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Inflation Insurance:
An "Escalator Clause" for Securities?

Vietnam Vets and the Job Scene

Regional Growth:
The Whys and Wherefores

FEDERAL RESERVE BANK of PHILADELPHIA

business review

1972

Inflation Insurance:
An "Escalator Clause" for Securities?

. . . Securities tied to changes in the cost of living would offset some of the redistributive effects of inflation and may even improve policymaking, but introducing the proposal into the marketplace may require Uncle Sam's help.

Vietnam Vets and the Job Scene

. . . Most Vietnam veterans have returned to the job market or to school, yet many remain unemployed or have dropped out of the labor force, not taking advantage of new job-training and education programs.

Regional Growth: The Whys and Wherefores

. . . Interest in encouraging local economic growth abounds, but the methods that local leaders employ to achieve prosperity can often be inadequate.

On our cover: The Birkenhead Mills are part of the original Du Pont powder mills at the Hagley Museum, Greenville, Wilmington, Delaware. From the early 1800s various types of mills—flour, paper, textile, iron—flourished along the Brandywine River. It was there that E. I. Du Pont in 1802 began building his black powder works. The Birkenhead Mills, built in 1822-24, are typical of the more than 20 stone buildings that appear much as they did when the powder yard was in operation. (Photo courtesy of the Hagley Museum)

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Inflation Insurance: An "Escalator Clause" For Securities?

By Donald J. Mullineaux

Sagacious Professor Newthought delights in demolishing maxims and substituting new ones—often his own. Recently he claimed "you can have your cake and eat it too"—by simply lending it out at interest.

A student sharply dissented, holding that in modern economies where people lend dollars in lieu of cakes or other "real" goods, lenders sometimes receive crumbs in value rather than their cake and a muffin for interest. If prices are increasing rapidly, he noted, borrowers pay off lenders with dollars that command fewer goods than during the period when the loan was contracted.

Quite right, answered Professor Newthought, inflation can "eat" away the purchasing power of loan repayments and interest. But lenders will protect themselves from this "wealth erosion" by demanding "inflation premiums"—that is, more interest to cover any expected price increases. So, to have their cake and eat it too, he added, lenders must anticipate the course of inflation and adjust their lending terms accordingly. If they get only "crumbs" in return, they've either erred badly in their inflation forecasts or failed to cover themselves adequately.

When the classroom debate had ended, neither pedant nor pupil had considered a larger question: Is there a better way of coping with the wealth-eroding effects of inflation? For example, can't we lessen the impact of human error on society by including "wealth-protection insurance" in financial contracts? Many wage contracts already include "escalator clauses" which "link" payments to changes in some cost-of-living index.

Actually, "index-linked" securities offer potential advantages and disadvantages and thus from time to time have surfaced as a politically sensitive issue. Both public and private debate, however, require a better understanding of the way financial markets presently cope with inflationary expectations.

THE "REAL" VS. THE "MONEY" RATE OF INTEREST

In this credit-card age when consumers as diverse as teachers, technicians, and telephone operators, use charge-a-plates, few of us escape interest rates. Whether applicable to a savings account, a corporate or government bond, or an installment loan from a bank or department store, an interest payment typically represents a reward to lenders for parting with some of their accumulated purchasing power. In this sense, then, an interest rate is a price of credit, and as credit arrangements come in numerous shapes and sizes, so do interest rates.

A typical credit contract promises to repay the amount borrowed (principal) after an agreed upon time period and to make periodic payments (interest) in the interim for the right to use the principal. For instance, a Mr. Appleby lends $1000 to the Neversink Screendoor and Submarine Company by buying a debenture[1] promising to pay him $65 annually until 1992 and then return the $1000. In other words, Appleby has "invested" $1000 in corporate bonds at a yield of 6½ percent.

When entering into the contract, Appleby realizes that a thousand dollars 20 years from now will most likely *not* buy the same sack of groceries it does today. Because inflation seems the "normal course of affairs," the principal (and interest over the intervening years) will buy fewer goods; in other words, the greater the price rise, the lighter the grocery sack. To protect himself from this erosion of purchasing power, Appleby has demanded more in interest payments than he would have had he expected prices to remain constant between now and 1992. In fact, Appleby would have settled for $40 a year as reward for parting with his funds in the absence of inflation. Neversink is quite willing to pay him the "extra" $25 a year, however, since the firm also expects a similar rise and will, therefore, be paying off the principal (and interest over the intervening years) in "cheaper" dollars.

In the absence of expected inflation, then, Neversink bonds would yield 4 percent. Since bond purchasers and Neversink agree that prices are likely to rise at an annual rate of 2½ percent over the next 20 years, an "inflation premium" of about this amount is tacked on to the 4 percent. The yield in the absence of inflationary expectations is referred to as "the real rate of interest," while the sum of the real interest rate and the inflation premium is called the "money rate" or "nominal rate of interest." Obviously, if prices are expected to decline, then the nominal rate of interest is less than the real rate. The "inflation premium" becomes a "deflation discount." This relation between the expected rate of price change and the level of interest rates is called "Fisher's Equation" after its originator, Irving Fisher of Yale University.[2]

FISHER'S EQUATION

*Money Rate =
Real Rate + Inflation Premium

*Fisher's equation for the money rate also includes a term reflecting the interest earned on the inflation premium, but it is typically so small that it can be ignored.

If, for some reason, borrowers or lenders expect the rate of inflation to accelerate, this should be reflected in increased inflation premiums and higher interest rates. Likewise, if market participants expect a decline

[1] A debenture is a bond backed only by the general creditworthiness of a corporation.

[2] Professor Fisher is often considered the foremost American monetary economist of the early twentieth century. Perhaps his most famous work is *The Theory of Interest* (New York: Macmillan, 1930). Fisher had emphasized the relation between price expectations and interest rates as early as 1896, however, in *Appreciation and Interest* (New York: Macmillan).

in the inflation rate, interest rates should eventually fall (see Appendix). While few economists question the existence of these "Fisher effects," most of them disagree over *the time* required for changes in price expectations to be reflected in interest rate changes. In fact, many economists believe that Fisher's equation is valid only in the "long run"—that is, during very long periods in which markets could adequately adjust to changes in expectations. Some have suggested that this may require 30 to 50 years or more, but no one knows for sure.

Thus, under the current scheme of things in financial markets, net lenders will suffer when inflation accelerates more rapidly than anticipated. They will fail to demand an adequate inflation premium. Net borrowers, however, will be hurt when prices rise more slowly than expected, having agreed to pay an excessive premium. Some evidence suggests that in recent years market participants have underestimated the rate of inflation (see Table 1) so that net borrowers probably have increased their real wealth at the expense of net lenders. Some of this redistribution could have been avoided had loan contract terms been tied to, say, the consumer-price index.

INDEX-LINKED SECURITIES

Since we do not know the price expectations of those who buy and sell financial securities, "your guess is as good as mine" concerning the size of the inflation premium in current financial markets. This would not be the case, however, if the amount of interest and principal in a credit contract were linked to changes in some general index of prices. For example, if the interest on 4 percent Neversink bonds were linked to the consumer price index, then a 2-percent annual increase in consumer prices over the life of the contract would push the yield on these securities to 6 percent. Likewise, reductions in prices or in the rate of price increases would be translated into yield reductions on Neversink securities. With protection against loss in the real value of their savings, lenders would be content with a lower rate of interest than if such "insurance" were not offered in the credit contract. In fact, the difference between the interest rates on index-linked and nonindexed securities of the same maturity could be taken as the "market" measure of price expectations. However, a 5-percent yield on 10-year nonindexed bonds and a 3-percent yield on indexed bonds does not mean that *all* investors ex-

TABLE 1
ACTUAL INFLATION HAS OUTPACED EXPECTATIONS IN RECENT YEARS

	Expected Change in Consumer-Price Index	Actual Change in Consumer-Price Index
	(Percent)	(Percent)
1967	3.12	2.88
1968	3.29	4.02
1969	3.33	5.37
1970	3.39	5.92
1971	2.89	4.30

Sources: University of Michigan, Survey Research Center, *Survey of Consumer Finances*, U.S. Department of Labor, Bureau of Labor Statistics.

pect inflation of 2-percent per annum over the next decade. Rather, the market measures the price expectations of only those investors who are indifferent about indexed and nonindexed securities.[3] If these market participants expected more (less) inflation, pressures on interest rates would result. Such pressures would increase (decrease) the yield spread of nonindexed over indexed securities (see Box).

