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# Cuba: An Economic Primer

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# Cuba: An Economic Primer


## Summary

This report provides an overview of the Cuban economy. Recent congressional interest in Cuba has centered on the partial lifting of trade sanctions on agricultural products and medicine. The 107$^{th}$ Congress may consider further easing of sanctions or other alterations to the trade embargo in effect since 1962. The paper first presents a brief historical overview of the Cuban economy. This history is characterized by dependence on major powers: first Spain, then the United States, and then the Soviet Union. The report then charts the different, and often conflicting, economic policy courses that Fidel Castro has pursued since his rise to power in 1959.

The loss of Soviet support led the Cuban economy to the brink of collapse in the period from 1989-93. The economy contracted by about one-third and there were widespread shortages of food, medicine, and electricity. In desperate straits, Castro turned to market-based reforms to resuscitate the economy. Since 1994, economic growth has been generally positive, yet dependent on the world price of its principal exports, sugar and nickel, and on the price of oil, its principal import.

Government spending represents about 60% of GDP, a huge level that the Castro regime is now attempting to reduce. Subsidies to state-run enterprises are being decreased and social services cut back. Taxes on the emergent dollar economy have replaced state sector revenues as the prime source of income. Principal sources of dollars in the economy are the tourist industry and remittances from the United States. Dollar inflows partially finance the chronic trade deficits that have characterized the economy since the Revolution.

Market driven reforms have occurred in five principal areas: state enterprise, foreign investment, banking, entrepreneurship and agriculture. State enterprises are being grouped into various holding companies. While these enterprises are not being privatized, western accounting and business practices are being adopted, and subsidies are being reduced. Joint ventures are permitted as long as they are consistent with state policy. The banking system is being expanded and modernized to facilitate investment, yet significant structural obstacles continue to cloud the investment climate.

The labor force is skilled and highly educated. The government employs approximately 75% of the workforce, yet widespread unemployment is apparent. The nation's infrastructure continues to operate, yet at reduced capacity due to aging facilities. Sugar is the major agricultural crop, though production has been hurt by underinvestment. Tobacco, coffee and citrus are also grown and exported. Cuba is endowed with the world's third largest reserves of nickel and cobalt. Cuba's manufacturing base was largely built during the Soviet era and is perceived to be obsolete. The bright spot for the Cuban economy is tourism. The inherent tension between the regime's commitment to Marxism and economic liberalization may prove an obstacle to further market-based, reforms.

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Adapted by CRS from Magellan Geographix.

# Cuba: An Economic Primer

Recent legislative action amending economic sanctions against Cuba to allow for the sale of agricultural and medical products to the island has heightened congressional interest in U.S.- Cuban relations. This report is designed to provide an introduction to the Cuban economy: an economy in the midst of transformation, caught in the tension between ideology and necessity.

## Background[1]

Sighted by Christopher Columbus in 1492, the island of Cuba was settled by colonists from Spain in 1511. Despite its rich soil and advantageous growing climate, it remained a backwater in the Spanish empire for two centuries. The port of Havana primarily served as a naval base to protect Spain's richer colonies in Central and South America. Sugar, tobacco and coffee plantations became the mainstay of the economy by the late 18th century. The port of Havana flourished with exports of these goods, the importation of slaves, and as a naval hub of the Spanish fleet. After Spain's loss of most of its American empire by 1830, Cuba became its prized possession as well as the world's wealthiest colony. Due to its plantation economy and the wealth it generated for Spain, slavery was not abolished in Cuba until 1886. By the late 19th century, the United States had supplanted Spain as the foremost market for Cuban products. This factor underlay Cuba's political drift from Spain and her two wars of independence.

Cuba's first revolutionary effort, called the "Ten Years' War," began in 1868. Spain's promise of political and economic reform ended that struggle in 1878. The second war of independence began in 1895. The United States intervened in 1898 after the battleship *Maine* exploded in Havana Harbor under mysterious circumstances. Cuban aspirations for independence were thwarted by this intervention, however, as the island was occupied until 1902 and thereafter became a U.S. protectorate.

American influence was enshrined in the Cuban constitution through the Platt amendment, which authorized U.S. intervention in order to guarantee the maintenance of a government "adequate for the protection of life, property and individual liberties." Although the amendment was abrogated in 1934, the provision reflected American economic ascendancy.

