

# EXPLAINING JAPAN'S RECESSION

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After decades of “miracle” economic growth since World War II, Japan’s economy abruptly faltered in 1990 and has stagnated since. I examine the Japanese government’s antirecession policies, most of which can be classified generally as either Keynesian or monetarist. The first section is an overview of economic conditions in Japan since 1989. The second section briefly outlines the Keynesian explanation of Japan’s recession and reviews Japan’s Keynesian policy attempts that have failed to cure the recession. The third section outlines the monetarist explanation and policies that have been tried. The fourth section briefly outlines the Austrian theory of the business cycle and examines Japan’s experience for evidence of an Austrian business cycle followed by interventions that have not allowed for market process corrections. The final section contains conclusions.

## OVERVIEW OF JAPAN’S ECONOMY 1985-2000

After the September 1985 Plaza Accord, the yen’s appreciation hit the export sector hard, reducing economic growth from 4.4 percent in 1985 to 2.9 percent in 1986 (EIU 2001).<sup>1</sup> The government attempted to offset the stronger yen by drastically easing monetary policy between January 1986 and February 1987. During this period, the Bank of Japan (BOJ) cut the discount rate in half from 5 percent to 2.5 percent. Following the economic stimulus, asset prices in the real estate and stock markets inflated, creating one of the biggest financial bubbles in history. The government responded by tightening monetary policy, raising rates five times, to 6 percent in 1989 and 1990. After these increases, the market collapsed.

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<sup>1</sup>All statistics contained herein are from the Economist Intelligence Unit *Country Profile Japan* (1996 and 2001) unless otherwise cited.

The Nikkei stock market index fell more than 60 percent—from a high of 40,000 at the end of 1989 to under 15,000 by 1992. It rose somewhat during the mid-1990s on hopes that the economy would soon recover, but as the economic outlook continued to worsen, share prices again fell. The Nikkei fell below 12,000 by March 2001. Real estate prices also plummeted during the recession—by 80 percent from 1991 to 1998 (Herbener 1999).

Real GDP during the 1990s stagnated, rising only from 428,826 billion yen in 1990 to 469,480 billion yen by the end of 2000.<sup>2</sup> Growth has been negative since 1998. The unemployment rate rose from 2.1 percent in 1991 to 4.7 percent at the end of 2000. Although the unemployment rate may seem low by international standards, the rise to 4.7 percent is significant in Japan, given the cultural and historical precedent of lifetime employment and given that it was never above 2.8 percent in the 1980s. The official unemployment rate is also biased downward because the Japanese government offers “employment adjustment subsidies” to companies that maintain employees as “window sitters” (Herbener 1999).

Table 1 contains selected macroeconomic data, and Table 2 has a timeline of relevant governmental policies undertaken during this period.

#### THE KEYNESIAN EXPLANATION AND SOLUTION

In Keynesian macroeconomic theory, business cycle fluctuations are caused by aggregate demand collapsing. Consumption is regarded as relatively stable, so the weakening in aggregate demand is due to the declining investment. Keynes did not precisely explain why investment collapsed; instead he attributed it to “animal spirits” in the business community. If the 1980s asset bubble is ignored, and Japan’s stock market is viewed between 1989 and 1992, a massive withdrawal of confidence occurred in the business community and investment collapsed, causing the Nikkei index to fall more than 60 percent. Because the investment decline is not attributed to something specific in Keynesian theory, the theory is difficult to refute. Nevertheless, in Japan, there has been a recession that has not corrected itself following a drop in investment.

In Keynesian theory, prices are “sticky” or rigid in the downward direction, so they do not adjust quickly to restore equilibrium. Although the economy might eventually restore its equilibrium, equilibrium is not inevitable. Even if price adjustments eventually restore equilibrium, Keynesians believe that the process requires too much time. According to Keynesians, to recover from recession, government must pursue active fiscal policies by lowering taxes and raising spending to increase aggregate demand and offset the fall in investment. Keynesians usually prefer increased government spending. Many

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<sup>2</sup>Throughout the paper many figures are in yen. Between 1986 and 2000, average market exchange rates ranged from 168.52 yen per dollar (1986) to 94.06 yen per dollar (1995). In 2000 the average market exchange rate was 107.77 yen per dollar (*International Financial Statistics Yearbook* 2001).