MEASURING THE INFLATION PREMIUM IN A WORLD OF INDEX-LINKED SECURITIES

An arithmetic example can convince us why a 6-percent rate on 10-year bonds with no price-level insurance and a 4-percent rate on indexed securities of like maturity must mean that 2-percent inflation is expected by market participants who will hold either type of security. Suppose in this situation that all borrowers and lenders revise their inflation expectations upward by one percentage point, but that interest rates are unchanged. Lenders who were previously satisfied with *either* indexed or nonindexed securities will now prefer indexed loans since they now expect these securities to yield 7 percent (vs. 6 on nonindexed loans). Previously indifferent borrowers will demand only nonindexed loans which now have an expected lower cost. Revised expectations will thus increase both the demand for indexed securities and the supply of nonindexed securities. But this will serve to increase the rate on nonindexed securities relative to indexed securities. In fact, the yield spread will expand until it once again reflects the price expectations of participants who are indifferent to either type of security. Only when the spread satisfies this condition will pressures making for further rate changes be absent. In our example, this would call for a yield spread of approximately 3 percentage points.

Index-linked securities obviously reduce risk by insuring against capital loss. Proponents of indexing also suggest that the sale of these securities may yield still other benefits such as a more equitable distribution of wealth and improved economic policymaking. Despite these advantages, however, some economists oppose indexing on the grounds that the harm resulting from higher rates of inflation outweighs all the proposed benefits for society.[4]

SOME POTENTIAL ADVANTAGES FROM LINKING

Less Reshuffling of Wealth. Supporters of index-linked securities often note that implementation of their proposal would alter some of the wealth distribution effects of inflation. When prices rise faster than expected or when families have difficulty adjusting to expected inflation, those who owe more in money terms than they have owed to them will increase their wealth relative to other families. Since these net monetary debtors repay their liabilities in "cheaper" dollars (in terms of real purchasing power), inflation transfers real wealth from net creditors to debtors. Likewise, net creditors gain relative to debtors when inflation is overestimated.

[3] In economists' jargon, the yield spread between indexed and nonindexed securities must reflect price expectations "at the margin," that is, of the marginal investor and borrower in each type of security.

[4] For a discussion of the gains and losses associated with inflation, see W. Lee Hoskins, "Inflation: Gainers and Losers," *Business Review* of the Federal Reserve Bank of Philadelphia, February 1970, pp. 23-30.

Since several factors account for the wealth redistribution effects of inflation, it is difficult to assess which income classes bear the major burden. Some limited evidence suggests that middle-income families may suffer most from that part of the redistribution stemming from underanticipation of actual inflation, while low-income families may be gainers.[5] At the same time, it is often argued that low-income families find it more costly to adjust and avoid the wealth-robbing effects of an inflation they see coming. This may be true if assets which provide investors a "hedge" against inflation by appreciating in price require large amounts of capital. Then "small" investors incur the additional cost of pooling their funds in order to acquire enough capital for purchasing the asset. This assertion may be valid for assets such as real estate, paintings, diamonds, and the like. However, for other potential hedges such as mutual-fund shares and foreign currencies which are available in small denominations, the argument is less convincing. Accordingly, the notion that lower-income families find it more difficult to adjust to inflation is likely to remain unsettled until the statistical evidence is more fully investigated.[6]

TABLE 2
THE POOR HOLD SMALLEST PROPORTION OF WEALTH IN MONETARY ASSETS AND THUS MAY BE GAINERS DURING UNANTICIPATED INFLATION

1958 Family Income (dollars)	Net Monetary Assets as a Percentage of Wealth
$0-999	8%
$1,000-2,999	15%
$3,000-4,999	13%
$5,000-7,499	15%
$7,500 or more	15%

Source: A. Ando and G. Bach, "The Redistributional Effects of Inflation," *Review of Economics and Statistics*, 49 (February 1967).

[5] Available data show that middle-income classes hold about the same percentage of their wealth in assets promising a fixed money return (monetary assets) as high-income classes (see Table 2). However, these figures are generally overstated, especially for wealthy families. In calculating a family's *net* position in monetary assets, these figures fail to consider *all* monetary liabilities. In particular, *indirect indebtedness* in the form of a *pro rata* share of the net corporate debt of the companies whose stock shares a family owns should be subtracted from the stated monetary asset positions. Since wealthier families hold proportionately more common stock, their net position in monetary assets is most overstated. Even after such a correction, however, it seems likely that the poor would continue to have the smallest portion of their wealth in monetary assets and would therefore be relative gainers in wealth during periods of unexpected inflation.

[6] It is tempting to argue that because "small" savers didn't adjust during particular inflationary periods it must have been more costly for them. For example, families continued to hold millions of dollars in savings accounts at financial institutions which paid *negative* real rates of return during the period 1967-69 (see Chart). It should be recalled, however, that the purchase of a security depends on the *expected* real rate of return. Families may not only have continually underestimated inflation, but they may have expected the monetary authorities to relax the ceilings on interest rates which were holding money rates down. These maximum rates were maintained unchanged throughout this period, however.

The lack of "hard evidence" on who gains or loses from inflation means that we cannot assert that the sale of index-linked securities will result in a more *equitable* distribution of wealth. Indexing would, however, cushion much of the *unintended* wealth redistribution effects of inflation (making it easier for planned redistribution policies such as progressive taxation to work).

Improved Policymaking. In addition to eliminating some of the redistributive effects of inflation, index-linked securities might facilitate the administration of national economic policy. The yield could serve as an "indicator" by both policymakers and policy-watchers for "gauging" the current status of monetary policy relative to previous periods.

Market rates of interest are often used to measure the thrust of monetary policy at present. Rising interest rates supposedly indicate "tight money" as the Federal Reserve attempts to restrain the growth of economic activity by slowing the growth of bank reserves. Declining rates mean "easy money" —the central bank is trying to provide expansionary impetus to the economy.

Using market rates to "read" the stance of monetary policy can produce conflicting signals, however. An increase in rates may reflect a larger inflation premium rather than the onslaught of a "tight money" policy. Likewise, rate reductions can simply mean that market participants expect less inflation. The rate on indexed securities, however, is a measure of the real rate of interest and is unaffected by changes in price expectations. It should, therefore, prove a less ambiguous indicator of the stance of monetary policy.[7]

Finally, market forecasts of inflation, a by-product of index linking, are valuable for society. Expectations of future prices are inputs into individuals' decisions about current and future consumption, investment, and their willingness to supply labor services. If consensus inflation forecasts can be supplied at low costs, then some resources are freed to augment the output of goods and services. And, society will be that much better off.

A POTENTIAL DISADVANTAGE: STILL MORE INFLATION?

Some opponents of index-linked securities claim that indexing creates *new* inflationary pressures. One view is that since index-linked securities offer protection against inflationary "pains," public pressure for responsible fiscal and monetary policies will be lessened. But this argument ignores the fact that indexing does not alleviate all the ills of inflation. For example, in a world of fixed international exchange rates rapid price increases mean that domestic goods cost more to foreigners (unless, of course, foreign prices rise in like fashion). Exports will, consequently, decline and balance of payments problems will become worse. Under such conditions, policymakers are hardly likely to let the inflation chips fall where they may in a helter-skelter pursuit of other goals.

Another view of some economists is that indexing *causes* inflation by generating a cost-push spiral which continuously forces up prices. Unexpected price rises increase interest payments which, in turn, raise the cost of producing additional output. As a result, producers either bring fewer goods to the market or increase their asking prices for goods in current production. This notion, however, considers only what happens on

[7] Some caution would still be required, however. Although an expansionary policy will initially reduce the real interest rate, income will eventually rise and with it the demand for credit. The real rate will thereupon begin to rise. In order to interpret observed changes in the index-linked rate as a reflection of a policy shift, some additional evidence is required to insure that the change in rates was primarily a policy-induced supply phenomenon. Examining the rate of change in the money stock or bank reserves should supply some confirming evidence.

