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Spending on Lotteries Booms

Between 1975 and 1988, per capita expenditures on state lotteries increased at an inflation-adjusted annual rate of 13 percent, according to **Charles Clotfelter** and **Philip Cook**. In **The Demand for Lottery Products** (*NBER Working Paper No. 2928*), Clotfelter and Cook point out that the increase occurred in states that already had lotteries and therefore was not caused by more states adopting lotteries over this period.

In 1986 the average adult living in a state with lotteries spent slightly over \$110 on lottery tickets. About half of adults played the lottery during the course of the year, and one-third played during the typical week. However, lottery betting is heavily concentrated among a small percentage of the population. Five percent of adults accounted for half of the total wagered, spending an average of about \$1100 annually.

Who bets? According to the authors, betting is most frequent and heaviest among males, Hispanics, blacks, the middle-aged, Catholics, laborers, and those with less than a college degree. Clotfelter and Cook find that in a sample of Maryland residents, blacks spent about \$235 more in 1984 than whites with similar age, income, and education. Participation rates for Catholics are over half again as large as for Protestants. Participation rates for those with less than a high school education are over half again as large as for those with a college degree.

How about the often-made claim that lotteries are played disproportionately by the poor? According to Clotfelter and Cook, "there is little systematic

relationship between income and the amount spent on lottery play." Lottery spending as a percentage of household income declines steadily as income rises. In a 1986 California survey, respondents in the lowest income category reported spending 2 percent of their income on lottery tickets, while respondents with incomes over \$40,000 spent less than 0.5 percent on the lottery.

Some of the authors' conclusions are relevant for state officials seeking to increase net lottery revenues. Most striking is their evidence that the introduction of a new game, such as lotto, does not undercut sales of existing games. They also find no evidence for the often-heard claim that lottery sales inevitably will decline.

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Clotfelter and Cook also show that lotto expenditures per capita are driven by the size of the jackpot and are quite insensitive to the probability of winning. Thus states with a small population are at a disadvantage relative to large states and can offset this disadvantage by joining a multistate lotto consortium.

This work is part of a larger NBER study of lotteries by Clotfelter and Cook that will be published as an NBER book at the end of 1989. DRH

Shared Housing Increases for All Income Groups in Cities

In the last decade, the poor in major urban areas of the United States increasingly have shared housing. Adult children with children of their own still live in their parents' households, and poor families double up to share the rent or mortgage. However, these same housing trends have begun to appear among the "near-poor" and higher-income families, although to a lesser degree, according to NBER researchers **Rebecca Blank** and **Harvey Rosen**. This suggests that the changes in housing situations among poor families are not just the result of lack of income but rather reflect social, demographic, and cultural trends. Indeed, changes in household income, city economic conditions, and government housing programs explain only a small part of the recent trends in urban housing.

In this study, Blank and Rosen define a *family* as a married couple, or single parent, and all of their unmarried, childless children (of any age) who live with them. A *household* is all family units living together in a single dwelling.

In **Recent Trends in Housing Conditions among the Urban Poor** (*NBER Working Paper No. 2886*), Blank and Rosen estimate that from 1977 to 1987, only an average 47 percent of poor urban family heads also headed a household—that is, lived in a dwelling that they either owned or rented. In 1987, the U.S. government's poverty line was about \$11,600 for a family of four. Among the near-poor—that is, families with incomes of one to two times the poverty line—an average of 57 percent of family heads also headed their own household. For families with incomes of more than twice the poverty line, almost 71 percent headed a household.

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Not surprisingly, the percentage of children who head their own family unit but live in their parents' household is much higher among the poor than among higher-income households: 5 percent on average over the past decade for the poor, versus 0.3 percent for the higher-income group. For the poor, the proportion living with parents has increased almost seven percentage points between 1977 and 1987. However, Blank and Rosen find little evidence that decreased housing independence and related trends among the poor are associated with changes in hous-

ing markets and in the economic conditions facing urban residents.

While more family units are living together, overall household size has not increased significantly between 1977 and 1987, because the size of family units has decreased. Even among upper-income households, the number of family units per household is going up while the number of persons per household has fallen significantly since 1977.

