which is given in this handout, where I summarize similar information for the G–7 countries, our principal economic competitors.

Let me say, parenthetically, for those of you who follow this debate on productivity, that in the latest issue of Foreign Affairs, Professor Paul Krugman of Stanford University has summarized similar results for the so called "newly industrializing countries," and those results bear out the conclusions that I am going to summarize for you here for our principal competitors.

What we can see in this chart is the relative importance of investment and productivity growth for the U.S. and its major competitors: Canada, Japan, Germany, France, the U.K., and Italy.

My principal conclusion is that the investment in tangible assets has been even more important to our economic competitors than to our own growth. This investment has, in fact, contributed to the substantial reduction in the gap between U.S. output per capita and that of our competitors.

What this last chart shows is that investment in tangible assets accounts for 47.4 percent of U.S. economic growth in output per capita. The bars here represent the percent of economic growth accounted for by the various growth sources, ranging from investment in tangible assets and human capital to productivity.

What you can see is that more than half of the growth in the other countries of the G–7 can be attributed to investment in tangible assets; productivity, by contrast, accounts for only one-fifth of U.S. economic growth.

Recall, now, that this is for a different period than the one that I showed you in the first chart. This is for 1960 to 1989, where productivity has played a less important role in all countries.

On the other hand, productivity accounts for about a third of Japanese growth, and more than 50 percent of the growth of our major economic competitors in Europe.

Now, I would like you to turn back to the fourth chart, which has the titled, "Level Comparisons for 1989." I would like you to focus on the last part of the chart there, representing the levels of output.

These represent the levels of output per capita for our major economic competitors where the United States is represented as 100. Every country that is included in these charts has a level of output per capita that is below the U.S. level.

On the other hand, if you look at the levels of productivity in the chart, you can see that Canada and three of our four major competitors in Europe—France, the U.K., and Italy—had achieved parity with the U.S. in productivity.

In fact, Canadian productivity was already at U.S. levels in 1960, France and Italy attained U.S. levels of productivity in 1974, and the U.K., in 1982. None of these countries has improved substantially in productivity relative to the U.S. since attaining parity.

In short, the continuing leadership of the U.S. in per capita output, which you see in this chart, is due to high levels of investment in human and non-human capital and not to high levels of productivity.

Well, in summary, the long period of convergence between U.S. productivity levels and those of our major economic competitors has ended. In fact, it ended in the 1970's and 1980's. Perhaps surprisingly, Germany has emerged as the economic laggard among the European countries, with productivity at only around 90 percent of U.S. levels.

Similar data for Japan for 1985, not shown on the chart, show that productivity levels are comparable to those of Germany. By contrast, Canada, France, the U.K., and Italy have all achieved parity in productivity with the U.S. For these countries, convergence in productivity has disappeared as a source of growth in output per capital relative to the U.S.

In this testimony I have made three points. First of all, it is necessary to distinguish between investment for which returns are internalized, and productivity for which returns are external to the economic activity that contributes to growth. This is critical, obviously, for economic policy.

To stimulate economic growth requires a totally different approach when it comes to these two different components of the sources of U.S. economic growth. To contribute most effectively to economic growth, investors in human and non-human capital must be able to appropriate the returns from their investments.

Tax policies under the jurisdiction of the Senate Finance Committee are the most important public policies for stimulating economic growth through private investment. These policies affect the returns for investments in tangible assets, as well as the returns to formal schooling and on-the-job training.

Second, I hope I have convinced you that investment in tangible assets has been the most important source of U.S. economic growth during the post-war period. Investment in human capital has also made an important contribution. Together, the relative importance of these two forms of investment greatly outweighs the contribution of productivity growth.

Accordingly, the focus of U.S. economic policy should be on fostering an economic environment that is conducive to private investment. The direction for future tax reform, as I suggested at the outset of my remarks, should be to shift the burden of taxation away from investments of all kinds to consumption.

This strategy for tax reform will greatly enhance the effectiveness of private investments in stimulating economic growth. I estimate, in fact, that the gains that will be associated with the adoption of a full-blown consumption tax, either of the Nunn-Domenici or of the Armey Flat Tax variety, is fully comparable to the gains that have already accrued through the Tax Reform Act of 1986.

Third, the international environment for economic growth has changed irrevocably. The convergence of productivity levels in the major industrialized countries has exhausted an important source of growth for our economic competitors. Investment in tangible assets, however, has been more important for these countries than for the U.S.

Future international economic competition will depend even more critically on investments in human and non-human capital. As we adapt our economic policies to this new environment, we must focus on enhancing the opportunities for private investors.

Thank you very much.

[The prepared statement of Dr. Jorgenson appears in the appendix.]

The CHAIRMAN. Gentlemen, thank you very much.

Let me come back to this flat tax, because Congressman Armey's is different than Nunn-Domenici's. But early on you said we should move from taxing investment, or savings, or income, to consumption. But the flat tax does tax income. Are you just assuming it is low enough that, in essence, you do not count it as a tax on income?

Dr. JORGENSON. No. The flat tax is a tax in which the business component of the tax is based on the so called "business cash flow principle," the idea being that business expenses, such as payroll, purchases of materials, energy, and so on in the current account, are treated in exactly the same way as expenses on capital accounts, investments in tangible assets, investments in training, and so on.

That being the case, investment at the business level is excluded from the tax base. Therefore, since all businesses are included—not only the corporations that are often represented here before you in this panel, but also all of the non-corporate businesses reported through partnerships, or Schedule C, or sole proprietorships—all of those businesses will be reported on the same basis and investment of all types will be excluded from the tax base. That is the basis for the Armey Flat Tax proposal.

Now, the mechanism there is quite different than the mechanism in the Nunn-Domenici proposal which focuses, as you know, on the creation of what you might call an uncapped or unlimited IRA. That focuses on the saving side. But the intention of both of these proposals is to focus the tax base on consumption rather than income. On the other hand, the details are very important. I do not mean to minimize that.

The CHAIRMAN. Well, I can see where our difference is. Most people, when you talk to an audience about flat tax, they are thinking personal tax, they are not thinking business tax. You are satisfied that a personal income flat tax is basically a consumption tax if you have the percentage low enough.

Dr. JORGENSON. That is right.

The CHAIRMAN. And you get the percentage low enough by having to include lots and lots of things in income that we do not now count as income.

Dr. JORGENSON. Yes. The important thing is to exclude investment from the tax base. As long as you exclude investment from the tax base you will achieve the objective of a consumption tax. That is the purpose of the flat tax approach.

The CHAIRMAN. Dr. Eisner?

Dr. EISNER. Yes. It just so happens, I just presented a paper on the flat tax at the American Enterprise Institute on Friday, and I will be happy to make it available.

The CHAIRMAN. I wish you would.

[The information appears in the appendix.]

Dr. EISNER. As Professor Jorgenson indicates, the Armey proposal does turn out to be a consumption tax, essentially.

I should point out, when you have a consumption tax, this relates to the whole question of human capital. There is a question of what you count as consumption. Are expenditures for a college education, investment or consumption? Generally, they are treated as consumption so you are going to then discriminate against that kind of investment.

The other thing we have to observe on any consumption tax, is consumption tends to be very regressive, particularly with respect to income. That is, particularly domestic consumption.

So, if you have a consumption tax such as the Armey proposal, which really comes from an old proposal of Professors Hall and Rabushka at the Hoover Institution, this turns out—and I have all those figures in my paper; I am updating them—to be astonishingly regressive at the upper levels.

In other words, they have huge deductions which involve somewhat lower taxes for very poor people, but, as you get into the middle income groups, the tax rates become effective rates higher, and then when you get to the million and over, or even the $200,000 and over, you have a tremendous reduction in taxes.

Now, there are ways of devising a consumption tax which could be progressive, but the flat tax is not one of them. At least, the flat tax, as proposed, is not one of them. I could go on on this if you would like, but maybe we will let it go.

The CHAIRMAN. I want to address a question to Dr. Makinen. Myth has it that at the end of World War II that Japan passed a variety of savings incentives, and it worked. Is this true or not?

Dr. MAKINEN. Well, I do not propose to be an expert on the Japanese economy, but let me explain to you what I think happened. We are talking about the Maru-yu system, basically.

The CHAIRMAN. The what?

Dr. MAKINEN. The Maru-yu system, which is the system of tax-exempt savings.

The CHAIRMAN. Oh, of course. That is exactly what I was talking about. [Laughter.]

Dr. MAKINEN. What basically happened is that the Japanese saving rate has a very peculiar shape to it. It rises very sharply from the mid-1960's to the mid-1970's, and then it comes back down again.

There are some handicaps in looking at these numbers because the official national income accounts of Japan only go back to 1955, so the numbers that are prepared prior to 1955 are unofficial data.

Now, the Japanese started with a system of tax-exempt accounts in their postal saving system, going back to 1920. We had the same system here. The interest payments were not tax-exempt, but in Japan they were. The Japanese savings rate before World War II was very low, lower than our saving rate was for that period, according to the unofficial data.

After the war, the saving rate began to rise. In 1963, the maru-yu system of accounts was introduced. Now, these accounts were basically capped. That is, you could invest up to three million yen

in one of these accounts, and the interest on those accounts was tax-exempt.

Now, the savings rate, I said, has this peculiar peak to it. The tax exempt account started in 1963. A very broad spectrum of accounts was introduced on which the interest payments were exempt from taxation.

Now, those accounts continued through 1988, when they were phased out. It was possible to invest about 14.5 million yen into one of those accounts, which was roughly, at the time, $100,000.

You could also invest using multiple names. That is, you could use variations on your name so it was possible to have a lot more money in those accounts than just $100,000. Basically, the bank pays your interest so you do not report this on your income tax forms. The bank in which those accounts are held basically pay it.

The CHAIRMAN. This is my question. Did the savings increase result from this legislation?

Dr. MAKINEN. Basically, I would say no.

The CHAIRMAN. All right.

Dr. MAKINEN. If you want an answer. Because the savings rate peaked——

Senator BRADLEY. That is good enough.

The CHAIRMAN. That is why I said, myth has it. I know they passed the legislation and I knew the savings rates went up, I just did not know if they were related.

Dr. MAKINEN. The rates went up and down, the system continued.

The CHAIRMAN. All right.

Dr. MAKINEN. So the answer to the question is basically no.

The CHAIRMAN. Senator Moynihan, then Senator Bradley.

Senator MOYNIHAN. Yes, sir. I would say to Dr. Makinen's excellent, clarifying presentation, that when you choose Germany and Japan as compared with the U.S., you get into the Mancur Olsen question, on what happens in the aftermath of war in countries that have cleaned out all of their financial institutions.

The question I would like to ask the panel, if I may, Mr. Chairman, is we have now, as several of you have observed, commenced a debate on a constitutional amendment to require a balanced budget. One of the things that occurs to me is that all of this shows a rather painfully trusting attitude, of course, in national statistics.

Dr. Makinen was pointing out that the Japanese national accounts started in 1955. Well, ours started around 1948. Dr. Jorgenson, you worked in the Bureau of Labor of Statistics at some point, I believe. I had very nominal responsibility for the BLS in the early Kennedy Administration and recall how the current survey based unemployment rates were 11 years old, 12 years old, and fiercely disputed and not understood.

This whole regime of national accounts is a post-war phenomenon and not nearly so exact as we think. Dr. Greenspan, as Dr. Eisner knows, has just appeared before the Budget Committee, I believe, and said we could reduce the budget deficit substantially if we more accurately measured this change in the cost of living. Now the CPI, Greenspan argues, tends to overstate the increase.

If we are not sure about the CPI, what else are we not sure of? If we go to a balanced budget amendment, are we not putting con-

fidence in revenue estimates and indices and such which are still very inexact? I see my colleague, Senator Bradley, encouraging me in this questioning.

We will go across the panel.

Dr. MAKINEN. Let me just tell you one problem that I have with the data for balanced budget purposes. It has to do with the fact that interest payments in the Federal budget really are not totally interest payments. Part of them are an attempt to keep the real value of the lenders principal lent to the government constant. So, there are really repayments of the national debt in those interest figures.

For balance budget purposes, it depends on what you want those expenditures to measure, the cost of borrowed money to the government, or do you want them to include some of the retirement of the national debt?

Now, in interest payments there is an inflation premium. The purpose of that inflation premium is to keep the principal of the lender's capital constant. We call that inflation premium interest. It is reported in the national income accounts as interest, it is recorded in the Federal budget as interest, but what it really represents is a repayment of the national debt. So, that has bothered me about accounting for interest in terms of balancing the budget.

Senator MOYNIHAN. You are going to elaborate on that, are you not?

Dr. MAKINEN. Pardon?

Senator MOYNIHAN. Will you elaborate on that on paper for us?

Dr. MAKINEN. Sure. I would be happy to do so.

[The information appears in the appendix.]

Dr. EISNER. I would be happy to add to that, too, because I have been arguing this for years. I mean, the deficit is tremendously mismeasured, among other things. One of them is just the point that Dr. Makinen is stating, that is, you are counting, not real interest payments, but nominal interest payments, which include an inflation premium.

Of course, another problem is that any business accounts for things with a separate capital budget. State and local governments, most of them have balanced budget provisions, but they also have separate capital budgets. So this amendment would require the Federal Government to do what no business does, what no state and local government does, because they generally virtually all borrow for their capital spending. I can go on on this.

On the question of estimates, you know, I just prepared another article for another newspaper and I point out, going through section by section, Section VI of the amendment says that "The Congress shall enforce and implement this article by appropriate legislation which may rely on estimates of outlays and receipts."

Now, how many of you have read that carefully, and what in the world does it mean? Of course, in some sense, since I think the amendment is so terrible, this is, perhaps, the best clause because it offers a complete out.

All the Congress has to do, when faced with a $100 billion deficit, is say, well, we will cut tax rates, and, by our estimate, that will raise receipts by $100 billion. Who is to say that is nonsense, the Supreme Court, or what? So, since they rely on their own estimates

to balance it, there will be no problem, but the question of estimates of these figures is very critical.

Dr. JORGENSON. Can I respond to that, or are we already beyond our limit here?

The CHAIRMAN. Yes, go ahead.

Dr. JORGENSON. I think it is important here not to be diverted by the fact that there is progress in economic measurement. When you were in the Bureau of Labor Statistics, certainly productivity statistics were not in the state of sophistication that they are today.

I can say confidently that the same is true of the cost of living index, that that has improved substantially, even over the last decade, maybe even more recently, and Mr. Greenspan was pointing to further improvements that are possible.

The main point though, is this. In 1981, we experienced a fiscal disaster. We had, as the figures have demonstrated here that we have seen this morning, a huge increase in the role of the government sector in saving and investment that was entirely negative. Professor Eisner has contributed to clarifying the nature of the change that took place, and, I think, clarified this in a very fruitful way. But the point is, there is no gainsaying the fact that a fiscal disaster occurred, we stopped raising the revenue we needed to finance expenditures, and we have not yet recovered.

What was the mechanism by which our investment rate was maintained? As you have heard this morning, the mechanism was foreign borrowing on an unprecedented scale. Again, Professor Eisner has contributed to clarifying that issue. But a fiscal disaster occurred, and foreign import of capital was the consequence.

I feel, though, that it is very important that this panel try to make a very, very careful distinction between issues that relate to the balanced budget, over which you have jurisdiction, and issues that relate to tax policy, over which you also have jurisdiction.

That is, that the fruitful way to approach tax policy is the way that it was done in 1986, by means of considering revenue-neutral changes. Revenue-neutral changes. That is the way to conduct the tax debate. In terms of the problem with fiscal policy, we have here the evidence of a disaster from which we have yet to recover, and it is going to get worse.

The Congressional Budget Office has produced evidence that it is going to get worse, and the reason for that is entitlements. If the Balanced Budget Amendment is a way of solving that problem—and I leave it to you to decide whether it is or not; I have to say I am for it—I would like to see a way of dealing with entitlements.

We have just had a commission, as you know, by Danforth and Kerrey, that was unable to get consensus on how to deal with entitlements. But that, gentleman and Senator Moseley-Braun, is the issue.

The CHAIRMAN. I might say, if we continue on the route that we are on in entitlements we will not have to worry about a capital budget because there will not be any capital expenditures.

Senator Bradley, and then Senator Moseley-Braun.

Senator BRADLEY. Thank you very much, Mr. Chairman.

Let me thank the panel, first of all, for what I thought were three very productive testimonies. I think that if every Senator on

this committee would read and think about what you have told us today, it would enlighten our debate considerably and also lead us in, I think, some very productive directions. I do not just say that because you said nice things about 1986. I do believe you were very helpful here.

On the issue of the revenue-neutral tax proposal, you suggest, Dr. Jorgenson, that we tax consumption. Do you suggest that the revenue from taxing consumption be used to offset what, decreasing taxes on income, decreasing Social Security taxes? If we put in a consumption tax, does that replace part of the income tax, or does that replace the Social Security tax, or something else?

Dr. JORGENSON. No, it replaces part of the income tax. In other words, looking at this as a revenue-neutral approach, whatever approach to consumption taxation that we take, it is going to have to produce the same revenue as we have produced from income taxes, so I do not look at this as something that should be brought over into a discussion of how to finance Social Security. That is another very important issue. The issue of how to finance Medicare is something that is very important, and the other Social Security programs.

But, no. My approach would certainly be to trade off consumption taxes against income taxes. That is the only productive way to look at it, I think.

Senator BRADLEY. You made a very interesting reference to Krugman's article in Foreign Affairs, and you presented data today that clearly indicate that investment in tangible assets is a major, major element of economic growth.

We also are debating up here on a regular basis the idea of de-industrialization of America, all of our jobs flowing to lower wage countries. Now, I take it from the Krugman article and from what you have said today that the data does not support that.

Dr. JORGENSON. That is exactly right. I do not believe the de-industrialization story at all.

Senator BRADLEY. Could you elaborate on this point, because this is a fundamental misconception that the political process is stuck in right now. What does the data not show?

Dr. JORGENSON. Well, what the data show is that, if you look at manufacturing, which is usually the focus of these discussions of industrialization and de-industrialization, that manufacturing has maintained its role in the American economy. Manufacturing employment, however, has been, in the United States and in all of our major competitors, a declining portion of total employment. We are all familiar with these facts.

The reason for that is that the manufacturing sector in this country has continued to increase its productivity. Now, how did that take place? It took place through the kind of investments that we are here to discuss, through investments in tangible assets that embody the newest technology, through investments in human capital like the one I referred to before where USX invested $50,000 per worker.

By the way, it is very important to focus on the idea that those workers in whom this human capital was embodied after the training invested in an enormous amount themselves. They had to forego opportunities to do things that would have paid more, would

have provided other forms of remuneration. So the investors, in the end, are the people who appropriate the returns that I was referring to.

So, through these investments what we have seen is a very substantial growth in manufacturing productivity in this country that has made it possible for manufacturers to release more and more of the workers.

Well, you might say, well, that is a terrible thing because that means we have destroyed jobs. Look at the unemployment rates. Look at the fraction of our population that is engaged in the economy. It is higher than in any of our major competitors.

If I had time I would go into the other charts that are presented in my written testimony, which show that the big difference between the United States and other countries that I have not alluded to so far is the increase in the amount of labor that we have committed, both in terms of quantity of hours worked, and quality. Where has this come from? Women. Pure and simple, that is the big difference.

So, by commitment of these resources, by investment in human capital, and by investment in tangible assets, we have had continued productivity growth and that has made it possible for us to maintain the role of the manufacturing sector while shedding manufacturing jobs.

We do not need more manufacturing jobs. The increased educational qualifications of our labor force make it important for us to create other kinds of employment opportunities. We should not get stuck in the past. That is what I think the de-industrialization debate is about.

Senator BRADLEY. Dr. Eisner, you stated that you think that if you have larger government deficits you have, contrary to conventional wisdom, more savings, not less savings. The 1980's would seem to refute that. We had much bigger budget deficits and much lower savings. How do you explain that?

Dr. EISNER. Yes. Well, that is readily explained. You have to distinguish between the actual deficit and the structural deficit. The deficit affects the economy, but the economy affects the deficit.

Professor Jorgenson referred to the huge increase in the deficit we had in the early 1980's. Well, that increase was, in part, because of tax cuts and increased military expenditures, but a major part of the increase in the deficit was because the economy slumped. If you simply look at the raw association of deficits with the economy and with saving, you find, when the economy goes into recession, the deficit soars and saving falls.

On the other hand, if you take measures to stimulate the economy by changing the structural deficit, if there is slack in the economy—and that is the critical assumption, and there usually has been slack in the economy—that deficit has been associated—according to all of my estimates; I have them in many papers—with increases in GDP the following year, with reductions in unemployment the following year, and, therefore, with increases in gross private domestic investment and in national saving.

The CHAIRMAN. We had testimony, Dr. Eisner, from Dr. Reischaur the other day, who corroborated just what you said, that we thought in 1981 we were going to have big surpluses. That was

the projections. Nobody foresaw the recession and nobody foresaw the rapid drop in inflation. We had not indexed the Tax Code at the time, so as inflation fell our receipts fell, and as the recession came our receipts fell and our expenditures went up. And I think he used the term that almost all of the resulting deficit was technical errors, forecasting errors, that nobody saw.

Dr. EISNER. I should tell you though, corroborating or commenting on that, I remember meeting with my friend, Murray Weidenbaum, when he was chairman of President Reagan's Council of Economic Advisors, I guess, in late 1981.

He said to me, well, have you ever seen any other administration that had its anti-recessionary package in place before the recession, because he had that tax reduction package there. But, in that sense, he had anticipated the recession.

The CHAIRMAN. Senator Moseley-Braun, and then Senator Chafee.

Senator MOSELEY-BRAUN. Thank you very much, Mr. Chairman. At the outset, I would like to say I am delighted to have the opportunity to hear from this panel, including Dr. Eisner, who is a constituent.

I have a couple of questions, but I also would like to let the Chairman know, I am on the Banking Committee and there is a hearing on Mexican pesos right now going on. So, I would just like to ask my questions and then, with the permission of the Chair, leave.

The CHAIRMAN. Go right ahead.