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[1]Material for this section adapted from Ana Julia Jatar-Hausman, *The Cuban Way: Capitalism, Communism and Confrontation,* (West Hartford CT: Kumarian Press, 1999); Howard I. Blustein, et.al., *Area Handbook for Cuba* (Washington: Government Printing Office, 1971); Simon Collier et.al., Cambridge Encyclopaedia of Latin America, (New York: Cambridge University Press, 1992).

Cuba was granted preferential access to the U.S. sugar market in 1903, and until the revolution, it was able to sell sugar under the American quota system for higher than world market prices. This economic relationship with the United States enabled Cuba to attain a higher aggregate standard of living than any other country in Latin America. Yet, this wealth was spread unevenly. Rural poverty, illiteracy, and stagnation contrasted with the wealth and bustle of the Havana metropolis.

Because of its protectorate status, Cuba was widely considered the safest investment option in Latin America, and U.S. investment lead the way. By the 1930s, the United States owned approximately 75 % the sugar cane under cultivation. The United States purchased 2/3 of its sugar from Cuba, and the United States accounted for 3/4 of Cuba's imports in the 1950s. U.S. companies and affiliates also owned refineries, power generation and manufacturing plants.

The 1959 revolution that overthrew the regime of Fulgencio Batista ended U.S. economic hegemony over the island. The revolutionary government, led by Fidel Castro, nationalized the property of foreign investors and expatriates. Castro declared his Marxist-Leninist leanings in 1961 and began the process of transforming the island into a socialist economy. The United States responded with a trade embargo in 1962 and began efforts to isolate the island politically, economically, and militarily. The Soviet Union, eager for a revolutionary foothold in Latin America, supplanted the role of the United States as Cuba's main benefactor.

Cuba followed several different economic paths after the revolution. Initially, government planners (led by industry minister Ernesto "Che" Guevara) sought to replace dependency on the United States with the promotion of widespread self-sufficiency. The failure of this policy coincided with the integration of Cuba into the 'socialist common market', the Council of Mutual Economic Assistance. Cuba's role in this arrangement was to produce sugar, tobacco, and nickel for export. In return, the Soviet Union and its Eastern European satellites would provide oil, machinery and consumer goods.

The all-out drive to produce sugar distorted Cuba's economic development and inhibited the economy's ability to produce other goods and services. In order to revive the skewed economy, the government attempted numerous market reforms from the late 1970s to mid-1980s quite similar to ones implemented again in the mid-1990s. Experiments in managerial independence, farmer and crafts markets, wage incentives, and self employment were undertaken. In addition, the first steps were taken to open the country to investment from non-communist nations. However, by the mid-80s the government came to the conclusion that these measures were threatening the Marxist nature of the regime and the reforms were terminated. This was followed by a period of 'rectification' in which the last vestiges of the overture to the market were erased.

These domestic initiatives were eclipsed by the dissolution of the Soviet Union and the collapse of the communist economic system beginning in 1989. The Soviet Union had been subsidizing Cuba at the rate of $5 billion per year through subsidized trade arrangements and soft credit. Because of this subsidization, the government was able to provide free health care, universal education and subsidized foodstuffs.

Soviet support also made Cuba a regional military powerhouse that could project power to Angola and Ethiopia in the late 1970s.

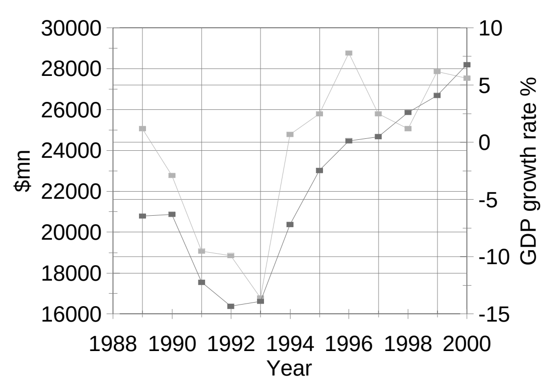
In the period from 1989 to 1993, the Cuban economy reportedly contracted by approximately 35 percent. To cope with the loss of Soviet bloc subsidies, the government declared a "special period in peacetime." Food was rationed, energy use curtailed and many state enterprises closed. Unemployment became widespread. During this crisis, Castro turned again to market reforms to stimulate the beleaguered economy. These reforms permitted private service sector business, allowing farmers to sell excess crops at farmer's markets, the creation of free-trade zones and the legalization of the dollar as an alternative currency.

