of COMMODITIES, the NEW INTERNATIONAL ECONOMIC ORDER (NIEO) or Marxian dependency and EXPLOITATION models (see MARXIAN ECONOMICS).

With regard to the physical issues, since (given the definition above) the production of almost every physical commodity requires raw material inputs to some degree, their importance can not be overstated. Here, concern centres on the potential exhaustion of certain specific raw materials. What is relevant is how crucial they are to a given standard of living. It is here that consideration must be given to efficiency of use; substitutability of capital, labour, energy and aggregate raw material inputs, and in addition substitutability of materials.

The cost share of raw materials in the total cost or GROSS NATIONAL PRODUCT (GNP) is not a good measure of the importance of such inputs. A large share may well be the result of low marginal productivity with abundant use – for example, raw material wastage in the former Soviet Union. Conversely, a small share may well be consistent with a high marginal productivity with resulting low utilization.

Probably the most reliable measure of the change in relative importance and/or scarcity of raw material inputs is their real (relative) prices. These reflect the true marginal productivity. To the extent that there are positive or negative EXTERNALITIES associated with the use of raw material inputs that are not reflected in the market prices, the market prices should be adjusted downwards or upwards as the case may be. Likewise, non-priced common property resources can become relatively more or less important as their relative scarcity values change. Relative importance thus depends on the production technology not only of market commodities, but also of non-market commodities and of their interactions.

Regardless of one's views on the importance of raw materials, countries have certainly acted as if they were vital. From a national security perspective, liberals contend that FREE TRADE is the best (certainly the most efficient) means of securing adequate supplies; a side-benefit of trade is that increased INTERDEPENDENCE will help assure peace, because the trading nations will have a stake in maintaining stable flows of raw materials and other traded goods. By contrast, realists (see REALISM) maintain that economic interdependence not only fails to promote peace, but in fact heightens the likelihood of war. States concerned about security will dislike dependence, since it means that crucial imported goods could be cut off during a crisis. This problem is particularly acute for imports like oil and raw materials: while they may be only a small percentage of the total import bill, without them most modern economies would collapse. Consequently, states dependent on others for vital goods have an increased incentive to go to war to assure themselves of continued access to their supply.

See also:

Prebisch–Singer hypothesis

Further reading

Copeland, D.C. (1996) 'Economic interdependence and war: A theory of trade expectations', *International Security* 20, 4: 5–37. Looks at raw material trade within the context of the debate between liberals and realists.

ROBERT LOONEY

'Reaganomics'

With the United States suffering from low growth and STAGFLATION (simultaneous increases in INFLATION and unemployment), the Reagan administration began its time in office with promises of a supply-side revolution. Lower inflation, lower taxes and a smaller government were going to boost productivity and growth. Relying on the Laffer Curve, cuts in taxes were going to generate increased revenues and help balance the budget.

The specifics of this new economic policy agenda for the country were dubbed 'Reaga-

nomics' and comprised four key elements: (1) a restrictive monetary policy designed to stabilize the value of the dollar and end runaway inflation; (2) a 25 per cent across-the-board tax cut (enacted in the Economic Recovery Tax Act of 1981) designed to spur savings, investment, work and economic efficiency; (3) a promise to increase defence expenditure while balancing the budget through domestic spending restraint, and (4) an agenda to roll back government regulation.

For this far-reaching economic programme to fully succeed, delicate balancing was required. Monetary policy had to be tightened enough to bring down inflation, but not so much as to create severe recession. Taxes had to be cut, but without raising the spectre of vast deficits that would scare the Federal Reserve Board into an excessively restrictive credit policy. Defence had to be expanded, but not so rapidly as to offset the reductions in civilian spending. Regulation had to be cut enough to provide a significant boost to productivity, but without eliminating public support for the reforms.

The rationale of 'Reaganomics' is contained in the theories of SUPPLY-SIDE ECONOMICS. The best way to examine 'Reaganomics' is to simply look at the record: What was done and why? What succeeded? What failed?