Senator MOSELEY-BRAUN. I served on that Entitlements Commission of which Dr. Jorgenson referred and grappled, with the other members, with the difficulty of coming to any conclusion in terms of the direction that we should take to deal with the dilemma of our budget. I am particularly struck by the fact that it does not appear that anybody seems to have any clear-cut answer as to what to do about entitlements.

And I would caution, by the way, I thought it was important that we be inclusive and expansive in our definition of what an entitlement was and not just focus in simply on Social Security and those kinds of transfer payments. But, in any event, no answers came out.

In fact, the Chairman referred to one of the issues, Social Security, as the third rail of American politics, and it was almost as though it was something that we could not even talk about, much less reach consensus about.

So, I guess my question, which is really open-ended, but to all of you is, if you had a chance to play Budget Shadows, which is the game that the staff developed, and you had a chance to give us a recommendation about what to do in terms of entitlement spending, or entitlements generally, what would your recommendations be?

Dr. JORGENSON. Well, it is very clear that we have to adopt a goal which is going to strike the members of this panel and anybody in the United States as pretty radical. Namely, we have to face the fact we have got to eliminate middle class entitlements. Middle class entitlements.

The big numbers that come out of any sort of calculations—Mr. Reischaur's are the ones that I respect the most, and if I were you I would certainly be hearing from him about this and his successor, whoever that is going to be—has to deal with essentially the fact that we are providing income support for the most affluent members of our society, the fabled middle class.

Now, this is obviously a very difficult political problem. I am not a politician, obviously, so I am not going to try to assist you on that front. But I would simply say that you have got to concentrate on middle class entitlements.

What are these middle class entitlements? Well, Social Security is number one. We have to tax Social Security benefits. People who receive Social Security benefits who are able to provide for their own retirement, and the elderly, as you well know, are the most affluent members of our society—sorry, but that is just a plain economic fact—really have to be taxed on the proceeds.

We have to recognize the fact that Medicare has to be shifted to an insurance system. It is not something in which one can provide for the middle class, essentially tax dollars, to support their medical expenditures.

They have to treat this as they would any other part of their budget. Medicare is a very, very important program. It has to be handled with considerable delicacy. But the point is, the middle class must look at this as an insurance program in which they contribute to the costs and receive the benefits in proportion to their contributions.

Another big middle class entitlement that is not even on the agenda—I do not believe this was included in the commission report; I could be wrong, I read it but hurriedly—is deductions for home mortgage interest and state and local taxes on residential property.

I am sorry. That is a middle class entitlement, and it is the biggest one. And if that is not the third rail, or the fourth rail in American politics, I do not know what is. All I can say is, it has got to go. Now, what do I mean by, it has got to go? I mean, it has got to be capped.

One of the great achievements of the 1986 Tax Reform Act, those of you who have read the fine print know, is that there is a very high limit in there, and that is something that needs to be lowered.

I once proposed, for example, that it be lowered to the level of a home mortgage for the FHA, which is a government program which provides for people who presumably are not all members of the middle class.

Well, I could go on, but you can see the direction that we have to go. This government and any government, whether it is federal, state, or local, cannot provide income support for middle class people. That has to be our goal, to eliminate middle class entitlements. And, while I realize that is just a generality, I think it is pretty clear the directions that we would have to go in order to achieve that objective.

I feel that the commission on which you served so effectively, even though it was not able to agree, did, in fact, lay out the territory very effectively and provides required reading for anybody who is seriously concerned about these problems.

Senator MOSELEY-BRAUN. Thank you for saying that. It makes you a minority voice, frankly.

Dr. Eisner?

Dr. EISNER. I would offer, I am afraid, a slightly different viewpoint. Social Security, as Professor Jorgenson pointed out, is the biggest single entitlement and I see no justification or merit in changing the rules in the middle. In fact, the government has operated a kind of a vast insurance system and I think it unjust to penalize the elderly at this point.

Now, if you get to Medicare, we have a general problem of escalating medical costs. That may well be something that has to be tackled. It certainly is. I would suggest that universal health care would have done something to ease the burden there.

On the mortgage interest deductions, I entirely agree with Senator Bradley on trying to clean the Tax Code of all of these things. But I would think again on trying to take away the encouragement of home ownership. I think we talk about investment——

Senator BRADLEY. Do not identify me with that now, Mr. Eisner. [Laughter.]

Dr. EISNER. No. I accept that. I did not mean to. But encouraging home investment and owner-occupied housing is actually a great thing. I think that is the greatest investment we have, people that own their own homes, that take care of their homes, of their neighborhoods.

I would suggest that a remedy for the terrible housing projects we have in the City of Chicago might be to promote home ownership among low-income people instead of low-rent housing.

Now, you can go on. I think it is easy to hit at entitlements in general, but will you not be careful about changing the rules and also what you are going to use this cut in entitlements for?

The CHAIRMAN. I might, and then we will go to Senator Chafee, give you some figures I just had run on housing. Current limit is $1 million, plus you can have $100,000 in home equity loans, so $1,100,000. You could lower that to $250,000. It would raise about $14 billion. If you wanted to use it straight across, you could support a 17 percent capital gains tax with the $14 billion, if you want to trade off houses for capital gains.

But the interesting figure is, 97 percent of the mortgages in this country are under $250,000. We would not be affecting the poor of Chicago, or anyplace else, with a $250,000 cap.

Dr. JORGENSON. How would that look if you took the FHA limit that I suggested?

The CHAIRMAN. Oh, even more. Even more. I have not run figures at $200,000 and $150,000. My hunch is, this is a top of the head guess, probably 70 percent of the mortgages in this country are under $150,000.

Senator Chafee?

Senator CHAFEE. Thank you, Mr. Chairman.

Dr. Jorgenson, just out of curiosity, you keep talking about no entitlements for the middle class. Well, I presume that that also includes——

Senator MOYNIHAN. Upper class.

Senator CHAFEE. [continuing]. The upper class too. We are careful about the word "class" in American society. But, shall we call

them, the wealthier. In other words, whatever you are saying, you are running hard against the middle class, you might as well include the upper class as well.

Dr. JORGENSON. Absolutely. Yes. Anybody above the middle class is certainly intended to be part of the reduction and elimination of entitlements.

Senator MOYNIHAN. But can we not use the word income?

Senator CHAFEE. Yes. Somehow class is——we have got to get a better word there.

Now, there was discussion of the flat tax. I think, Dr. Eisner, you talked about it. Could you briefly tell me what the flat tax is?

Dr. EISNER. Well, the flat tax, as proposed by Congressman Armey, would substitute in the initial year for the entire set of corporate and individual income taxes, a tax of 20 percent, first, on gross receipts of business——

Senator CHAFEE. Let us stick with individuals, if we could.

Dr. EISNER. Well, the individual portion, it turns out—and this is important—will be left a much smaller portion of the total tax burden because the individual will have only wages, salaries and pensions taxed.

There will be no taxation of capital income, which will be a huge boon to those who receive interest, dividends, and capital gains. Those would not be taxed at all.

There will be this 20 percent in the initial year, then 17 percent tax on wages, salaries and pensions only, but net a very substantial family deduction, a standard deduction which will be $24,700 for a couple filing jointly, plus $5,000 for each dependent. So, a family of four would have deductions of $34,700. If they had only wage income of that amount, they would pay no tax.

Now, if they had wage income of, let us say, $134,000, they would pay then a tax of 20 percent of 100, which would be $20,000. On the other hand, if they had income and interest dividends or capital gains of $134,000, they pay no tax. So, that is the personal side of it.

Senator CHAFEE. Well, my time is limited here.

Dr. EISNER. Yes.

Senator CHAFEE. Well, I would say that that, to me, sounds like a bonanza for the so called middle class.

Dr. EISNER. Well, it is a bonanza. Remember, because of the elimination of so much of the tax on the individual, the tax has shifted to what amounts to a sales tax on business of 20 percent, net, as Professor Jorgenson points out, of capital expenditures so that, instead of paying in income tax, most people are paying a huge sales tax.

Now, the incidence of that depends upon what people buy. It is the middle classes that are going out and consuming, so they are going to pay that tax, they are not going to pay much in the way of an income tax.

The very wealthy will not be consuming that large a proportion of their income, they will not be paying much of a tax on the sales side, and they will have a very huge reduction in tax on the income side because they are not getting income in wages and salaries, so much as in capital gains, interest, and dividends.

Senator CHAFEE. Well, I obviously do not know all the details of this. Just as a general rule, I have always found that simplicity in income taxes is the enemy of fairness.

Senator BRADLEY. You are right again, Senator Chafee.

Senator CHAFEE. I do not know what the deductions are if your house is wiped out by a fire or a child becomes terribly sick and you incur tremendous medical bills, and you have a series of children. I do not know what the deductions or the exemptions are under the flat tax.

But let me get on to this personal savings. As I understand, the personal savings rate started to decline in 1980. Am I right in that, Dr. Jorgenson?

Dr. JORGENSON. That is right.

Senator CHAFEE. Yet that is when we substantially liberalized the IRAs. How do you explain that? Because around here, IRAs are very popular.

Dr. JORGENSON. Well, I think I would revert to a point that Professor Eisner made a moment ago. It is important to realize that immediately after the 1981 tax changes that created these savings accounts you are referring to, there was a tremendous recession in this country, more severe than any recession we have experienced since that time. Recessions always result in the reduction of personal saving as people try to maintain their standards of living.

So I think that looking at this from the point of view of the business cycle, thinking of what happened right after the change, is very misleading for exactly the reasons that Professor Eisner has already pointed out so eloquently.

On the other hand, if you look carefully at the saving behavior of people who benefitted from these accounts, the big issue is, did they substitute other kinds of saving for the saving that they made in the IRAs?

The IRAs grew dramatically after the change that you are referring to and the question is, did that substitute for other saving? The best evidence that has come up on that is, definitely not.

In other words, people made new savings that partly offset the reduction in savings that resulted from the downturn in the economy. So, the fact is, these IRAs were very effective. That is why they have played an important role in the design of the Nunn-Domenici proposal. That is one possible approach to a consumption tax.

We focused on the flat tax here. Professor Eisner has described the effect of that tax. But one can approach tax policy in many different ways, as you are very well aware, and the Nunn-Domenici approach is one that certainly deserves serious consideration. It is very well thought through, it is also a tax on consumption as opposed to saving and investment.

Senator CHAFEE. Thank you.

Thank you, Mr. Chairman.

Mr. Chairman. Senator Grassley.

Senator GRASSLEY. Dr. Eisner, in your advocacy of the free market as it deals with taxes, and I suppose the deficiencies you see in using incentives for savings, is that a pretty pure philosophy of yours or are there some incentives for savings that you would approve of?

Dr. EISNER. Well, I have a general philosophy of leaving everything to the market unless you can show some reason why not to, and I can imagine reasons why not to. To some extent, the classical ones that economists offer of externalities, pollution costs, or whatever, or the fact that something that somebody can do would be of benefit beyond the individual parties, or markets are imperfect. I will say that the greatest place that markets are imperfect is in human capital in reference to Professor Jorgenson's interesting testimony.

The real problem on human capital is, you may be able to get the returns in your wages, but what are you going to tell this kid in the inner city in Chicago; well, why do you not go ahead and get yourself an education, and gee, think how much you are going to get back?

There is a tremendous need there for some government intervention. That market in human capital is so far from perfect it really does not exist. You cannot get a bank to tell this kid, look, I will lend you $1 million and finance you up through Northwestern University, and you pay it back to me afterward. Have you ever heard of any bank that would do that? There is not a market for that. That is where we need government intervention.

Senator GRASSLEY. So most of the incentives would be towards human capital.

Dr. EISNER. I would argue so, yes. Also, basic research, by the way, because there again, the firm may not be able to recoup the benefits. The applied research it can get, but the basic research it might not.

Senator GRASSLEY. Dr. Jorgenson?

Dr. JORGENSON. Mr. Grassley, I think that in my testimony I emphasize exactly the distinction that Professor Eisner just made. I would like to underline this point. Most of the sources of economic growth with which we ought to be concerned are those in which the returns are internal.

When we think about returns that are external, then we think about other kinds of policies, not tax policies. Therefore, the best tax is one that creates an environment that equalizes opportunities for all kinds of investors.

I would just like to make a point about investment in human capital, which is an area that both Professor Eisner and I worked on a lot. The reason that we have state and local governments providing educational services is precisely for the reason that Professor Eisner just underlined, namely that the market does not work, left to its own resources.

On the other hand, I think it is important to recognize—and former Professor Moynihan can tell you more about this than I can, being a specialist in education—the great success in one of our investment activities has been precisely to bring in the people that Professor Eisner was just referring to, inner city kids.

It is a "bad rap," as they say, on the American school system not to recognize the fact that the greatest gains we have had over the last two or three decades has been to bring in groups, like the inner city youth that Professor Eisner conjured up before us here, into the educational system.

If you look at the advances in the educational attainment of these people, they are enormous. Northwestern University is one of the universities that has contributed to this by making opportunities available for people with that kind of background. So we have had a great success in this country investing in human capital.

A consumption tax is one that would provide ways of enhancing the incentives for private investors in human capital as well as in tangible assets, and, therefore, ought to be neutral across all kinds of investments, not just investments in tangible assets.

Senator GRASSLEY. I want to move on to another area, and that is the area and problem that we hopefully all recognize about under-funded pension plans, as well as the problems we are going to have down the road 30 years from now with Social Security, or maybe there are problems right now we have to deal with as far as Social Security is concerned.

Have these problems been taken into account in assessing the Nation's long-term savings, the problem of under-funded pension plans?

Dr. EISNER. I cannot really answer on the private pension plans. I do not know if any of you are more familiar with that.

Dr. JORGENSON. Well, the figures that you have seen presented here at the outset of the testimony are figures that include essentially all of the assets that are held by pension plans, and those assets are part of the saving picture that has been presented here.

Senator GRASSLEY. So then if they are under-funded, then we have a long-term savings problem.

Dr. JORGENSON. Well, let us put it this way. The problem of under-funded private pension plans is something that was recognized more than 10 years ago. And, as you know, there are very careful regulations that have been put in place that have gradually forced American corporations and other administrators of pension plans to bring all pension plans to full funding. This has been a very positive force for saving. It has increased the amount of business saving that you have seen here.

Senator GRASSLEY. So then you are saying that we do not have a problem.

Dr. JORGENSON. We do not have a problem. That is something that is macroscopic. There are a number of specific problems, specific firms, whose pension plans are still under-funded, and those will be dealt with by the Federal regulators that you and your colleagues in this body have put into place working on this problem. It is still a problem for some corporations and, therefore, for some workers.

Senator GRASSLEY. Well, would IRAs, for instance, and the tax incentive for IRAs, help that problem?

Dr. JORGENSON. Yes, because it would provide an alternative channel. IRAs, as you know, are outside the system of pension planning administered by businesses on behalf of their employees.

That provides an additional channel for workers who want to make their own provisions outside Social Security and outside the corporate pension plans to make those provisions through an IRA. That is one of the strengths of the Nunn-Domenici approach, it strengthens that institution.

Dr. EISNER. I might just add, on IRAs, Professor Jorgenson cited or had in mind, correctly, some studies that indicated that the IRAs did have some positive effect on saving, but there have been others that indicate no effect. It is not very clear.

Again, you have to distinguish between the effect on individual savers and what the ultimate effect is on the economy, recognizing that unless the saving somehow contributes to more investment, you do not get more saving in the aggregate.

The CHAIRMAN. Senator Simpson.

Senator SIMPSON. Mr. Chairman, do you realize I gave up Environment and Public Works to come on this committee? What have you done to me? I am ready. I am going to enjoy this thoroughly. And I intend to participate thoroughly because Senator Carol Moseley-Braun and I are both on the Entitlements Commission, thus learning effectively what hell really is.

One of the great remarkable days of the debate was when those who were saying, you cannot do anything to the older people, to——I mean, it was really a rich tapestry of emotion that everyone over 65 somehow is foraging in alleys for sustenance. It is a little too much for me because, as you say, they are the most affluent group of society.

This man said, with passion, get rid of these tax expenditures; that is what killing us. That is where the rich get into the game. So I thought, you know what the two biggest tax expenditures are. Whatever that term is, do not ask me to define it. No one has ever been able to define it well, and maybe I will ask you.

But the biggest one is one you mentioned, home mortgage deductibility. And guess what the second biggest one is? The employer's deduction of the employee's premium on health insurance. Now, kick those two babies out and you really are talking about some big time hits.

Senator MOYNIHAN. May I say to my friend, that I believe that the exclusion from income of employer contributions is now first.

Senator SIMPSON. That may well be, Pat. I think that may well be. So, there they are, if you want to talk about doing something "to the rich." That is the way it is portrayed, usually, that it is these two things.

For 16 years I have been in the U.S. Senate, and I have never seen any figures presented to me that have been correct. None. I mean that not in an evil way, just no. I mean, what will be the rate of growth, what will be this, what will be this, and none of them have been correct.

My question is this: how are we going to get anywhere in this country's debate when we are trying to do something with the big things, Medicare, Medicaid, COLAs, CPI?

I think we ought to look at CPI, the Entitlements Commission said that, Alan Greenspan says that, a big ticket item. COLAs came from Wilbur Mills and Richard Nixon. That was never part of the original contract on Social Security.

The CHAIRMAN. As what we thought was a cost saving device at the time.

Senator SIMPSON. Yes. Yes.

So, when 30 of the 32 of us on the Entitlements Commission know that in the year 2013 that there will be only sufficient funds

to take care of entitlements, which include Medicare, Medicaid, Social Security, Federal retirement, and interest on the debt and nothing—nothing for education, defense, transportation, Head Start, or any other program of the government, what are we going to do?

Dr. JORGENSON. The answer is, Senator, that you are going to eliminate middle class entitlements. You are going to be forced to. That is the short version of the story. Now, whether that starts today, or tomorrow, or next year, middle class entitlements, including the tax expenditures that you referred to, have to go. That is the future of fiscal policy in this society.

Dr. EISNER. I, again, have a different view. What will happen in the year 2013, or any other year in the future, with regard to what Social Security recipients can expect will depend upon the real goods and services being produced then and what the public, the body politic, is willing to give them.

It really has nothing much to do with what some accountant says is in a fund as an accounting entry. The people who are retired, who are not working, are supported by the people who are working. If there are enough people working, if they are productive enough, and if they have the will to give that to those people, they will get it. If they want to cut it then, you can.

The problem of doing something now for an alleged problem we will have, let us say, in 20 years, is that there is little that you can do effective now, and a lot that you can do that will be counterproductive.

The thing to do now is to try to make sure we have a more productive society in the year 2012 so there are ample resources to take care of the elderly and the young at the same time.

If you simply, for example, raise Social Security taxes or promise to cut benefits now, there is no indication that that will provide any of the additional human or non-human capital that will give us more product in the future.

The problem that has to be addressed is a real one, not an accounting one, not a gimmick in which we say, well, we are going to change the rules so that we can now estimate that the Social Security fund will have more money in the year 2012.

Dr. JORGENSON. Could I elaborate on that point? I think this is a point that we came back to before which is, that it is important in focusing on tax policy to do it in a revenue-neutral way, not to try to bring in the considerations that are involved in the Balanced Budget Amendment. Therefore, I think that in terms of stimulating growth, what we need to do is to focus on a consumption tax.

Senator SIMPSON. I think so. I have been an advocate of what Pete Domenici and Sam Nunn are doing. My time has expired. But I will certainly, Dr. Eisner, challenge, respectfully so, what you say. That sounded very much like what the senior groups were telling us, the AARP, the National Commission for Social Security and Medicare.

Every time we mention slowing the growth in any of those programs, they immediately shriek, cut. And when we are trying to stop Medicare from going up 10 percent and, say, let it go up only six, they immediately go to their membership and say we are cutting Medicare. And when a six percent increase is a cut, this coun-

try is in deep trouble in trying to make the American public understand.

The real problem is this: when I was a freshman at the University of Wyoming, 16 people were paying into the Social Security system and one taking out; today there are three people paying in and one taking out. And the Social Security trustees are telling us it will go broke in the year 2029. And we are not going to do anything for 20 years? Disaster.

I know my time is gone, but I would like to hear your response to that.

Dr. EISNER. Again, Senator, I have to emphasize that we will have a problem in 20 or 30 years. I think you were alluding to that. You said, paying in. The question is, how many people will be working in the year 2012 or 2030, how many will not be working, and how productive will the people be that are working? Now, actually, there is something of a balance. We will have more elderly people relatively, but we will have fewer children.

Now, this may sound a bit facetious, but I know you have been in the forefront of work on immigration, for example. You know, one solution would be to let more Mexicans in and let them work and produce for the people who are retired. All I am pointing out is, that the real problem is going to be how much production we will have then.

Now, if our production is not high enough, it is true that we may have to make a decision, with the elderly living longer, that they will have to take less. That decision will have to be made as these developments occur.

Senator MOYNIHAN. May I say to my friend from Wyoming that, as usual, the Democratic administration is ahead of the curve. The President, about 20 minutes ago, announced that he is dropping his request for a $40 billion loan guaranty to Mexico, so that there will be more Mexicans. [Laughter.]

Senator SIMPSON. Pat, you and I started together on Environment and Public Works, and I have loved all 16 years. That is a marvelous innovation I had not thought of, but it is sure as hell real.

The CHAIRMAN. I am not sure that Dr. Eisner and Dr. Jorgenson are that far apart, if you can see Dr. Eisner's presumption. If, instead of growing 2 percent a year we grow four percent a year, we will have a lot more revenue to spend on things than if we grow 2 percent a year.

But if, on average, we just do about what we are doing and we get to 2010 and 2015 and we are now starting to redeem the bonds that Social Security has instead of collecting a surplus, and gradually we have redeemed all the bonds and we are now out, whether or not at that stage our kids or grandkids will be willing to support a tax level at our gross domestic product of 40–45 percent is problematical. I do not know, I think you are looking at a generational battle at that stage.

Maybe they will. Maybe they will accept that level of taxation, in which case a lot of problems that we think we are going to have are going to go away. But we are running the risk that they will be willing to accept it. I just have a feeling, if we had to get to an

11–12 percent payroll tax each to support Social Security, that you might start to have some rebellion amongst a younger generation.