# Macroeconomic Trends[2]

## GDP and Growth

The withdrawal of the Soviet subsidy led to a severe economic contraction in the 1989-1993 period. The implementation of market reforms has been credited with the renewed growth of the Cuban economy since 1994, although this recovery has been neither dramatic nor uninterrupted (See figure 1). Some observers interpret the slowdown after 1996 to the restrictions placed on entrepreneurs and the non-state sector after 1996, including the imposition of an income tax on private earnings.[3] Due mainly to increasing oil import prices, which offset increases in world prices for sugar and nickel, the Cuban economy grew only 5.6 percent in 2000. However, an oil agreement signed between Cuba and Venezuela in September 2000 appears to be saving the economy a significant amount in energy imports. Growth slowed to 3% in 2001 with drought affecting agricultural output (including the sugar harvest), high oil prices, and a resumed slump in world nickel prices. Reduced tourist revenues as a result of the

**Figure 1. GDP Level and Growth Rate, 1989-2000**




Source: ECLAC, 2000, Economist Intelligence Unit

[2] The Cuban government does not provide regular or reliable statistics on the country's economy. The last widely-available comprehensive survey of the economy was conducted by the Economic Commission for Latin America and the Caribbean (ECLAC) in 2000, hence many statistics in this report are from 1998. Reliable foreign-source statistics, such as the Economist Intelligence Unit and the U.S.-Cuba Trade and Economic Council's *Economic Eye on Cuba*, have been used for more recent figures, where available.

[3] Political Risk Services Report, Cuba, May 1, 2000.

September 11th attacks in the United States, and damage caused by Hurricane Michelle, which crossed the island in November 2001, also slowed the rate of growth. Michelle proved to be the worst hurricane to hit the island in fifty years.[4]

Cuban GDP for 2001 was estimated at $27.3 billion on a 1997 constant-peso basis.[5] On a purchasing power parity basis, the economy was estimated at $18.6 billion in 1999, or $1,700 per person. Reliable information about productivity gains, the basis for future economic growth, is unavailable. In 2000, Fidel Castro claimed that productivity growth and improved efficiency was responsible for the country's recovery, and claimed that productivity had grown by over 3% a year since 1995.[6] The source of this figure remains mysterious, but it is indicative of changes being undertaken in state enterprises that this figure has significance to him.

## Inflation and the Price Level

Prices on foodstuffs and consumer commodities in Cuba have been kept artificially low by subsidies. For Cubans, the traditional impediment to the procurement of goods has not been their price, but their availability. This 'hidden inflation' is the result of peso earnings only being able to purchase a rationed amount of goods. Excess liquidity in the past fueled a black market, but now these excess pesos are channeled into the dollar economy. The government has begun to raise peso prices to reflect more accurately the cost of goods. Inflation in the peso sector has been averaging 3% per year, and was 3.5% in 2001.[7] Although price levels are not tracked in dollar denominated goods, it was recently reported that the government has raised prices in dollar stores for goods such as cigarettes, electronics and gasoline in order to raise hard currency to finance imports.[8]

## Monetary System

The Cuban peso, which depreciated to 120 pesos/dollar during the depths of the economic crisis, had recently recovered its stability and was trading in the 19 to 23 peso range. However, the peso's value depreciated recently due to economic fallout from the September 11th attacks in the United States and damage caused by Hurricane Michelle, and is now trading in the 24 to 28 peso range. A convertible peso, which is set at par with the dollar, is used for official transactions. In addition, the dollar and other foreign exchange has been legal to use since 1993. Hard currency stores were established that year as an alternative outlet to the black market. Official exchange centers, *Entidades Casas de Cambios*, were established in 1995 to facilitate the exchange of dollars and pesos. The official sanctioning of the dollar

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[4]Mark Frank and Andrew Cawthorne, "Hurricane Further Blow to Fragile Cuban Economy," Reuters, 7 November 2001; EIU Country Report, Cuba, March 1, 2002.

[5]EIU Country Reports, "Cuba: Domestic Economy," May 1, 2002.