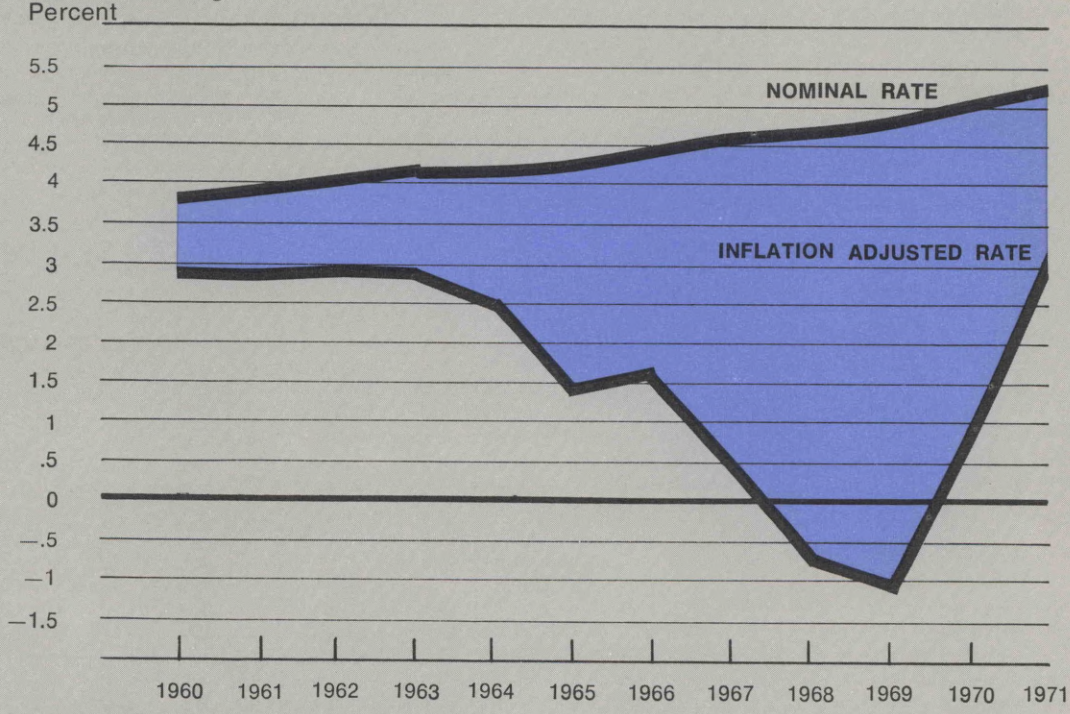
the supply side of the market. Increased costs of borrowed funds will also squeeze cash flow. Firms may attempt to restore liquidity by postponing or cancelling investment expenditures on plants and equipment. The resulting decline in investment would reduce aggregate demand and thus moderate pressures on the price level. This may very well mean that indexing would affect *relative* prices instead of the absolute price level. This scenario suggests that in a world of indexed-linked securities the prices of capital goods will decline relative to other goods during periods of inflation.

Without a better understanding of how the inflation process works, it is difficult to say whether loan indexing would have an abetting or offsetting effect on the inflation cycle. Certainly, the case has yet to be made that indexing would have a *strong* effect in either direction.

BREAKING THE ICE— LINKED SAVINGS BONDS?

Presently, no private corporations issue index-linked securities in the United States. Their absence from our relatively sophisti-

INFLATION ADJUSTED RATES EARNED BY SAVINGS DEPOSITORS DECLINED SHARPLY DURING INFLATION OF 1965-70.



Source: Savings and Loan Fact Book

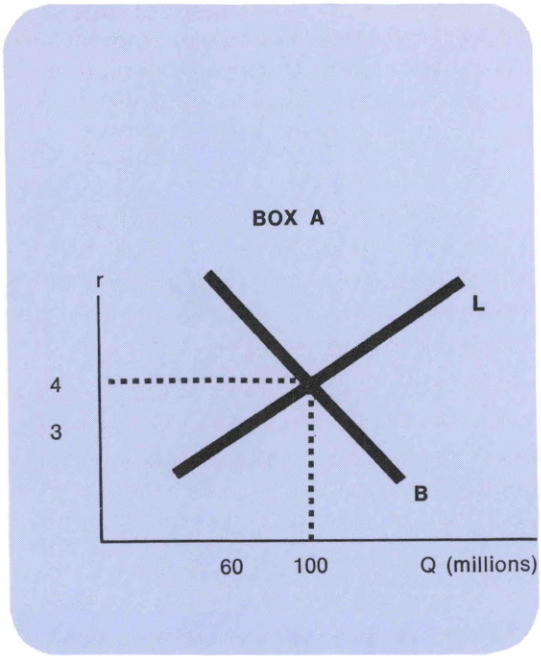
cated financial scene is difficult to explain, especially given the rapid increase of cost-of-living escalator clauses in labor and pension contracts in recent years.

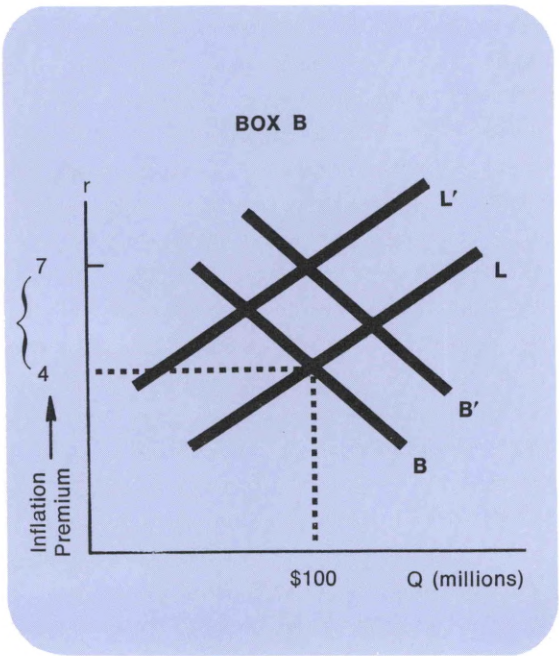
Proponents of indexed securities have suggested that the United States Treasury should "break the ice" and that a favorable reception would insure the spread of index-linking to the private sector.[8] On equity grounds, savings bonds are an ideal candidate for linking, for they are bought mostly by low- and middle-income families. Small savers have not only been hurt by recent increases in the rate of inflation, but by legal ceilings on the rates they could receive on deposits placed with financial institutions (see Chart). The Federal government, however, has "gained" more from inflation than any other economic unit because it is the largest net debtor in the economy.

Favorable experience with "tied" savings bonds might encourage the Treasury to link a number of marketable issues to price-level changes. Should these be well received, competition for funds would probably spur private corporations and financial institutions to issue their own indexed securities. These explicit inflation premiums should alleviate some of the ill effects of inflation and would keep unexpected inflation from redistributing wealth in a manner inconsistent with expressed social goals. Moreover, the risk that indexed-securities would create new inflationary pressures is probably small enough to assure that society would be a net beneficiary of index-linked securities. ■

[8] See Edward Kane, "Short-Changing the Small Saver: Federal Government Discrimination Against Small Savers During the Vietnam War," *Journal of Money, Credit and Banking*, 2 (November 1970): 513-522.

Appendix: A Graphical Analysis of Inflation Premiums





This appendix demonstrates graphically how the "inflation premium" is "built into" the market rate of interest. Box A demonstrates how the "real" rate of interest is determined. The vertical axis measures the rate of interest (r) and the horizontal axis the quantity of loanable funds (Q). Curve L represents the amount of funds savers wish to lend at each rate of interest. As the rate rises, savers will supply more loanable funds. Curve B shows the amount of funds borrowers would like to absorb at each interest rate. Obviously, as the rate rises, borrowers will demand fewer loanable funds. Both of these schedules represent the desires of borrowers and lenders *under the assumption that prices will be constant* over the life of the loan contract. The real rate of interest is 4 percent and $100 million is the amount borrowed.

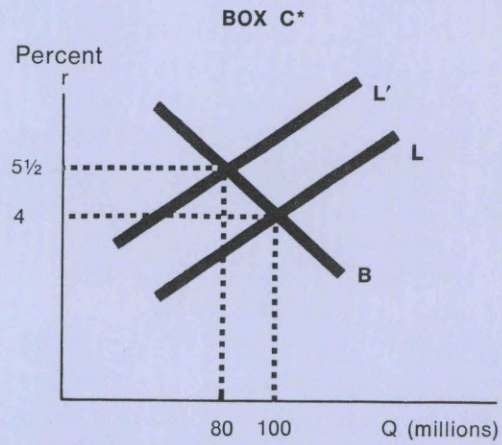
Box B shows the effect of inflationary expectations on the level of interest rates. If lenders expect prices to increase at a 3 percent annual rate over the life of the loan contract, they will raise (shift leftward) their loan supply schedule by this amount on the vertical scale. That is, where they formerly were willing to lend $60 million at 3 percent, they now offer the same amount for 6 percent; likewise, they now demand 7 percent to induce an offer of $100 million. The new supply schedule is indicated by curve L'. If borrowers expect a similar amount of inflation, they likewise raise (shift rightward) their loan demand schedule by 3 percentage points for each quantity of loans—indicated by schedule B'. Borrowers and lenders will now be satisfied only with a market rate of 7 percent which includes an "inflation premium" of 3 percent.