With regard to monetary policies, the decision to fight inflation through monetary contraction had actually been taken in October 1979, more than a year before the election. Nevertheless, there had been considerable uncertainty during 1980 as to the Federal Reserve's resolve. The election of the new administration was important in creating credibility for the tight monetary policy (see MONETARY POLICIES). By 1983, inflation was down to 4 per cent (from double digits in the late 1970s), the recession was over and the economy was growing. Deficits were swollen and monetary policy was no longer center stage, but it still played an important role. The Federal Reserve, faced with high fiscal deficits, decided to maintain high real INTEREST RATES and in the process to accept high and fluctuating growth rates in the monetary aggregates. Real interest rates were, until the end of 1985, high and roughly constant, before declining.

In the area of FISCAL POLICY, tax cuts received most of the attention. These were put in place by the Economic Recovery Act (or less formally Kemp–Roth) of August 1981. Kemp–Roth had three main components:

1. A cut in personal taxes, coming from decreases in income tax rates phased over three years and from tax breaks on savings. Income tax rates were decreased in three instalments (5 per cent, 10 per cent and 8 per cent) over the following three fiscal years. Other tax breaks were targeted at savings. Of those, the most significant was a $2,000 income deduction per worker for contributions to an individual retirement account (IRA).
2. A cut in business taxes. The main element was an acceleration of depreciation for tax purposes. Assets were grouped in four categories and given write-off periods of three, five, ten and fifteen years. For most assets, this implied much faster write-off and larger depreciation deductions. The rate of investment tax credit was also increased. To a large extent, however, these tax breaks were offset by the increase in real interest rates stemming from the tight monetary policy.
3. The indexation of tax brackets and minimum taxable income, the final part, was delayed until 1985. To a large extent, the decrease in inflation made indexation less important.

After Kemp–Roth there was little fiscal policy action until 1986. Some of the decrease in corporate taxation was undone by the 1982 Tax Equity and Fiscal Responsibility Act (TEFRA). Minor adjustments were made in the Deficit Reduction Act of 1984. These were quantitatively much less important.

From 1981 to 1986, the US economy went through three phases. The first was dominated by monetary contraction, the second by fiscal expansion and the third by anticipations of changes in the money–fiscal mix. Until 1982,

the macro-economy was dominated by the effects of monetary policy. Deficits were still not large and the main development was the increase in short real rates of interest. Once financial markets believed that the Federal Reserve was committed to disinflation and thus to high real rates for some time, long real rates also increased.

By 1982, the increase in real interest rates had led to a sharp recession with unemployment reaching nearly 11 per cent by the end of the year. As the increase in real interest rates was not fully matched by foreign central banks, the real actual and expected interest rate differential also led to a sharp dollar appreciation. The recession and the dollar appreciation both contributed to the decrease in inflation from 9.7 per cent in 1981 to 3.8 per cent by 1983.

By the end of 1982, budget deficits had become the dominant macro-economic force. Large deficits were strongly increasing aggregate demand and putting pressure on interest rates. The policy of the Federal Reserve was to only partially accommodate; the policy of foreign central banks was to only partially respond to US interest rates. The result was an increase in US interest rates, a smaller increase in foreign interest rates and further dollar appreciation.

By 1985, it had become clear that a shift in the money–fiscal mix was required and might indeed be forthcoming. Anticipation of a decrease in deficits and the assumption that the Federal Reserve would again partly accommodate any fiscal contraction, this time by a decrease in interest rates, led to a dollar depreciation starting in early 1985. By 1987, signs of an actual shift in the mix became more apparent, with the Gramm–Rudman deficit reduction law pointing towards reduced fiscal deficits.

Freeing the forces of the supply side was the ultimate goal of the Reagan programme. Behind the short-term developments noted above, did shifts in savings, labour supply, investment and productivity growth occur in response to those changes? The 1981 and 1986 tax changes altered the incentives to save and to supply labour. By decreasing tax rates across the board in 1981 and by reducing top marginal tax rates in 1986, the after-tax return to both savings and labour supply was increased. The 1981 tax changes further increased the return to retirement savings; these initial tax breaks were partially, but not fully, offset by the 1986 tax reform.

It is clear that the retirement plans for which contributions were partly tax deductible have been very successful. The amount contributed to these plans in 1985 was equal to half of personal savings. The aggregate evidence on savings is, however, much less impressive with savings (no matter how defined) not increasing in the 1980s.

