

Is it hand-to-mouth idea to speed cap. circn? Risky, etc.

No. The risk is in stretching produ. pds. as far as amassed capl. allows. Then there is no slack.

~~There~~ The ambiguity comes re mineral "reserves".

We are facing shortage in 1973 bcs. of too little reserves, in the true sense. Reserves are something you can call on to use right away. We have "reserves" for many years. Lackings is current supply; and current prices high enough relative to future prices.

So I am not vs. excessive "reserves" as such.

I am vs. stretching produ. pds. of reserves so far into future.

See GRT on how reserves double as cushion.

Using land more efficiently, putting in demand, etc., wd.
create capt. by lowering Σ L.V. Thus, by bldg.-resid.
method, revaluing bldgs. Owners wd. have to replace them
as they deprec. & obsolesce. Thus Δ internal sources of inv
capt., as owners milked capt. from old bldgs.

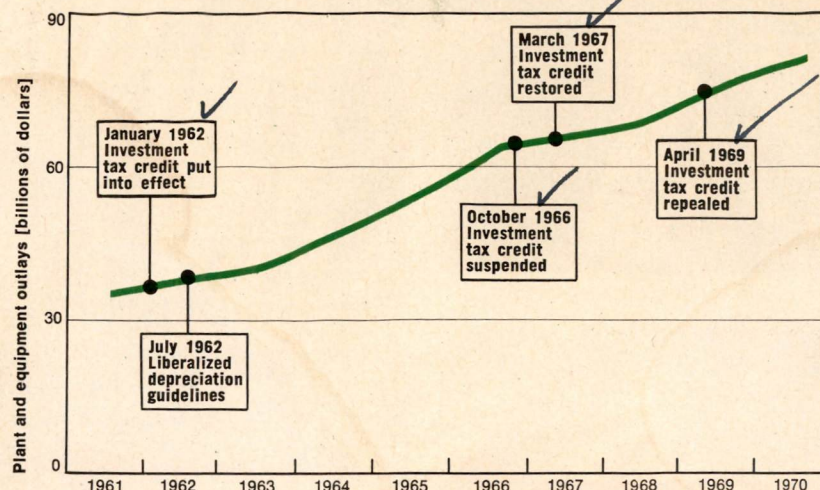
Aspects of the I. U. Hangup.

Early '69, Nixon said repeal 7% inv. tax credit,
to slow down priv. bus. inv. (Congress repealed it.)

Last depm. change (IRS) was in '62.

Chart seems to show ~~inv.~~ "P & E Outlays"
are very responsive to inv. tax credit.

Milestones for the investment boom



Data: Office of Business Economics

ECONOMICS

How to revive capital spending

Treasury is contemplating changes in depreciation to help stimulate investment

Only 18 months ago, President Nixon was telling Congress to repeal the 7% investment tax credit because "this subsidy to business investment no longer has priority over other pressing national needs." Now, with signs that the capital spending boom may be petering out, the Administration appears to be reordering priorities again.

The White House dilemma is to find a way to encourage business investment without undoing restraints it already has clamped on the inflationary spiral. The solution currently being examined by Treasury tax experts is to change the depreciation schedules that companies use to write off the cost of replacing capital goods and equipment from their tax bills.

The idea has several backers in the Treasury, on Capitol Hill, and among members of the task force on business taxation. This commission was set up by Nixon to suggest a new policy on business taxes. The majority recommended changes in depreciation, but because of a disagreement over the outlook for European-style value-added

taxes in this country, the panel's report has been gathering dust in the White House since April.

Action. The Administration clearly thinks that something should be done quickly. The Council of Economic Advisers, in its first "inflation alert," welcomed the softening of equipment prices but stated, "It is logical to attribute this apparent slowdown to the gradual tapering off of the capital boom."

Senator Jacob Javits (R-N.Y.) sounds even more distressed as he talks about the "current recession." An opponent of the Nixon investment credit repeal, Javits last year voted for repeal but only after the Treasury promised a detailed study of the impact of depreciation changes. The study was delivered recently, and now Javits wants to put it to work. "Implementation of revised depreciation schedules now could play an important role in restoring business confidence," he says.

First, though, the Treasury has a lot of questions to answer. Edwin Cohen, Assistant Secretary for Tax Policy, says the department already is on record as favoring investment incentives for business, given the right climate. The problem, he says, is forecasting the economy's weather charts. "We all feel the time will come when we will have to make some recommended changes in depreciation policy," Cohen notes, "but there's the question of timing and the other question of financing these changes."