[6]EIU Viewswire, "Cuba Economy: Government Predicts 5 percent Growth this Year," November 28, 2000.

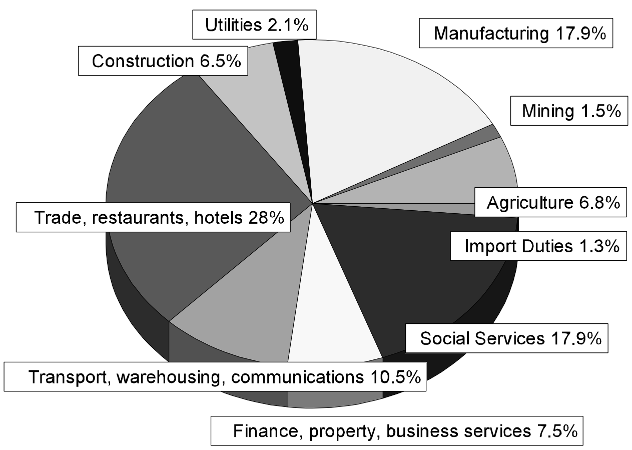
[7]EIU *Country Report*, "Cuba: Domestic Economy," March 1, 2002.

[8]*Wall Street Journal*, June 6, 2002.

as an alternate means of exchange has contributed stability to the economy by decreasing excess liquidity, easing inflation, and undermining the black market for dollars. In addition, the Euro began circulating as legal tender in the Varadero tourist district in June 2002.

Sources of dollars include the tourist industry, bonus payments to Cuban workers in joint ventures, and remittances from abroad. These remittances from friends and family have been estimated as high as $800 million per year, although a more realistic figure may be more in the neighborhood of $375-400 million yearly.[9] Due to economic troubles in the U.S. and their effects abroad, remittances began to decrease following the September 11th attacks in the U.S.; remittances for the following October, for example, were estimated to be down 25 %.[10] With annual sales approaching $1 billion, the growth of dollar stores point to an increased standard of living for residents with access to dollars, reportedly 62% of the population.[11] Yet, it has opened a permanent rift in incomes between those with access to dollars and those without. This income gap has led to an internal migration away from rural and eastern provinces to Havana and tourist destination areas.[12] Reacting to this trend, the government passed a decree in 1998 that permits Havana officials to forcibly return migrants to the provinces.[13]

**Figure 2:**
**Origins of GDP, 2000**




Source: Oficina Nacional de Estadisticas; EIU

## Fiscal Policy

Public sector spending, by the government or by state enterprises, represents approximately 60% of gross domestic product.[14] The government's 2000 budget

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[9]International Trade Commission, *Economic Impact of U.S. Sanctions with Respect to Cuba*, Investigation no. 332-413, September 19, 2000, transcript, p. 195-200.

[10]Claudia Márquez Linares, "Incentivos para trabajar," Cubanet Independiente, November 20, 2001.

[11]EIU Viewswire, "Cuba Economy: Surge in Dollar Consumer Spending," January 4, 2000.

[12]ECLAC 2000, Chart 69, *Movimiento Migratorio interno, 1986-1998.*

[13]EIU Viewswire, "Cuba Economy- Sharp Social Divide," October 25, 1999.

[14]PRS Group, Cuba: Labor Policies, May 1,2000.

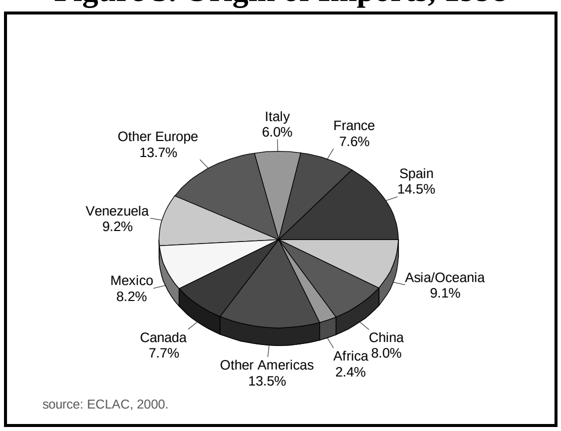
estimates revenue of $13.5 billion and outlays of $14.3 billion.[15] Government policy has been to keep the deficit at under 3 % of GDP, although the above figures suggest a deficit of 5.5%. The Cuban budget is not publically released, but available information indicates that taxes on private enterprise account for an increasingly greater share of government income, displacing revenues from state sector enterprises.[16] Yet, subsidies to state-sector enterprises are also falling, indicating progress on the rationalization of the public-sector economy. These subsidies have been estimated to account for 2.4% of GDP.[17] Principal categories of spending are health services, education, housing, social security and the military. Public investment continues to fall short of pre-crisis levels, reaching 6.5 % of GDP in 1999, compared to 19% in 1990.[18] This slowdown in investment spending reflects, in part, the government's preference for maintaining social services and employment protection through subsidies to state enterprises.

