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Does Our Tax System Favor Investment in High Tech or Smokestack Industries?

New investment in high tech industries is typically taxed at the same effective tax rate as new investment in other industries, according to NBER Research Associate **Don Fullerton** and **Andrew B. Lyon.** Although tax rates vary widely for different types of investments and different industries, there are no systematic differences in tax rates between high tech industries and all other industries, at least for profitable firms with similar debt–equity ratios. These are the conclusions of *NBER Working Paper No. 1600*, **Does the Tax System Favor Investment in High Tech or Smokestack Industries?**

Under current law, new investments face a variety of tax rates, including corporate, personal, and property taxes over the life of the new investment. For example, new equipment such as furniture, engines and turbines, ships, and railroad equipment are taxed at low rates or not at all. On the other hand, new investment in commercial, industrial, and agricultural structures face tax rates of 30 to 40 percent. Because industries invest in a variety of depreciable assets, they pay different tax rates on their typical new investment.

Fullerton and Lyon consider both federal and state corporate income taxes and state and local property taxes in calculating the tax rate on new investments in 34 different types of depreciable assets. Using Department of Commerce data on type of investment by industry, they then estimate effective marginal tax rates on new investment for 73 industries. They find that profitable high tech industries with identical debt–equity ratios do not pay any more or less, on average, than other industries. This basic conclusion is not altered by changes in the inflation rate or depreciation rates.

Effective tax rates on new investments range from 7.4 percent for the motor vehicles industry to 24 percent for the petroleum refining industry. Among the seven high tech industries that the authors examine, tax rates vary from 10 percent for aircraft and electronic components to 16 percent for scientific instruments and pharmaceuticals. The other high tech industries—radio, TV, and communications equipment; optical equipment; and office and computing equipment—have tax rates on new investments of 12 to 13 percent. The average tax rate for the seven high tech industries is 13 percent, only one percentage point below the average tax rate for other industries.

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Fullerton and Lyon also calculate tax rates by industry under the tax laws passed in 1980, 1981, and 1982. They find that tax rates under 1980 tax law were 23 percent for a typical industry. These would have been reduced to a negative 7 percent by the 1981 tax changes but remained at 14 percent under 1982 law. Under all three tax laws, there was little or no difference in tax rates faced by high tech and by other industries.

The Dollar and the Policy Mix

Since 1980, the Reagan administration has been pursuing a previously untried policy of fiscal expansion and monetary contraction. According to NBER Research Associate **Jeffrey D. Sachs,** the result has been lower inflation at a smaller cost in output (or a lower "sacrifice ratio") than a more conventional policy mix would have entailed. However, Sachs predicts in **The Dollar and the Policy Mix: 1985** (*NBER Working Paper No. 1636*) that the extra gains against inflation will be lost, or more than lost, in the future. This policy mix, he finds, reduces the sacrifice ratio in the short run but increases it in the long run.

Sachs focuses on the effects of the mix of monetary and fiscal policies on the value of the dollar and thus on imported inflation. (He does not suggest that the policy mix was designed with the effects on exchange rates in mind; the notion of inexpensive disinflation through currency appreciation was rarely if ever mentioned in 1981 as an argument for the Reagan tax cuts.) He shows, however, that the fiscal–monetary policy mix can plausibly explain the rise of the dollar. Moreover, Sachs finds that the huge appreciation of the dollar since 1980 reduced the U.S. inflation rate by somewhere between 1.9 and 2.8 percentage points in 1984.

Given the strong likelihood of a coming depreciation of the dollar, those disinflation gains will likely be lost in the future, Sachs explains. Because of the foreign debt that the United States has accumulated (and will continue to accumulate in the coming years), the eventual decline of the dollar might well exceed its appreciation since 1980. If that happens, then the resulting increase in inflation will exceed the reduction in the inflation rate that the appreciation of the dollar has yielded thus far.

However, Sachs points out that choosing a policy mix that produces a strong dollar in the short run in exchange for a weaker dollar in the long run may actually be optimal. This is particularly so if inflation is high at the outset and has rapidly rising marginal social costs: the social benefit of reducing inflation from, say, 10 to 9 percent right away (through an appreciation of the dollar) may be greater than the social cost of inflation rising from 2 to 3 percent a few years later, when the dollar weakens.

While this policy mix may be desirable from an individual country's perspective, Sachs notes, it can be counterproductive globally. The nation pursuing the policy achieves its extra gains against inflation by exporting a portion of its inflation to other nations; the policy mix does not reduce inflation worldwide. Worse still, if many countries try to reduce inflation simultaneously by pushing up their exchange rates, the policy mix can produce undesirably high world interest rates or too rapid growth in public indebtedness without achieving disinflation gains for any country.

> "A...policy of fiscal expansion and monetary contraction...reduces the sacrifice ratio in the short run but increases it in the long run."

Optimal policy now involves high but steadily falling budget deficits, Sachs explains, not the path of rising deficits that appears possible. If deficits remain high, the United States will experience an enormous increase in foreign debts. Domestic consumption eventually will have to fall to make room for an increase in exports that will be needed to service the debts.