Table 1  
Macroeconomic Data

	GDP Growth Rate Percent	Narrow Money Growth Rate Percent	Money + Quasi Money Growth Rate Percent	Discount Rate Percent	Consumer Price Index	Unemployment Rate
1985	6.43	2.92	8.87	5.00	87.4	2.6
1986	4.45	9.40	9.29	3.00	88.0	2.8
1987	4.18	4.62	11.15	2.50	88.1	2.8
1988	6.75	7.93	9.84	2.50	88.7	2.5
1989	6.84	2.30	11.78	4.25	90.7	2.3
1990	7.31	4.31	8.17	6.00	93.4	2.1
1991	5.82	8.71	2.53	4.50	96.5	2.1
1992	2.56	3.75	-0.15	3.25	98.2	2.2
1993	1.01	6.50	2.25	1.75	99.4	2.5
1994	1.08	4.00	3.07	1.75	100.1	2.9
1995	1.19	11.58	2.71	0.50	100.0	3.2
1996	2.56	8.83	2.29	0.50	100.1	3.4
1997	2.12	7.90	3.07	0.50	101.8	3.4
1998	-1.17	4.72	4.13	0.50	102.5	4.1
1999	-0.64	10.50	3.41	0.50	102.2	4.7
2000	-0.14	3.37	1.10	0.50	101.5	

Narrow money = transferable deposits + currency outside deposit money.

Money + quasi money = narrow money + liabilities of banking institutions, comprised of time, savings, and foreign currency deposits.

Source: International Financial Statistics Yearbook 2001

Table 2  
Important Policy Events

1987	Official discount rate lowered to 2.5 percent.
1989-1990	Official discount rate raised five times, to 6 percent. Consumption tax of 3 percent for the first time.
1992-1995	Government implements several expansionary supplementary budgets.
1994	Income taxes are temporarily cut.
1995	Official discount rate lowered to 0.5 percent.
FY 1997/97	Budget permits a huge rise in investment and has an unprecedentedly large borrowing requirement.
1997	Consumption tax raised by 2 percentage points to 5 percent.
1998	<p>January: Temporary cut worth 2 trillion yen passed.</p> <p>April: Government announces a fiscal stimulus package worth 16.7 trillion yen, including 4 trillion in tax cuts and 7 trillion yen in public works.</p> <p>September: BOJ announces it will guide the overnight call rate down to around 0.25 percent from just under 0.5 percent.</p> <p>October: Diet passed a package of bank reform bills, allowing it to nationalize unviable banks and establishes a bank recapitalization fund. On the same day the government nationalizes the Long Term Credit Bank.</p> <p>November: Government announced another fiscal stimulus package, worth 23.9 trillion yen.</p>
1999	<p>February: BOJ announces it will guide the overnight call rate down to nearly 0 percent.</p> <p>March: 7.5 trillion yen of public funds injected into 15 large banks.</p> <p>November: Government announces an 18 trillion yen fiscal stimulus package.</p>
2000	<p>August: BOJ announces that it will guide the overnight call rate up to 0.25 percent.</p> <p>October: Government announces a fiscal stimulus package worth nearly 11 trillion yen.</p>
2001	February: BOJ lowers the official discount rate to 0.35 percent and later to 0.25 percent. Overnight call rate is also lowered to 0.15 percent.

Source: Economist Intelligence Unit *Country Profile Japan* (1996 and 2001).

of the policies in Japan fit the Keynesian prescription, but they have failed to bring the economy out of recession.

Between 1992 and 1995, Japan tried six spending programs totaling 65.5 trillion yen and cut income tax rates during 1994. In January 1998, Japan temporarily cut taxes again by 2 trillion yen. Then, in April of that year, the government unveiled a fiscal stimulus package worth more than 16.7 trillion yen, almost half of which was for public works. Again, in November 1998, another fiscal stimulus package worth 23.9 trillion yen was announced. A year later (November 1999), yet another fiscal stimulus package of 18 trillion yen was tried. Finally, in October 2000, Japan announced yet another fiscal stimulus package of 11 trillion yen. Overall during the 1990s, Japan tried 10 fiscal stimulus packages totaling more than 100 trillion yen, and each failed to cure the recession. What the spending programs have done, however, is put Japan's government in poor fiscal shape. The "on-budget" government spending has caused public debt to exceed 100 percent of GDP (highest in the G7), and even more debt is apparent when the "off-budget" sector is included.