Solution. Part of the answer may come from data Cohen compiled on a recent three-week tour of Europe to study the potential of value-added taxation. This system, put into effect this year by Common Market nations, taxes the value added to an item at each stage of

production instead of taxing sales or income of individuals on businesses.

Treasury sources say that Cohen's staff could recommend adoption of a value-added tax as a new source of revenue to pay the cost of new incentives for business investment. Some money would even be left over for a plan to share revenues with states and the cities—a pet Nixon project that has been stalled up to now.

But whether the incentives are paid for by a new tax or, as Javits asserts, by the increased tax revenues the incentives themselves would produce, the Treasury still must answer the basic question of how to do it. Says one staff economist: "We are faced for the first time since the last depreciation change in 1962 of who wins and who loses if we change the rules again or come up with something new."

The obvious solution for the Treasury is to ask Congress to reinstate the investment tax credit. In its report to Javits on depreciation changes, the Treasury staff noted that the "extent of revenue losses are variable among the options examined, roughly proportional to their incentive effectiveness." Omitted from the report, however, were statistics to show that the investment credit is more effective than a number of depreciation changes.

Free hand. Many changes in depreciation rules can come without Congressional consent under the Treasury's administrative authority. The broad

Rules could be tailored to fit the needs of specific industries

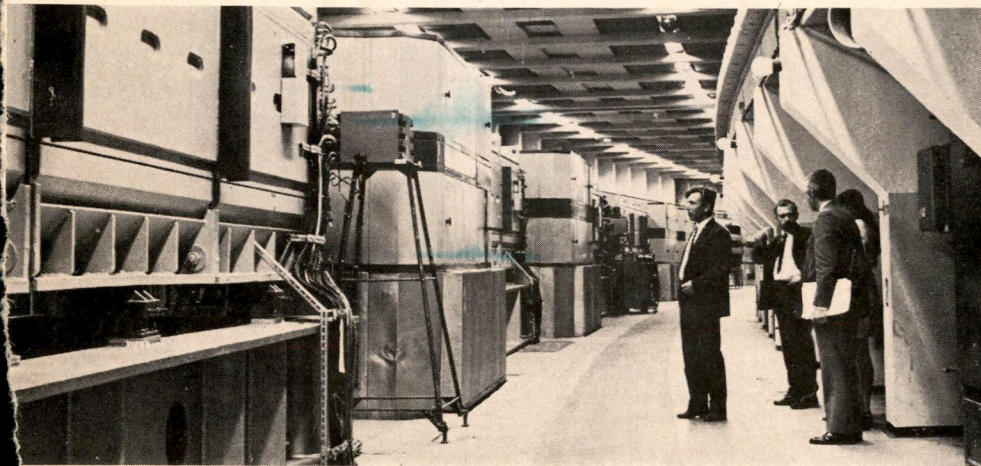
powers of setting up "reasonable" depreciation allowances have been used frequently. The Treasury could shorten the useful life it assigns to various capital goods, enabling companies to recover their investment in the equipment and reinvest the money. Other changes, such as abolition of the deduction of an item's salvage value from the tax write-off, could be tailored to fit the needs of specific industries and thus prevent a broad windfall.

Cohen insists he is under no deadline to come up with a plan. But others say his staff must clear the decks of investment incentives—with or without a value-added tax scheme—so it can deal with a Congress that already has scheduled tax reform hearings in January on estate and gift levies. Further, if Cohen's staff puts together a plan that wins White House approval, Nixon will want to unveil it in his January budget message.

"Come back around Thanksgiving, and I'll be able to tell you better how things are going," a staffer said. "Right now, I don't even have the time to breathe."



French technicians supervise the installation of the Mirabelle "bubble chamber."



Giant Russian accelerator is becoming a focal point for international research.

ready working to expand its capacity. They have initiated:

- A series of international nuclear projects, under which both men and supplementary research equipment are being shipped to Protvino from Europe and the U. S.

- A program to explore whether superconducting magnets, now experimental, can be used to boost its rating.

Cooperation. The closeness of the Russian-European cooperation is illustrated by the projects under way at Protvino. A dozen French scientists there are installing a huge, 6,000-liter bubble chamber called Mirabelle. Another 40 Frenchmen will join them when components of the \$9-million sphere, built at the French Atomic Energy Commissariat's Saclay Research Center outside Paris, are shipped to Russia and assembled there. Mirabelle will remain French property, but will be used by the French and Russians under a five-year agreement.

Soviet-CERN cooperation is even closer. High energy physicists shuttle back and forth between Russia and Switzerland, where CERN has a 28-Gev atom smasher. A formal CERN-Soviet agreement has been in effect for three years. And a dozen CERN scientists at Protvino have launched the second of a series of projects, begun in 1968, to study particles called heavier neutral mesons. Last April, the CERN group took 200 tons of equipment to Protvino,

including an IBM 1800 computer, all to be returned to CERN.