For the poor, homeownership has dropped by more than 3 percent over the last 11 years. On average from 1977–87, 30 percent of urban poor families lived in housing they owned, compared to 44 percent of near-poor families and 63 percent of higher-income families. Blank and Rosen note that while all owner-occupied housing is not necessarily good, nor is all rental housing necessarily bad, self-ownership is often considered a signal of better housing quality.

Blank and Rosen use data from the annual Current Population Survey of the Census Bureau on eight major cities: New York, Los Angeles, Chicago, Philadelphia, Detroit, Washington, Houston, and Boston. The housing conditions vary considerably between cities. For instance, Philadelphia's homeownership rate is almost three times that of New York City. Clearly these variations among cities are related to historical differences in tastes, demographics, and housing markets, not year-to-year changes in economic or demographic variables. DRF

The Crash of '87 Was Unique in Many Ways

The October 1987 stock market crash was unusual in many ways. Following the large drop in prices on October 19, stock volatility jumped dramatically, but after a few months, volatility returned to lower, more normal levels.

In **Stock Volatility and the Crash of '87** (*NBER Working Paper No. 2954*), NBER Research Associate **G. William Schwert** investigates the swings in stock prices following October 19. Immediately after the crash, he finds, volatility was extremely high. For example, the Standard & Poors 500 index rose 5.3 percent on October 20 and 9.1 percent on October 21 but fell 8.2 percent on October 26.

Despite these large daily price changes, volatility was *lower* than would have been predicted by historical experience. Schwert compares the 1987 crash with daily market returns from 1885–1987, a sample of more than 28,000 trading days. He finds that volatility usually rises quickly after a large drop in prices. The 1987 crash was unusual because volatility was

relatively low before October 19, and it fell back to normal levels faster than was true for previous crashes. By November 30, six weeks after the market's collapse, daily ups and downs were much less extreme than they had been following previous large drops in prices.

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Schwert also uses prices of options and futures on the S & P index to study stock volatility. Prices of close-to-the-money call options on the S & P 500 and on Britain's Financial Times Stock Exchange Portfolio first showed expectations of unusual volatility on October 19. In the days immediately after the crash, option price movements showed that investors expected stock prices to be three times more volatile on average than they had been before the crash. The options market took longer to return to normal than the stock market: option prices show that expectations of high stock volatility persisted until about March 1988, more than four months after the crash.

Daily spreads between high and low prices for futures contracts on the S & P 500 index show that futures price volatility was similar to stock volatility, except for the days around October 19. The increase in estimated volatility in the futures market, as in the stock market, was much larger than what was suggested by prices in the options market. By January 1988, however, measures of stock volatility from all three markets were similar. All three markets show that stock volatility had returned to pre-crash levels between January and March 1988. The rapid decline in stock price volatility evident in all three markets may offer some clues as to why the October 19 crash did not lead to a more general economic downturn.

ML

A Warning to Populists: Noble Aims Aren't Enough

From Argentina's Juan Peron in the late 1940s to Brazil's Jose Sarney in the mid-1980s, Latin American leaders repeatedly have adopted populist economic policies as antidotes to stagnation and poverty. After impressive early successes, however, these policies ultimately have ended in catastrophe, with particularly disastrous consequences for their intended beneficiaries: the urban working poor.

In **Social Conflict and Populist Policies in Latin America** (NBER Working Paper No. 2897), NBER Research Associate **Jeffrey Sachs** describes the classic example of populism, the Peronist regime in Argentina during 1946–9. Monetary and fiscal policies were highly expansionary. With a fixed exchange rate, the currency soon became highly overvalued. Real wages grew by 62 percent during the three-year period, and the share of wage income in GNP grew from 39 percent in 1946 to 46 percent in 1949.

The end of the boom began in 1948, when agricultural production started to drop and foreign exchange reserves fell from \$1.11 billion in 1946 to \$258 million in 1948. Inflation accelerated and GNP fell by 4.5 percent in 1949. Eventually Peron was ousted by a military coup.