If the dollar drops sharply, domestic inflation could increase significantly. Sachs's simulations indicate that even an optimal response to a tumbling dollar would push the economy into a mild recession, with an output gap of 1 percent or more and inflation 1 percent higher on average for the next four years.

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Hospital Costs under Different Reimbursement Systems

Reimbursing hospitals for patient care on a per-case rather than a per-service basis does not generally appear to lower hospital costs, according to a recent NBER study (*NBER Working Paper No. 1633*) by **David S. Salkever, Donald M. Steinwachs,** and **Agnes Rupp.** Only when very stringent limits are imposed on per-case payments do costs go down, the authors conclude in **Hospital Cost and Efficiency under Per-Service and Per-Case Payment in Maryland: A Tale of the Carrot and the Stick.**

These conclusions are based on the experience of Maryland hospitals between 1977 and 1981. Maryland was the first state to adopt the per-case payment system in the hope that it would reduce hospital costs through shorter inpatient stays and more conservative use of ancillary services (such as x-rays and laboratory tests). Between 1976 and 1981, 22 of Maryland's 46 acute care hospitals were reimbursed on a per-case basis (the others continued on the per-service system). Three of those 22 hospitals also had a cap, or ceiling, imposed on their reimbursements by the state in an attempt to lower those hospitals' costs, which had been higher than average.

The authors were specifically interested in how the per-case system might influence total inpatient costs and average cost per case. They found that hospitals paid by the case did not have significantly lower costs than those hospitals with similar types of patients but paid for each service performed.

Costs *were* lower when a cap was imposed on reimbursements, mostly because of lower routine costs (such as nursing services). Also, nonteaching hospitals had lower costs under the per-case system, but the saving (mainly in the area of ancillary services) declined over time.

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The authors found that the risk of losses for those hospitals facing reimbursement caps was a more powerful inducement to cost control than were the built-in incentives of the per-case system. Reimbursement ceilings had a stronger negative impact on the cost of routine care than on the cost of ancillary services. However, the observed negative effect of such caps on cost per case was offset by increased admissions, so that the effect of caps on *total* inpatient costs was much weaker.

The authors conclude that "impacts on cost per case were significant only for those hospitals in which the per-case payment level was set in a very stringent manner." They caution, however, that Maryland's per-service system is fairly stringent compared with other states' systems, so that pressures for cost control already had been in place in Maryland, and reducing costs further would have been relatively difficult. Moreover, the per-case system was in place for only about three years under their study; cost savings may grow in later years.

The Earnings of Immigrants

Newly arrived immigrants to the United States earned less in 1980, relative to other workers, than newly arrived immigrants in 1970, according to a study by NBER Research Associate **George J. Borjas.** This may have been the result of increased illegal immigration or of the greater emphasis on family ties rather than job skills in admitting legal immigrants.

In *NBER Working Paper No. 1515,* **The Impact of Assimilation on the Earnings of Immigrants: A Reexamination of the Evidence,** Borjas also finds that the earnings of immigrants grow relatively slowly after they arrive in the United States. Previous studies had found that immigrants' earnings improved rapidly and eventually surpassed the earnings of similar native workers after a few years. However, by measuring the growth of earnings experienced by specific groups of immigrants, Borjas concludes that many had little or no increase in their real earnings between 1970 and 1980.

Borjas analyzes data from the 1970 and 1980 Censuses on the earnings of six groups of immigrant and native-born men: Mexicans, Cubans, other Hispanics, Asians, whites (not Hispanic), and blacks (not Hispanic). To measure change in the productivity of immigrant groups over time, he compares the 1969 earnings of white men who arrived in the United States between 1965 and 1969 with the 1979 earnings of white men who arrived between 1975 and 1979. The earlier group had relative average earnings that were 6.4 percent higher than the later group. The earnings of the other ethnic groups declined even further in that decade. For blacks, the difference between earlier and later groups was 28 percent, for Asians 9.2 percent, Mexicans 15 percent, Cubans 26 percent, and other Hispanics 20 percent.

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Borjas extends this analysis and finds that earlier arrivals earn more at every point in their careers in the United States than more recent arrivals. These results suggest that there was substantial decline in the productivity of immigrants between the 1960s and the 1970s.

Borjas also finds that native workers generally

earn more than immigrants with the same level of education and experience. Among Asian men in 1980, for example, natives earned 41 percent more than similar immigrants who arrived during the previous five years, 27 percent more than immigrants who came here between 1970 and 1974, and 12 percent more than immigrants who arrived between 1965 and 1970.

Some groups of immigrants, however, earn more than similar natives. Among whites in 1980, for example, natives earned 9 percent less than immigrants who arrived between 1950 and 1960.

Finally, Borjas finds that the difference in wage rates between natives and immigrants narrows over time. For instance, Asians who immigrated between 1965 and 1969 increased their earnings relative to Asian natives by 21 percent between 1969 and 1979. Mexican men who immigrated in the late 1960s increased their earnings relative to Mexican natives by 19 percent. For white immigrants, the increase relative to white natives was 8.9 percent. However, black and Cuban immigrants actually suffered a decline in their earnings relative to black and Cuban natives between 1969 and 1979.

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