In the preceding case, the existence of inflation premiums had no effect on the *volume* of finance ($100 million in both cases). However, if borrowers and lenders disagree about the prospects for inflation, the amount of funds transferred from borrowers to lenders will be affected. If lenders expect more inflation than borrowers (Box C), lending will be less than the volume that would be forthcoming in the absence of expected inflation. If borrowers expect a larger price rise than lenders (Box D), the amount lent will exceed the volume of lending in the economy with constant prices.

The notion that borrowers systematically expect more inflation than lenders is sometimes advanced as the reason borrowers have not offered securities with interest payments linked to some index of price level changes. In the graphical example, index-linked securities would be sold with a contract yield of 4 percent (the "real" rate) in an amount of $100 million. If borrowers' anticipations of 3 percent annual inflation are realized, they will pay 7 percent over the life of the loan on an indexed security. If borrowers issue nonindexed securities, however, they can obtain $120 million in finance at 5½ percent (see Box D). Lenders are willing to offer this amount at 5½ because they expect no inflation. In fact, anytime borrowers expect *more* inflation than lenders they can obtain a larger volume of financing at lower *expected* cost with nonindexed securities than with index-linked loans.

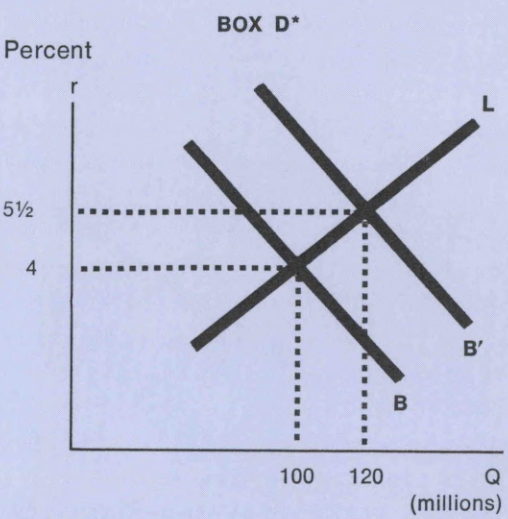
Although this analysis is accurate, it fails to offer a firm rationale for the notion that borrowers will *always* expect more inflation than lenders. Economists know very little about how decision-makers form expectations, so the case can hardly be made on theoretical grounds. Empirical evidence on expectations formation is likewise extremely sparse. Until this missing link in the argument is substantiated, economists must look elsewhere for an explanation of the absence of index-linked securities.

BOX C*



*Borrowers expect no inflation.

BOX D*



*Lenders expect no inflation.

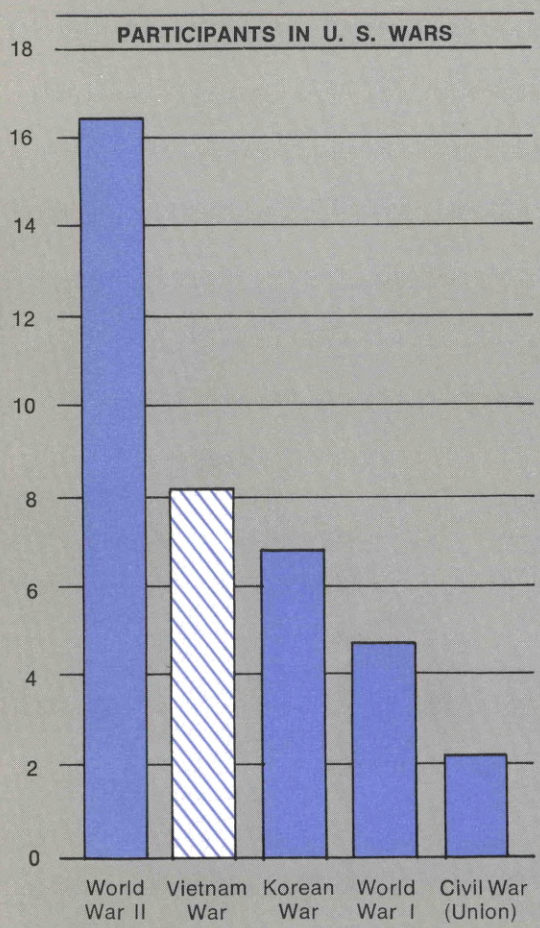
Vietnam Vets and the Job Scene

by Curtis R. Smith

CHART 1

OVER 8 MILLION AMERICANS HAVE BEEN UNDER ARMS DURING THE VIETNAM WAR AND, OF THESE, 6 MILLION HAVE NOW RETURNED TO THE JOB MARKET

(Millions of men)

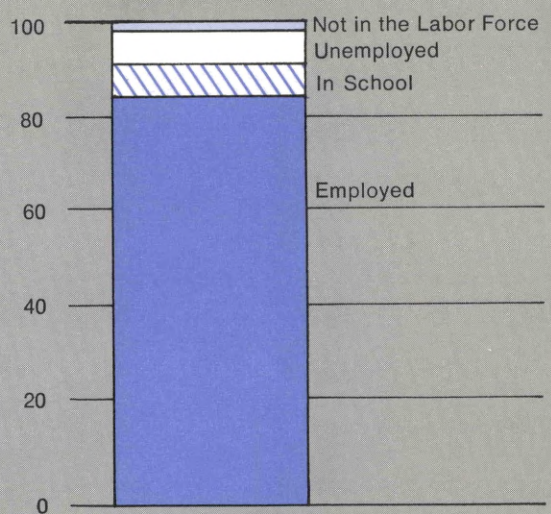


Source: Veterans Administration, Office of Controller

CHART 2

MOST VETERANS ARE EMPLOYED AND MANY ARE IN SCHOOL; HOWEVER, ALMOST 9 PERCENT REMAIN UNEMPLOYED OR HAVE DROPPED OUT OF THE LABOR FORCE.

Percent

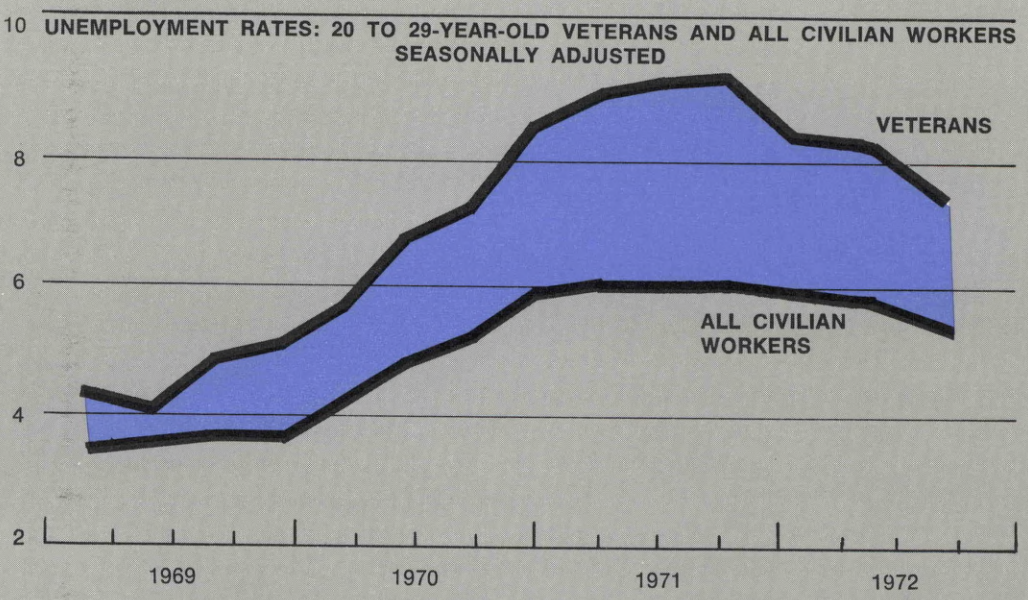


Source: U.S. Department of Labor, Bureau of Labor Statistics

CHART 3

ALTHOUGH VETERANS SUFFERED DISPROPORTIONATELY DURING THE LAST RECESSION, THEY MADE SUBSTANTIAL GAINS AS AN EXPANDING ECONOMY BROUGHT THEIR UNEMPLOYMENT RATE DOWN FASTER THAN FOR ALL WORKERS