I want to ask Dr. Jorgenson a further question. You said the IRAs worked, by and large, you thought, and you also talk about a flat tax. Do you think the flat tax—I am talking about personal side only—would be better for savings and investment than targeted savings incentives?

Dr. JORGENSON. Yes, I definitely do. I think that the whole issue of targeted incentives revolves around this issue of externalities that Professor Eisner brought into the discussion and, as you say, we are not that far apart.

The fact is, you cannot identify these externalities. Nobody is going to come before you with numbers that you believe or do not believe about exactly what these externalities are that are associated with these various investments.

We can look at the internal returns. We can see them in incomes that people enjoy from their participation in the labor market, the participation in the capital markets. That is the way people generate income in a capitalist society.

What we need to have—and that was the purpose of the 1986 tax reform which was formulated in this committee and in the House Ways and Means Committee—is a system that is neutral with respect to all forms of investment, and I believe that Professor Eisner and I would agree.

There are certainly conceptual issues that might lead to exceptions, but I think that the day of targeted incentives, whether they are on the investment side or on the savings side, is past.

What we have to do is to think, if we are going to make progress in tax policy, of moving toward greater neutrality. There are lots of different approaches that one could take for that.

For example, I have actually advocated in print an approach that would carry the 1986 tax reform further that would bring housing, which we have talked about in this hearing, into the tax structure.

However, an international comparison that I published in 1993 showed that there was only one country out of our leading competitors that had succeeded in achieving that goal. You can imagine the politics of bringing housing into the tax structure.

That country is Sweden. The way that they did it was essentially to include it in the VAT. Now, you might say, does that mean that every home owner in Sweden is paying Value Added Tax on their housing? No. They were much more circuitous in their approach.

What they did, is to include housing investment in the VAT. They carefully made sure that everybody who bought a house in Sweden had to pay the VAT on the cost. That, essentially, is an alternative way of achieving the same thing.

My conclusion is, from studies of the U.S. tax structure, that there is no way to get from where we are to a system based on income that is totally neutral. In other words, that would incorporate the big missing asset, namely, owner-occupied residential housing.

So, I have, after many years of pondering this—not 16 years, but maybe more like six—come to the conclusion that the way to achieve neutrality is to shift all the way to a consumption tax. That is the natural way to make progress, using the same principles that motivated the 1986 tax reform.

The CHAIRMAN. You have been very kind in referring to the 1986 tax reform. You are looking at four of us here that met every morning for a very short period of time—only Senator Simpson was not there at the time—out of six of us that more or less guided that along, and it took us only 10 days from the time we first started meeting. I was going to do a book, Ten Days That Shook the World, but the Library of Congress said it is taken.

Dr. JORGENSON. Not a bad idea, Senator.

The CHAIRMAN. It is a good title.

Senator Moynihan?

Senator MOYNIHAN. Yes. I remember I had a semi-clerical role. It would be my job to do the morning reading, and I would find a text from the Wall Street Journal that morning that said, "Attention Investors: Guaranteed Losses."

The CHAIRMAN. That is correct.

Senator MOYNIHAN. It would show you how, if you bought enough cattle in Wyoming, they could guarantee you a million and a half dollars of passive losses.

The CHAIRMAN. Llamas, as I recall.

Senator MOYNIHAN. Llamas. We had llamas.

I would like to just make one remark about something I hope we can deal with. I have said this a couple of times. It is a question of the word, entitlements.

Frederic Clay, who is a diplomatist and a very distinguished one, wrote a book about diplomacy, and he used the word, "semantic infiltration," in which he said, if, in a negotiation you can get the other side to start using your terms for what is at issue, you are at a great advantage already.

Not to be beastly to the Japanese, but if you remember in the 1930's, they had invaded Manchuria. I said to the Chairman the other day, if Canada invaded Oregon, we would say Canada invaded Oregon, not the United States, as in Manchuria, and not China. But that is a very important thing.

The word, entitlement, is a term that, first, the statutes say, if an individual or firm meets certain conditions, it automatically gets a benefit from the Federal Government, be they food stamps, farm supports, and so forth. We have thought of social insurance, of Social Security, in different terms. I am fond of citing an exchange between Luther Guilick, who taught at Columbia, was a member of the Brownlow Commission in 1936 that reorganized the Federal Executive Branch.

He called on Roosevelt in 1940 and said, you know, I have been looking at this thing, and Social Security is maturing now. We are spending an awful lot of money, just scribbling in these six cents, and 16 cents, and so forth. Should we not just collect the tax and pay out the benefits because it is a pay as you go system?

And Roosevelt—you can see him doing this—said, you know, Luther, I am sure you are right about the economics, but it is not a question of economics. I want every citizen, every worker, to have an account with a number, that he will know that that is his money and he will be able to draw it, and no damn politician will be able to take it away.

A little later, I found Luther Guilick, age 99, living in the village of Pottsdam up on the St. Lawrence River, his mind as clear as

Easter bells, and remembered that exactly. There is a memorandum of conversation in the Hyde Park Library about it.

This is social insurance. It was meant to be. Now, are we going to scrap that? Because when you start using the word "entitlement" to describe food stamps, and farm price supports, and retirement benefits under Social Security, you are making them all optional. What about all of the people who paid in for 40 years? I mean, do we want to give that up? Is that not an institution that is of value? Do we want to turn it into welfare?

Dr. JORGENSON. Well, you are quite right, Senator, that this is a very important rhetorical battle and this is, in a way, the opening salvo. More precisely, there was an opening salvo in the Kerrey-Danforth Commission. I think that is what that was about. What we are saying is, let us recognize the economics of that program.

As you said, it was perfectly apparent to Luther Guilick and to anybody who has looked at the Social Security system, that the rhetoric that accompanies that system and has accompanied it since its inception has been that it is not an entitlement, it is not a transfer program, it is an insurance system.

You know, I know, members of this panel know, members of this Senate Finance Committee know, that it is a transfer program. If we think about applying the idea of entitlement to owner-occupied residential housing deductions, that is stretching the rhetoric.

But the rhetoric is very, very important in these things and I think that what we need to recognize is the fact that these middle class entitlements encompass tax expenditures, they encompass this treasured Social Security system, they encompass Medicare, they encompass many things that essentially have the basic character that you described, namely that they are not described in terms of an appropriation, they are described in terms of a right to receive payment from the Federal Government. That is no longer a viable program within our fiscal policy. The days in which those programs can be maintained is over.

So, when we begin to take this up I think we have to take a comprehensive view of entitlements, and that is exactly the point of view that was taken in the Danforth-Kerrey Commission.

That commission did not result in a consensus about what to do. Why? Because this is an incredibly complicated matter. This is a matter of decades of American history that we are talking about. To make these changes is something that is going to take time. As I say, I am a patient man.

The CHAIRMAN. I do not think it is complicated, it is difficult. It is politically difficult, it is not complicated to understand.

Dr. Eisner?

Dr. EISNER. Yes. Well, I do warmly endorse Senator Moynihan's remarks. I am rather appalled by the extent to which, somehow, I think misinformation has fed public cynicism about the Social Security system.

If you ask the ordinary person, polled him, do you expect to get your Social Security benefits or do you think the system is bankrupt, or something like that, you get appalling answers.

There is, I think, a social contract here. It is understood that the government will be the intermediary for the young supporting their parents in their old age, and that is what it comes to. It is a pay

as you gc system. And I have to emphasize, though, that it is, of necessity, in the economy, a pay as you go system.

The point that I was trying to make, that is, the people who are not working who are retired, no matter how you account for it, are being supported. The food that they eat is being produced by the people who are then working. And at any point in time you have to make the decision, whether the people who are working are willing to provide what their parents and grandparents think they need and want.

That decision, as Senator Packwood has pointed out, will be influenced very much by just how much is available at that time, how much we are producing.

Senator MOYNIHAN. Could I make a quick point? I know that Senator Simpson cares a lot about this. It is almost a secret, but in 1977 we went to a partially funded system. And, had it not been for the fiscal disaster of 1981, we would be seeing a reserve that we put in place that would buy the Stock Exchange. If we had used the surpluses to buy down the privately held public debt, we would, in that measure, increase investment such that when the time came for an intergenerational transfer, it would be a lot easier.

Senator BRADLEY. And there would be higher growth.

Senator MOYNIHAN. There would be higher growth because we would have the larger capital stock.

The CHAIRMAN. Senator Bradley.

Senator BRADLEY. Thank you very much, Mr. Chairman.

In 1986, we cut tax rates and we eliminated loopholes that told businesses where to invest because they would get a lower tax rate, and we left that money with the individual and the business person to decide whether they would prefer to buy a new piece of equipment or whether they preferred to educate their worker.

Now, Dr. Jorgenson, you are taking this to the next step. You are saying you did a good job, but you still have too many distortions, too many of these things in the income tax system that channel investment in unproductive ways.

And the only way that we can deal with this is to simply get rid of the income tax system and replace it with a tax on consumption, and then you leave the individual business person or individual with the total responsibility as to whether they want to buy a new piece of equipment or whether they want to spend the money on education. That is your basic argument here this morning.

Dr. JORGENSON. Exactly. That is it in a nutshell.

Senator BRADLEY. Now, we have talked about the degree of difficulty involved in going from where we are now to that kind of system. But I really think we have kind of glossed over it because you would essentially be saying, eliminate those so called big loopholes that are now in the income tax system. You would eliminate it because you would not have an income tax system, so you would not have anything to deduct against.

Dr. JORGENSON. Precisely.

Senator BRADLEY. Which means that you have a pension fund, the pension fund invests, it earns profits every year. That now is taxable to you as an individual. Your mortgage is no longer deductible. The money that your employer pays for your health care is now taxable to you as an individual. All of your Social Security is

now taxable to you as an individual, and you no longer get deductions for charitable contributions. So, there is a lot of talk about moving to a consumption tax, but that is essentially what you are giving up for the lower rate tax.

Dr. JORGENSON. That is right. That is right. And what that would produce is economic gains that are stupendous.

Senator BRADLEY. Right. Right.

Dr. JORGENSON. And would deal with the issue that Professor Eisner identified, namely, stimulating economic growth. That is the direction we have to go to stimulate growth.

Senator BRADLEY. Now, is it your view that that view, in and of itself, a revenue-neutral move, would produce more growth than eliminating the national deficit through cutting other spending or increasing taxes?

Dr. JORGENSON. That is a difficult question to answer.

Senator BRADLEY. Well, that is why I saved it for you.

Dr. JORGENSON. Eliminating the national deficit is something that involves looking at all of these entitlement programs, looking at Mr. Reischaur's projections, and asking ourselves how we are going to do this.

Senator BRADLEY. Right.

Dr. JORGENSON. The answer is, it depends on how we do it. In other words, the way in which we eliminate the deficit would make a big difference in the answer, so with that in mind, I think, we have to think about what sorts of investments there are that are being made by the government sector that really capture externalities that are relevant to growth.

Senator BRADLEY. Let us say we did what you suggested, which is cut entitlement spending.

Dr. JORGENSON. That would certainly move in the direction of enhancing——

Senator BRADLEY. Would that give more growth than changing the whole tax system?

Dr. JORGENSON. That is something that would be about comparable in terms of its impact because it would have the effect of essentially reducing consumption and stimulating investment.

Senator BRADLEY. I know, Dr. Eisner, you do not agree. I am going to come to your question.

If we cannot do that, if we cannot move to a new tax system, nor can we really reduce entitlements in the budget deficit, you have said the existing system has essentially internalized return on investment in tangible assets——

Dr. JORGENSON. Right.

Senator BRADLEY. [continuing]. But does not have that on investment in human capital.

Dr. JORGENSON. No, no, no. I argued that, in fact, the current taxation system for human capital—again, this is an area where Professor Eisner and I disagree—is essentially a consumption tax. I mentioned, for example, this USX example, where you essentially expense. In other words, you write off the value of the investment and the training.

The same thing is true of people that are in college. People who are in college, as all of us are aware, are going to be the future leaders of our country, going to be the future members of the afflu-

ent middle class. These are people you might say, well, they are getting a lot of income because their wealth is gradually mounting up, they ought to be taxed. They are not taxed, of course. I mean, that would not make any sense. That point is, that is already on a consumption tax basis.

What I am advocating is essentially moving tangible assets to the same basis. I have already mentioned that I regard investment in human capital as one of the great success stories. In that regard, contrary to what you read in the media, the education system of this country is one of our great success stories. We have a massive engine for investing in human capital.

One of the reasons that it is so successful is that it is treated, from the tax point of view, on a consumption tax basis. My argument is simply to move tangible assets to the same basis. That is what I am advocating.

Senator BRADLEY. The subject of this hearing is savings. Which of those two would produce more savings, eliminating the budget deficit through cuts in entitlements, or going to a new system, replacing the income tax with a consumption tax?

Dr. JORGENSON. The answer is, I think, very simple. Namely, that insofar as the reduction in expenditures cuts consumption, reduces consumption, it has the same benefits as a tax reduction that stimulates investment. Professor Eisner has reminded us of the accounting identities that we are dealing with here.

So, anything that reduces consumption is certainly going to have benefit. Therefore, I would argue that if we want to pursue this idea of stimulating growth we should be focusing on both reducing entitlements and changing the tax system on a revenue-neutral basis in the direction of a consumption tax and away from an income tax.

The CHAIRMAN. Senator Moynihan?

Senator MOYNIHAN. I want to thank you.

Senator BRADLEY. Could I ask one more?

If I could, I wanted to give Dr. Eisner his chance to disagree with you. As he is doing that, since he has posited that growth is more important than savings, how do we get growth without savings?

Then if you could share with us, what would you put in your capital budget, would you put infrastructure and education, would you put the defense budget in there, would you put investment in missiles and other tangible governmental assets?

Dr. EISNER. All right. First, on the last question, I would put everything in, including defense and missiles. This is not an argument in support, necessarily, of that spending. But I think if the defense program has any meaning, any value, it is to protect our future.

It is an investment in our future, and I would include what we spend on the armed forces; not just the missiles and the aircraft, probably, as investment, but certainly any of the tangible capital. So, I have no problem there. I believe this is a matter of honesty in accounting to state what is investment and what is not.

On the issue of how to get saving with growth, you have to have saving——

Senator BRADLEY. Well, how do you get growth without increasing saving?

Dr. EISNER. You will not get growth without increasing saving if you measure saving comprehensively to include all of the human capital. And, as I have indicated, I think it is the human capital which the government can control to a considerable extent which will be the engine of growth.

On the question you raised with Dr. Jorgenson, I can give you a quick answer. First, on the budget deficit, if you reduce entitlements to reduce the deficit the question you have to immediately ask is, what will this do to the economy now?

If it will causes a recession, if cutting benefits to the elderly or anybody else by a substantial amount causes them to spend less and that is not taken up elsewhere, then you clearly have less saving.

I think the critical point I may differ with Professor Jorgenson on and some others is the assertion that if you have less consumption you will have more saving. That only follows if income is the same. You cannot guarantee that income will be the same. I also do not share Professor Jorgenson's enthusiasm for a consumption tax.

I might suggest that I would realize all of the benefits, virtually all, that he sees in a consumption tax by moving along the path that so many of the members of this committee did so well on in 1986, and continue to have an income tax moving in the direction of a really comprehensive base, eliminating all of these deductions.

Indeed, in my paper for the American Enterprise Institute I proposed a comprehensive flat tax, if you wish, which would do away with the corporate income tax, do away with payroll taxes—I mean, this is, I admit, somewhat utopian—and put the whole thing into one comprehensive tax, which I figured could be about 32 percent with the Armey exemptions. That would cover everything and it would eliminate all of these distortions. I calculate that the Armey proposal would itself actually require a rate of about 23 percent to be revenue neutral.

Senator BRADLEY. Well, will you submit the testimony to us, that particular proposal?

Dr. EISNER. Surely. It is subject to revision before printing, but I can send the paper to you. Yes.

Senator BRADLEY. And it is not regressive?

Dr. EISNER. No. That would be quite progressive, actually. The key thing though is, this is going to be the big difference, I suspect, with Professor Jorgenson. We will be taxing capital income the same as we tax labor income. We will be taxing interest, dividends, and all real capital gains over and above inflation.

Senator BRADLEY. If I could ask one last question to Dr. Makinen, and then if each of you could comment.

In his chart, Table I, on the personal saving side, when you first talked about this I thought, aha, maybe there is a connection between the decrease in personal savings and the sluggishness of wages, meaning wages have been very sluggish, personal indebtedness between 1980 and 1987 increased like 80 percent, and maybe people were borrowing because they could not make ends meet.

But then I looked at this data and I see that it did not occur from the 1970's to 1985, but the real drop occurred from 1985 onward.

So, why, in your view—and all three of you take a crack at this—the precipitous drop in personal savings precisely at the time that it was morning in America in 1984? We were coming out of the recession, and yet you see this drop in personal savings which is inexplicable, it seems to me. That is why I hope you can tell us.

Dr. MAKINEN. Well, part of this is an artifact of the way the numbers are recorded. That is, part of the problem, the high personal saving rate of the 1970's was substantially influenced by pension contributions. So, those numbers are sort of artificially high there.

If you were to adjust the personal savings rate to reflect the fact that these pension contributions were artificially high, the decline in the personal savings rate actually starts in the 1970's. It does not start the way the numbers look there, it actually starts earlier.

It is just the way that these numbers get recorded. I mean, there is nothing wrong with them, but the standard procedure is to take pension contributions and attribute all of them to household income. The pensions had to be funded in the 1970's, and it makes the household rates artificially high. So, there is a real distortion there.

Senator MOYNIHAN. That has changed.

Dr. MAKINEN. Pardon?

Senator MOYNIHAN. That has changed.

Senator BRADLEY. The 1980's have changed.

Dr. MAKINEN. Yes, the 1980's.

Senator BRADLEY. And then we brought it back.

Dr. MAKINEN. Yes.

Senator MOYNIHAN. That is good to know when we get to the Balanced Budget amendment.

Senator BRADLEY. Right. Because in the 1980's you did not have to fund your pensions.

Dr. MAKINEN. They were basically funded during the 1970's. Now, if you also want to adjust those savings rates because of the way in which interest income gets recorded, it also shows that the household sector savings rate declined earlier than this.

If you go back to the 1970's you will find that the rates looked different than they do here. I can supply you with those adjusted data if you would like. So, the mystery is somewhat more complicated than these numbers show, Senator Bradley.

Senator BRADLEY. Well, I do not get your answer to my specific question. You say that 1980 to 1984 is overstated.

Dr. MAKINEN. Yes. Relative to this, I would say that the——

Senator BRADLEY. Well, take the 1960's to 1985; why did it drop a percent? The 1960's were, as you know, the glory days of economic growth.

Dr. MAKINEN. Well, basically, the way the numbers are presented there, if you averaged the whole decade of the 1980's it is 4.7 percent. Those two numbers will average to 4.7 percent, which is exactly what it was in the 1950's and the 1960's. The 1970's is the anomaly number that is basically due to pension funding.

I mean, if you average those two numbers, the decade of the 1980's looks exactly the same as the 1950's and the 1960's. If you break the decade apart, you get a higher rate of personal savings in the first half of the decade than you do in the second half.

Senator BRADLEY. And then let us be very clear. Why, in the 1970's, was there so much in pension funds?

Dr. MAKINEN. The requirement that pensions had to be funded. This was ERISA.

Senator BRADLEY. Oh, my God. What a shocking idea.

Dr. MAKINEN. Pensions were funded, which raised the rates there. I mean, there may not be that much of a mystery here, actually.

Senator BRADLEY. Then when we get to the 1980's, of course, we say, let us drop off what we are contributing now and we will deal with that next decade. Right? Right? Something like indexing.

Dr. MAKINEN. That might have been a problem. The numbers for the 1990's are clearly influenced by the business cycle, there is no doubt about that. We had a recession.

Senator BRADLEY. Do either of you gentlemen have a comment? Is that sufficient explanation for you?

Dr. JORGENSON. I agree completely with what Dr. Makinen just said. That is exactly right.

Dr. EISNER. Well, I might just add, I would not make too much of these figures in any event. These are residuals. How do you calculate a saving rate? You start out with income, 100 percent, you are subtracting taxes, you are subtracting consumption. You are subtracting another 97 percent then. If you miss by a percentage point or two, you are going to make a big difference there. One of them is depreciation, which is an uncertain item.

I should also point out, the very definition of consumption and saving is curious. Suppose people started not renting as much from Hertz, but buying their own cars. They are driving the same cars, the same investment in future transportation. And what happens? Your saving rate is going down because if Hertz is buying the car, that is investment and there is saving corresponding to it. If you buy the car, that is consumption.

Before you get carried away with any of these figures, I would look, actually, at investment again. The saving has to equal investment. What is happening to investment in the economy?

Dr. JORGENSON. That is the main point. I think that if you look at this chart, the news is not in the first two columns. The news, as we have agreed here, is in column number three. What happened in morning in America? It is all in column number three. Look at those negative numbers.

And what maintained the levels of investment? As Professor Eisner just pointed out, the last column: net saving from abroad. We started importing a lot of capital. We are the most advanced country. What are we doing importing capital? That is morning in America in that chart. There it is.

Senator BRADLEY. One last question, Dr. Eisner. So, in your view, for we on the Finance Committee, what should we do to jump-start the growth that you think is the key to all this, and which all of us, I think, would agree? We would like to have an economy that is robust, non-inflationary, with four or 5 percent growth. What one thing do we do here?

Dr. EISNER. Well, in terms of the province of the Finance Committee, one thing is to continue to go along the path you began a

decade ago of trying to clean up the Tax Code of all of the misincentives and distortions. That would be one thing.

A lot of the rest of what I prescribe I am not sure is your main province. But, again, I think if you are using the Tax Code you have to use it for things like an earned income tax credit that will encourage work by people, you have to generally facilitate in every way the investment in human capital, the forms of investment that the market economy is not doing adequately.

Senator BRADLEY. What if we decided to convert deductions to credits and made the credits applicable at, say, a 27–28 percent rate, and cut the top rate a couple of points? That is the next step along the road here, making deductions worth less for those who are in the highest income level, giving everybody else their full deduction and lowering the rates.

Dr. EISNER. Well, that is a step in the right direction. In terms of equity, I think having credits rather than deductions is advantageous. Lowering marginal rates is always advantageous, although I would not exaggerate that value, particularly for the upper income group.