The Keynesian framework permits a liquidity trap in which shifting the LM curve has no effect on aggregate demand. Keynesians can point to failed attempts by the Bank of Japan to reflate in order to revive its economy (see monetarist section below) as evidence supporting their theory.

The Keynesian policy solution when the economy is in a liquidity trap is to have the government lend directly to businesses instead of creating liquidity in the banking system. Japan has the Fiscal Investment and Loan Programme (FILP), an off-budget branch of the Japanese government worth about 70 percent of the spending in the general-account budget. FILP gets most of its money from the post office savings accounts. Once they collect the money, the funds are allocated to borrowers through the Ministry of Finance Trust Fund Bureau and the bureau's various agencies. Much of this money is not allocated to the most efficient projects. Politicians in the Liberal Democratic Party (LDP) run most of these government agencies. The Economist Intelligence Unit profile states that "FILP money is channeled toward traditional supporters of the LDP, such as those in the construction industry, and without proper consideration of the costs and benefits of specific projects" (EIU 2001, p. 30). Although this Keynesian approach of government direct-lending does avoid the reluctance of banks to lend, it does not aid economy recovery. Funds are not allocated according to market-based consumer preferences, but to the most politically connected businessmen. This leads to a higher cost of borrowing for those seeking private funds, further distorting the economy. Also, because the loans are often highly risky, Japan's fiscal condition deteriorates further. Once FILP and other "off-budget" debts are included, Japan's debt is estimated to exceed 200 percent of GDP (EIU 2001).

One prominent New Keynesian, Paul Krugman, recently recognized that,

Japan's postal savings system which channels money into public works projects that have little if any social payoff, is monumentally inefficient; so

is the practice of rolling over the debts of companies that will never regain profitability and hence keeping capital employed producing what nobody wants. (Krugman 2001)

Krugman argues that this is not a problem as long as Japan is not producing at capacity. He says that to assert otherwise is erroneous because the focus on supply ignores the real problem: inadequate demand. Japan's problem, however, is not inadequate aggregate demand but a structure of production that does not meet consumers' particular demands. Producing things that nobody wants and propping up malinvestments cannot possibly help any economy. This policy is equivalent to the old Keynesian depression nostrum of paying people to dig holes and fill them. Neither policy will revive the economy because neither forces businesses to realign their structures of production to match consumer demands.

Krugman offers another policy solution. Because New Keynesians do not strictly prefer fiscal policy over monetary policy, Krugman recommends "unconventional monetary expansion, with the Bank of Japan buying dollars, euros, and long-term government bonds; it also involves accepting and indeed promoting mild inflation and a weak yen. I could explain why this would probably work, but what's the point? It's not about to happen" (Krugman 2001). Krugman should not think that this could not happen, because it is similar to what occurred from mid-1997 to mid-1998, and this approach did not work. During that period the BOJ's holding of commercial paper went from zero to \$117 billion (Herbener 1999, p. 14). The Ministry of Finance and BOJ both bought government bonds from private holders increasing the amount the government owned to \$2.22 trillion, which is 53 percent of the market for government bonds, while at the same time promoting a weaker yen (Herbener 1999). The Japanese economy was not stimulated out of its recession but instead experienced the two most negative years of GDP growth in the decade.