## International Debt

Four factors have led to Cuba's isolation from the international financial community. First, Cuba withdrew from the IMF as it allied itself closely with the Communist economic community in the 1960s. Second, Comecon (the Soviet bloc economic community) provided Cuba with low interest, liberally termed loans on which the country became overly dependent. Third, Cuba then defaulted on its international hard currency debt in 1986 which froze new lending. Fourth, Cuba has been cut off from lending by U.S. financial institutions since the imposition of the U.S. economic embargo, and non-U.S. banks have been reluctant to make investments due to the country's poor credit history and complications arising from the Helms -Burton Act. As a consequence of this isolation, Cuba must rely on high interest rate (15-20%), short-term loans.

Recently, the government has attempted to remove itself from this debt trap by negotiating bilateral repayment accords with Britain, Japan and Italy. This rescheduling renews Cuban eligibility for government backed credits from these nations. Inconclusive negotiations have occurred for the $11.7 billion debt owed to western

**Figure 3. Origin of Imports, 1998**




[15]CIA World Factbook, Cuba [www.cia.gov/cia/publications/factbook/geos/cu.html]

[16]EIU Viewswire, "Cuba Economy: Fiscal Deficit Remains within Target Range," February 7, 2000.

[17]*Ibid.*

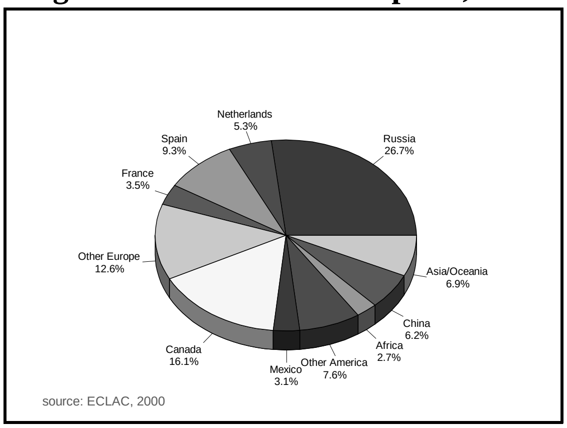
[18]EIU Country Reports, "Cuba: Economic Policy Outlook," August 3, 2000.

sources by the end of 2001.[19] Debt in the form of soft loans and credits from former east bloc countries have variously been valued at 20-22 billion rubles.[20] Russia and her former satellites may conceivably seek repayment of this debt, if western debt began to be repaid.

## Trade and the Balance of Payments

Cuba was a charter signatory to the General Agreement on Tariffs and Trade(GATT) in 1948. It remained active in the GATT process even during the period of Soviet influence when it drifted away from other western international financial institutions such as the IMF and the World Bank. Today, Cuba is a member of the World Trade Organization (WTO). Support for Cuba's participation in the proposed Free Trade Area of the Americas (FTAA) is waning throughout the Western Hemisphere, and Cuba was singled out as the only country not invited to the Summit of the Americas held in Quebec in April 2001. Castro has criticized the FTAA as a form of annexation of Latin America by the United States.

**Figure 4. Destination of Exports, 1998**




Cuba has a primary product, developing country trade pattern. It exports raw materials and agricultural products in exchange for finished goods and services, yet it is also heavily dependent on oil imports. Cuba recorded consistent trade surpluses before the revolution, but Cuba has been plagued with trade deficits since 1961. During the 1985-1990 period, the merchandise trade deficit averaged over $2 billion per year. The trade imbalance moderated somewhat during the economic crisis period 1989-1993, but it rose to $3.1 billion in 2001. This deficit mattered less during the time of Soviet influence when easy credit terms and subsidies made the trade balance less of an economic priority. Recently, this large imbalance has been caused by high prices for oil on which it is dependent, and by low prices for sugar and nickel, two of its primary exports. Today, Cuba makes up for its merchandise trade deficit by service sector inflows in the form of tourist revenues.