I think the real problem on marginal rates is in the lower income group, where a person on welfare faces an effective tax frequently of over 100 percent if he or she goes to work. That is where the huge marginal rates are killing us.

Dr. JORGENSON. That is a step in the right direction. Again, I am an incrementalist. I am not insisting that you go immediately to a consumption tax, Senator. But I do feel that that is not going to do it. I think that is my conclusion.

Senator BRADLEY. Thank you.

The CHAIRMAN. Gentlemen, thank you. It has been a most educational morning.

Senator MOYNIHAN. Indeed. It has indeed.

[Whereupon, at 11:44 a.m., the hearing was concluded.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED

Saving and Economic Growth

Statement of Robert Eisner*

Saving and growth are inextricably intertwined. You can't have one without the other. But that does not tell you the direction of the relation, which is cause and which is effect. Does saving generate growth or does growth generate saving? And to the extent saving does contribute to growth what should and can be done to have more saving and more growth? What measures would work? What measures would have little or no effect. And what measures are likely to be counterproductive?

Saving in the economy as a whole is the accumulation of assets or investment. Indeed, we have the well-known accounting identity: Saving ≡ Investment. If investment adds to our productivity or productive capacity *and if that capacity is utilized* it adds to growth. That tells us that saving that corresponds to unproductive investment does nothing for growth. It also tells us that an economy that does not provide enough purchasing power to buy the products of new investment robs that investment of its potential contribution to growth--and probably causes it to decline in the future. Business will not continue to invest if it can't sell its products.

Understanding of this should make clear the futility of many measures to "promote saving." Individuals may be persuaded--by some "tax incentive," although perhaps not as easily as some may think--to save more. This means that they are persuaded to consume (spend) less

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* William R. Kenan Professor Emeritus of Economics, Northwestern University.

of their income. But unless this reduction of their consumption leads business to decide to invest more, that is, buy more new machines or construct additional plant or accumulate additional inventories, there will be no new investment. That means that there can be no additional saving in the economy as a whole.

What happens is that one individual's decision to consume less--say to forego a haircut--merely results in another individual earning less income--in this case, the barber. As a consequence, the second individual--the barber--finds himself saving less, since his saving equals his income minus his consumption. If the barber chooses to cut his consumption to maintain his saving the chain (referred to in textbooks as a "multiplier chain") merely goes on. If investment somehow increases, income will be maintained--as someone else earns more, producing new machinery, to make up for the barber's loss of income. Or there may even be an increase of income out of which will come the increased saving. But you can't get more saving without more investment.

The old classical argument, resurrected in some quarters today, was "not to worry." If one individual decides to save more he offers to lend his free money, directly or through a bank. This lowers interest rates and hence brings about the increase in investment that corresponds to the increased saving. But if the effects of interest rates on most investment are modest and if lower consumption has a more chilling effect on business and its investment than lower interest rates can offset, the classical argument surely falls. And if we want lower interest rates to stimulate investment, that can best be achieved by the Federal Reserve relaxing its constraints.

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It may be added that the traditional measures intended to encourage more individual saving are of doubtful efficacy. People save to provide for expected future needs, such as sending a child to college and, most important, to provide the resources to maintain their consumption during their retirement years. Considerable saving is also undertaken, intentionally or unintentionally, that provides for one's heirs or, at least among the wealthy, is given away at death to charity. None of these components of saving appears to be much affected by the returns to be expected--which might be influenced by changes in interest rates or in tax provisions which would alter any remaining differences between the after-tax and before-tax return on savings. There is even some suggestion that increasing the return might lower the individual propensity to save. Those saving for retirement, for example, find that because of the increased return over the years on their accumulated savings they need to set aside less each year--save less--to have enough to provide the standard of living to which they aspire in their later years.

This indicates that the way to get more private saving may well be to approach it from the other side of the saving-investment identity: raise investment. As I have indicated, that might be done by lowering real interest rates. Real interest rates are of course the real borrowing cost to business and the real returns to lenders. They are the nominal interest rates minus the expected rate of inflation. We can hence lower real interest rates by increasing the rate of expected inflation with nominal interest rates rising less, or by lowering the nominal rate with expected inflation falling less, remaining the same, or even rising. The second alternative, with less inflation, would seem preferable, although it should be noted that past periods of high inflation have generally been periods of very low or even negative real interest rates and of

relatively high investment. Whatever other complaints there may be about inflation, it has tended to be good for investment, and therefore good for saving. That said, however, I must point out that the direct impact of interest rates on investment, except probably investment in housing, has not been that great. Low real interest rates are likely to have a further desirable effect on investment, though, by contributing to more spending of all kinds and hence providing general prosperity and sufficiency of purchasing power.

Given the limited direct impact on investment of interest rates and monetary policy in general, there have been periodic efforts to stimulate investment by fiscal measures, that is, by tax "incentives." These have included, in particular, accelerated depreciation for tax purposes (and currently, again, "neutral recovery systems" which may not prove so neutral) and investment tax credits. I have found these incentives, in studies over many years, to be of very limited effect. In work for the Treasury with Robert Chirinko a decade ago[1] I reported, on reexamining the major econometric models, that each dollar of lost Treasury revenue tended to result in perhaps 40 cents more of investment. There would have been more bang for the buck if the Treasury had merely paid the entire bill for new investment and given the machines and plants to business outright.

There is a further question to be raised about so-called incentives for investment. Recall that investment contributes to growth if it is productive, that is, it adds to productivity or

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[1] Robert S. Chirinko and Robert Eisner, "The Effects of Tax Parameters in the Investment Equations in Macroeconomic Econometric Models" (from Office of Tax Analysis Paper 47), in Marshall Blume, Jean Crockett, and Paul Taubman, eds., Economic Activity and Finance, Cambridge, Mass.: Ballinger, 1982, pp. 25-84, and "Tax Policy and Investment in Major U.S. Macroeconomic Econometric Models" (from Office of Tax Analysis Paper 46), Journal of Public Economics 20(2), 1983, pp. 139-66.

productive capacity that is utilized. But if opportunities for such productive investment exist, we should expect profit-seeking firms in a market economy to undertake it without special tax favors. If they do not, there must be a presumption that the investment we would promote is not really expected to be sufficiently productive on its own. I am fond of pointing out the folly of an investment tax credit of $10 million that induces a firm to acquire new machinery costing $100 million with an expected pay-off without the tax credit of $95 million. Fostering such investment is the way not to growth but to national decline.

It has been argued frequently that the United States suffers from inadequate rates of saving and investment. This presumed inadequacy is said to be related in considerable part to our Federal budget deficits. While gross saving is identically equal to gross investment, much of private saving, it is pointed out, goes to finance pubic dis-saving, that is, to buy the Treasury bills, bonds and notes that are sold to finance the deficit. If last year's deficit of about $200 billion, for example, had been eliminated, gross private investment would have equaled the (approximately) $1,000 billion of private saving instead of being, as was the case, $200 billion less, or about $800 billion.

Widely as this argument is repeated it is essentially without merit. Of course, if private saving remained the same while the deficit were eliminated, gross private investment would have been increased by the amount of the deficit. But that is precisely the question. Would or could private saving possibly remain the same if the deficit were eliminated? Suppose we could eliminate it by raising taxes. Would this not lower private saving as tax-payers would have to pay Uncle Sam a portion of what they would have saved? And as they cut their spending to pay these increased taxes would that not slow the economy and discourage investment--and hence

lower saving? If tax-payers decided, because of increased taxes and reduced after-tax income, not to buy new cars, is that likely to cause GM, Ford and Chrysler to invest more—or less?

I have done extensive work relating the underlying, real structural deficit to saving and investment.[2] I have found on the basis of data over a 35-year period, that real deficits have actually contributed to gross private domestic investment and to national saving. The reason, on a bit of thought, is clear. During most of this period the economy had slack resources. The real deficits tended to stimulate the economy, to offer more purchasing power to use idle capacity. That promoted both economic growth and investment. And as long as there is idle capacity, as there is now, it is possible to have more consumption *and* more investment.

What may be confusing is the undoubted fact that larger deficits have generally been associated with recessions and hence with lower growth and less investment. But that again is a confusion of cause and effect. The underlying, real structural deficit affects the economy. But the economy also affects the deficit. When the economy slumps the deficit soars, as it did in 1982-83 and 1991-92. Tax receipts, based largely on individual and corporate income, decline and outlays, as for unemployment insurance payments, rise.

This, by the way, underlines one of the follies of the "Balanced Budget Amendment" currently under consideration. If unemployment were to rise by two percentage points (it has fallen 2.2 percentage points since June 1992) it would raise the deficit by at least $110 billion. Suppose the amendment were in effect and by some miracle (or sleight of hand) we were to begin the year with the plan for a balanced budget. Suppose unemployment rose. Outlays, in

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[2] See, in particular, "National Saving and Budget Deficits," *The Review of Economics and Statistics*, February, 1994, pp. 181-186, and *The Misunderstood Economy: What Counts and How to Count It*, Harvard Business School Press, 1994.

violation of the constitution, would immediately begin to exceed the declining receipts. The Treasury, again in violation of the constitution, would have to borrow to finance government operations. What would we do?

Stop paying unemployment benefits? Delay social security checks? Send our armed forces home or lay off the border patrol? Default on interest payments on the existing debt? Or raise taxes? All of these measures are clearly outlandish if not disastrous, including the last of raising taxes. All would create new misery in one direction or another and hurt the economy. They might indeed plunge the economy so much deeper into recession that the deficit would not be eliminated but would actually increase, as Herbert Hoover discovered when he tried to balance the budget in the 1930s. And all of these measures, we can be sure, would prove a new disaster for saving and investment.

The lament that national saving is too small is generally misdirected. For one thing there are significant measuring problems. Gross private domestic investment is in fact a high proportion of gross domestic product, running currently at about 15.5 percent in current dollars and 18 percent in constant dollars, the latter taking account of the major technological advance in capital equipment, particularly computers. In 1990 the current dollar ratio was 14.6 percent and the constant dollar figure was only 15.2 percent. If we exclude highly variable and frequently involuntary inventory investment, we find that constant dollar fixed investment is currently running just about 17 percent of GDP as against 15.1 percent in 1990. Much of the growth over the past four years relates of course to the recent recovery of the economy but that is indeed always the major factor determining investment.

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The argument that national saving is too low usually turns, however, on measures of net investment. Here there are two problems. First, the difference between gross and net is our estimate of "capital consumption" or depreciation. But this is notoriously difficult to come by and essentially relates to accounting conventions and practices. My own inference is that accounting allowances for depreciation have grown more than is warranted by real depreciation. The only non-arbitrary measure we have is for gross investment and even here, when we look for constant dollar measures, we run into uncertainty.

More fundamentally, what can we really expect for net investment or net saving? It is true that growth will stimulate investment and saving. But can we have any net investment without growth? Net investment is, after all, the increase in our capital stock. In a free economy, business acquires additional capital stock essentially to produce more. If there is no growth, there is no increase in production and no need for more capital, hence no net investment. It is conceivable that, for a while, we can switch to a more capital intensive economy, presumably by moving to more long-lived, more expensive capital, without a concomitant increase in current production. But we can hardly expect that to continue indefinitely. If we are to believe the depreciation figures, we have probably been moving the other way in recent years, to shorter lived capital with faster obsolescence, which would mean more gross investment but less net investment.

Essentially, though, more investment demands higher growth. It is frequent pointed out that Japan and other countries have higher net saving ratios than we. But this undoubtedly reflect the fact that they have been growing more rapidly, in considerable part going through a

period of catch-up to the greatest economic power in the world. As they complete their catch-up and their rates of growth slow, their net saving and investment rates will also fall.

For the United States to have markedly higher saving and investment rates will require that the U.S. economy grow more rapidly. The way to achieve that more rapid growth is not by futile and wasteful tax incentives for saving and not by weak and dubious incentives for business investment. Both individual saving decisions and business investment decisions may better be left to free choice. That choice, however, must not be restricted by artificially high interest rates, engineered in an effort to fight an invisible inflation, or by a lack of purchasing power sufficient to the output of our existing resources of labor and capital.

The propelling force to growth is largely to be found in the major, indeed dominant components of investment that are all too often ignored in discussions such as these, and that I have not mentioned thus far. What I have in mind are the vast amounts of investment other than business tangible investment or gross private domestic investment (which will also include non-profit investment and investment in owner-occupied housing). These include all of public investment in infrastructure of roads, bridges, harbors, airports, our land, water and air and the domestic security that makes all other investment possible. They also include business and non-profit and public investment in the research that underlies new technology and economic progress. And most important of all, I have in mind the investment in our human capital in the education of our young and the training of a work force essential to production in a modern, technologically advanced society. I have estimated that all of this investment, outside of the conventional measures, comes to some 75 percent of total investment.[3]

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[3] See *The Misunderstood Economy* and my *The Total Income System of Accounts*, University of Chicago Press, 1989.

I have argued that private saving and private business investment in tangible capital should be left to the free choice of those involved, with a minimum of government intervention. But all of this vast public investment and particularly investment in intangible capital is very considerably a matter of public policy choice. This investment will prove our engine of growth, pulling private tangible investment along with it. A well-qualified labor force will offer the best incentive to business to invest in the capital that makes full use of its talents.

We shall not be able to compete favorably in the world or have much growth or investment if we continue to have perhaps a fifth of a generation growing up functionally illiterate as we cope--or fail to cope--with schools and neighborhoods where it is a challenge for youngsters to survive, let alone learn. Nor shall we have much growth or investment if we continue to have our 13-year olds in good suburban neighborhoods, in comparison with children in other parts of the world--in Asia, Europe and Canada--score last in tests in math and science.

It is to this vast area of investment in human capital, much of it publicly supported, that we must look for renewed sources of growth, growth that will come with greater public and private investment. When we recognize this, and recognize that so much of it depends on government support, we may recognize the folly of current obsessions with reducing the role and functions of government, with little care as to what is reduced. And when we recognize this and recognize that investment, whether public or private, is expected to have its payoff in the future, we may see the folly of trying to prevent government borrowing to finance investment in that future. We would not dream of telling business it cannot borrow to finance its investment. And we would not dream of telling individuals they cannot borrow to invest in new houses or their children's education.

Relating all this to the current topic of political discourse, it is the utmost folly to amend the supreme law of the land to restrict the powers of the Federal government to borrow without discriminating at least, as state and local governments do, between borrowing for current operations and borrowing for capital investment.

February 12, 1995

The Proposed Sales and Wages Tax: Fair, Flat or Foolish?

Robert Eisner*

For American Enterprise Institute Conference

The Hall-Rabushka-Armey proposed "Flat Tax" is not entirely fair. It is not entirely flat. And it is not entirely foolish.

The proposal is touted as bringing almost incredible simplicity to our incredibly complicated federal income tax system. It is also claimed that it will bring significant, major gains to the efficiency and productivity of our economy. And it is argued that by reasonable standards it is fair--fairer than what we have.

That it will bring enormous simplification I will not challenge. And that our current system is an awful mess I would not dream of denying. I am happy to stipulate that we waste many, many billions of person-hours and hundreds of billions of dollars in administering, complying with and seeking to avoid or evade current income taxes. Eliminating the current system would indeed add measurably to unemployment as it destroyed the livelihood of hundreds of thousands of tax preparers and accountants, lawyers, and lobbyists.

I am further willing to stipulate that elimination of our current income tax system would rid the economy of countless distortions that lead to misallocation of resources--as between work

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* William R. Kenan Professor Emeritus of Economics, Northwestern University. I am indebted to Tom Petska and the staff of the Statistics of Income Division of the Internal Revenue Service for making available and offering some guidance to a number of SOI documents bearing on the components of income and their taxation. I am also indebted to Eric Toder and the professional staff of the Office of Tax Analysis of the Treasury Department for advice as to a number of published documents and general information bearing on the issues discussed in this paper. And finally, I am grateful for the research assistance of Jim Gill and Jay Hoffman, who have helped process a variety of statistical tabulations.

and leisure and between saving and consumption, and among forms of saving and consumption and investment goods.

And I am also willing to stipulate that there is a great deal that reasonable people must find palpably unfair about our present system. It fails over and over again with regard to our usual criteria of horizontal and vertical equity. People with the same incomes pay vastly different amounts of taxes. Many people with very high incomes pay little or nothing in taxes. The presumed progressivity of our tax system as a whole is far less than is generally presumed. If we include all income we find that the very rich pay smaller proportions of their income in taxes than the moderately rich.

I join too in deploring some of the high marginal tax rates in our current system, although I see the problem somewhat differently from those who seem only to note and be concerned with the marginal income taxes on the top one or two percent of the income distribution, rates that now reach 39.6 percent and more. I shall come back to this matter but might just point out now that the problem is worse for wage income than other income and is much worse at the very low end of the income distribution. The marginal effective rate of taxation and loss of benefits for work by many of the very poor on welfare, at least without the earned income tax credit, has been over 100 percent.

With all of my stipulations and agreement as to the deficiencies of our present income tax system and many of the advantages of the flat tax, I might be tempted to give up and end the debate right here. If I had to chose one or the other, the proposed flat tax or what we have now, I would be sorely tried.

The Proposal

Alas, in its current form, the proposed flat tax has too many objectionable features to allow me to swallow it. These do relate very considerably to fairness--both horizontal and vertical equity. But they also involve issues of efficiency: as proposed, it substitutes serious new distortions for those it would eliminate. And, without offering substitutes, it eliminates much public intervention which I, and I think many of you, might hesitate cavalierly to discard.

I shall focus my discussion on the Armey tax proposal in H.R. 4585. Where it is not sufficiently spelled out I shall assume that it is intended to embody the provisions of the Hall-Rabushka proposal as published in 1983 and now updated.[1] To quickly review and state for the record, the proposal would replace current individual and corporate income taxes and all of their rates and exclusions and deductions with two new taxes, one on wage income and one on business.

The Armey proposal would set the "flat" rate on both initially at 20 percent (but drop it to 17 percent in 1997 on the basis of other spending reductions and the expected increase in productivity and resultant tax revenue increases). Hall-Rabushka (H-R) would set the rate at 19 percent. The wage tax would apply to all wages, salaries and pensions. The Armey bill would allow deductions on the wage tax totalling $34,700 for a family of four; the Hall-Rabushka "personal allowances" would come to $25,500 for a family of four. There would be no further deductions, none. Not for state and local taxes, IRAs, charitable contributions, mortgage interest, excess health costs, moving expenses. You name it; they would all be gone.

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[1] Hall and Rabushka, 1983, and 1995.

The business tax would apply to gross revenue from sales minus allowable costs, which would include purchases of goods, services, and materials, wages, salaries and retirement benefits, and purchases of capital equipment, structures, and land. Note that capital acquisitions would be "expensed"; there would be no depreciation or separate capital account. Sales of capital equipment, structure and land, however, would be included in gross revenue. Income from investment would not be included but banks and insurance companies would, in Hall-Rabushka, have their sales grossed up to include the value of services furnished in lieu of interest payments. Fringe benefits (other than contributions to pensions) would not be deductible, nor would employer contributions for social security and state and local taxes. Neither interest payments nor dividend payouts would be deductible, but neither would be taxable, at the individual level, where only wages and pensions (and not social security benefits) would be taxed.

The Armey bill unaccountably eliminates withholding taxes, which would appear to invite considerable evasion by wage-earners and consequent revenue loss. Hall-Rabushka do provide for withholding. Hall-Rabushka would explicitly eliminate inheritance taxes. Both would eliminate all capital gains taxes (other than that portion of net business taxes which might result from sale of assets for amounts greater than the deductions entailed by their original purchase). Non-corporate business would be subject to the same business tax as corporations; wages and salaries that owners pay to themselves would be deductible on the business tax but taxable (beyond the standard deductions or personal allowances) on the wage tax. Both Armey and Hall-Rabushka have set rates and deductions that they believe would generate revenues equal to those under the current system. Hall-Rabushka use a figure for wages, salaries and pensions of $3,100 billion, calculate their "family allowances" at $1,705 billion, and thus have a wage tax base of

$1,395 billion. They calculate their business tax base at $1,903 billion. Applying a 19 percent rate, they report a flat tax revenue of $627 billion (actually $626.62 billion) which is approximately the total of personal and corporate income taxes in 1993. The Armey proposal claim of revenue neutrality, however, is not consistent with the Hall-Rabushka calculations.[2]

The first point I should make is that what has been proposed is the substitution of a consumption tax for a large part of the current income tax. That is a major part of its import. We could have a "flat tax" on all income. We could have a consumption tax with progressive rates.[3] H-R-A (Hall-Rabushka-Armey) offer us a "flat" consumption tax, albeit one on domestic consumption only. We may oppose H-R-A not because we reject flat taxes but because we want a flat income tax. We may oppose H-R-A not because we oppose a consumption tax but because we prefer a progressive one on income minus saving, which would not have the effect of raising the general level of prices with the various implications for incidence that this would entail.

The second point to be made is that we can eliminate the myriad exemptions, deductions, credits and other complications in the income tax without going to a consumption tax.. And we

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[2] Hall-Rabushka (1995, p.63) indicate that their proposal of a tax rate of 19 percent and allowances of $25,500 for families of four is equivalent to one with a tax rate of 23 percent and allowances of $34,500. Since they judge their proposal as revenue neutral in comparison with current law they apparently judge the 23 percent-$34,500 parameters as also revenue neutral. But those are almost precisely the parameters of the Armey proposal—that would have allowances of $34,700 but might retain estate and gift taxes. Hall-Rabushka thus imply that the Armey version would require a 23 percent flat tax, not the 20 percent with which they would start, let alone the 17 percent rate that they propose for 1997 and beyond. My own estimates confirm the Hall-Rabushka evaluation, as will be explained below. If their flat tax of 19 percent is in fact revenue neutral, I calculate, on the basis of projections from a sample of early returns for 1993, the year with which Hall-Rabushka were working, that it would take a 22.87 percent flat tax, with the parameters specified in the Armey bill, to bring in the same revenue as the current system.