Krugman's policy recommendations are a result of his belief that Japan is in a liquidity trap. Although Krugman recognizes the problems in Japan's banking system and thinks that the banks need to be reformed, he believes the failure of broad monetary aggregates to expand along with narrow aggregates is not due to the banking problems but is occurring because Japan is in a liquidity trap. Although he recognizes that current inflation is ineffective in a liquidity trap, he thinks the major obstacle is a credibility problem. If the central bank could credibly promise to continue to inflate in the future, Japan would be able to increase the aggregate demand and revive its economy. He recommends passing a law requiring the central bank to pursue at least 4 percent inflation rates for 15 years (Krugman 1998).<sup>3</sup> Central banks, however, do not have a credibility problem when promising to inflate. The history of central

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<sup>3</sup>Krugman is not convinced of the actual numbers because he thinks that more empirical work needs to be done. He does think that the policy itself is correct and that Japan should commit to a minimum policy of at least a decade-long sustained inflation.

banks is one of continual inflation of the money supply and erosion of their currency's purchasing power.<sup>4</sup> Japan's government debt, in excess of 100 percent of GDP, makes any policy announcement to inflate all the more credible, because inflation reduces the burden of the debt that must be paid back. Indeed, given the history and incentives of central banks, the Japanese people should already rationally expect Japan to continue to inflate its money supply in the future, regardless of policy announcements.

Krugman's policy recommendations would only make Japan's problems worse. Any fiscal stimulus package only serve to maintain the existing structure of production against the preferences of consumers. Even worse, a policy of continual inflation only distorts the interest-rate signal from consumers to businesses and results in more malinvestments that will eventually have to be liquidated (see section on Austrian theory below).

While Keynesian theorists could plausibly point to evidence that the source of Japan's recession is consistent with their theory, many Keynesian policies have failed to revive Japan's economy. Massive spending and lending packages have been tried over the past decade. By focusing on aggregate demand, Keynesian theory overlooks Japan's real problem: a mismatch between the existing structure of production and consumers' specific demands. The Keynesian spending programs have not only failed to pull Japan out of its recession, but they have also placed the government in a weak fiscal position and distorted the economy further away from consumer preferences.

#### THE MONETARIST EXPLANATION AND SOLUTION

The Monetarist School, like the Keynesian, has no trouble finding a cause for Japan's recession. Monetarists blame recessions on a contraction in the money supply or a slowdown in the growth rate. In 1987 the discount rate was lowered to 2.5 percent to stimulate domestic demand. An asset price bubble followed. To stop the bubble, the discount rate was raised five times, to 6 percent during 1989 and 1990, slowing lending, and the bubble burst. Since the monetary contraction, Japan's economy has been in a recession. Monetarists can argue that the BOJ contracted the monetary expansion too quickly and caused the economic slowdown, much like Milton Friedman's story in the *Great Contraction* regarding America's Great Depression.

Traditionally, monetarists have recommended reinflating after a monetary collapse to avoid a continuing depression. Monetarists recommend this because they have traditionally viewed the LM curve as relatively steeply sloped and the IS curve as flatter. This branch of monetarism has seen its policies implemented and fail in Japan.

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<sup>4</sup>For example, the U.S. dollar performed only 1/25 of the service in 1999 that it performed at the beginning of the century (Wood 1999). For more on the history of what government has done to the value of money see Rothbard (1990) and Wood (1999).

Japan's expansionary monetary policy failed to achieve recovery. From a high of 6 percent, the discount rate has been lowered to 4.5 percent in 1991, 3.25 percent in 1992, 1.75 percent during 1993-1994, and 0.5 percent during 1995-2000. This dramatic easing of interest rates has not stimulated Japan's economy, but the failure of interest-rate easing is not necessarily a failure of monetary theory. Japan's banking system is widely regarded as in need of restructuring. Much of the stimulus that reduced rates could provide has not been realized because the banking community has been increasing its liquidity instead of increasing its lending. Many banks have bad loans with collateral now worth only 60-80 percent of their value when the loans were made. Some banks are merging, and others have been nationalized. Such problems have contributed to the ineffectiveness of monetary policy.

Some monetarists argue that interest rates should be ignored and that the money supply itself must be controlled. Milton Friedman has advocated a monetary rule of expanding the money supply at an annual rate of 3-4 percent. During the 1990s, the Japanese money supply grew steadily. M2 grew from 507,526 billion yen in 1991 to 629,664 billion yen in 2001, an increase of about 25 percent over the decade, or 2.5 percent a year. Monetarists who advocate a monetary rule would likely point out that Japan should have been following a monetary rule before the recession. The rapid expansion and then contraction of the money supply, the monetarists would claim, caused the asset bubble and its subsequent bursting.