Percent

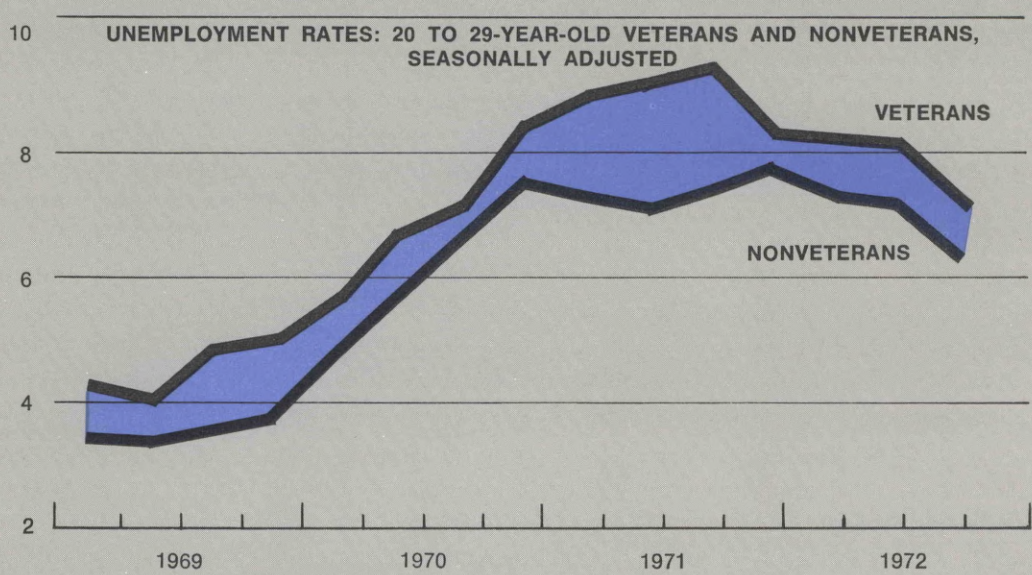


Source: U.S. Department of Labor, Bureau of Labor Statistics

CHART 4

WHILE ALL YOUNG JOB-SEEKERS FIND THEIR YOUTH A LIABILITY, VETERANS STILL HAVE A TOUGHER TIME GETTING A JOB THAN OTHERS OF THE SAME AGE . . .

Percent



Source: U.S. Department of Labor, Bureau of Labor Statistics

BUT THEIR STATUS AS VETERANS PROVIDES UNIQUE OPPORTUNITIES TO HELP

One of every five Vietnam-era veterans has less than a high school education. Ten percent are black or members of other minority groups. These are the men most likely to have difficulty in the civilian job market. They represent a microcosm of America's disadvantaged—poor, uneducated, and unemployed. But, because they are veterans, these men are particularly reachable. Society, through education and training, is making special efforts to raise the socioeconomic level of disadvantaged veterans. Public opinion supports the vet, an administrative framework exists, and many programs have already been started. A principal task remaining is to make the veteran aware of ongoing efforts.

Reemployment Rights. A veteran who left a full-time job is entitled to a position comparable to one he would have held had he not served. About 50 percent of the returnees have a legal right to their old job, but only 30 to 40 percent exercise it.

Civil Service Preference. Veterans automatically receive a 5-point preference on Civil Service exams. Disabled servicemen and Purple Heart winners can claim a 10-point advantage.

Emergency Employment Act. A major aim of this program is to fill 30 to 40 percent of its temporary jobs with veterans. During its first year, 67,000 Vietnam veterans, 27 percent of the participants, held EEA jobs. More than 90 percent were unemployed before starting the program.

Jobs for Veterans. This national campaign emphasizes the marketable skills and assets of veterans. It concentrates on increasing national awareness through advertising, forming local action groups, conducting Job Fairs, and publicizing other programs for veterans.

Listing of Jobs. Since 1971, all employers holding Federal contracts have been required to list job openings with Federal and state employment offices, and to report the number of jobs filled by veterans.

Project Transition. The Defense Department provides predischarge job counseling and placement assistance. It also cooperates with private industry in on-the-job training prior to separation.

NAB-JOBS Program. The National Alliance of Businessmen helps place veterans in private industry. Over 130,000 were helped in fiscal year 1972, with a 1973 goal of 150,000.

PREP. The Defense Department's Predischarge Education Program offers high school completion and secondary level remedial courses while still in the service. However, only 7 percent of the 550,000 servicemen needing remedial help are in the program.

G.I. Bill. Since the beginning of the current G.I. Bill in 1966, 36 percent of all Vietnam-era veterans have participated in training. Not all veterans, however, have used the bill to the same extent. Although 20 percent of all veterans are educationally disadvantaged, they comprise only 7 percent of those receiving benefits. A negative attitude and past academic failures help contribute to low participation. Outreach efforts sponsored by the Commonwealth of Pennsylvania, the National League of Cities and U.S. Conference of Mayors, and the National Council of Churches try to contact new veterans personally and counsel them regarding further education. The low level of benefits has also hampered participation among lower-income veterans; however, recent Congressional legislation has raised basic full-time benefits from $175 to $220 a month.

Remedial Programs. The Department of Health, Education, and Welfare has recently announced a $5.8 million grant to more than 50 colleges and universities that are beginning remedial programs for veterans this fall. Some 10,000 to 12,000 young veterans lacking college-level skills are expected to participate.

Regional Growth: The Whys and Wherefores

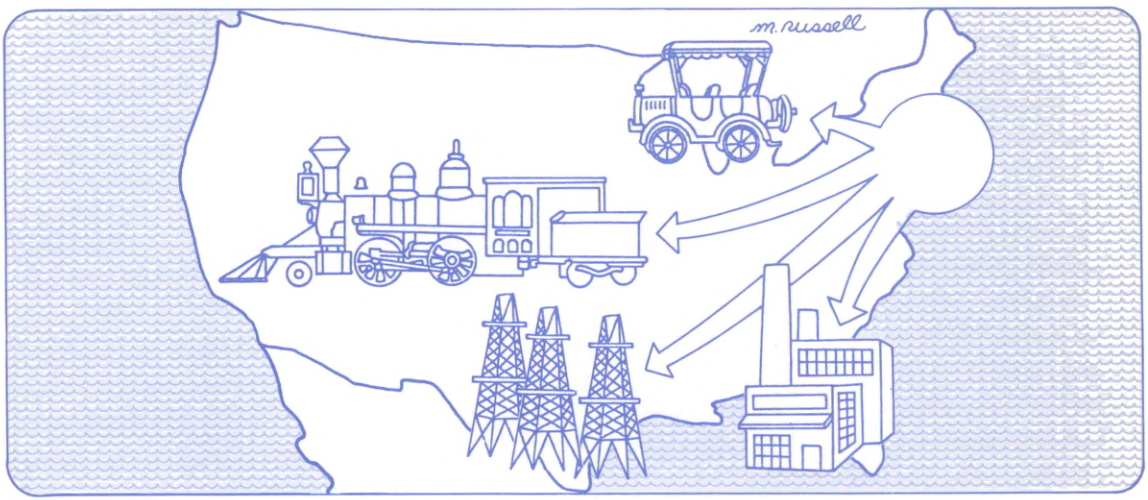
By James L. Freund

Differences in the fortunes of regions have existed for generations. California rushed ahead when gold was discovered while New England whaling ports slowly withered. Expanding railroads caused regions to boom while areas around canals languished. Detroit grew with the automobile; Appalachia burned out with coal. Most recently, the tide of economic growth has moved southward and westward, leaving behind older, more lethargic regions.

These regional disparities have received relatively little attention. Rather, economists have concentrated almost exclusively on national problems—achieving full employment and economic growth without inflation. This emphasis probably has followed from the general belief that differences in growth among regions are temporary phenomena.[1]

Both economists and policymakers now devote more attention to how regions grow and function. For businessmen and civic leaders, local economic conditions have never been a secondary consideration. They

[1] In a perfectly competitive world where regions sell to one another and resources flow over distances without cost, mobility of factors would equalize earned incomes in all areas. Capital would flow to regions in which profitability was highest. This flow would eventually equalize the rate of return among regions by lowering it in the receiving regions and increasing it in the vacated ones. Likewise, labor would move geographically to where wages were the highest away from low-wage areas. The result of mobility and trade would be an optimal regional allocation of resources that also provided for the largest possible national output.



want to know why one area grows more rapidly than another and how to make their area prosper. Persistent economic disparities also have troubled economists. Finding that mobility of people and investment funds have failed to eliminate many of these differences, they have begun to reexamine the causes of differential local growth.