[3] As suggested by Bradford (1988) and elsewhere in his "X-Tax," a consumption tax very much like H-R-A but with progressive rates on the wage tax.

can eliminate virtually all the complications as well without having a "flat" tax. The proposed tax actually has two rates, of course, zero up to the amount of deductions, $34,700 for a family of four and 20 percent above that amount, in the Armey bill. We could readily add an other rate on upper incomes or wages, say 28 percent as in the law until 1990, on wages over $69,400, and increase the deductions or lower the 20 percent rate. We could accomplish virtually all of our other objectives but have a somewhat more progressive incidence.

Viewed as a Consumption Tax

Hall-Rabushka explain that their flat tax is in reality a consumption tax because income comes from production but taxes are imposed on total income minus investment. Since saving equals investment, their tax is a consumption tax. In fact, this is not entirely right. First, not all of gross private domestic investment is deductible. In particular, investment in owner-occupied housing is not (nor, of course, is the taxation of owner-occupied imputed rental income). Second, private saving is not equal to gross private domestic investment. The correct equality is: private saving equals gross private domestic investment + net foreign investment + the government budget deficit. Gross private saving in 1993 was $1,002 billion while gross private domestic investment was only $882 billion and subtraction of owner-occupied housing would bring the investment figure down at least an other $100 billion. Thus, even in the aggregate, the taxes on the saving out of wage income are not fully cancelled by the full deductibility of investment in the business tax. And it is hardly clear that any individual will recognize that he can save taxes on his wages by saving instead of consuming. He may well recognize that the choice is between paying a consumption tax now and saving and paying a consumption tax later.

It is the business tax that turns out to be a consumption tax. Hall-Rabushka declare at one point (1995, p. 5-22), "Remember, businesses don't pay taxes, only individuals do. And, higher taxes on business are borne in part by the employees in fewer jobs and lower wages." Then (p. 5-25), "Remember, the true incidence or burden of income taxes on corporations is not fully known--some is effectively paid by owners, some by employees, and some by consumers (who are workers in another guise)." The true incidence of taxes on all business, essentially all market production, however, must be clear. Like all other costs it must be reflected in the prices of its products. This need be qualified only to the extent that taxes on market production induce a substitution of non-market production or leisure. It is hard to believe that this qualification can amount to much in our economy.[4] It may well be argued that current business taxes, both corporate and non-corporate are essentially a consumption tax. To the major extent that H-R-A would add to business taxation, while making business investment fully tax-deductible, they will converting a significant part of our income tax to a consumption tax or what is, in effect, a sales tax. Its ultimate incidence on individuals will then depend upon individuals' consumption, or purchases of goods and services subject to the tax.

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[4] There can of course be other assumptions about the consequences of a general consumption tax, as pointed out in JTC (1993) which refers to a general increase in prices as "the traditional method of distributing a consumption tax" (p.54). I find it appropriate in this instance to follow tradition.

The deductibility of wages in the business tax does add some complications, however. If there is a rising supply curve of labor in terms of the real wage, employers may be induced to raise nominal wages to avoid losing their workers. This would add to the upward push on prices but, with wage deductibility prices would rise by less than the rise in pre-tax wage costs. If the supply curve is closer to vertical, as I would argue, if not backward bending, the reduction in labor supply would not occur and wages would not rise in response to the increase in prices. There would be some compensation for wage earners, particularly those with high incomes, in the form of lower personal taxes as compared to current law.

There are some further problems, which I shall ignore, with respect to forms of income such as social security benefits and in-kind medical benefits which are indexed in whole or in part for inflation.

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How Fair Is the Hall-Rabushka-Armey Proposal?

We may begin our analysis of fairness by recalling the Haig-Hicks-Simon concept of income as that which can be consumed while keeping real wealth intact.[5] This implies, it will be noted, that real capital gains, that is, those in excess of general inflation, are part of income. We should also note that the huge wealth accumulated by our richest citizens--the Gettys and Hunts and Trumps and Perots--have been garnered not in ordinary income subject to income taxation, but in essentially untaxed capital gains.

We may next question whether consumption, and certainly the more restrictive measure of consumption taxed by H-R-A, is the sole argument in individual welfare functions. An old joke runs, "I have been poor and I have been rich, and rich is better." And it is better not merely because the rich can enjoy higher lifetime consumption than the poor. Riches convey prestige and power and the ability to add to future income for oneself and ones children. How many have benefitted from their own or their parents' wealth and consequent connections to obtain privilege and profit! And "respect" is also an argument in individual preference functions, and a commodity offered more generously to those themselves generously endowed.

Income and wealth also permit the acquisition of property--houses, mansions and country homes--which produce non-market, untaxed consumption services. And they permit travel and untaxed consumption in foreign countries.

Income and wealth can offer security. Assuming the marginal utility of consumption is declining there is a clear advantage to its smoothing. That is a luxury freely available to the rich and those of high incomes. With obviously imperfect financial markets for human capital, low

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[5] See Bradford (1986), p. 16, and Eisner (1989), pp. 17-19.

wage earners suffer painful losses of welfare when their earnings fluctuate downward, losses that are not fully recouped by subsequent upturns.

Calculation of the Wage Tax by Income Class

We shall focus first on the impact of H-R-A on the distribution of taxes by size of income. Measuring the distribution of the wage tax would be fairly straightforward if we had comprehensive measures of income by size class. IRS publications in the *Statistics of Income* report on components of income included in "total income" and "adjusted gross income" and on various deductions. Total income, however, excludes non-taxable interest income and the non-taxable portions of IRA distributions, pensions and social security benefits, and includes only realized (nominal) capital gains. The adjustments to get to adjusted gross income include subtraction of IRA deductions, moving expenses, one-half of the self-employment tax, self-employed health insurance deductions, Keogh retirement plan and self-employed SEP deductions, and penalties on early withdrawal of savings and alimony paid. IRS *Statistics of Income* tables are drawn upon in our Tables 1, 2, 3 and 4 to present estimates of total income, adjusted gross income and various components of income, individually and combined.

In estimating the distribution of the wage tax by income class, I worked with *Statistics of Income* early tax estimates for 1993, the year used by Hall-Rabushka in their estimates. I first normalized "wages," that is, the income subject to "wage" taxation, actually wages and salaries, pensions and retirement benefits, so that their total matched the Hall-Rabushka total of $3,100 billion. I then calculated the total dollar amount of the Hall-Rabushka personal allowances based on their specifications: $16,500 for married joint filers, $9,500 for single filers, $14,000 for

single heads of households and $4,500 for each dependent. I normalized these to fit the Hall-Rabushka total "family allowances" of $1,705 billion. I then subtracted the sum of these allowances, for each adjusted gross income (AGI) class, from the corresponding sum of wages. For the lower AGI classes, under $10,000 and $10,000 to $20,000, the allowances exceeded the total income subject to taxes. For each AGI class where the sum of wages minus allowances (or W - E, for "exemptions") was negative, I put the figure at zero and renormalized to reach the Hall-Rabushka total of $1,705 billion, shown in Table 5. I then subtracted the normalized vector of allowances from the normalized vector of wages and thus generated a normalized wage tax base vector with a sum equal to the Hall-Rabushka wage tax base of $1,395 billion. This in turn, at the Hall-Rabushka flat rate of 19 percent, gave a wage tax vector with a total wage tax equal to their $265 billion (or, precisely, $265.05 billion), shown in Table 6.

I then took the total income tax (of $428.299 billion) reported in the early returns, shown in Table 2, and normalized this distribution by AGI class to fit a total of $508.62 billion later reported, very close to the $510 billion indicated by Hall-Rabushka. I next normalized "total income," as defined by IRS and reported in the *Statistics of Income* early returns, by multiplying the total income distribution by the ratio of 508.62/428.299, so that the total income series, shown in Table 5, corresponded to the taxes paid. I was then able to compare all taxes, current and under the Hall-Rabushka and Armey proposal, as percents of total income. For Hall-Rabushka then, the incidence of the wage tax is simply, for each AGI class, the wage tax as calculated above, divided by total income.

The total business tax for Hall-Rabushka is 19 percent of their business tax base of $1,903 billion. Accepting their figure indicates a business tax revenue of $361.57 billion (they

put it at $362 billion) and a total actual revenue of $626.62 billion (as against their published figure of $627 billion).

I then calculated the Armey wage tax by substituting the larger Armey exemptions, or "standard deductions" as the Armey proposal calls them. These are, as specified in H.R. 4585, $24,700 for a joint return, $16,200 for a "head of household," $12,350 for an individual, and $5,000 for each dependent. Normalizing these consistently with the methods applied to Hall-Rabushka, I calculated the Armey sums of wages minus exemptions (W - E), again zeroing out those classes where $\Sigma W - \Sigma E < 0$. The Armey exemptions came to $2,263.172 billion, or $558.172 billion more than the Hall-Rabushka exemptions, both shown in Table 5. The Armey wage tax base was thus reduced precisely to $836.828 billion, $558.172 billion less than the Hall-Rabushka wage base.

I was then able to calculate the Armey flat tax rate, r, that would generate, or would have generated in 1993, the same total revenue as Hall-Rabushka and, if their calculations were correct, as current law. This entailed simply solving for r the equation:

TT = r * (BTB + AWTB), where TT = total taxes, BTB = business tax base and AWTB = Armey wage tax base. Substituting the actual numbers, we have:

626.62 = r * (1903 + 836.828), whence r = 0.228707787 or 22.87 percent.

Multiplying this by the Armey tax base vector (by AGI class) generates the Armey wage tax, which comes to a total of $191.389 billion (Table 6). This is considerably less than the Hall-Rabushka wage tax of $265.05 billion we have noted above. The Armey business tax, conversely, will be correspondingly more than the Hall-Rabushka business tax of $361.569 billion, actually coming to $435.23 billion, as seen in Table 7.

The wage tax in itself will generally tax most taxpayers less than they pay currently in individual income taxes, which include large amounts of non-corporate business taxes, as well as taxes on capital income. The distributional implications of substituting a wage tax for an income tax may be anticipated by comparing, by AGI class, the ratios to total income of various of its components. In 1991, salaries and wages plus pensions averaged some 90 percent of AGI for those with income between $20,000 and $75,000, as shown in Table 3, and 31 percent for those with AGIs of $1,000,000 or over. By contrast, capital income--interest, dividends and capital gains--all excluded from taxation by H-R-A, averaged no more than 8 percent of AGI for the classes from $30,000 to $75,000, but was 45 percent of AGI for the $1,000,000 and over group.

Of major importance with relation to size distribution is the failure to include all real, accrued capital gains, which are concentrated overwhelmingly among the very highest income classes. A small indication of the significance of this concentration is found in the published data for realized capital gains. In 1991, "net capital gains" constituted 22.95 percent of adjusted gross incomes of $1,000,000 or more, as shown in Table 1. They constituted less than 1 percent of adjusted gross incomes in the $10,000 to $50,000 classes.

Those in the $30,000 to $40,000 class paid taxes equal to 10.1 percent of AGI according to the Statistics of Income sample of early returns for 1993, as shown in Table 10. Taxpayers in that class with a family of four and the mean wage and pension income of those in that class, $31,955 as shown in Table 4, would pay no wage tax under the Armey plan. My estimate of Armey wage taxes that would be paid by all in the $30,000 to $40,000 AGI class, is 3.94 percent, shown in Table 12. For the $50,000 to $75,000 AGI class, the average wage tax that

would be paid under the Armey flat tax would be 6.45 percent of income. Personal income taxes for this group, based on 1993 early returns, were 12.32 percent of total income (Table 10). In 1991, individual income taxes in this AGI class came to 12.9 percent of AGI. The $1,000,000 and over class, in 1991, paid taxes that came to 26.47 percent (Table 1). At the 22.87 percent flat rate, since their wage, salary and pension income was only 31.34 percent of AGI they would have paid "flat" taxes equal to 7.17 percent of AGI, or slightly less, depending on the number of their exemptions. The H-R-A wage tax is a smaller proportion of income than the current individual income tax at all income levels, as may be seen by comparing figures in Tables 10 and 12. But while progressive with respect to wage income, because of the personal deductions, it is regressive at higher income levels with respect to total income.

Calculation of the Business Tax by Income Class

The distribution of tax by income class depends much more with H-R-A, however, on the incidence of the business tax. To get an initial handle on this, we can make a few simplifying assumptions. The simplest, consistent with the permanent income hypothesis in perhaps its extreme form with no bequests, would be that consumption is the same proportion of income in all income classes. A more realistic assumption, recognizing that neither AGI nor taxable income is permanent income, that consumption includes only domestic consumption, and that higher income groups leave more in their estates, a phenomenon likely to become more prominent because of the elimination (at least in Hall-Rabushka) of inheritance taxes, would be that consumption is a declining proportion of income. If we specify the parameters of this relation we can calculate the consumption of the tax-payers in each AGI class.

Assuming then that all of the business taxes of H-R-A are passed on in higher prices, we can calculate how much is paid by each income class by distributing the total business tax, in proportion to the consumption of each class. I have calculated the distribution of the H-R-A business taxes as a percentage of total income from estimates prepared by the staff of the Joint Tax Committee. The JTC reports using saving rates from the Survey of Consumer Finances to impute consumption by income group. They then calculated the "burden" of a 5 percent consumption tax as a percent of their measure of "extended income" by AGI class.[6] The JTC staff made available to me ratios of adjusted gross income to their extended income by AGI class. I was able to use SOI data on total income and AGI to convert the "burdens" into percents of total income, as shown in Table 9. I multiplied these percents by the total income vector (Table 5) and normalized the resulting vector so that it summed to the Hall-Rabushka business tax (HRBT) total of $1,903 billion. I had only to multiply this vector by the Hall-Rabushka flat tax rate of 19 percent to get the business tax by AGI class and its sum of $361.57 billion, and divide by total income to get the tax as a percent of total income or Hall-Rabushka business tax effective rate, HRBTER.

Since the Armey business tax had the same base but differed only in the tax rate applied, the Armey business tax and effective rates (ABT and ABTER) were calculated simply by multiplying the corresponding Hall-Rabushka numbers by the ratio, 0.2287077875/0.19. The resulting Armey business tax vector is shown in Table 7. Similarly, we can prepare a

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[6] Expanded income = adjusted gross income + tax-exempt interest + workers' compensation + nontaxable Social Security benefits + excluded income of U.S. citizens living abroad + value of Medicare benefits in excess of premiums paid + minimum tax preferences + employer contributions for health plans and life insurance + employer share of payroll taxes + corporate tax payments imputed to individual holders of corporate equity. The published estimates are to be found in JTC (1993), Table 3, p. 55.

distribution of business income taxes under current law; I have assumed that the income taxes not related to business under current law are distributed in the same fashion as total income taxes. We take the total business income tax under current law in 1993 to be the corporate income taxes of $118 billion reported by Hall-Rabushka and the portion of individual income taxes related to business income, which I estimate, on the basis of information from the SOI staff, at $119.1 billion. The total then is $237.1 billion. To calculate the business tax under current law we merely scale down the Hall-Rabushka business tax by the ratio, 237.1/361.57; the resulting current business tax vector is also found in Table 7. The current law, non-business individual income taxes to be distributed are $508.62 billion minus $119.1 billion, or $389.52 billion. The total tax vectors for current law and the two versions of the flat tax are shown in Table 8.

We thus have all the ingredients for a comparison of wage, business and total taxes for Hall-Rabushka and for Armey with the personal income tax and the totals of non-business income tax and business tax under current law.

Distribution of the Wage and Business Taxes Combined

We may note first in Table 10 the effective rates of taxation under current law. Looking at the personal income tax alone, we see that is clearly progressive, rising from 2.22 percent and 4.85 percent for the lowest AGI classes, under $20,000, to 18.24 percent and 27.60 percent for the $100,000 to $200,000 and the $200,000 and over classes. The business tax (as with Hall-Rabushka and Armey) is, however, highly regressive. Even apart from the very high effective

rate of 20.25 percent for the under $10,000 group,[7] effective rates decline from 6.47 percent for the $10,000 to $20,000 AGI class to 3.22 percent for the $200,000 and over class. This decline in the effective rates, as income rises, stems from the negative relation between measured income and the ratios of measured consumption to income, with the drop in that ratio becoming precipitous for the very wealthy.

This regressive business tax contributes to a current total tax that is less progressive than the personal income tax itself. But since the business tax is a relatively small proportion of total income under current law, 5.95 percent as against 9.77 percent for the non-business portion of the personal income tax, the current total tax remains generally progressive. Ignoring the lowest AGI class, we find the effective tax rate as a percentage of total income rising from 10.18 percent for the $10,000 to $20,000 AGI class to 18.65 percent and 24.36 percent for the two highest classes.

When we turn to the Hall-Rabushka flat tax, shown in Table 11, we see a very different picture. First, much of the Hall-Rabushka tax burden has been shifted from the individual income tax to the highly regressive business tax. The overall proportions now are 9.07 percent of income for the business tax and only 6.65 percent of income for the wage tax. Second, despite its large personal allowances or exemptions, the wage tax itself, with its flat rate and exclusion of all taxation of income interest, dividends and capital gains, which are received overwhelmingly by upper income groups, is much less progressive than the current income tax.

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[7] The lowest AGI classes undoubted include large amounts of negative transitory income, indeed even negative total incomes. Similarly, the higher AGI classes have average transitory incomes that are positive, contributing to the high measured income of these classes. Measures related to permanent income would probably show less regressivity. This reservation applies to all measures of progressivity regarding current income, to the flat tax as well as the current income tax.

The Hall-Rabushka wage tax rate rises from zero to those under $20,000 (undoubtedly not quite right because of my method of estimating from aggregates within classes; there were certainly some taxpayers without dependents who were paying taxes) to 4.49 percent for the $20,000 to $30,000 group and ultimately to a high of 9.81 percent for the $75,000 to $100,000 AGI class. It then declines to 9.00 percent for the $100,000 to $200,000 class and 7.63 percent for the $200,000 and over class. It is the steady progression of the tax percentages up to $100,000 that is the basis for the repeated assertions by Hall-Rabushka that their proposed flat tax is progressive.

In so claiming, however, they ignore the very regressive nature of their business tax, which is now a considerably larger component of total taxation. They have in effect moved one step in the direction of more progressivity by sharply raising their personal allowances from the current law exemptions,[8] but three steps away from progressivity, with the substitution in effect of a regressive sales tax for much of the current income tax, the exclusion from the individual tax of the capital income earned chiefly by upper income groups, and the abandonment of a progressive rate structure. The Hall-Rabushka total tax effective rates (HRTOTER), after the very high 30.89 percent for the under $10,000 group, move from 9.87 percent for the $10,000 to $20,000 class and 13.91 percent for the $20,000 to $30,000 class, to 17.54 percent for the $75,000 to $100,000 class. For the highest income classes, though, the Hall-Rabushka turns sharply regressive. The percent of total income taxed falls to 16.15 percent for the $100,000 to $200,000 class and to 12.55 percent for the $200,000 and over class.

[8] $6,350 for joint filers, $5,600 for "heads of households," $3,800 for singles and $3,175 for "married filing separately," and $2,450 for each dependent. By way of ready comparison, a family of four filing jointly would have exemptions of only $11,250 while the corresponding Hall-Rabushka personal allowances would be $26,500.

The pattern for the Armey version of the flat tax, shown in Table 12, can now be anticipated. The Armey tax would shift even more of taxation to business taxes, which reach 10.91 percent of total income, reducing the wage tax proportion to 4.80 percent. With its considerably higher exemptions, the Armey wage tax is thus more progressive, although still turning regressive for incomes over $100,000. But the larger business tax contributes to Armey total tax effective rates (ATOTER) which are more regressive than the Hall-Rabushka version. In the two lowest AGI classes, essentially free of the wage tax because of the high exemptions (and presumed to pay no wage tax in our calculations), the Armey effective rates are much higher than Hall-Rabushka, 37.18 percent against 30.89 percent and 11.88 percent against 9.87 percent. The Armey bill would collect $106 billion from taxpayers in these two classes, $18 billion more than the $88 billion collected by Hall-Rabushka, as seen in Table 8. But it then take less from the AGI classes between $20,000 and $100,000.

Table 13 offers a recapitulation of the figures for total taxes. By construction, all generate the same total of 15.71 percent of total income. Ignoring the under $10,000 income class, we see that the current income tax system is progressive over all classes.[9] Hall-Rabushka taxes would be considerably higher than current taxes for all of the income groups between $20,000 and $100,000, essentially the much mentioned "middle class." They would then be much lower for the highest income groups: 16.15 percent of total income as against 18.65 percent for the $100,000 to $200,000 class and 12.55 percent compared to 24.36 percent for the $200,000 and over class. The Armey flat tax version would also have considerably higher taxes than current law for the middle income classes, although somewhat less than the Hall-Rabushka flat tax. For

[9] That is, over all AGI classes broken down in these tabulations. As we move to very high incomes, over $1,000,000, we may find regressivity developing to the extent larger and larger proportions of income are received in the form of lightly taxed capital gains. The inclusion of non-taxable interest would also decrease the progressivity or increase the regressivity as we move into upper income groups.

the $200,000 and over class, the Armey total tax would be 12.69 percent of total income as against the Hall-Rabushka 12.55 percent, both little more than half of the current total tax figure of 24.36 percent.

I of course cannot claim complete accuracy for most of these figures. The flat tax calculations begin with the Hall-Rabushka base of aggregates. And my aggregation within AGI classes, made necessary by the unavailability to me of individual taxpayer data relating exemptions to total income, introduces some error into the results. Working with data from a sample of early 1993 returns introduces some further error to the extent that early returns, while an overwhelming proportion of the total, are not fully representative. It is hard to believe, however, that corrections of any of these errors would make much difference to the relative figures presented.

Other adjustments might make more difference, chiefly in the direction of showing current taxes and the proposed flat taxes all to be less progressive or more regressive. It would be particularly important to adjust properly for capital gains, which, as we have noted, are concentrated very much among the very highest income groups. To some extent, of course, the high incomes depend upon the inclusion of these gains.

We should be including not nominal but real capital gains in our measures of income. But we should be measuring all capital gains, as they accrue, not merely those that are realized. The extent of non-realization may be gleaned from the Budget estimates of revenue losses from the step-up of basis which eliminates capital gains passed on at death from taxation; death is inevitable but, in this instance, taxes are not. These revenue losses were put at $28.3 billion[10]

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[10] *Budget of the United States Government, Analytical Perspectives, Fiscal Year 1995*, Table 6.6, p. 77.

for 1995, implying that capital gains of perhaps $80 billion (assuming an average tax rate of about 33.7 percent) escaped taxation by being "unrealized."