Controlling the money supply can be difficult, especially in view of the condition of Japan's banking system. From mid-1997 to mid-1998 Japan increased its monetary base by 10 percent, but the broader monetary aggregates rose by only 3.5 percent (Herbener 1999). This is what Keynesians mistakenly call a liquidity trap. The lack of credit expansion, even after expansion of the monetary base, is not due to investors expecting that future interest rates will rise, but is instead caused by the enormous amount of bad debt in the banking system that makes banks unwilling to lend (Herbener 1999).

In Japan's recession not all monetarist approaches can be dismissed as a complete failure like Keynesian theory can. However, monetarist policies have not helped Japan out of recession.

#### THE AUSTRIAN EXPLANATION AND SOLUTION

The Austrian theory of the business cycle is more accurately a theory of an unsustainable boom than a theory of a depression (Garrison 2001, p. 120). Japan's experience in the late 1980s is what Austrian theory describes as an unsustainable boom that must collapse. The recession or depression that follows an artificial boom is not something to avoid but is essential to the alignment of consumer time preferences and the structure of production. According to Austrian theory, the late 1980s boom was artificial, caused by the Bank of Japan's expansionary monetary policy. The 1985 discount-rate reduction began the central bank-induced boom. Following this reduction, the Bank



of Japan expanded the money stock by an average of 10.5 percent per year from 1986 until 1990 (*International Financial Statistics Yearbook* 2001).<sup>5</sup> While this action would not concern other schools of thought, because of price-level stability at the time, Austrian theory identifies monetary expansion as the problem. “The market process set in motion by credit expansion does not depend in any essential way on there being a change in the general level of prices” (Garrison 2001, p. 71). In Austrian theory, the rapidly expanding money stock artificially lowers interest rates, signaling businesses to invest more in longer-term and more capital-intensive projects. The problem is that these lower interest rates do not reflect consumers’ time preferences. The Economic Intelligence Unit profile notes that the boom of the late 1980s “encouraged consumers to spend and companies to invest as never before” (EIU 2001). From 1987 to 1990, private consumption increased an average of 5.6 percent per year while at the same time gross fixed capital formation increased by 10.63 percent per year (*International Financial Statistics Yearbook* 1994). Consumption and investment are substitutes in the short run. If the economy is operating on its production possibilities frontier, consumers can consume more and invest less, or invest more and consume less, in the short run. The economy was both consuming and investing more in the late 1980s because the central bank was distorting the interest-rate price signals from consumers to producers. This can only be sustained in the short run while the central bank pursues ever increasing rates of monetary inflation.<sup>6</sup> Once the monetary inflation slows or contracts, the boom abruptly ends and a recession begins. During the recession, the boom’s malinvestments are liquidated and consumer time preferences are restored to the structure of production. This began to happen in Japan in 1990. When the central bank stopped the monetary expansion, the stock market dropped, investment dropped, and recession followed—as Austrian business cycle theory predicts.<sup>7</sup>

The Austrian description of the boom’s timing and cause seems similar to the monetarist theory, but there is an important difference. Both schools agree that the contraction of the monetary expansion triggered the recession, but the monetarists view this contraction as something that should be avoided so that prosperity can continue. In Austrian theory, the contraction is necessary to restore balance to the real economy—the preceding expansion is the problem. This is one reason why the two schools differ in their policy recommendations.

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<sup>5</sup>The money stock used here is comprised of narrow money—transferable deposits + currency outside deposit banks, and quasi money—the liabilities of the banking institutions comprised of time, savings, and foreign currency deposits.

<sup>6</sup>The economy is able to temporarily operate beyond the production possibilities frontier because the frontier is defined as *sustainable* combinations of consumption and investment. For more on this, see Garrison (2001, pp. 70–71).

<sup>7</sup>Readers unfamiliar with Austrian business cycle theory can see Mises (1998, pp. 535–84; 1980) or Hayek (1960) for the classic statements of Austrian business cycle theory.