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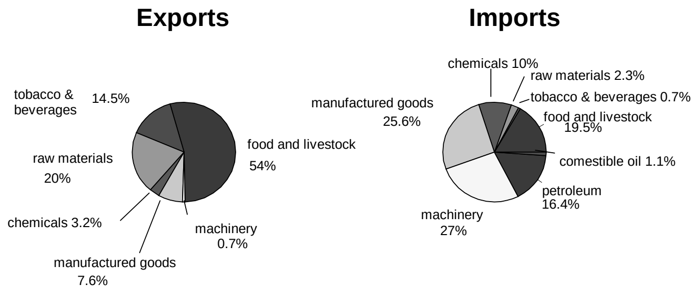
[19] EIU Country Risk Service, "Cuba: Economic Forecast Summary," May 1, 2002.

[20]The value of this debt in hard currency would be the subject of any negotiations on repayment.

**Figure 5. Exports and Imports by Sector, 1998**




Source: ECLAC, 2000.

Alongside its participation in the international trading regime through the WTO, it continues to face a near total economic embargo from the United States. Although no other nation participates in this embargo, the policy increases the cost of trade in two ways. First, it forces Cuba to buy higher priced commodities that it traditionally purchased from the United States. These prices are often higher because the commodity must be shipped from a greater distance than from the U.S. One study reported that additional costs due to the embargo added 30% to the cost of Cuban imports.[21] The Helms-Burton Act, which restricts vessels from entering U.S. ports within six months of departing Cuba, also increases shipping costs. Second, Cuba must pay higher finance costs because it is considered a high risk by international creditors. Cuba can only obtain high interest short-term financing, and U.S. financial markets are closed to Cuba.

In November 2001, Archer Daniels Midland, ConAgra Foods, Cargill, and Riceland Foods, Inc., became the first U.S. companies to agree to sell agricultural goods to Cuba. The deal, valued at approximately $36 million, came about after Cuban President Fidel Castro's request to the U.S. government for speedy authorization to buy food and medicines from the United States in the wake of Hurricane Michelle, which struck the island on November 4, 2001. Cuba requested U.S. items such as wheat, corn, rice, soybeans, soy oil, flour, pork lard, and chicken leg quarters. At that time, Castro indicated that the purchases, to be paid for in cash, would be the only ones made until the U.S. lifts its embargo against Cuba.[22] However, contracts for an additional $37 million in agricultural products were signed between February and April 2002.[23]

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[21]Raymond C. Offenheiser, "U.S. Sanctions on Cuba: Assessing Their Impacts and Benefits from Potential Trade," Prepared testimony before the International Trade Commission, September 19, 2000, p.3.

[22]Nelson Acosta, "Castro Welcomes First Trade with United States," Reuters, November 17, 2001.

[23] *Economic Eye on Cuba*, April 10, 2002.

## The Labor Force

There are 11.2 million residents of Cuba living on the island. Partly as a result of the regime's emphasis on social services, Cuba's population is well educated with a high literacy rate (95.7 %), and life expectancy figures ( 74 years for men, 78 for women) that are comparable to developed nations. The government, directly or indirectly through state enterprises, employed 75 % of the workforce in 2000.[24] Many of these achievements, however, have been compromised by recent economic hardships. According to a U.S. Department of Agriculture study, average daily caloric intake decreased 38 % from 2,908 to 1,863 during the period 1989-1993.[25] The economic recovery has since ameliorated these conditions (average daily caloric intake had increased to 2,585 in the year 2000[26]), yet it is expected that living standards will not regain 1989 levels for another 5 years under current growth rates.