The inflation adjustment would of course cut the figures on realized and unrealized capital gains sharply, since they reflect nominal gains over sometimes long periods during which prices rose substantially. With current low rates of inflation, the generally much larger totals of all net gains, "realized" or not, would certainly be higher, as I found them to be some years ago.[11] It would be useful to have such estimates prepared on a current basis. Inclusion of all real, accrued capital gains would reveal that both the current system and H-R-A are less progressive than indicated by measures without their inclusion. Since capital gains there are not taxed at all, the adjustment would reduce the measure of progressivity more for H-R-A than it would for the current system.

The H-R-A wage tax is very progressive up to middle incomes, because of the large standard deductions, but then regressive at upper income as its base of salaries, wages and pensions becomes a considerably smaller proportion of total income. But, as we have noted, by substantially increasing the business or consumption tax, however, H-R-A raises taxes on the very poor who pay no wage tax under H-R-A, but also pay no income tax under current law. If the earned-income tax credit is eliminated, the increased burden of H-R-A on the very poor is sharply increased. And H-R-A raise taxes substantially on the middle class, up to incomes of $100,000.

By my preference function and, I think, that of most Americans, both proposed flat taxes fail the test of vertical equity. Hall-Rabushka declare (1995, p. 4-35), "Tax reform will be a

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[11] See Eisner (1980, 1989).

tremendous boon to the economic elite from the start." My estimates clearly confirm this. And I see no reason to believe that this initial boon will not be permanent.

The current income tax does so badly by any measures of horizontal equity, that is, people with the same income paying the same tax, that one might expect that H-R-A could hardly be worse. That, unfortunately, is not the case. The H-R-A wage and pension tax leaves totally untaxed the income from interest, dividends, and capital gains. Its business tax is the same for all those with the same income who consume the same proportion of their income. Big savers pay a smaller proportion of their income on the business tax, however, and small savers pay a larger proportion. Those who consume more abroad are also liable for smaller proportions of their income under the business tax. Horizontal equity will be disturbed the most by the failure to tax capital gains. This will be true not only because of the complete elimination of the very low effective capital gains tax under existing law. It will also be true because the complete absence of a tax, along with the consequent increase in liquidity of assets, will generate a major shift of income from pensions and annuities to capital gains. More individuals will be taking income in interest, dividends and capital gains, which will no longer be taxable at all.

Effects on Efficiency

Let us turn from issues of fairness to those of efficiency for the economy as a whole, now and in the future. First, if often ignored in current discussions of tax policy, a consumption tax reduces the force of automatic stabilizers. It does so because consumption varies less over the business cycle than income; investment and income vary more. Hence, when the economy

slows, taxes fall less with a consumption tax. Conversely, when the economy booms and investment surges, since business investment is fully deductible, tax receipts grow less than with income taxes. It might be a useful exercise to estimate how much average unemployment and average inflation would be increased by the move to consumption taxes.

In the transition, at least, one can expect a major rise in the level of prices. We have observed above that, on the assumption that current business taxes are passed on in higher prices, the switch to the proposed flat tax represents an increase in the consumption tax from 5.95 percent to 9.07 percent for Hall-Rabushka and to 10.91 percent for the Armey version. This would suggest exogenous upward pushes of 2.94 percent or 4.68 percent to prices.[12] This might of course be moderated by tighter monetary policy--at real costs to the economy in lost employment and output. But it is likely also to be amplified as the initial increases work their way through the economy.

Second, the move to expensing all business investment which, on the basis of *Statistics of Income* tabulations, we may estimate will substitute a deduction of $719 billion of investment in 1995 for $553 billion of depreciation charges, offers the greatest advantage to the most durable investment. The present value of straight-line depreciation deductions on a 30-year $100 million dollar plant investment at a modest 8 percent discount rate is roughly $37.5 million. For a 3-year investment in equipment it would be $85.9 million. Offering expensing to both then adds about 167 percent to the value of the tax deduction for the 30-year investment but only 16 percent for the 3-year investment.[13] It may be argued that expensing in fact is a neutral

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[12] (1.0907/1.0595) - 1 = 0.0294479; (1.1091/1.0595)-1 = 0.0468145.

[13] These figures are merely rough illustrations. They assume that tax depreciation is taken only at each anniversary of capital acquisition and that accelerated depreciation, which would reduce the differential if applied

approach; no investment is taxed. But if capital income were to bear its share of the costs of government it may better be argued that this income should be taxed as it accrues, that is as gross income in excess of current depreciation is earned. The immediate gain by avoiding this taxation is greater for longer-lived investment.

The issue of neutrality with regard to investment is controversial and complex. I may fall back on the position of Hall-Rabushka, who assert repeatedly (page 4-8 and 5-22, for example) that their 100 percent initial write-off offers a powerful investment "incentive." The incentive then is greatest for long-lived investment. But why should there be any incentive for business investment? Why should business not be left free, without government intervention, to invest to the extent it considers it profitable? It is usually argued that investment contributes to growth but this can be true, surely, only if it adds to future product more than its cost. If government tax subsidies with a present value of $10 induce a firm to make a $100 investment that would have a payoff of $95 without subsidy, the investment would be contributing not to growth but to economic decline.

The benefit-cost principle of taxation would suggest that taxes be associated with the social costs imposed by economic activity. A major cost of government, by way of illustration, is defense. The more capital we have, the more our economy is worth, the more we have to defend and, we may assume, the more we will spend for defense. To exempt capital income from taxation is then to encourage the acquisition of capital beyond the point where its returns exceed or are equal to its total costs, including the costs it imposes on society and its government.

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to both investments, is not used.

Third, H-R-A tilt the playing field against state and local investment and other expenditures. They do this by imposing a federal tax on state and local taxes. Their business tax offers no deduction for state and local taxes. These can then be expected to be passed on in higher prices to consumers who will thus be paying the state and local tax plus a 19 percent surcharge in the Hall-Rabushka formulation, or a 22.87 percent surcharge in the Armey version if revenue neutrality is imposed. If we can assume that public choice has already given us an optimum amount of state and local services and taxes--which some may of course question--imposing an additional tax, which will cause total taxes to exceed the value of the services they are presumed to finance, can only discourage the provision of such services. If there is a judgment that such services are in general excessive, a judgment that I would not share, it would be in order to correct this up front, and not with an extra federal tax.

Fourth, investment in owner-occupied housing would be discouraged by H-R-A in favor of other kinds of investment. This will occur because other investment will gain an immediate reduction of taxes again equal to 19 percent (or 22.87 percent) of its cost. Owner-occupied housing will receive no such reduction. It is true that the returns to owner-occupied housing in the form of imputed rent are not taxed but the returns in the form of interest, dividends and capital gains accruing as a result of other forms of investment will now also not be taxed. The tilt is thus clearly away from owner-occupied housing.

In addition, the elimination of tax deductibility for mortgage interest will hit housing hard. Hall-Rabushka argue that this will be compensated by lower before-tax interest rates. But this compensation can at best be only partial. Hall-Rabushka also claim that their consumption tax with business investment expensing will stimulate investment. This, as they acknowledge,

would raise interest rates. They can't have it both ways. If their business investment "incentive" raises business investment, owner-occupied housing will surely be the loser.

I am aware that it is fashionable in some circles to argue that business investment adds to productivity and provides for our future while the current tax code, with its mortgage and property tax deductibility and non-taxation of imputable rent, biases investment toward unproductive housing. I would argue that owner-occupied housing is one of the best investments we can make in our future. It is subject to minimum obsolescence and provides the most essential services with no cyclical lows. I would suggest that it has substantial externalities in encouraging non-market activities of home and neighborhood maintenance. Indeed, I would prescribe owner-occupied housing as a substitute for many of the monstrous public rental housing projects which plague our inner cities in Chicago and elsewhere. Current housing preferences are one thing I would not discard without an adequate substitute. H-R-A eliminates the preference and tilts the playing field the other way, to business investment.

Fifth, H-R-A introduce a bias against saving in human capital. Taxation of saving in business tangible capital is presumed to be cancelled by the deductibility of business investment which the saving may finance. But what about saving to finance vocational training or post-secondary education? Private household expenditures for education and training are counted as consumption.[14] If the education is provided by profit-making institutions or by state colleges or universities financed by taxes paid by business they are subject to further taxes

[14] It is not even clear that H-R-A would deduct business expenses on training for management and workers in calculating the business tax. Would an executive education program at Northwestern, or elsewhere, be counted as deductible business expenses, compensation of employees, or a form of fringe benefit?

at the business level. The returns to such investment in education in the form of better jobs at higher salaries and wages are, however, fully taxed under H-R-A, as they are now.

I have elsewhere pointed out that business tangible investment is no more than perhaps 20 percent of total investment[15], public and private, tangible and intangible. By its special incentive to business tangible investment, H-R-A are tilting our investment decisions away from all of this other investment. I would argue that business investment guided by the profit motive is likely without "incentives" to reach an optimum amount, as long as fiscal and monetary policy provide a full-employment environment without interest rates unduly raised by restrictive monetary policy. I see our shortages of investment in most of the other areas: in human capital in general and particularly in education, in basic non-military research, in domestic security, and in public infrastructure. We can use more police on the beat to permit investment in a rising generation beset by crime, violence and drugs. Incentives to business investment while adding a surcharge to the state and local taxes necessary to finance those police is moving in the wrong direction.

Marginal Tax Rates and Supply

Sixth, the reduction of marginal tax rates is generally seen as improving allocation, as between work and leisure and consumption and saving. I might observe initially that not all of the innovations of H-R-A are in the direction of reducing marginal rates. It must be remembered that Federal income taxes are only part, and a minor part at that, of total taxes imposed on the economy. In 1993 Federal personal income taxes were 9.9 percent of national income. Federal

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[15] Eisner (1988, 1989).

personal and corporate income taxes combined amounted to 12.3 of national income. Total Federal tax receipts were 24.7 percent of national income and total taxes at all levels of government came to 42.0 percent of national income. The Federal taxation of state and local income taxes in the H-R-A business tax and their removal as a deduction in the wage tax adds to the effective marginal rate faced by tax-payers. Similarly, the ("double") taxation of employer contributions for social security adds to the marginal tax rate on employment, presumably a further incentive to the substitution of capital for labor. We are left with that 19 percent (or 22.87 percent) Federal wage tax plus a 6.2 percent employee payroll tax for social security plus a 1.45 percent tax for Medicare plus business taxes of 6.2 percent on payrolls plus business taxes on payrolls for unemployment insurance plus a 19 percent or 22.87 percent business tax on the payroll taxes that are not deductible. Taking all of this into account indicates that the total marginal tax rate on wages and salaries in H-R-A will be more like 34 percent and 38 percent than the 19 or 20 or 22.87 percent we may be led to believe.[16]

I should like, however, to question the widespread tendency, found in Hall-Rabushka as elsewhere, to assume that increases in marginal return will generally increase supply. This, it would seem, entails a conclusion from substitution effects while excluding consideration of likely income effects. Take saving, for example. Are we so sure that raising the return to saving, by eliminating taxation or raising interest rates will raise the rate of saving? I recall Michael Boskin and then Larry Summers arguing that this was so and Summers, at least, changing his mind. The counter-argument is that most household saving is for retirement, aimed at providing

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[16] The marginal tax on labor may indeed be taken in Hall-Rabushka to be 19 + 6.2 + 1.45 +(1.19 * 6.2) = 34.028 percent. Applying the Armey rate apparently necessary for revenue neutrality we 22.87 + 6.2 + 1.45 + (1.2287 * 6.2) = 38.138 percent. (These figures do not include the FUTA tax for unemployment insurance, which is 6.2 percent minus a 5.4 percent credit for state taxes, but has a low Federal cap, at $7,000.)

retirement income sufficient to maintain the standard of living of ones working years. Higher returns on accumulated savings will permit greater consumption and hence generate lesser pre-retirement saving while still meeting retirement income objectives. Indeed this argument, as I recall from my graduate student days, goes back to an article by John Cassel in the first American Economic Association volume of *Readings in Income Distribution.*

Similarly, I recall from my graduate student days articles suggesting the possibility of a "backward-bending supply curve" and a classic article by Lionel Robbins on the elasticity of the demand for leisure in terms of wages. This suggested that higher incomes might induce less labor, not more. Clearly leisure is a superior good and the income effect on the demand for labor has been such that, historically, with the rise in real wages have come greatly reduced hours, shorter work-weeks, longer vacations, and earlier retirement, all of course adding up to a reduction in labor supply. I would hence not share the frequently expressed confidence of Hall-Rabushka that their flat tax will generally greatly increase the supply of labor. There may be a reduced supply of labor from upper income groups with higher after-tax earnings.[17]

Seventh, the elimination of all Federal taxation of foreign earnings of United States residents promises greater distortions. What will happen to the wages of American residents of Detroit who cross over to work in a Windsor, Ontario auto plant? Will their income escape U.S. taxes? This may significantly increase the supply of labor--to Canada. I am not one to limit the free movement of labor or capital across international borders but the elimination of taxes on earnings of Americans from foreign investments would appear to offer undue encouragement to

[17] The large increases in labor, resulting in a 6 per cent increase in output, which they predicted on the basis of their interpretation of work by Jerry Hausman, was early challenged by Joe Pechman (1985) in his review of the first edition of H-A.

the movement of capital abroad. Implementation of any such net movement of capital would depend of course on creating a surplus, or reducing the deficit, on current account. This would presumably follow from the fall in the value of the dollar resulting from the increased supply of dollars abroad. But that in turn would entail a deterioration in our terms of trade with the rest of the world.

Removal of All Tax Expenditures

Aside from increased distortions that may be introduced by H-R-A, we may wish to question their removal of a number of governmental interventions which, admittedly, have kept the economy away from what might be perfectly competitive outcomes. I have already referred to their removal of tax preferences for owner-occupied housing--and their tilting away from such investment. In this connection, I might add special allowances for low-rent housing and tax subsidies for its construction. I share their antipathy for using the tax code for "social engineering." I have always opposed tax expenditures in principle as an inefficient and deceptive form of government intervention. But it would be cavalier, cruel and counter-productive to remove many of these without providing substitutes. Hall-Rabushka indicate awareness of this but offer little or nothing in the way of explicit new measures to package with their "flat tax." The Armey bill offers nothing at all and one is led to believe that all deductions, exemptions, credits and other preferences would be removed, with those people affected left somehow to fend for themselves.

One conspicuous and important example is the earned income tax credit, estimated to come to $20.9 billion in 1995. Supplementing wages of low income workers at a marginal rate

as high as 36 percent, it is recognized as an important tool, not only in reducing poverty but in increasing the supply of labor and in moving people from "welfare" to work. The whole current, largely means-tested welfare system, including AFDC, food stamps, Medicaid, and low income housing, is such that the marginal effective tax from work at the low-paying jobs that might be available to those on welfare, taking into account loss of benefits as a result of earning income, is frequently over 100 percent. The earned income tax credit offers some remedy. Do H-R-A mean to eliminate it, since it would clearly violate their flat tax prescription? Would they then replace it with direct payments (government spending!) outside of the tax system? Or would they eliminate the means-testing in the welfare system--or eliminate the whole system--to reduce effective marginal tax rates on the poor?

Fringe Benefits

Take next "fringe benefits." Hall-Rabushka place them at 18 percent of compensation of employees[18] and I will not question their estimate. The bulk of them, I presume, are for health insurance. The current revenue loss to the Treasury of "Exclusion of employer contributions for medical insurance premiums and medical care" is put at $56.3 billion.[19] I appreciate that fringe benefits have grown hugely over the years because of the great tax preference accorded them. The costs are deductible on corporate or other business tax returns but, unlike wages and salaries, the benefits are not taxable to the employees. If the insurance costs were taxed, many employers and their employees would prefer to have the insurance costs paid instead in wages

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[18] As indicated by H-R (1995), pp. 3-26, 3-27.

[19] *Budget* (1995), p. 77.

with the recipients free to decide, uninfluenced by tax considerations, how much they want to spend on health care and how they want to spend it.

But this would involve a significant drop in the total remuneration of employees. If 18 percent of the compensation of employees comes in the form of fringe benefits, replacing them with wages and salary compensation taxed at 19 percent or 22.87 percent will result in a cut of some 4 percent in employee after-tax compensation. (If the increased tax is passed on to consumers in higher prices, instead of avoided by substituting increases in wages and salaries for the fringe benefits, the costs will largely be paid for by workers in their capacity as the major consumers of the economy.)

Further, much health care might become considerably more expensive or even unavailable if no longer provided in group insurance programs at work. We already have what most Americans see as a critical problem of tens of millions without health insurance. Denying tax deductibility to all fringe benefits would almost certainly increase this number. Are the proponents of removing that deductibility ready to support and, if they are in Congress, put in place a system that will guarantee universal health insurance, or at least prevent the lost deductibility from moving us further from that goal?

Transition Dislocations

Eighth, there are enormous problems of dislocations and huge capital gains and losses intrinsic to the transition. Hall-Rabushka have paid some attention to issues of the transition, considering particularly the unused accumulated depreciation allowances and the costs of existing mortgages which lose their interest tax-deductibility, which might lead some to fill that they

have been treated unfairly by a mid-stream change in the rules. But the problem is much greater. Hall-Rabushka point, for example, to the vastly different consequences for a relatively low-investment firm like General Motors and a rapidly growing, high-investment firm like Intel. GM's tax in 1993, if the flat tax had been in effect, would have risen from $110 million to $2.7 billion. Intel's tax would have fallen from $1.2 billion to $277 million.[20] On the assumption that competitive market conditions prevent these *relative* income changes from being passed on in price movements and assuming further that these would be permanent changes, we have at 8 percent discount rates a capital loss of $32.5 billion for GM owners and a capital gain of about $11.5 billion for those of Intel. It is conceivable that changes of this magnitude for some companies on the losing end would leave them in a position where they could not service their existing debt and could not raise new capital. They might be driven to bankruptcy, with considerable loss to their investors, to their employees and to the economy in general. At the least, the large rents and losses resulting from the change in government tax rules may be demoralizing to investors and to the public.

The surge in prices resulting from the introduction of the flat tax would imply real losses for those with assets fixed in nominal terms, particularly those holding money and bonds and those with pensions that are not indexed to the cost of living. In the aggregate, it may be argued that this is only a distributional question for private creditors and debtors, although the distributional effects would be significant--gains for debtors and losses for creditors, the latter including many pensioners. But there would be substantial effects on the real value of the Federal debt held by public. Currently at about $3.5 trillion, its real value to its holders would

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[20] H-R (1995), pp. 30-32.

drop by $100 billion or more.[21] To those greatly (and improperly) worried about the Federal debt this real drop may seem fine. But to those directly or indirectly relying on their assets in the form of savings bonds and Treasury bills, notes and bonds, it may be disquieting.

Of perhaps most consequence would be the changes in personal fortunes of losers at the lower end of the income distribution. In the cases of some of the very poor with indexed government income support or assistance in kind, there would be some protection against the price inflation. But this protection would be incomplete. For millions of low-wage earners without government support the pain would be very great. These would be Americans whose incomes are already so low that they pay little in individual income taxes. They would hence gain little from the generous personal allowances or deductions totalling $34,700 for a family of four. The political discontent, to the extent affected people vote, might prove much greater than that which brought the dramatic electoral changes of 1994.

A Better "Flat Tax"

I may conclude by suggesting my ideal of sweeping tax reform that would meet all or almost all of the faults in the current income tax system that the flat tax promises to eliminate, without most of its drawbacks. The Eisner program will certainly seem beyond the realm of political reality at this time. But then, despite the powerful support generated by Congressman Armey's name, I doubt that many, including Mr. Armey, would view his flat tax proposal as

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[21] The Hall-Rabushka business tax might be expected, as pointed out above, to raise prices by (1.0907/1.0595) - 1, or 2.945 percent, the loss in purchasing power of the dollar is 1 - 1/1.02945 = 2.86 percent. Multiplying this by $3.5 trillion number for the debt gives a figure of $100 billion. Similar calculations for the Armey business tax, with its 10.91 percent effective rate, indicate an exogenous upward push to prices of 4.681 percent and a loss in the purchasing power of the dollar of 4.47 percent, amounting to a $156.5 billion reduction in the real value of the existing Federal debt.

within the realm of current political reality. And I might add that some of my proposals could stand alone; all do not have to stand or fall together.

I would begin by eliminating the corporate income tax, lock stock and barrel. As we have quoted Hall-Rabushka, "Businesses do not pay taxes, individuals do". Let us then tax individuals directly so that we can get a reasonable idea of who is paying the taxes and how much. We would include all of the earnings related to business activity--real interest, dividends and real, accrued capital gains of owners--in individual income. Among the many advantages of eliminating the corporate income tax would be elimination of the double taxation of dividends which biases the financial structure of corporations in the direction of internal financing and raising outside capital by debt rather than equity. Taxing real rather than nominal interest is an obviously desirable move that limits the tax to what is actually income and permits lenders to receive positive after-tax returns in periods of substantial inflation. Taxing real capital gains as they accrue, with full loss offset, would end the lock-in effect on holders of equity and hence improve the efficiency of capital markets. It would also make moot the step-up of basis at death. And of course it would eliminate the absurd and pernicious taxation of nominal capital gains that reflect only general inflation.[22]

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[22] Taxation of real, accrued capital gains can be easily accomplished for owners of listed securities. We could merely have corporations report to their stock-holders (and to the IRS) the averages of the highs and lows for stock prices on the last trading day of each year. The IRS for its part would make known the inflation percentage to apply to the initial prices of securities held for the entire year. More detail, in terms of adjustments by month for securities acquired during the year, could readily be added. Computing accrued capital gains for assets for which transaction prices were not established could be accomplished by relying on tax-payer declaration of values at the end of each year. To the extent he mis-estimates them, he would compensate--with appropriate interest or other penalties--at realization or death. This would apply as well to owners of unincorporated business, who would be taxed only on what they take out of their business and their real, accrued capital gains. There would be no business tax returns of any kind, no elaborate depreciation calculations--nothing! Individuals would be permitted to deduct their out-of-pocket expenses incurred in connection with earning their income.