Garrison has said, “the Austrian theory of the business cycles is a theory of the unsustainable boom. It is not a theory of depression per se.” He then states, “The story of depression and recovery, which may involve reflation, devaluation, debt restructuring, and/or capital controls, is unique to each individual episode of each economy” (Garrison 2001, p. 120).

In Austrian theory, the recession is necessary, and once it sets in and bad investments are liquidated, the economy will self-correct. After 10 years, there are still no signs of economic correction. Austrian theory recognizes that time is required for economic self-correction but that the correction can only occur if the market process is allowed to work. Rothbard (2000) summarized the Austrian policy position this way:

If government wishes to alleviate, rather than aggravate, a depression, its only course is laissez-faire—to leave the economy alone. Only if there is no interference, direct or threatened, with prices, wage rates, and business liquidation will the necessary adjustment proceed with smooth dispatch. Any propping up of shaky positions postpones liquidation and aggravates unsound conditions. (p. 185)

As described above, Japan’s government has done everything but leave the economy alone and allow self-correction.

The many Keynesian fiscal stimulus packages have shifted the structure of production to satisfy government demand instead of allowing the market to adjust to consumer demand. In particular, much “pump priming” expenditure has been public works spending that benefits the construction industry—a large, politically powerful segment of the Japanese economy, accounting for 7.6 percent of GDP and 9.7 percent of the labor force. The ruling Liberal Democratic Party, which has been the dominant political party in Japan since 1955, has seen construction companies as natural allies and has cultivated their support over the years through generous public works programs (EIU 2001). Because of the close relationship between the construction industry and the LDP, many of the spending packages have emphasized public works. Almost half of the \$16.7 trillion in the April 1998 fiscal stimulus package was for public works. Then, in November 1998, \$66.4 billion of the \$196 billion stimulus package was spent on public works (Herbener 1999). Overall, between 1991 and 2000, the construction industry received orders from the government valued at 59,054.7 billion yen—this sum is 30.12 percent of the total value of all construction industry orders for that period. The favors from the LDP have paid off for the construction industry. The Economist Intelligence Unit profile notes, “Generous Public works programmes have allowed many unviable construction companies to remain in business” (EIU 2001, p. 40). By keeping otherwise unviable construction companies in business, the government has hindered the market’s process of adjustment by maintaining a capital structure that does not reflect consumers’ desires. If the market process was allowed to work, capital and labor would be reallocated from the construction industry to other industries.

The agricultural industry also has political influence over the LDP. The political voice of the agricultural lobby is enhanced by Japan's electoral system, which, by failing to take account of the massive postwar shift of the population to the urban areas, makes votes in the sparsely populated rural areas worth more than those in the urban areas (EIU 2001). This has resulted in a wide array of import quotas and price-support programs. Barriers to price adjustment, such as these, harm the market's ability to adjust to consumer demands and correct itself out of the recession.

The central bank has tried to reflate, which has only further distorted the interest-rate price signals, slowing the market's ability to correct. Despite the massive interest-rate cuts, broader monetary aggregates have not responded because of the poor condition of the Japanese banking industry. For example, when the BOJ increased the monetary base 10 percent from mid-1997 to mid 1998, M2 + CDs increased only 3.5 percent (Herbener 1999). The asset contraction that the Japanese banks have experienced on their balance sheets has not only hindered attempts of the BOJ to reflate but also has interfered with their ability to serve as financial intermediaries. The collapse in real estate prices and the economic slowdown that has put many borrowers out of business have left Japanese banks with a huge overhang of problem loans backed by collateral worth sometimes 60-80 percent less than when the loans were taken out (EIU 2001). Japan's financial institutions are estimated by the Financial Services Agency to have 31.8 trillion yen in problem loans, and even this estimate is widely believed to underestimate the extent of the problem (EIU 2001). In addition to these problems, banks that invested in the real estate boom have seen values fall 80 percent from 1991 to 1998 (Herbener 1999). Banks invested in the stock market have seen the Nikkei average drop from 40,000 yen in 1989 to under 12,000 yen by March 2001. Because of the increase in bad loans with poor collateral and the fall in other asset values, increased funds injected from the BOJ or additional deposits from savers have been used to hold as cash reserves against bad loans, instead of being used to extend loans to worthy borrowers.