At the same time, 12 Soviet scientists in Geneva are working with highly sophisticated systems that have been developed at CERN—a fast ejector system to switch particles out of the accelerator and radio frequency particle separators. These systems will be shipped to Protvino in about a year for permanent installation there.

Payoff? Soviet ties with CERN could pay off for the Russians if and when a 300-Gev European accelerator is built. Years of argument over financing and locating this proposed atom smasher caused seven of CERN's 13 partners, in-

Superconducting magnets would sharply boost atom smashers' energy

cluding England, to opt out of the project.

Last June, however, project director Dr. John B. Adams, a Briton, urged CERN to adopt a radically new proposal. Under its terms the new accelerator would straddle the Swiss-French border at Meyrin and use a 28-Gev atom smasher that is already there as part of its system.

The Adams plan looks cheaper and quicker than earlier proposals; it could mean only eight years' construction and a cost of \$251-million. Therefore, CERN officials hope that it will lure the



Protvino, the site of the accelerator, is one of the Soviet's "science cities."

nonparticipating countries back into the fold, and they look for a CERN decision by this Christmas on whether to go ahead.

A vital part of the Adams plan is that, initially, the CERN accelerator would get only half the number of magnets it is capable of using. This would give it a rating of only 150 Gev. But space would be left for installation later of much more powerful magnets—cryogenic superconducting magnets.

These magnets are still in the experimental stage but could permit energy levels of 500 Gev to 800 Gev. If they do not work out, the accelerator would get another set of iron-core magnets, for a maximum rating of 300 Gev.

Russia, too. Superconducting magnets, which are under intensive research at Britain's Rutherford High Energy Laboratory, among other places, are at the heart of Soviet research to boost the rating of the Protvino accelerator, too. According to Sulayev, use of superconducting magnets would boost the atom-smasher's energy level three to eight times—that is, to a maximum of more than 600 Gev. "A lot of work remains to be done in this field—but it is a definite possibility," he says.

Officially, the U. S. has made no commitments to cooperate with Protvino. This winter's visit of the American team, headed by Dr. Darrell J. Drickey of the University of California, Los Angeles, is based on an exchange of letters between Dr. Glenn T. Seaborg, chairman of the U. S. Atomic Energy Commission, and A. Petrosyants, chairman of the Soviet State Committee on the Utilization of Atomic Energy. But scientists in both countries are hoping for stronger links. Says Sulayev: "A wider, more formal agreement would be useful." ■

Capl. gets no rents, ~~for~~ even at nat. level, bcs. mobile.

To a small degree, labor does get some rent, ~~for~~ -- in aggr. anal
at nat. level -- bcs. of immigration laws.

So prime nat. concern shd. be to untax & hold capl.

4. Land taxation as an alternative to territorial expansion

Finally, we turn to policy. How best to quicken replacement? In general the answer must lie in raising the costs of time relative to the costs of replacement: in making it costlier for capital to stand still, and cheaper to revolve.

The later Austrians have stressed the Ricardo effect, and the need to lower wage rates and raise interest rates. Formally I must concede and confirm their reasoning, but I question the heavy emphasis on the villainy of workers. Overpricing of organized labor is a problem, I agree, and Wicksell's capital theory can be used to demonstrate a remarkably high elasticity of demand for labor because a small drop in wage rates raises the relative attractiveness of short over long investments, quickens capital turnover, and thereby substitutes labor for capital and land. But if one's ultimate goal is to increase the rewards of human labor there is something unconvincing about insisting that the first step must always be to reduce them. I do not condone Jimmy Hoffa, or even Walter Reuther,

but I think we can leave them in peace for a bit and at least begin breaking the capital-labor deadlock by giving our attention to fiscal policy and the land question.

I also question the Austrians' heavy emphasis on interest rates. On first blush, nothing is more plausible than that high interest rates speed replacement, and so they do in any partial analysis. Here, however, I refer back to the principle that replacement requires a place, and site renewal is slower than capital turnover. High interest rates alone will speed capital replacement, but not site clearing and renewal. Indeed, they will probably retard site renewal by lowering the net rent expectable from sites in their best future use. They also may weaken the impact of whatever land taxes are levied, by raising capitalization rates and lowering the land price which is the tax base.

High interest rates alone, therefore, lead capital to migrate. Capital migration, as we have emphasized, leads to the very thing we are seeking to avoid, a lengthening of the Austrian "period of production." One might truly say that lengthening supply lines in space also lengthens them in time.