Unemployment does exist and has become a problem for the government. Recorded unemployment fell from 7.6 % in 1995 to 4.2 % at the end of 2001. However, these figures only partially reflect the informal economy. Total *employment* tells a different story. The official measure of unemployment in Cuba excludes many categories of the non-working labor force, including those not registering for work and those who seek work in the informal economy.[27] Only approximately 45 % of Cubans over 20 years of age were officially employed in 1996. This figure points to a large alternative economy, if for no other reason than that state pensions and other renumerations, denominated in pesos, are not life-sustaining without supplement.[28]

Traditional employment is governed by the State Committee for Work and Social Security (CETSS). Minimum wages for each sector are set by this agency. Workers are hired for foreign joint ventures through this committee. Joint ventures pay the employee's wage to the CETSS in hard currency: the worker is then paid in pesos. Foreign companies often pay more than $500 per month to the CETSS for each employee; the average monthly salary is 237 pesos ($11). Employees of joint ventures also often receive cash bonuses paid in dollars that supplement their income.

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[24]PRS Group, "Cuba: Labor Policies," May 1, 2000.

[25]U.S. Department of Agriculture, "Cuba's Agriculture: Collapse & Economic Reform," *Agricultural Outlook*, October 1998, p. 26. 2,100 calories is considered the minimum adequate caloric intake.

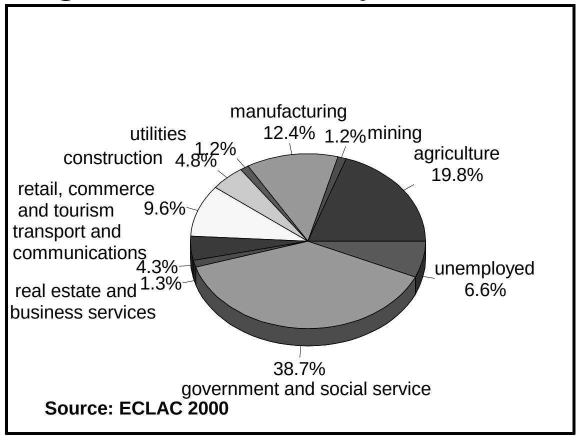
[26]Ministerio de Economia y Planificacion, "Cuba: Informe Economico Ano 2000," http://www.cubagov.cu/des_eco/mep/cuba2000.htm.

[27]EIU Country Reports, "Cuba: Economic Trends," February 1, 2001.

[28]Gary H. Maybarduk, "Measures Not Taken: Issues for Today," ASCE *Cuba in Transition*, 1999, p.283.

While earnings are not high under this system, living expenses are also very low. Ration cards allow the purchase of an inadequate food supply for about 15 pesos (70 cents) per month.[29] This ration can be supplemented at the country's 300 farmer's markets with dollars, widely used in the entrepreneurial economy and by employees of joint venture and tourist enterprises. Education and medical care are free, although medicines are often unavailable and hospital equipment is outdated. In addition, rents are minimal and there are no taxes on peso salaries. Periodically, 'volunteer' labor 'contributions' to the revolutionary cause are required, especially during the sugar harvest.[30] Labor organizations also exist under the direction of the Communist Party and the state. However, these bodies are not trade unions in any western sense of the word. They function to mobilize political support for the state, not to bargain collectively with state enterprises or joint ventures.

**Figure 6: Labor Force by Sector, 1998**




A new employment agency, the Servicio de Orientación Laboral y Empleo (the labor and employment guidance service), was recently created to aid individuals seeking work. Its first offices were opened in Havana, where jobs are scarcest according to unemployment registration. This agency is designed to more efficiently match labor supply with demand, with the individual taking a more active role in seeking work and a diminished role for the government in allocation of labor.[31]

## Economic Reforms

The near collapse of the economy during the 1989-93 period caused the government to adopt certain market-based reforms. A number of these reforms had been attempted during the 1970s subsequent to the economic strains experienced as a result of the all out drives to produce sugar. The success of these market initiatives and reforms were their undoing, however, as Castro came to believe these reforms threatened to undermine the achievements of the revolution and of the Communist Party. In 1993, Castro turned again to the market to rescue the regime from desperate straits. Reform measures have been undertaken in the areas of state enterprise, foreign investment, and banking.

[29]Karen DeYoung, "Cuba Climbs Economic Ladder," *Washington Post*, 24, 2000.

[30]Joaquim F. Otero, Testimony prepared for the International Trade Commission hearings, *The Impact of U.S. Sanctions with Respect to Cuba*, September 19, 2000, p.3

[31] EIU Country Report: Cuba, May 4, 2001.