Effects on the labour supply were positive but not very large, with one estimate suggesting that the labour supply of married men increased by 0.4 per cent as a result of the 1981 tax changes and another 0.9 per cent as a result of the 1986 tax reform. The figures for married women were slightly higher.

Taxation of business investment was sharply reduced in 1981 and investment was strong during the recovery, despite higher rates of interest. On the other hand, there is evidence that most of the investment during this period took place in sectors not particularly affected by tax reductions.

Data regarding the effect of 'Reaganomics' on productivity is vague. In actuality, labour productivity growth in the non-farm business sector, which had decreased from an average of 2.3 per cent in the 1960s to 1.3 per cent in the 1970s remained at a low 1.2 per cent over the 1980–5 period. This poor performance comes largely from poor productivity growth in the service sector, which experienced little labour productivity improvement in the 1980s.

As the discussion above suggests, assessing 'Reaganomics' is difficult. It is not clear whether its failures were the result of poor policy design or bad luck. What is clear is the fact of painful and often undesired interactions between the individual parts of the Reagan programme, which resulted in disparate results. Monetary restraint was the key to unwinding inflation, as well as precipitating sharp recession. Reces-

sion, in turn, delayed the beneficial effects of the tax cuts on investment and pushed the budget deficit to unprecedented heights. Ironically, it was the enactment of tax cuts unmatched by spending cuts that forced the Federal Reserve into a tighter monetary policy. The subsequent recession caused a serious budgetary imbalance.

The positive effects of 'Reaganomics' are hard to quantify and appear largely to have been changes in attitudes. Although it is speculative, many commentators have credited 'Reaganomics' with a new sense of realism that became evident in business and personal decision-making in the late 1980s. At that time, labour and management appear to have become more cost-conscious. In the public sector, the era of big dams and expensive waterpower projects drew to a close. The reduced flow of grants-in-aid from the federal government led to a change in the expectations of state and local officials, who began once again to look primarily to their own resources.

The legacy of 'Reaganomics' is a fascinating mixture: lower inflation and higher deficits; lower taxes and higher levels of government spending; less unemployment and bigger trade deficits; fewer strikes and more government jobs; reduced economic regulation and expanded social regulation; the deepest recession in half a century and the longest peacetime recovery ever.

A few numerical comparisons help make the point. Real GROSS DOMESTIC PRODUCT (GDP) declined by 0.5 per cent in 1980 (President Carter's last year in office) and rose 3.9 per cent in 1988 (President Reagan's last year). The consumer price index (CPI) rose 13.5 per cent in 1980 and by 4.1 per cent in 1988. The prime (interest) rate dropped from 15 per cent in 1980 to 9 per cent in 1988. Real median family income rose from $34,200 in 1980 to $37,000 in 1988. The unemployment rate declined from 7.0 per cent in 1980 to 5.4 per cent in 1988. On the other hand, the budget deficit rose from $74 billion in 1980 to $155 billion in 1988, while the trade deficit rose from $15 billion to $129 billion during the same period. And, contrary to widespread belief, the portion of the population below the poverty line was 13 per cent in both years. One more set of statistics: real national wealth rose from $11.9 trillion in 1980 to $14.2 trillion in 1988.

Even these statistics are not conclusive, judging from the partisan political discourse that still occurs in Washington. Republicans look at these numbers and describe the 1980s as an era of prosperity – a decade when the United States reasserted its economic and military might. Democrats, on the other hand, see the Reagan presidency as a period of record budget deficits, economic decline and widening income gaps between rich and poor. To them, the 1980s was a decade of 'discredited supply-side economics'.

IDEOLOGY also prevents a dispassionate assessment of 'Reaganomics'. The political Left tends to argue that the beneficial economic changes in the 1980s – the conquering of inflation, the surge in employment and the sustained economic expansion – had little to do with Reagan's policies, whereas any negative change – the explosion in the budget deficit, the savings and loan crisis, and so forth – was a direct consequence of the failed theology of 'Reaganomics'. Similarly, the Right argues that only the triumphs of Reagan's record deserve attention and that any problems (such as the big budget deficits) were either inconsequential or the fault of the Democrats in Congress.

Further reading

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