REGIONAL GROWTH: PLANTS OR PEOPLE?

While interest in encouraging local economic growth abounds, there is considerable disagreement over how to accomplish it. Attracting new industries into their regions is the number one concern of most local leaders. In national publications and on signs along almost any highway, communities welcome new industries, extol the local business atmosphere, tell businessmen of a particular town's tax advantages, and brag about the pleasantness of an area's climate.

These efforts are expressions of the view that an area's economic health primarily depends on its "export base." That is, the key to raising incomes and expanding the work force is adding to the existing core of firms industries that sell their products to other sections of the country.[2] These industries not only create jobs, but, as a bonus, they attract other firms. For example, a new automobile plant will attract painters, tire suppliers, glass companies, and manufacturers of accessories. This growth will generate income for spending on local trade and services that, in turn, will create more jobs.

Others argue that such efforts are misguided. Instead of attracting industry and assuming that workers will follow, local policymakers are urged to concern themselves with people. Over the long haul, firms may

[2]It is often said that not any industry will do; the object should be to attract "growth industries." While these industries do generate new investment over time, they are not the only path to a successful export base. In many cases—the South and textiles—areas have expanded their share of slow-growing industries. In other areas, "glamour industries," such as electronics and defense, have not lived up to expectations. In short, studies have shown that a region with a "favorable mix" of industries does not always have the best growth record. Likewise, others stress manufacturing firms as the source of export strength. Nonmanufacturing industries can be just as important, however. Tourist facilities, corporate headquarters, and even a major university have successfully provided regions with "export income."

comfortably locate in a number of different areas and still meet growing national demands. This camp contends that only with an ample supply of workers can firms satisfy national demand at competitive prices. Thus, those regions where population is growing most rapidly have an advantage in gaining new businesses.

Resolving conflicting views on the importance of attracting people and industries is basic to future efforts of local leaders and policymakers. Identifying the key element affecting regional growth is a complicated, but imperative, task. Such an effort requires an in-depth look at the basic economic forces involved.

ENHANCING A REGION'S INDUSTRIAL BASE

Bringing new industries into a region is another way of saying that an area will grow primarily by increasing its productive capacity through augmentation of its stock of capital[3]—increasing numbers of plants, machines, and tools. "Attracting new industry" is not a simple process, however. Nor is it the only way to enhance an area's capital facilities.

Attracting new industry. Most people believe one or two key factors influence the location of industry. Some argue that high taxes drive industry from some regions to those with lower taxes. Others say that low-wage, nonunion cities are the ones attracting new plants. Still others argue that comfortable suburban settings away from city noises and problems are magnets to industry. Who is right? . . . everyone and nobody at the same time.

The complete picture must be considered. Over time, competition will force firms to locate where it is most profitable to do so. As long as most firms vie for the consumer's dollar in the national market place, those locating where the *total* production costs are lowest will have an advantage. While many costs are fairly standard, the transportation costs of materials used in production and of products to their markets often differ significantly among firms and can be important sources of competitive advantage.

Clearly, geographical cost considerations mandate the location of some firms. There is little sense in leaders in eastern states trying to attract pulp mills when lumber is grown in the South and Pacific Northwest. Likewise, nobody would seriously suggest that New York-consumed beer be brewed in Georgia. For many firms, however, costs are such that the most profitable location is not fixed in any one place; these are, presumably, the plants that advocates of increasing an area's export base covet.

For these mobile firms the most profitable location is significantly affected by a combination of transportation and other cost factors. Firms may move if the geographical concentration of their customers shifts; that is, many firms may be attracted to areas where population is growing. Or a plant may relocate to another area if it produces alternative, less-expensive inputs. Moreover, highways, waterways, or air routes that affect the expense of transporting goods influence where total costs are lowest. Changes in transportation access eventually cause new places to boom and others with advantages to lose their edge, thereby causing firms to shift locations because of lower costs.

Profitability is also related to a region's economic structure. One firm's costs will reflect the presence of other firms. Where other firms are established, a businessman will find that services are readily available, that labor is likely to have developed considerable skills, and that news about opportunities is likely to spread rapidly throughout

[3] When "export" industries are attracted, product demand is also provided. People to man the plants are assumed to be either at hand or will be attracted automatically.

the business community. Likewise, in places in which large numbers of businessmen interact on a regular basis, new ideas are more likely to develop. Large differences in local wages or productivity that affect total labor costs (whether union-induced or not) also enter the profitability picture. So do local taxes and land costs. In short given transportation costs, local considerations vary and, if they are large enough can affect where new investment occurs. Rarely does any one factor dominate, however. All interact to form the total cost picture.

Other Ways the Industrial Base Grows. There are other, less spectacular ways in which an area can acquire new plants and job-creating machinery that are not typically emphasized by those who say an expanding industrial base is the key to regional growth. Additional productive capacity can also be achieved through making goods locally that were formerly purchased from other regions. As income grows, enough demand can be generated so that local producers can make goods for local consumption with local labor. This process is an integral part of regional growth. National firms open branch plants to assemble automobiles or televisions. Local firms begin to produce furniture, process food, and manufacture household goods. In technical terms, *import substitution* takes place.

Furthermore, the long-run economic health of an area can depend upon the very developments which those that concentrate on "basic," or export, industries ignore. An efficient and expanding "service sector" not only autonomously creates jobs but affects the profitability of investment for other industries. It can be an inducement for investment long after a particular export industry has come and gone. An area having business services that are adaptable to demands of particular industries and to the latest business techniques is bound to be vibrant. Likewise, efficient and economical communication and transportation systems are regional assets in inducing all types of investment.

THE IMPORTANCE OF POPULATION GROWTH

While people stress industrial growth, population is often regarded as a liability rather than an asset for regional development. In areas where unemployment is high, problems would seem much simpler if the workers for whom jobs are hardest to find were to move to areas where labor shortages exist. After massive in-migration leads to mounting social and economic burdens, many long-time residents often have second thoughts about newcomers. Yet, areas in which economic activity has expanded most rapidly have been those with the fastest population growth—most recently Florida, California, and the Southwest. Conversely, areas which have lost population have been among the slowest growing.

These trends suggest to some observers that people rather than machines are the more important factor in growing regions. Like capital, people are productive assets. Since investment funds are available at comparable costs all over the nation over long periods, lack of capital need not deter regional growth. It naturally flows where investment is most profitable. Further, the argument goes, a large segment of any growth in national product demand can be serviced from a wide variety of locations. For instance, the basic components of products such as computers and automobiles could be produced in California as well as in Pennsylvania.

With nearly equal access to market opportunities and to capital, differences in labor availability determine which regions will prosper and which will not. Areas where firms can get plenty of workers at competitive wage levels will find expansion profit-

able. In regions losing labor, or where good labor is just hard to recruit, firms will find that they cannot expand as readily. Observers have noted that manufacturing industries in areas receiving large doses of migrants or attracting workers from nearby farms have grown most rapidly in past decades. The East and the Midwest, where workers are less abundant, have lagged.[4]

Besides providing a valuable productive asset to a region, growing population over time has a second beneficial effect. As new people move into a region, they stimulate local industries. For instance, retailers, wholesalers, and construction firms expand. As these sectors grow, they will invest and stimulate further economic expansion. In short, a strong case can be made that policymakers really can't advance the prospects for their area if they are not affecting a long-run growth in labor resources.

REGIONAL GROWTH: THE OVERALL PICTURE

There is little disagreement that a prerequisite to long-run regional growth is increasing an area's productive resources. With more productive inputs, an area is able to make goods for its own inhabitants and to sell goods to others. Arguments have been made on both sides as to the efficacy and desirability of attracting labor on the one hand or capital on the other.