The government's answers to the problems in the banking industry are bailout funds and nationalization. In late 1998, a \$514 billion bailout fund was set up, with \$214 billion designated to buy stock in troubled banks, and \$154 billion to nationalize, restructure, and liquidate failed banks (Herbener 1999). Nationalization and bailout funds only serve to prop up unsound financial institutions, delaying the needed restructuring, which would allow them to serve their function as financial intermediaries again. The market deals with unsound banks by allowing bank failures, mergers, acquisitions, and restructuring. After market-based corrections, banks would serve in their roll as financial intermediaries again. Some market corrections have taken place. Most bank mergers, however, have occurred among smaller, regional banks that have not had access to bailout funds (Herbener 1999). One large merger was announced that would combine Dai-Ichi Kangyo Bank Ltd., the Industrial Bank of Japan Ltd., and Fuji Bank Ltd., into one company with \$1.2

trillion in assets (Herbener 1999). Until the government stops intervening with bailout funds and nationalization, the process of larger bank failures and mergers will be delayed, extending the time that the banks are unable to function as efficient financial intermediaries.

The Japanese government has gone to great lengths to prevent the liquidation of the boom's malinvestments. Japan set up a 20-trillion-yen credit guarantee fund to ease credit availability for companies. The Economic Intelligence Unit profile indicates "funds disbursed under the programme are often going to companies that are not creditworthy and that would otherwise go bankrupt" (EIU 2001). According to Austrian theory, these are precisely the companies that must go bankrupt if the economy is going to recover. When a company goes bankrupt, real resources are not lost; capital and labor are reallocated to other companies in line with consumer preferences. The government controls and allocates more and more loans through the Fiscal Investment and Loan Program (FILP) (EIU 2001). FILP gets its funding from the postal savings system, which had 254.9 trillion yen in funds at year-end 2000—accounting for around 35 percent of total household deposits (EIU 2001). Government lending is usually made to political allies of the Liberal Democratic Party, such as the construction industry, resulting in wasteful, loss-producing projects that do not reflect consumer preferences. In one instance, a \$5.3 billion loan was channeled into building a high-tech bridge-tunnel spanning Tokyo Bay—a project that will, by the government's own estimates, suffer losses until the year 2038 (Herbener 1999). This type of lending does not reflect consumer preferences.

The government has also worked to prop up the stock market by purchasing shares when the Nikkei stock average drops below 12,000, to maintain Japanese banks' capital adequacy ratios as defined by the Bank for International Settlements. Banks are allowed to count up to 45 percent of unrealized profits on share holdings toward their tier-two capital; these ratios are in jeopardy whenever the Nikkei falls below 13,000 (EIU 2001). Artificially holding up stock prices hinders market forces from reasserting themselves, further delaying capital reallocation and economic recovery.

In *America's Great Depression*, Rothbard (2000) wrote, "there is one thing the government can do positively [during a depression], however: it can drastically lower its relative role in the economy, slashing its own expenditures and taxes" (p. 22). The Japanese government raised its consumption tax from 3 percent to 5 percent in 1997. There were income tax cuts in 1994, and in 1998, the top income tax rate was decreased from 65 percent to 50 percent and the corporate rate from 46 percent to 40 percent. Despite some tax cuts, Japan has maintained a high level of government spending. Government-services spending increased 9 percent from 1995 through 1999 (EIU 2001). Tax decreases cannot have their full beneficial effects if they are not matched by corresponding decreases in government spending. If more money is left in the hands of private citizens, some of it will be saved, helping to justify the lengthened structure of production, whereas all government spending is

consumption.<sup>8</sup> The increase in the consumption tax and the failure to reduce government spending along with the other tax cuts delay recovery from recession. Government spending seeks to maintain the existing production structure, against the demands of consumers, instead of permitting its liquidation and reconstruction (Herbener 1999).

The repeated fiscal stimulus packages with public-works spending, the large amount of savings controlled by the postal savings system and allocated through FILP, and the efforts to prevent bank and business failures all have prevented the market process of recovery from working. These repeated government interventions have maintained the existing structure of production, delaying its necessary alignment to the particular demands of consumers.