I would also eliminate payroll taxes for social security. Putting their proceeds "in" trust funds is an accounting fiction. Our separate set of payroll taxes discriminates against labor income, which is also taxed in the individual income tax. And it does so, unlike the H-R-A "flat" wage tax, with no deductions and hence no progressivity. I would remove all taxes on social security benefits. Recipients will generally have paid taxes on their income, which we may still credit to their personal social security accounts. If social security income were to be taxed I would gross it up so that the elderly suffer no general net loss as a consequence of the switch to a comprehensive tax.

I would also eliminate all other taxes, except estate and gift taxes, which cannot be justified as user taxes or taxes to attempt to equate individual and social cost. I would hence maintain--and increase--gasoline and cigarette taxes and, with a bit of hesitancy, maintain taxes on alcoholic beverages. (I refuse to believe that, taken in moderation, the latter are bad for anybody.) I would, unlike Hall-Rabushka, retain estate and gift taxes as an instrument of our dedication to a free and fluid society, in which people are led to succeed by their own efforts and we try to moderate the influence of inherited wealth.[23]

I would then fold all other Federal taxes into our new, comprehensive income tax. As with H-R-A, other than the standard personal deduction or allowance, all of the myriad deductions, loopholes and "tax expenditures" would be eliminated. In a number of cases, however, these would be replaced by up-front government spending. Among my recommended Treasury subsidies would be those for replacement (and expansion) of the earned income tax

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[23] Armey's H.R. 4585 makes no mention of estate and gift taxes, which would imply that they would be retained. This is put in some doubt, however, by his avowal that his bill is essentially an implementation of the flat tax proposal of Hall and Rabushka, who call explicitly for their abandonment (H-R, 1995, p. 5-28, for example).

credit, state and local taxes and taxable bonds (as a substitute for tax-exempt bonds), health care, owner-occupied housing, education and training and basic research, which might come to no more than $200 billion, as compared to revenue losses from tax expenditures in the current tax code that amount to well over $500 billion.[24] I see important externalities in the activities that I would subsidize, particularly, in the light of other aspects of the interface between government and the private sector.

But to realize these positive externalities, I would not reduce the measure of comprehensive income subject to taxation. I would even hope to add imputations for rental income produced in owner-occupied housing, and some of the other corrections in the Bureau of Economic Analysis National Income and Product Accounts, such as the value of food and fuel consumed on farms, board, meals and services furnished by employers to employees without charge or below cost, and services provided consumers by financial institutions in lieu of interest payments. The comprehensive base, with the inclusion of all real capital gains and interest on government securities, would indeed exceed national income.[25]

With the taxation of all capital income, including interest on state and local bonds, dividends and real, accrued capital gains, as well as generous personal allowances as in H-R-A and the maintenance of an expanded earned income credit, there might be sufficient progressivity

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[24] See Budget (1994), Table 6.1, pp. 54-56, which lists total revenue losses for tax expenditures in the income tax, but does not total them, presumably because of interaction of the revenue effects of the various tax expenditures.

[25] An indication of just how much a truly comprehensive income tax base would exceed the base in current law may be gleaned from Nelson (1987). She derives a measure of "family economic income" which exceeds 1983 AGI (based on the pre-1986 tax law) by almost 50 percent and somewhat exceeds personal income for that year as well. H-R (1995) arrive at a total of $5,003 billion for the 1993 bases of their business tax and wage tax before allowances. This total, without capital income, comes close to the 1993 figures of $5,131 billion for national income and $5,375 billion for personal income.

even to permit the application of the cherished "flat tax," albeit as in H-R-A, really at two rates, zero and some positive number. I would estimate, given my larger base, particularly with the inclusion of all capital income, that despite the elimination of payroll and other taxes, we could maintain revenue neutrality with the Armey personal deductions, which total $34,700 for a family of four, and a "flat" rate of 31.63 percent. This flat rate tax, it will be recalled will replace current individual and corporate income taxes and payroll taxes. It is to be compared with a rate of 22.87 percent plus 13.85 percent in payroll taxes for social security and Medicare, or 36.72 percent, that the Armey bill would impose in direct taxes on labor income.[26] If we include only the smaller personal deductions of Hall-Rabushka, coming to $25,500 for a family of four, we would need a flat tax of only 27.10 percent, compared with the total of 32.85 percent in direct taxes that their proposal would place on labor income. The financing of the $200 billion of subsidies I have proposed would increase the flat tax rates to 37.63 percent with the Armey exemptions and 32.23 percent with the Hall-Rabushka exemptions. In either case we would have a more progressive tax structure than what we have now.[27]

If it were desirable, however, to introduce more progressivity, I could readily accept and be induced to endorse a third tax rate, say 46 percent with the Armey exemptions, for really high incomes, say over $350,000. This would suggest the advisability of adding an averaging

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[26] As observed above, we should add to this the 22.87 percent business tax on the 6.2 percent employer contributions for social security, or 1.42 percent, which would bring the total to 38.14 percent.

[27] I estimate these figures, roughly, by assuming that I could build the comprehensive base to about $5,600 billion (calculating in terms of 1993 figures). The exemptions under the Armey plan come, by my estimates reported above, to $2,263.173 billion, and with Hall-Rabushka to $1,705 billion. Total income and payroll taxes to be replaced amount to $1,055.5 billion. I would add $200 billion of direct expenditures. We thus have $1,255.5 billion to be raised on a base of $3,336.827 billion with the Armey exemptions, which implies a 37.626 percent flat rate.. With the H-R exemptions the taxable base is raised to $3,895 billion. The necessary tax rate is thus reduced to 32.23 percent. Without the additional direct expenditures, the taxes to be raised are reduced to $1,055.5 and the flat tax rates to 31.632 percent and 27.099 percent.

feature for taxable income to avoid penalizing those whose incomes fluctuate from year to year across marginal rates. This would certainly be a trivial complication as compared to H-R-A.[28] Except for that and trivially additional reporting necessary for fair and effective taxation of real capital gains, my comprehensive, more or less flat tax, then offers all of the simplification advantages of H-R-A. It quite eliminates the monstrous system we have.

But it does it in a way that is fair, almost flat, and not at all foolish.

[28] The "flat tax" on wages would actually have, as we have pointed out, two rates: the rate of 19 percent (or 20 percent or 22.87 percent) and zero. There is hence a need to avoid penalties for those are at the zero rate one year, not using up their personal deductions, but then paying taxes at the positive flat rate the next. Neither Hall-Rabushka nor Armey provide for negative taxes or refunds so that taxpayers with incomes which fluctuate above and below the zero rate point are penalized.

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Table 1. Adjusted Gross Income, Selected Components of Income and Individual Income Taxes, in Billions of Dollars and as Percents of Adjusted Gross Income, By AGI Class, 1991

A. Billions of Dollars

AGI Class (In Thousands of Dollars)	Adjusted Gross Income	Salaries and Wages	Taxable Interest	Nontaxable Interest
Under 10	102.6	123.0	20.0	2.0
10 Under 20	373.2	280.6	29.2	1.5
20 Under 30	433.3	350.0	22.5	2.5
30 Under 40	429.1	354.1	21.0	2.6
40 Under 50	393.5	327.2	16.8	2.8
50 Under 75	685.6	573.6	27.3	5.9
75 Under 100	305.0	243.5	14.6	3.8
100 Under 200	339.1	233.6	20.6	7.3
200 Under 500	196.3	111.6	15.2	6.8
500 Under 1000	79.6	39.0	7.4	3.2
1000 And Over	127.1	38.0	14.7	4.7
All Incomes	3,464.5	2,674.3	209.4	43.1

AGI Class (In Thousands of Dollars)	Dividends	Net Capital Gains	Pensions and Annuities	Total Income Tax
Under 10	4.2	7.9	14.5	0.6
10 Under 20	5.8	2.9	38.4	20.4
20 Under 30	5.8	3.9	36.4	38.5
30 Under 40	5.8	3.6	30.6	46.0
40 Under 50	4.9	3.8	26.3	43.0
50 Under 75	11.0	9.7	42.2	88.6
75 Under 100	6.2	6.9	17.3	47.3
100 Under 200	11.3	15.9	19.4	62.8
200 Under 500	8.7	16.7	9.5	46.8
500 Under 1000	4.4	9.9	2.9	20.9
1000 And Over	9.2	29.2	1.8	33.7
All Incomes	77.3	110.2	239.2	448.4

B. Percentages of Adjusted Gross Income

AGI Class (In Thousands of Dollars)	Salaries and Wages	Taxable Interest	Dividends	Nontaxable Interest
Under 10	119.80	19.52	2.23	1.91
10 Under 20	75.19	7.83	1.55	0.40
20 Under 30	80.77	5.20	1.33	0.58
30 Under 40	82.53	4.89	1.36	0.61
40 Under 50	83.14	4.28	1.25	0.70
50 Under 75	83.66	3.98	1.60	0.86
75 Under 100	79.84	4.79	2.03	1.24
100 Under 200	68.89	6.08	3.34	2.16
200 Under 500	56.85	7.74	4.45	3.47
500 Under 1000	49.03	9.32	5.50	4.05
1000 And Over	29.93	11.58	7.24	3.70
All Incomes	77.19	6.04	2.23	1.24

AGI Class (In Thousands of Dollars)	Net Capital Gains	Pensions and Annuities	Total Income Tax
Under 10	4.12	114.24	1,040.39
10 Under 20	0.77	10.29	5.48
20 Under 30	0.89	8.41	8.88
30 Under 40	0.85	7.13	10.71
40 Under 50	0.96	6.68	10.92
50 Under 75	1.41	6.16	12.92
75 Under 100	2.25	5.67	15.50
100 Under 200	4.68	5.73	18.53
200 Under 500	8.50	4.82	23.83
500 Under 1000	12.45	3.67	26.27
1000 And Over	22.95	1.41	26.47
All Incomes	3.18	6.91	12.94

Table 2. Total Income, Adjusted Gross Income, Selected Components of Income and Individual Income Taxes, in Billions of Dollars and as Percents of Total Income, By AGI Class, Based on Sample of Early Returns, 1993

A. Billions of Dollars

AGI Class (In Thousands of Dollars)	Total Income (or Loss)	Adjusted Gross Income	Salaries and Wages	Taxable Interest
Under 10	130.6	128.7	113.4	11.0
10 Under 20	342.5	339.9	257.6	17.6
20 Under 30	400.3	397.0	324.7	10.7
30 Under 40	396.6	393.7	337.4	8.5
40 Under 50	368.9	367.0	308.0	10.3
50 Under 75	671.0	666.7	565.4	14.5
75 Under 100	332.0	330.5	281.5	7.3
100 Under 200	362.2	357.4	256.4	12.5
200 And Over	354.2	346.9	190.9	28.5
All Incomes	3,358.3	3,327.8	2,635.3	120.8

AGI Class (In Thousands of Dollars)	Dividends	Net Capital Gains	Pensions and Annuities	Total Income Tax
Under 10	3.5	2.3	13.3	2.9
10 Under 20	5.6	2.6	36.6	16.6
20 Under 30	5.3	3.9	35.9	33.0
30 Under 40	4.8	3.4	24.8	40.0
40 Under 50	5.7	4.8	29.6	39.6
50 Under 75	9.7	12.3	44.1	82.7
75 Under 100	5.8	6.7	15.3	49.8
100 Under 200	10.7	14.7	19.2	66.0
200 And Over	25.7	34.0	10.0	97.7
All Incomes	76.7	84.8	228.9	428.3

B. Percentages of Total Income

AGI Class (In Thousands of Dollars)	Salaries and Wages	Taxable Interest	Dividends
Under 10	86.81	8.38	2.69
10 Under 20	75.20	5.13	1.63
20 Under 30	81.12	2.68	1.33
30 Under 40	85.06	2.13	1.20
40 Under 50	83.50	2.79	1.54
50 Under 75	84.26	2.17	1.44
75 Under 100	84.79	2.20	1.75
100 Under 200	70.80	3.44	2.95
200 And Over	53.89	8.05	7.25
All Incomes	78.47	3.60	2.28

AGI Class (In Thousands of Dollars)	Net Capital Gains	Pensions and Annuities	Total Income Tax
Under 10	(1.79)	10.18	2.22
10 Under 20	0.77	10.69	4.85
20 Under 30	0.98	8.98	8.23
30 Under 40	0.87	6.25	10.09
40 Under 50	1.29	8.03	10.73
50 Under 75	1.84	6.57	12.32
75 Under 100	2.01	4.61	15.00
100 Under 200	4.07	5.31	18.24
200 And Over	9.60	2.82	27.60
All Incomes	2.53	6.82	12.75

Table 3. Wages, Salaries and Pensions, All Other Income and Capital Income, by AGI Class, as Percents of Adjusted Gross Income, 1991, and as Percents of Total Income, Based on Sample of Early Returns, 1993

A. 1991

AGI Class (In Thousands of Dollars)	Adjusted Gross Income (In Billions of (Dollars)	Wages, Salaries, Pensions, and Annuities	All Other Income	Capital Income
Under 10	102.6	133.9	(33.88)	33.17
10 Under 20	373.2	85.5	14.52	10.55
20 Under 30	433.3	89.2	10.82	8.00
30 Under 40	429.1	89.7	10.34	7.71
40 Under 50	393.5	89.8	10.18	7.19
50 Under 75	685.6	89.8	10.19	7.85
75 Under 100	305.0	85.5	14.50	10.30
100 Under 200	339.1	74.6	25.38	16.26
200 Under 500	196.3	61.7	38.33	24.17
500 Under 1000	79.6	52.7	47.30	31.33
1000 And Over	127.1	31.3	68.66	45.48
All Incomes	3,464.5	84.10	15.90	12.70

B. 1993

AGI Class (In Thousands of Dollars)	Total Income or Loss (In Billions of Dollars)	Wages, Salaries, Pensions, and Annuities	All Other Income	Capital Income
Under 10	130.6	96.99	3.01	12.87
10 Under 20	342.5	85.89	14.11	7.53
20 Under 30	400.3	90.10	9.90	5.00
30 Under 40	396.6	91.31	8.69	4.20
40 Under 50	368.9	91.53	8.47	5.62
50 Under 75	671.0	90.83	9.17	5.44
75 Under 100	332.0	89.40	10.60	5.96
100 Under 200	362.2	76.11	23.89	10.46
200 And Over	354.2	56.71	43.29	24.90
All Incomes	3,358.3	85.29	14.71	8.41

Table 4. Mean Total Income and Mean Income in Wages, Salaries and Pensions by AGI Class, Based on 1993 Sample Early Returns

AGI Class (In Thousands of Dollars)	Mean Total Income (In Dollars)	Mean Wages, Salaries, and Pensions (In Dollars)
Under 5	2,520	2,278
5 Under 10	7,564	6,215
10 Under 15	12,547	10,555
15 Under 20	17,501	15,298
20 Under 25	22,600	20,054
25 Under 30	27,562	25,199
30 Under 40	34,995	31,955
40 Under 50	44,838	41,040
50 Under 75	60,883	55,302
75 Under 100	85,650	76,570
100 Under 200	132,616	100,937
200 And Over	431,944	244,967
All Incomes	31,454	26,826

Table 5. Total Income and Wages, Salaries and Pensions, Hall-Rabushka and Armey Applicable Exemptions and Wage Bases, by AGI Class, Based on 1993 Sample Early Returns, Billions of Dollars

AGI Class (In Thousands of Dollars)	Total Income Adjusted to Match Income Tax of $508.62 Bill.	Wages, Salaries and Pensions Adjusted to Match Total of $3,100 Bill.	Applicable Exemptions Distributed Among AGI Classes Where Exemptions Do Not Exceed Wages		Wage Bases	
			H-R	Armey	H-R	Armey
Under 10	155.1	137.1	137.1	137.1	0	0
10 Under 20	406.8	318.4	318.4	318.4	0	0
20 Under 30	475.3	390.3	277.9	357.5	112.4	32.9
30 Under 40	471.0	392.0	227.9	310.8	164.1	81.2
40 Under 50	438.1	365.4	189.3	268.2	176.1	97.2
50 Under 75	796.8	659.7	293.5	434.9	366.2	224.7
75 Under 100	394.2	321.2	117.7	186.2	203.5	135.0
100 Under 200	430.1	298.4	94.6	157.0	203.8	141.3
200 And Over	420.6	217.4	48.6	92.9	168.9	124.5
All Incomes	3,988.1	3,100.0	1,705.0	2,263.2	1,395.0	836.8

Table 6. Personal Income Tax and Hall-Rabushka and Armey Wage Taxes, by AGI Class, Based on 1993 Sample Early Returns, Billions of Dollars

AGI Class (In Thousands Of Dollars)	Personal Income Tax (Adj. to $508.62)	Wage Taxes: Hall-Rabushka (At 19 Percent)	Wage Taxes: Armey (At 22.87 Percent)
Under 10	3.4	0	0
10 Under 20	19.7	0	0
20 Under 30	39.1	21.4	7.5
30 Under 40	47.5	31.2	18.6
40 Under 50	47.0	33.5	22.2
50 Under 75	98.2	69.6	51.4
75 Under 100	59.1	38.7	30.9
100 Under 200	78.4	38.7	32.3
200 and Over	116.1	32.1	28.5
All Incomes	508.6	265.1	191.4

Table 7. Business Taxes: Current and Hall-Rabushka and Armey Flat Taxes, by AGI Class, Based on 1993 Sample Early Returns, Billions of Dollars

AGI Class (In Thousands Of Dollars)	Current Business Tax	Flat-Tax Business Taxes: Hall-Rabushka (At 19 Percent)	Flat-Tax Business Taxes: Armey (At 22.87 Percent)
Under 10	31.4	47.9	57.7
10 Under 20	26.3	40.1	48.3
20 Under 30	29.3	44.7	53.9
30 Under 40	27.8	42.4	51.0
40 Under 50	25.5	38.9	46.8
50 Under 75	43.0	65.6	79.0
75 Under 100	20.0	30.5	36.7
100 Under 200	20.2	30.7	37.0
200 and Over	13.6	20.7	24.9
All Incomes	237.1	361.6	435.2

Table 8. Total Taxes: Current Individual and Corporate Income Taxes and Hall-Rabushka and Armey Flat Taxes, by AGI Class, Based on 1993 Sample Early Returns, Billions of Dollars

AGI Class (In Thousands Of Dollars)	Current Total Tax	Flat-Tax Total Taxes	
		Hall-Rabushka (At 19 Percent)	Armey (At 22.87 Percent)
Under 10	34.1	47.9	57.7
10 Under 20	41.4	40.1	48.3
20 Under 30	59.3	66.1	61.4
30 Under 40	64.2	73.6	69.6
40 Under 50	61.5	72.3	69.0
50 Under 75	118.2	135.2	130.4
75 Under 100	65.3	69.2	67.6
100 Under 200	80.2	69.5	69.3
200 and Over	102.5	52.8	53.4
All Incomes	626.6	626.6	626.6

Table 9. "Burdens" of 5 Percent Consumption Tax, as Percent of "Expanded," Adjusted Gross Income and Total Income, from
Joint Tax Committee

Size of AGI (In Thousands)	Burden as Percent of "Expanded Income"	AGI as Percent of "Expanded Income"	Burden as Percent of AGI	Burden as Percent of Total Income*
Under 10	3.70	30.40	12.17	12.06
10 Under 20	2.66	68.90	3.86	3.83
20 Under 30	2.90	78.70	3.68	3.65
30 Under 40	2.92	83.00	3.52	3.49
40 Under 50	2.94	84.90	3.46	3.44
50 Under 75	2.77	86.10	3.22	3.20
75 Under 100	2.63	87.20	3.02	3.00
100 Under 200	2.50	88.90	2.81	2.78
200 and Over	1.76	90.30	1.95	1.91

* Percents of total income calculated by multiplying percents of AGI by ratios of AGI to total income indicated in *Statistics of Income* sample of 1993 early returns.

Table 10. Current Income and Business Taxes, as Percent of Total Income, by AGI Classes, 1993

AGI Class (In Thousands of Dollars)	Personal Income Tax (PITER)	Non-Business Portion of Personal Income Tax (NPITER)	Current Business Tax (CBTER)	Current Total Tax (CTOTER)
Under 10	2.22	1.70	20.25	21.95
10 Under 20	4.85	3.71	6.47	10.18
20 Under 30	8.23	6.30	6.17	12.48
30 Under 40	10.09	7.73	5.90	13.62
40 Under 50	10.73	8.22	5.82	14.04
50 Under 75	12.32	9.44	5.40	14.83
75 Under 100	15.00	11.49	5.07	16.56
100 Under 200	18.24	13.97	4.69	18.65
200 and Over	27.60	21.13	3.22	24.36
All Incomes	12.75	9.77	5.95	15.71

Table 11. Hall-Rabushka Flat Tax: Wage and Business Taxes, as Percent of Total Income, by AGI Classes, 1993

AGI Class (In Thousands)	H-R Wage Tax (HRWTER)	H-R Business Tax (HRBTER)	H-R Total Tax (HRTOTER)
Under 10	0.00	30.89	30.89
10 Under 20	0.00	9.87	9.87
20 Under 30	4.49	9.41	13.91
30 Under 40	6.62	9.00	15.62
40 Under 50	7.64	8.87	16.51
50 Under 75	8.73	8.23	16.97
75 Under 100	9.81	7.73	17.54
100 Under 200	9.00	7.15	16.15
200 and Over	7.63	4.92	12.55
All Incomes	6.65	9.07	15.71

Table 12. Armey Flat Tax: Wage and Business Taxes, as Percent of Total Income, by AGI Classes, 1993

AGI Class (In Thousands)	Armey Wage Tax (AWTER)	Armey Business Tax (ABTER)	Armey Total Tax (ATOTER)
Under 10	0.00	37.18	37.18
10 Under 20	0.00	11.88	11.88
20 Under 30	1.58	11.33	12.91
30 Under 40	3.94	10.83	14.77
40 Under 50	5.08	10.68	15.76
50 Under 75	6.45	9.91	16.36
75 Under 100	7.83	9.31	17.14
100 Under 200	7.51	8.60	16.12
200 and Over	6.77	5.92	12.69
All Incomes	4.80	10.91	15.71

Table 13. Current and Flat Taxes as Percent of Total Income, by AGI Class, 1993

AGI Class (In Thousands of Dollars)	Current Total Tax (CTOTER)	Hall-Rabushka Total Tax (HRTOTER)	Armey Total Tax (ATOTER)
Under 10	21.95	30.89	37.18
10 Under 20	10.18	9.87	11.88
20 Under 30	12.48	13.91	12.91
30 Under 40	13.62	15.62	14.77
40 Under 50	14.04	16.51	15.76
50 Under 75	14.83	16.97	16.36
75 Under 100	16.56	17.54	17.14
100 Under 200	18.65	16.15	16.12
200 And Over	24.36	12.55	12.69
All Incomes	15.71	15.71	15.71

INVESTMENT AND ECONOMIC GROWTH

by

Dale W. Jorgenson

In this testimony I will present evidence for the proposition that investment in human and nonhuman capital, rather than productivity growth, is the predominant source of U.S. economic growth. Perhaps surprisingly, this proposition is a controversial one, at least among professional economists. Profound differences in policy implications militate against any simple resolution of the debate on the relative importance of investment and productivity.