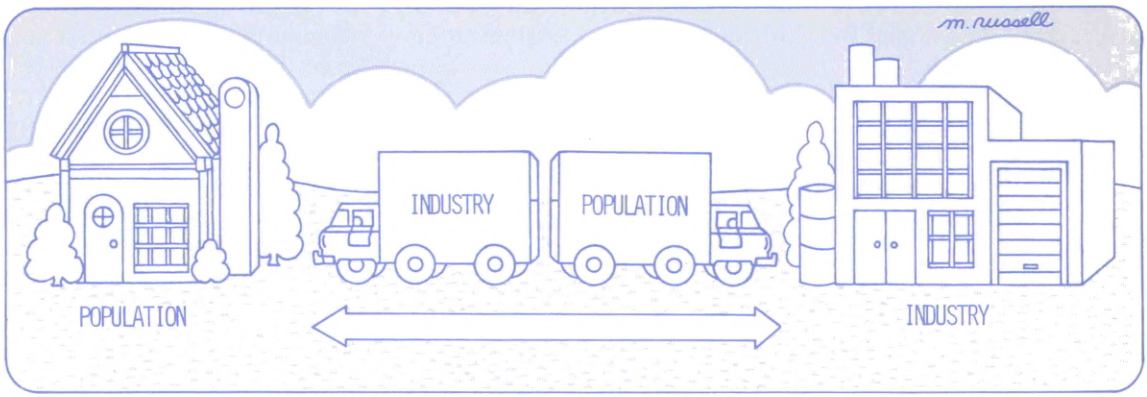
Neither side is wholly correct in asserting that growth in one factor comes first and the other factor merely follows. The two aspects of growth are not unrelated in that a healthy region is one in which new jobs attract people and the new people, in turn, enhance the profitability of new plants and machinery. Since more people encourage investment by providing manpower as well as consumer demand, over long periods, regions with the greatest labor force growth attract industry and jobs. However, where people move is partly related to where industry is prospering. While geographical and sociological factors are important, the growth of economic activity plays a major role. New jobs and bright economic prospects often give a family the strongest reason to move.

Thus, the overall picture of regional growth is one of interaction of physical and human resources. One encourages and helps determine the other. Focusing on one ignores the importance of the other. In some instances, autonomous population increases may set off a spiral of economic growth; elsewhere, a large expansion of the industrial base may come first. The point is that once growth starts both factors are important.

WHAT LOCAL LEADERS CAN DO

If regional growth involves the interaction of labor and capital, what is the best way for local leaders to encourage prosperity? Clearly, attracting new firms touches only a limited aspect of the problem. It ignores other ways that the industrial base can be expanded, and it does not deal with population growth. Whether policymakers can exert a more effective role is not certain, however. Many of the determinants of growth are beyond their control. To make a significant difference over the long haul, they may have to turn to different and innovative tools.

[4] Some people will quickly point out that attracting workers is a good idea—so long as they are skilled and with high incomes. It is true that this type of migrant is especially beneficial in terms of increasing a region's productive capacity, contributing to local taxes, and stimulating local sales. But despite the higher social costs of less skilled workers, they too are a valuable productive asset to the region receiving them.



Limitations on Local Initiative. The forces controlling an area's share of the action are often determined by national developments. National policies often govern how much and where firms invest. For instance, transportation costs, often a key determinant of differential costs among areas, are fixed by where Federal highways are routed and by Washington's regulation of transportation rates and services. Where defense and scientific projects are located controls who will garner their beneficial local effects. Further, without Federal assistance local resources are often technically and financially inadequate to provide public services that crucially affect the profitability of investing in an area—local transport systems, flood control projects, and even manpower retraining programs.[5] In a sense, a good regional development policy may be to have a strong and effective lobbyist in the nation's capital.

In many ways national economic trends are much more influential for local development than either regional or national policy actions. Lack of demand for an area's products and consequent local unemployment is most often the result of national business conditions. This is especially true in areas that specialize in producing cyclically-sensitive goods. Such underutilization of local resources is beyond local control; a healthy national economy is a prerequisite for healthy regional economies.

Over the long haul a region's fate is also determined by the national economy. For instance, given the rapid rate of technical progress and often-changing consumer tastes, finding today's successful industry in trouble tomorrow is not uncommon. Since no economy can grow without such changes, problems will always plague local areas. The key to avoiding prolonged periods of regional decay is to recognize change and adjust to it.

[5] The importance of national decisions suggests that an active national role in regional development may be appropriate. In many countries national decisions are made within the framework of a regional development policy: the Economic Development Act of 1965 was a first step toward such an effort in the United States. Any such policy may be hampered, however, by conflicts over efficient output growth and regional equity.

Perhaps more important is a recognition that certain problems are inappropriate for local government efforts. When society as a whole decides to maintain a minimum standard of living, it is the Federal government that should step in. Many local areas have a disproportionate share of disadvantaged groups and lack resources to cope with the problem. Further, there is no guarantee that a person will not absorb all the benefits and then move on to another area. "Local" problems such as compensatory education, welfare, and drug addiction are really national concerns; to attempt to bear them at the local level is unsound and a source of severe financial strain.

Even with efficient adjustment to change, it is simply the case that at times some places will not grow as rapidly as others. Local economies will always have unequal geographic access to demand and new resource bases. The changing composition of output will inevitably favor some over others. Events will also grace some regions with greater population growth than others. In short, differences in location and natural endowments often make efficient growth of the national economy unbalanced regarding subnational areas.

Encouraging Local Growth. Although to a large extent local economic progress is determined by outside influences, promotion efforts may enhance the prospects of a region. In shorter periods, the influence of local actions may be limited to capturing a disproportionate share of the economic growth of the section of the country in which a community is located. Over long periods concerted efforts to reduce total production costs in a region may draw both men and machines from other sections of the country as well as encourage expansion of local firms.

Sometimes management exercises considerable discretion over investment, and a strong local attack on total costs may tip the scale toward a given community. Improving public services per unit of tax dollar can be important in this respect, as will any effort to lower the cost of investing in an area—for example, making financial costs as low as possible on improving the quality and quantity of suppliers of supportive services. Likewise, training or retraining those residents who are most likely to stay in an area will enhance the overall productivity of a region's work force. But these efforts would be made only with full realization of their inherent limitations—years of work can be wiped out by a major national economic change.

An approach to increasing a region's capital assets which is not often considered, but has been the hallmark of growth in many regions, is the eliminating of economic inefficiencies and the fostering of innovations within a region. Resources tied up in unproductive ventures are wasted. Many regions have released valuable assets by having labor and capital which have been underutilized in agricultural pursuits flow into the growing sectors. Vested interests in the business community and labor camp that tie up resources in declining industries or in unproductive work rules rob a region of growth potential. Government programs which siphon resources in an unproductive manner are just as bad. Furthermore, it is as important to encourage new techniques and investments of local industries as it is to attract a plant. The financial community, of course, has heavy responsibilities in this effort.

Retaining and attracting human resources are difficult tasks. Some factors are clearly beyond the control of local leaders. Among the more prominent are climate, natural recreational opportunities, and where migrants' friends and relatives happen to live. Still there is room for local action. Residential and cultural amenities carry some weight, as do convenience and lack of congestion on local transport facilities. Low crime rates, clean streets, good medical facilities as well as efficient and low-cost government services are also attractions. Making a town a "nice place to live" is not enough, however. Workers need jobs just as much as the local economy needs workers. Like attracting new firms, attracting new people will be easier when a region is already growing and harder when it is stagnant.

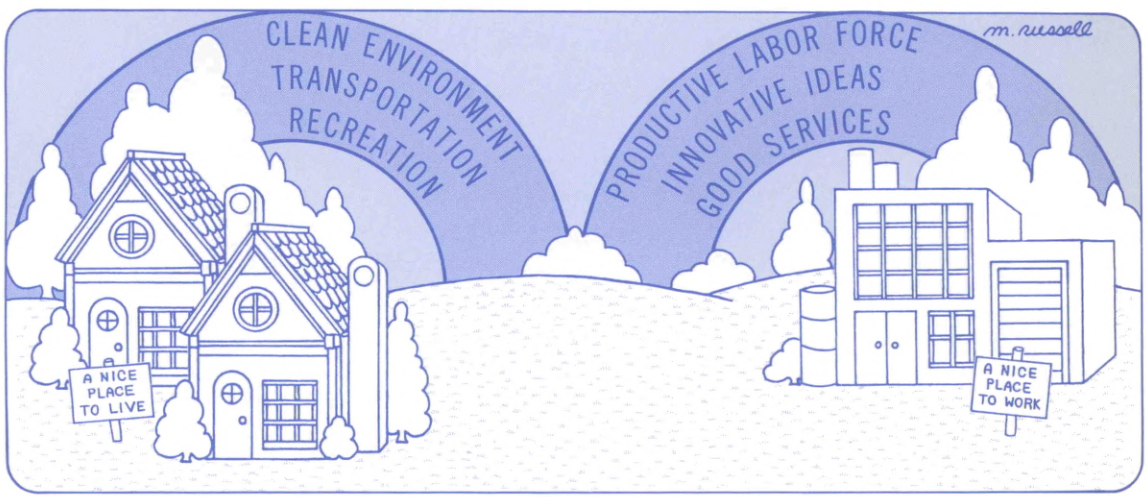
BETTER BUT NOT BIGGER

Rapid economic expansion is not a reasonable expectation for many sections of the country—especially older, manufacturing states. It may be prudent for leaders in these areas to shift their attention to other goals.