In a related study, NBER Research Associates **Rudiger Dornbusch** and **Sebastian Edwards** analyze the experiences of Chile under Salvador Allende from 1970–3 and Peru under Alan Garcia since 1985. In **Macroeconomic Populism in Latin America** (NBER Working Paper 2986), Dornbusch and Edwards acknowledge that external forces contributed to both economies' crises. Nonetheless, the authors blame unsustainable domestic policies for “the extreme vulnerability that makes destabilization possible.” Both regimes espoused an approach that “emphasizes growth and income redistribution and deemphasizes the risks of inflation and deficit finance, external constraints, and the reaction of economic agents to aggressive nonmarket policies,” they write.

“Extreme income inequality produces intense political pressures to raise the incomes of the poorest groups. In pursuit of that goal, governments embark on overly expansionary macroeconomic programs that ultimately lead to high inflation and severe balance-of-payments crises.”

The episodes in Chile and Peru have much in common from initial conditions and immediate benefits to eventual collapse. Prior to the landslide victories of Allende in 1970 and Garcia in 1985, both Chile and Peru had suffered years of fiscal retrenchment, sluggish growth, and falling living standards. For example, in Peru under an International Monetary Fund stabilization program in 1982 and 1983, real per capita income sank 16 percent and inflation doubled to 116 percent.

The short-run aims of the Allende and Garcia administrations were to spur economic recovery, rein in inflation, and lift the living standards of the poorest workers. To these ends, both regimes greatly boosted government spending, granting pay hikes

to civil servants and pouring funds into public works, and simultaneously imposed broad price controls. All the while, policymakers explicitly rejected the conservative economic paradigm, maintaining that idle capacity and existing reserves of foreign exchange provided sufficient leeway for noninflationary growth. Shortly after taking office, Garcia announced that Peru would limit debt service payments to foreign creditors to 10 percent of exports.

Like Allende's Unidad Popular, Garcia's "Growth with Redistribution" program was wildly successful at first. In 1986, GDP grew 9.5 percent, inflation fell by more than half, real wages soared 14 percent, and business investment jumped 24 percent. But by mid-1987, serious strains appeared. A swelling budget deficit brought inflation roaring back. Dwindling foreign exchange reserves and rampant capital flight forced a series of devaluations. Real bank credit available to private businesses plummeted and the black market grew explosively.

As of early 1989, the Peruvian economy, mired in an escalating foreign exchange crisis, faced "a gradual but accelerating disintegration, . . ." write Dornbusch and Edwards. With inflation running over 6000 percent, real wages have fallen well below their 1985 level, and political violence is spreading. "Peruvian policymakers do not like to hear this, but the most likely course of Peru is that taken by Chile in the period from September 1970 to September 1973," argue Dornbusch and Edwards. The three-year Chilean experiment, they remind readers, ended when the armed forces staged a coup: "This was the stage where frightful real wage cutting took over."

When, then, do governments with noble intentions gamble on such risky policies? Sachs contends that extreme income inequality produces intense political pressures to raise the incomes of the poorest groups. In pursuit of that goal, governments embark on overly

expansionary macroeconomic programs that ultimately lead to high inflation and severe balance-of-payments crises. According to Sachs, "This particular type of Latin American policymaking . . . has been repeated so often, and with such common characteristics, that it plainly reveals linkages from social conflict to poor economic performance."

Sachs observes that income inequality is far more extreme in Latin America than in the rest of the developing world. In Peru, for example, 1 percent of the population claims nearly one-half of the nation's income. Further, turnover among Latin American governments is high and political institutions, particularly norms for resolving conflicts among different economic classes, are weak. Reviewing the experiences of Argentina under Peron, Chile under Allende, Brazil under Sarney, and Peru under Garcia, Sachs defines economic populism primarily as a willingness to increase budget deficits rapidly and significantly to meet distributional goals. In each instance, Sach reports, the governments justified deficit finance as necessary to erase glaring inequities in income distribution.

A common structural characteristic of many Latin American economies makes populism particularly tempting, Sachs finds. Because these economies are divided into a labor-intensive sector that produces chiefly for domestic consumption and an export-oriented, primary resources sector, monetary and fiscal expansions can raise real wages temporarily at the expense of the wealthy resource owners. Governments elected by urban, working-class constituents find such policies highly attractive. The governments also tend to underestimate the potential dangers of the course they have chosen. Populist policies, which result in a temporary burst of demand and a brief respite from inflation, look remarkably good early on. SN

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