*Structure of Production Evidence for ABCT*

In *Prices and Production*, Hayek (1960) theorizes,

But when it is remembered that the fall in the rate [of interest] will also change the relative profitableness of the different factors of production for the existing concerns, it will be seen to be quite natural that it should give a relative advantage to those concerns which use proportionately more capital. (p. 86)

Garrison (2001) wrote,

A less steeply sloped hypotenuse [of the Hayekian triangle] illustrates the general pattern of reallocation in the early stages of the structure of production. Some resources are bid away from the intermediate and relatively late stages of production and into the early stages. (p. 72)

He added, "During the period of over-production, investment decisions were biased by an artificially low rate of interest in the direction of long-term undertakings" (Garrison 2001, p. 73).

Keeler (2001) has drawn the conclusion that,

A distinctly Austrian hypothesis is that when the market rate is depressed below the natural rate, investment in more capital intensive production processes increases relative to investment in less capital intensive production processes. (p. 133)

In addition to Keeler's hypothesis, the investment would occur in industries that are not only more capital intensive but are also in the earlier stages of production. If Austrian business cycle theory describes Japan's recession, the boom's largest malinvestments will have taken place in capital-intensive industries, in the earlier stages of production. During the recession, the greatest contractions should occur in these industries, if the Austrian business cycle theory applies.

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<sup>8</sup>See Rothbard (2000, p. 20, n. 15) for an explanation of why government spending is always consumption.

The mining industry is capital intensive and one of the stages of production farthest from eventual consumption. Manufacturing is also relatively capital intensive and one of the earlier stages of production, although less so than the mining industry. Wholesale and retail are relatively less capital intensive and are in the later stages of production. Finally, the services industry is in the latest stages of production and is not very capital intensive. Although there would be individual exceptions within each category, broadly speaking, these industries fall in order from earliest to latest stages of production, and from

Table 3  
Industry Gross Domestic Product Growth Rate

	Mining	Manufacturing	Wholesale and Retail	Services
1990	23.2	6.8	8.5	7.2
1991	-2.7	5.3	6.1	5.7
1992	-1.8	-1.4	1.2	4.8
1993	-4.4	-4.0	-2.3	3.4
1994	-15.5	-1.3	-0.4	0.9
1995	-0.4	1.6	4.3	2.2
1996	0.7	2.2	2.4	5.2
1997	-6.6	1.9	3.9	3.8
1998	-8.3	-5.0	-4.0	4.0
1999	-9.6	-2.6	-4.4	0.5

Source: Economist Intelligence Unit *Country Profile Japan* (1996 and 2001).

most to least capital intensive, as: mining, manufacturing, wholesale and retail, and services. During Japan's recession, the contractions in these industries lend support to Austrian business cycle theory (see Table 3).

In 1990 there was great expansion in the mining industry, but, when the artificial boom ended, the hardest-hit sectors throughout the decade have been in precisely the order Austrian theory would predict. The GDP growth rate, by industry sector, has been worst in the mining industry, followed by manufacturing, and then wholesale and retail. Finally, the service industry has experienced the smallest contractions.

#### CONCLUSION

Austrian theory, like the Keynesian and monetarist theories, can give a reason for the start of the Japanese recession. Unlike the other schools, the Austrian policy recommendation of laissez-faire has not been tried. One prediction that

Austrian business cycle theory provides has been accurate. The industries in the earliest stages of production have had the worst growth rates throughout the entire decade.

Japan's development model over the past 50 years has emphasized government intervention and planning in the economy. During its recession, government interventions have manifested themselves as fiscal stimulus packages involving large amounts of public works, increases in the monetary base, interest-rate cuts, bailouts and nationalization of some banks, direct government lending to businesses, and increases in government spending despite some tax cuts. These interventions have tried to maintain the existing structure of production preventing the necessary market processes from working to correct the artificial boom's malinvestments.

Japan has experienced an Austrian business cycle. The initial boom was created by a central bank-induced monetary expansion. Because of repeated interventions, the economy has not recovered. The greatest malinvestments took place in capital-intensive industries in the earlier stages of production. For Japan's economy to recover the government must stop intervening in the economy and allow the market process to realign the structure of production to match consumer preferences.

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