Whether the negative effects of migration would outweigh the positive effects of higher interest rates, or simply temper them, I will not try in general to say. I do insist that we can speed turnover more surely by raising the time-cost of holding land, which accelerates both capital replacement and site renewal.

Recall the syndrome summarized earlier. There is at any time an artificial scarcity of land, within the framework of public works, because the market somehow fails to incite landowners and municipalities

to rise to their opportunities. At the same time there is an artificial abundance of land because the public works are overextended. The obvious solution is to use the excess land capacity, rather than add to it; to apply more capital to underused private lands, where it will turn fast, rather than into more public works where it may never turn at all.

Toward that end the most effective policy would be to increase taxes levied on the base of the expectation value of land. Such land taxes help in several ways.

It is tempting simply to say they make it costlier to hold land each year. While that is the upshot of it, the truth is not quite that simple or directly reached. Land taxes are capitalized into lower land prices, and to the extent that they increase tax costs they tend also to lower the base on which interest costs are reckoned. Interest, whether explicit or implicit, on the price of a land title is the major yearly cost of holding title. Land taxes tend to replace the interest cost by a tax cost, rather than to heap the latter on the former. Their impact comes in other ways, therefore, than in a general and simple sense raising the yearly cost of holding land.

One way is that, for many landowners, land taxes replace an implicit charge by an explicit one. Those who borrow to buy land pay explicit interest, but self-financed landowners do not. Now, it is a wonderful thing that the science of economics has given us the notion of an alternative use as a cost, and we all chafe at students and occasional colleagues who don't get the point. But when we observe the behavior of actual landowners, it is hard to avoid the conclusion that many of them don't get the point either. The lag between stimulus and response

in land markets is measured in generations, when there is only the implicit cost of alternative uses to activate the inert.

Like Alexander Hamilton with our public lands, many landholders are content with the rise of their lands' expectation values and collateral values, asking nothing by way of ordinary income that would require that they bestir themselves. They do not hasten to improve the opportunities showered on them by developmental public works, experiment station research, cheaper inputs, or shifts in demand. There are some leaders who do adapt quickly, but those who do not adapt, neither do they perish. They are not even asked to move over. The procession of laggards straggles out over decades.

An explicit tax charge, by contrast, applies leverage to all landowners, just as corporate bondholders apply leverage to equity holders. The higher the land tax, the higher the percentage gain from any given absolute gain such as would follow from bringing land up to its highest and best current use; the higher the percentage loss from holding back. Opportunity alone is enough to bestir the most enterprising landowners; explicit mortgage payments incite many more. Those who are neither enterprising nor in debt, or whose enterprise takes the perverse form of holding land for the rise, need to feel some more universal sort of constraint to scrub or get out of the tub. Land taxes supply the needed leverage.

Related to the leverage effect is what I will call the "in rem effect." Land taxes are levied on a thing (rem), a site, regardless of who owns it. Interest rates on the other hand are in personam, they vary with persons, because borrowers and lenders are always partly

insulated from one another by credit rationing and the high cost and risk of making loans. There is no one "market" rate of interest, but a spectrum, not to mention differences in other important conditions of loans. Slow-moving landholders, by and large, are those on whom interest costs fall lightly, usually in the form of implicit opportunity costs.

The in rem effect occurs when we substitute the in rem tax cost for the in personam interest cost by raising land taxes. Well-financed landholders do find their holding costs increased, because the impersonal tax rate is higher than their personal interest rates. These landholders are the ones who have been dawdling with redundant lands -- who else could afford to?

So the land tax does make it costlier to hold land where it counts, that is for the well-financed. It doesn't affect everyone that way. The weakly financed, indeed, find it cheaper to hold land, as tax capitalization makes land prices fall by a greater percentage than the ratio of the increased tax rate to their high internal or in personam interest rates.

Without land taxes, we rely on implicit interest charges to make landholders feel the full social costs of preempting land from others who need it. Because interest rates are in personam, the well-financed are sheltered from feeling the full yearly cost. The full yearly cost is the marginal net value product of a year's land-time in the hands of some nearby landholder whose holding is overmanned, overequipped, and undersized, and who cannot buy more land because of weak finances.

One might question the probability of weakly financed persons' lands' being "overequipped." They often are. Weak finances handicap one in

buying all assets, but the handicap increases with their durability, and declines with their replacement frequency. Since land never turns over (zero replacement frequency) there is no asset in whose purchase financial strength, or waiting power, is so important. So land generally makes up a smaller proportion of the total assets of the weakly financed. That means that, if they own land at all, they tend to combine it with more capital equipment per standard acre.