Proponents of income redistribution will not easily abandon the search for a "silver bullet" that will generate economic growth without providing incentives for investment in tangible assets and human capital. Advocates of growth strategies based on capital formation will not readily give credence to claims of the importance of external benefits that "spill over" to beneficiaries that are difficult or impossible to identify. Despite substantial progress in analyzing U.S. economic growth over the past two decades the relative importance of investment and productivity is still hotly debated.

To avoid the semantic confusion that pervades popular discussions of economic growth it is essential to be precise in distinguishing between investment and productivity. First, the term productivity has a number of different meanings in the economic and business literature. The most common meaning is *labor productivity* or output per hour worked. This economic indicator, issued monthly by the Bureau of Labor Statistics (BLS), is widely reported in the business press.

BLS is the government agency with official responsibility for productivity statistics and also reports a more comprehensive measure of *multifactor productivity*. This broader notion is the one relevant for economic policy and is defined as output per unit of all inputs, both labor and capital. The contrast between investment and productivity growth involves the relative importance of investment in human and nonhuman capital and growth in the effectiveness

with which these resources are used.

I will now turn, more specifically, to the policy implications of the distinction between investment and productivity growth. Investment is the commitment of current resources in the expectation of future returns and can take a multiplicity of forms. The distinctive feature of investment as a source of economic growth is that the returns can be internalized by the investor. The most straightforward application of this definition is to investments that create property rights, including rights to transfer the resulting assets and benefit from incomes that accrue to the owners.

The concept of wealth has been broadened to include investments that do not create property rights. For example, a student enrolled in school or a worker participating in a training program can be viewed as an investor. Although these investments do not create assets that can be bought or sold, the returns to higher educational qualifications or better skills in the workplace can be internalized. The contribution of investments in education and training to economic growth can be identified in the same way as for tangible assets.

The mechanism by which tangible investments are translated into economic growth is well understood. For example, an investor in a new industrial facility adds to the supply of assets and generates a stream of rental income. The investment and the income are linked through markets for capital assets and capital services. The income stream can be divided between the increase in capital input and the marginal product of capital or rental price. The increase in capital contributes to output growth in proportion to the marginal product.

Similarly, an individual who completes a course of education or training adds to the supply of people with higher qualifications or skills. The resulting income stream can be decomposed into a rise in labor input and the marginal product of labor or wage rate. The increase in labor contributes to output growth in proportion to the marginal product. Although there are no asset markets for human capital, investments in human and nonhuman capital have the common feature that returns are internalized by the investor.

Since the returns from investments in human and nonhuman capital can be internalized by the investors, the role of economic policy is to assure that private investors can appropriate the returns. For investments in tangible assets a critical role is played by tax policy at the federal level. For investments in human capital state and local governments provide schools, colleges, and universities. However, federal tax policy affects the appropriability of investments by individuals in their own human capital through formal schooling and on the job training.

The defining characteristic of productivity as a source of economic growth is that the incomes generated by higher productivity are external to the economic activities that generate growth. These benefits "spill over" to income recipients not involved in these activities, severing the connection between the creation of growth and the incomes that result. Since the benefits of policies to create externalities cannot be appropriated, these policies typically involve government programs or activities supported through public subsidies.

Publicly supported research and development programs are a leading illustration of policies to stimulate productivity growth. These programs can be conducted by government laboratories or financed by public subsidies to private laboratories. The justification for public financing is most persuasive for aspects of technology that cannot be fully appropriated, such as basic science and generic technology. The benefits of the resulting innovations are external to the economic units conducting the research and development.

Similarly, public investments in infrastructure can be justified by appealing to externalities associated with the use of public facilities. Improvements of public roads may relieve traffic congestion, but the returns can be appropriated only by limiting access to public facilities or monitoring the use of these facilities. This can be done for bridges, tunnels, and high density highways, but is more difficult for urban streets or low density highways. If access is unlimited, the benefits are external to the authority undertaking the investment.

In summary, the distinction between investment and productivity growth is critical for economic policy. The returns to investments in human and nonhuman capital can be

appropriated by the investors. The role of public policy is to maintain an economic environment assuring that private decisions contribute to the social goal of achieving economic growth. The enhancement of productivity growth requires policies that take account of the returns that spill over to beneficiaries other than the investors. These "spill overs" cannot be appropriated by private investors and require public investment programs or subsidies to private investors.

The accumulation of empirical evidence has gradually shifted the terms of the professional debate over the importance of investment and productivity as sources of U.S. economic growth. Chart One, presented below, shows that productivity accounts for only thirty percent of growth of the U.S. economy over the period 1947-1992, while growth of capital and labor inputs accounts for almost seventy percent. This is corroborated by the results reported by BLS (1994) and greatly restricts the role for "spill overs" such as those associated with investments in research and development or public infrastructure.

Chart Two presents a more detailed view of investment and productivity as sources of economic growth. In this Chart the growth of capital and labor inputs is divided between two components – growth in capital and labor inputs in "natural" units and enhancements in the quality of these inputs. I have already pointed out that the natural unit for labor input is the number of hours worked; this is the unit employed in the official statistics on labor productivity published by BLS and its many counterparts in other countries.

Hours worked are quite different from measures of labor input that reflect the quality of different workers. For example, wages increase with educational attainment. The contribution of different types of labor input is measured by weighting the change in hours worked by the corresponding wage rate. Labor input grows through increases in the number of hours worked and increases in the proportion of hours by workers with higher levels of education. The difference between the growth of labor input, defined in this way, and the growth of hours worked is the change in labor quality indicated in Chart Two.

Similarly, the "natural" unit for capital input is capital stock, since this appears on the balance sheets of firms and other producing units. The contribution of different types of capital input is measured by weighting the change in capital stocks by the corresponding rental rate. The rental rate is the annualized value of a capital asset and represents the "wage rate" of a unit of capital. Capital input grows that increase in capital stocks and increases in the relative proportion of stocks with higher rental rates. Chart Two decomposes the contribution of capital input into growth of capital stock and change in capital quality.

It is common practice in economic statistics to measure multifactor productivity as output per unit of capital and labor inputs in "natural" units. However, this gives a totally misleading view of the sources of growth from the point of view of economic policy. Investments in human capital produce growth in labor input, including both increases in hours worked and changes in labor quality. For example, investment in education is the primary source of growth in labor quality. As the average level of educational attainment in the U.S. population has risen, the quality of labor input in the U.S. economy has increased.

Similarly, investments in nonhuman capital result in growth in capital stock, but also produce changes in the quality of capital. For example, investment in computers increases stocks of computers. However, a rise in the proportion of computers improves the quality of capital, since computers have much higher marginal productivities than other types of capital. Measures of multifactor productivity that omit the quality of capital ignore this source of economic growth.

We can easily visualize the impact of ignoring quality change in capital and labor inputs by considering the data presented in Chart Two. The growth in hours worked and capital stocks represents the growth of these inputs in "natural units". Quality change is then absorbed into residual productivity growth, accounting for almost exactly fifty percent of U.S. economic growth. This exaggerates the growth of productivity by sixty percent, drastically overestimating the role of "spill overs" and correspondingly underestimating the role of investment as a source of growth.

In summary, investments in human and nonhuman capital account for the predominant share of U.S. economic growth during the postwar period. The focus of economic policy should be on the environment faced by private investors in tangible assets and human capital. Federal tax policies under the jurisdiction of the Committee on Finance have a critical role to play in stimulating economic growth. Investors must be able to appropriate the returns from their investments in order to contribute most effectively to the future growth of our economy.

The final charts I will present are devoted to international comparisons. The purpose of these charts is to quantify the relative importance of investment and productivity growth for the U.S. and its major competitors among the G7 countries -- Canada, Japan, Germany, France, U.K., and Italy. My principal conclusion is that investment in tangible assets has been more important to the economic growth of our competitors than to our own growth. This investment has contributed to a substantial reduction in the gap between U.S. output per capita and that of our competitors.

Chart Three gives level comparisons for 1960, omitting Japan. In these comparisons output per capita ranges from 42.9 percent of U.S. levels for Italy to 73.0 percent for Canada. Chart Four gives the corresponding comparisons for 1989. The U.S. has substantially higher output per capita in both years, but that the gap between the U.S. and five of our major economic competitors has shrunk considerably. Chart Five presents a decomposition of growth rates of output per capita for all seven countries between investment and productivity growth.

Chart Five shows that investment in tangible assets accounts for 47.4 percent of U.S. growth in output per capita during the period 1960-1989. This chart also shows that more than half of growth in the other countries of the G7 can be attributed to investment in tangible assets. Productivity growth accounts for only a fifth of U.S. economic growth during the period 1960-1989 and a slightly smaller proportion of Canadian growth. By contrast productivity growth accounts for almost a third of Japanese growth and more than fifty percent of the growth of the four major European countries.

In 1989 all five countries had lower inputs of both capital and labor inputs per capita than the U.S. However, Canada and three of the four major European countries – France, U.K., and Italy – had achieved parity with the U.S. in productivity. In fact, Canadian productivity was already at U.S. levels in 1960. France and Italy attained U.S. levels of productivity in 1974 and the U.K. in 1982. None of these countries has improved substantially in productivity, relative to the U.S., since attaining parity. In short, the continuing leadership of the U.S. in per capita output is due to high levels of investment in human and nonhuman capital.

I conclude that investment in nonhuman capital is a very important explanation of the convergence in output per capita between the U.S. and its economic competitors over the period 1960 to 1989. Rapid growth of productivity in Europe through the 1970's and early 1970's has been largely offset by drastic declines in hours worked per capita. Moreover, productivity gains in Europe, relative to the U.S., have largely ended. The future growth of output per capita in our major economic competitors will depend on investments in human and nonhuman capital.

In summary, the long period of convergence between U.S. productivity levels and those of our major economic competitors ended in the 1970's and early 1980's. Perhaps surprisingly, Germany has emerged as the economic laggard among the European countries with productivity around ninety percent of U.S. levels. (Similar data for Japan for 1985 show productivity levels comparable to those of Germany.) By contrast Canada, France, U.K. and Italy have all achieved parity in productivity with the U.S. For these countries convergence in productivity has disappeared as a source of gains in output per capita relative to the U.S.

In this testimony I have made three points. First, the distinction between investment and productivity as sources of economic growth is critical for economic policy. In order to contribute most effectively to economic growth investors in human and nonhuman capital must be able to appropriate the returns from their investments. Tax policies under the jurisdiction of the Senate Finance Committee are the most important public policies for stimulating economic growth through private investment. These policies affect the returns for invest-

ments in tangible assets as well as returns to formal schooling and on the job training.

Second, investment in tangible assets has been the most important source of U.S. economic growth during the postwar period. Investment in human capital has also made an important contribution. Together, the relative importance of these two forms of investment greatly outweighs that of productivity. Accordingly, the focus of U.S. economic policy should be on fostering an economic environment that is conducive to private investment. The direction for future tax reform should be to shift the burden of taxation from investments of all types to consumption. This strategy for tax reform will greatly enhance the effectiveness of private investments in stimulating economic growth.

Third, the international environment for economic growth has changed irrevocably. The convergence of productivity levels in the major industrialized countries has exhausted an important source of growth for our economic competitors. However, investment in tangible assets has been more important for these countries than for the U.S. Future international economic competition will depend even more critically on investments in human and nonhuman capital. As we adapt our economic policies to the new environment, we must focus on enhancing the opportunities for private investors.

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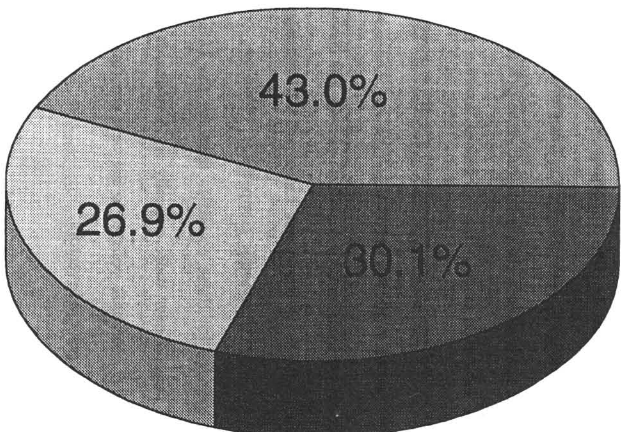
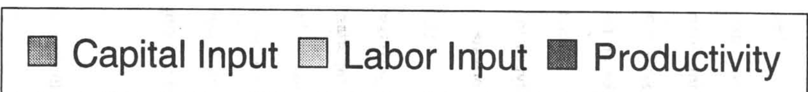
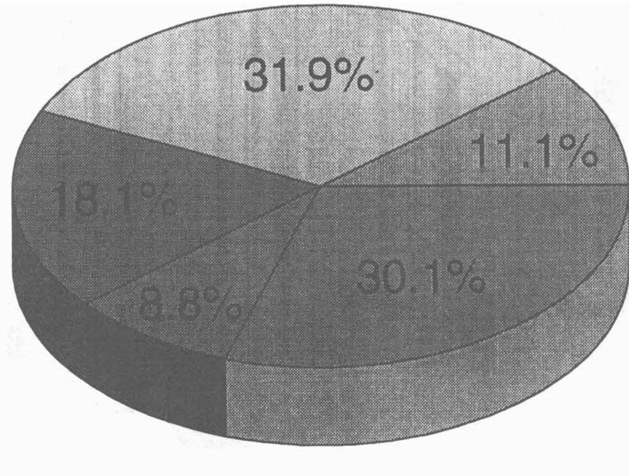
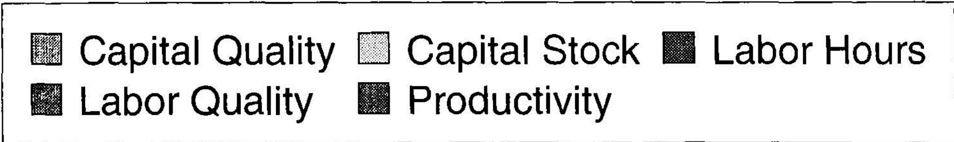
Sources of U.S. Economic Growth 1947 - 1992





The Quality of Capital and Labor Input as Sources of US Economic Growth 1947 - 1992





Level Comparisons for 1960
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Capital Stock
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Labor Hours
Labor Quality
Productivity
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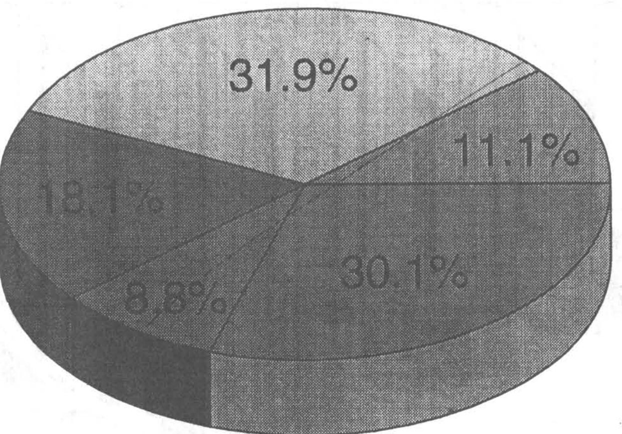
Germany
France
UK
Italy


The Quality of Capital and Labor Input
as Sources of US Economic Growth 1947 - 1992
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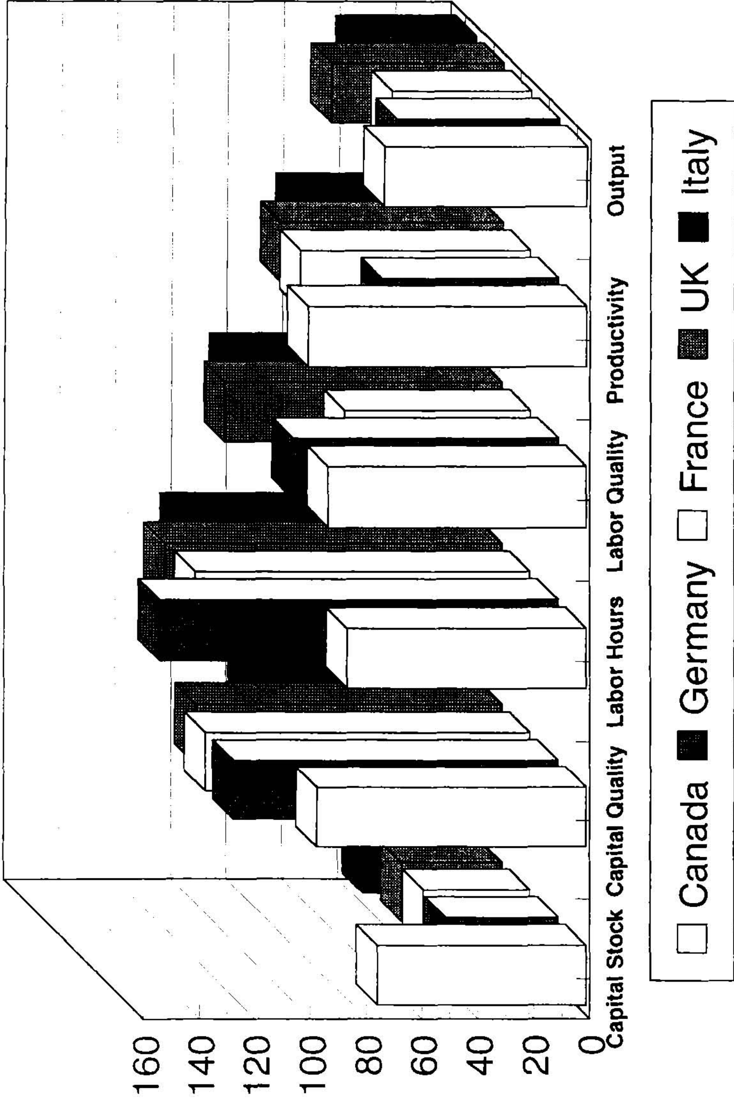
Capital Quality
Capital Stock
Labor Hours
Labor Quality
Productivity


Level Comparisons for 1960
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Capital Stock
Capital Quality
Labor Hours
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Productivity
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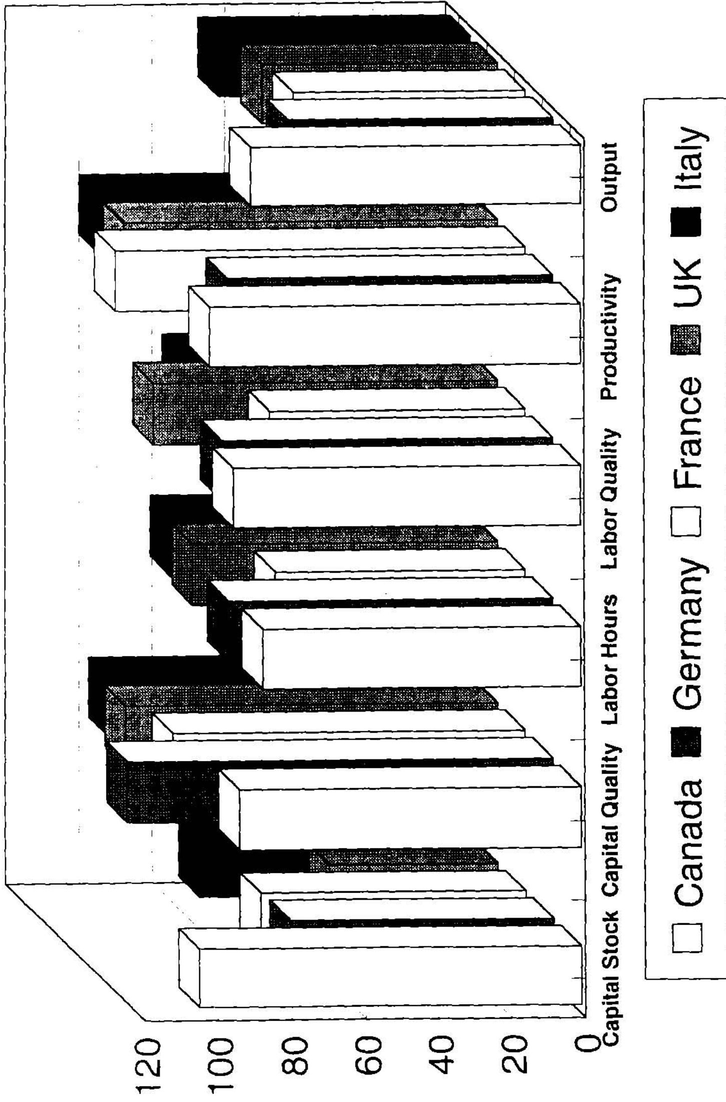

Level Comparisons for 1989
120
100
80
60
40
20
0
Capital Stock
Capital Quality
Labor Hours
Labor Quality
Productivity
Output
Canada
Germany
France
UK
Italy

Growth Rates 1960 - 1989

80
60
40
20
0
(20)
(40)

Capital Stock
Capital Quality
Labor Hours
Labor Quality
Productivity

Canada
Japan
Germany
France
UK
Italy
US

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