Such a course need not be discouraging since growth is not necessarily the only possible objective. Nor, in the view of some critics, is it the best. Indeed, even leaders in regions with substantial potential for expansion may not find unlimited growth to be the most desirable path. Economic progress has "quality" elements worthy of consideration. Likewise, the physical, social and political structure of the region has economic aspects which are fertile grounds for attention.

Growth in a region, like a nation, is often accompanied by problems and ill-effects. Local leaders may decide to channel their efforts toward stable industries rather than an ever-expanding number of new ones. Likewise, they may weigh the pollution costs of economic progress and decide a larger economic base means too many undesirable effects. In the past, the result of growth was often more jobs *and* more pollution. In the future, strictly enforced standards may adversely affect the profitability of investment and thus give areas the choice of greater growth or cleaner air and water.

The way regions function internally is often taken for granted, but changes in this area may be productive in an economic as well as social sense. A region's geographic structure affects the economic costs of land, of communication among people, and of area travel. Thus, economic performance is strongly influenced by present physical arrangements. Regions typically consist of high-density central cities with gradually decreasing concentrations of people in the suburbs and large expanses of agricultural land. Given the trend of many offices to locate in central cities and more plants in the suburbs, many workers spend much time and effort commuting to their jobs. Even more costly for the local economy is the loss of valuable labor services of inner-city residents who may be isolated from prospective jobs.



Likewise, a region's total economic performance is almost certain to be adversely affected by the fragmentation of local government. In almost all sections of the country, the local government structure is marked by a multiplicity of units, varying widely in their responsibilities and fiscal capabilities. Instead of cooperating to achieve equitable and efficient arrangements of services, local governments are often busy competing among themselves for plants. In short, the way local laws, attitudes, and traditions shape

the geographic, political, and social fiber of a region has definite economic ramifications. Thus, changes enchancing regional efficiency and productivity are important future concerns.

Ironically, community leaders who direct their attention to the *quality* of a region's growth and its institutions rather than the *magnitude* of its economic growth may find they are more successful than when their sole concern was attracting new industries. As technology advances and transportation within the country becomes easier, those very regions having the best total economic environment will attract people and capital. Thus, by striving to make itself a better place to live, an area may end up with both a better and bigger place. ■

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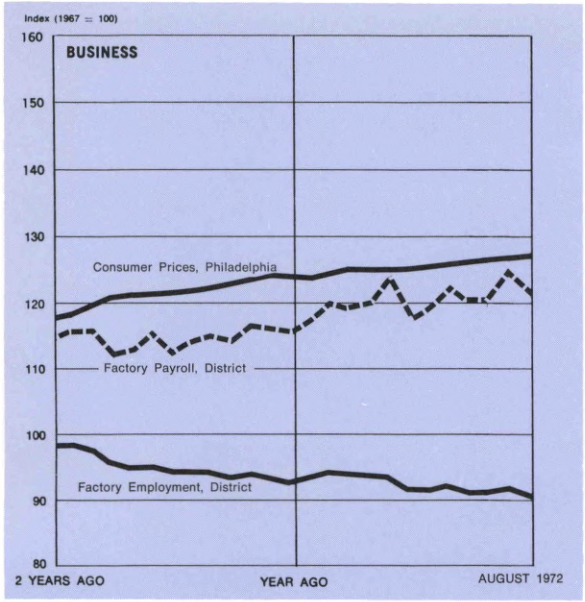
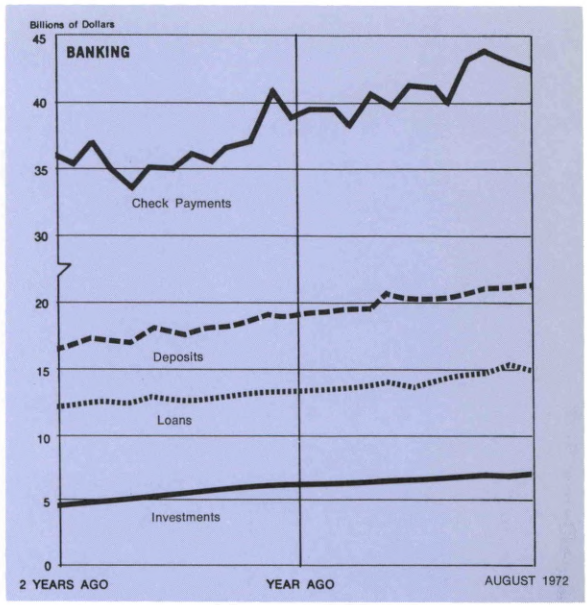
FOR THE RECORD...





SUMMARY	Third Federal Reserve District			United States		
	Percent change			Percent change		
	August 1972 from		8 mos. 1972 from	August 1972 from		8 mos. 1972 from
	mo. ago	year ago	year ago	mo. ago	year ago	year ago
MANUFACTURING						
Production	....	....	....	+ 5	+ 9	+ 6
Electric power consumed	+ 8	+ 9	+ 3	....	....	....
Man-hours, total*	+ 3	− 1	− 2	+ 4	+ 6	N/A
Employment, total	+ 2	− 2	− 3	+ 2	+ 3	+ 1
Wage income*	+ 3	+ 6	+ 4	+ 4	+13	N/A
CONSTRUCTION**	+25	+14	−20	+10	+16	+13
COAL PRODUCTION	+34	−10	− 6	+22	−10	− 6
BANKING (All member banks)						
Deposits	+ 1	+12	+13	0	+10	+10
Loans	+ 2	+16	+13	+ 1	+14	+12
Investments	+ 1	+ 9	+13	+ 1	+ 9	+ 9
U.S. Govt. securities	+ 1	− 1	0	0	+ 1	+ 1
Other	+ 1	+14	+20	+ 1	+13	+15
Check payments***	+ 8†	+17†	N/A†	N/A	N/A	N/A
PRICES						
Wholesale	....	....	....	0	+ 4	+ 4
Consumer	0‡	+ 3‡	+ 3‡	0	+ 3	+ 3

*Production workers only
**Value of contracts
***Adjusted for seasonal variation
†15 SMSA's
‡Philadelphia

LOCAL CHANGES Standard Metropolitan Statistical Areas*	Manufacturing				Banking			
	Employment		Payrolls		Check Payments**		Total Deposits***	
	Percent change August 1972 from		Percent change August 1972 from		Percent change August 1972 from		Percent change August 1972 from	
	month ago	year ago	month ago	year ago	month ago	year ago	month ago	year ago
Wilmington	0	+ 3	− 6	+11	+15	+13	0	+ 7
Atlantic City	+ 1	+ 3	+ 3	+16	0	+ 6	+ 3	+21
Bridgeton	+ 3	− 1	N/A	N/A	N/A	N/A	0	N/A
Trenton	+ 1	+ 1	+ 6	+15	+27	+19	− 2	+10
Altoona	+ 1	− 2	+ 3	+ 7	+ 2	+ 3	+ 4	+13
Harrisburg	0	− 3	+ 1	+ 8	+12	+19	+ 1	+14
Johnstown	+ 1	+18	+ 4	+43	− 4	+11	+ 2	+ 9
Lancaster	+ 2	+ 2	+ 5	+13	+10	+47	+ 1	+15
Lehigh Valley	+ 5	+ 2	+ 6	+18	− 3	+ 9	+ 1	+13
Philadelphia	+ 1	− 1	+ 3	+ 6	+ 6	+18	+ 1	+12
Reading	+ 4	− 1	+ 6	+11	+ 5	− 8	+ 3	+18
Scranton	+ 2	− 2	+ 3	+ 3	− 5	+10	+ 2	+13
Wilkes-Barre	+ 2	− 6	+ 3	0	+16	+33	+ 3	+31
Williamsport	N/A	N/A	N/A	N/A	+ 9	+12	+ 3	N/A
York	+ 2	+ 2	+ 3	+ 8	− 5	+34	+ 3	+12

*Not restricted to corporate limits of cities but covers areas of one or more counties.
**All commercial banks. Adjusted for seasonal variation.
***Member banks only. Last Wednesday of the month.