The capital of the weakly financed also tends to turn faster because of their low waiting power. That means they do more volume per dollar of capital than do the well-financed, and therefore, a fortiori, more volume per standard acre.

With heavy land taxes, land ceases to be preserved for the financially strong. It becomes something one can hire and pay for from year to year. The competition of the weakly financed, now held in abeyance, is thus brought full to bear on the well-financed. As the latter finally feel the true social cost as a personal cost they are constrained either to use their excess lands better or to release them to someone else who will apply capital heavier and oftener.

Thus land taxes let us employ our capital and labor on less land than now. That in itself shortens mileage requirements of transportation-utility networks, and reduces social requirements for durable social overhead capital. It also promotes closer clustering of land users -- indeed, it is not easy always to separate the two effects. Wherever there is a premium on central location, land taxes will rise toward the center or 100% location and serve as a sort of mandatory injunction that the best lands be used first and heaviest. There will be no doughnut-shaped

cities, no haphazard sprawl and straggle, but a focussing of production, storage, and exchange in centers of maximum mutual accessibility. Social overhead is minimized and capital released for faster-turning uses on private land.

Heavy differential taxation of favored central land should also help relieve much of the political pressure to subsidize transport-utility extensions onto uneconomic peripheral lands. Much of the animus behind such subsidies is the desire in some very crude sense to treat all landowners equally, to spread thin the economic rent that tends to concentrate in a very few centers and a very few hands. When we levy on those concentrated central rents we solve the problem of distributive equity in a simple direct way without needing to waste the nation's capital extending sops to the disinherited. Nor will peripheral landholders seek extramarginal extensions so eagerly when higher land taxes would accompany them.

Finally, land taxes help speed capital turnover by letting us reduce other taxes. The taxes most obviously unfriendly to turnover are turnover taxes. Excise taxes hit capital each time it moves, but leave it in peace when it lies sequestered and still. It is an anomaly in the later Austrians, whom in some ways obviously I follow, that they admire sales taxes, which obviously I do not. To escape sales taxes, capital will tend to move in longer "periods of production."

Income taxes, too, seem biassed against capital rotation, although probably not to the same degree. If I turn my capital slower, my taxable realized income is longer deferred. If I play my cards right I get long-term capital gains treatment. I couple my capital with fewer other

income-receiving factors, including my own labor, and so in a sense reduce the tax liability associated with the capital. I receive tax-free implicit interest income from my durable consumer goods. And so on.

The tax on buildings is harder to evaluate. On balance, I think it tends to slow turnover. Like high interest rates, building taxes cut into the net income imputable to land in its best future use, lower the expectation value of land, and in that way ease the pressure to renew sites.

Building taxes resemble interest rates in many ways. Most of what we said of higher interest rates applies here, also. In any partial analysis, building taxes would seem to discourage adding to present value in order to add to remote future revenues. The tax hits the added value once a year until it is finally recouped. In that way the tax discourages slow turnover.

But building taxes also slow down site renewal. Therefore they tend to raise the amount by which capital replacement frequency outspeeds site renewal frequency. They foster longevity without durability. Thus they leave slums uncleared, accelerate capital migration, worsen urban sprawl, extend the slow-turning social overhead sector, and so on.

Building taxes also seem calculated to discourage new capital formation, in which regard they are not entirely parallel to higher interest rates. They also discourage quality, as distinct from durability, in building, and that hardly seems salutary.

Building taxes do seem less odious than excise taxes, which are clearly the worst of the lot. With limited short-run choices, therefore, in the heat of politics, there is much to be said for the general property tax which penalizes capital for standing still rather than for moving.

But there is more to be said for a simple tax on the expectation value of land, exempting capital altogether.

Severance taxes fall roughly in the same class with excises. They tend to defer the extraction of geological funds, and extend the time during which the lower layers are locked in sterile cold storage, and they do it without any compensating stimulus to private exploration.

Severance taxes seem generally premised on the revived hyper-Malthusian philosophy that is only now beginning to run its course in the United States. The recent work by Landsberg, Fischman, and Fisher will go far to help lay Malthus to rest for our generation, and it would seem time to reverse the shift away from ad valorem to severance taxes on geological funds.

There is a conservationist role for severance taxes, I believe, in the late years of mines, to preclude disorderly looting and abandonment. But there is some danger of our forgetting the constructive role of ad valorem taxes in the early years of mines, to accelerate the fructification of a sterile stockpile of potential value. Geological funds are the material vehicle which labor requires to create capital. There are adequate market incentives to reserve much of them for the future without adding a fiscal bias to the restrictive bias of cartels, conferences, and commissions we already have.