## State Enterprises

Government controlled economic entities continue to produce a majority of goods and services in the nation and they account for the largest share of GDP. The government has attempted to introduce economic efficiencies into this sector by arranging state enterprises into holding companies that are established in the consumer, retail, tourism, financial, distribution and service sectors. The three largest of these are Cubanacán, Cubalse and Cimex.[32] Subsidies to state enterprises in these holding companies are being reduced or eliminated, and western style accounting practices are being introduced. These measures are part of the proceso de perfeccionamiento empresarial (or business perfection program), meant to improve efficiency across the board in Cuban enterprise. One trade consultant claims that these firms have become, in essence, private companies with one shareholder, the government of Cuba. Juntas de gobierno, or government boards, have been established for 26 state enterprises and work in much the same way as the board of directors of a publicly-held company. These companies reportedly can borrow in international financial markets, are audited by western accounting firms, and can undertake new business deals without state interference. The government can and does intervene, as a shareholder, to assure continued profitability.[33] Others point out that with continued central planning, complete autonomy from government edicts is unlikely. It has also been reported that many of these enterprises are run by and for the profit of the Cuban Armed Forces.[34]

## Foreign Investment

Cuba introduced its first foreign investment statute, Decree Law 50, in 1982. Joint ventures were allowed under this provision, but foreign investors were limited to a 49 % stake. The cultivation of foreign investment began in earnest with the withdrawal of Soviet support. By 1995, 185 joint venture arrangements had been approved with an estimated value of $1.5 billion.[35] In that year, Decree Law 77 was adopted to codify many practices under which joint ventures operated and to guarantee the irreversibility of government policy towards foreign investment.[36] The new law authorizes 100% foreign ownership of investments, full remittance of profits abroad, the transfer for investment to third parties, the establishment of free trade zones, and investment in real estate. It also protects foreign investors from expropriation, except in the interest of "public utility or social interest."

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[32]Economist Intelligence Unit, *Reassessing Cuba*, (London: The Economist Group, 1997)(EIU1997), p. 99.

[33]Kirby Jones, Prepared Testimony before the U.S. International Trade Commission. September 20, 2000, p. 3-4.

[34]Mariá C. Werlau, "Foreign Investment in Cuba: The Limits of Commercial Engagement," *ASCE Cuba in Transition*, 1996, p. 489.

[35]Tom Baranauskas, *Foreign Military Markets-Cuba*, Forecast International/DMS, August 2000, p. 4.

[36]Jorge Pérez-López, "Cuban Economic Reforms," in *ASCE Cuba Transition Workshop: Internal and External Factors in Cuba's Economic Transition*, March 25, 1999, p. 11.

**Figure 7. Joint Ventures by Partner, 1998**

| | |
|---|---|
| Spain | 82 |
| Canada | 69 |
| Italy | 56 |
| France | 16 |
| United Kingdom | 13 |
| Mexico | 13 |
| Netherlands | 9 |
| Other Latin America | 62 |
| Rest of World | 42 |
| Total | 362 |

**Source: ECLAC, 2000**

**Figure 8. Joint Ventures by Sector, 1998**

| | |
|---|---|
| Agriculture | 11 |
| Minerals | 34 |
| Petroleum | 20 |
| Manufacturing | 113 |
| Tourism | 66 |
| Transport | 11 |
| Communications | 3 |
| Construction | 31 |
| Real Estate | 17 |
| Others | 56 |
| Total | 362 |

**Source: ECLAC, 2000**

Foreign partnerships in Cuba had an estimated value of $4.3 billion by the end of the year 2000.[37] Despite the government's official embrace of foreign investment, each joint venture must be reviewed by a council of ministers or commission of foreign investment.[38] The government has used its power to direct investment into areas it considers beneficial to the economic or social life of the nation. For example, the government recently imposed a moratorium on the approval of more than 50 real estate property ventures, declaring that available resources needed to be concentrated in tourist infrastructure.[39] Other contracts have been cancelled outright, and compensation has been determined unilaterally by the Cuban government.[40] Critics of Cuban investment cite such arbitrariness as hazards of investing in the regime. They note that structural weaknesses such as the lack of a commercial code, an independent judiciary to enforce that code, uncertainty over the approval process for foreign investment, the lack of a domestic market, and the difficulties associated with the U.S. embargo continue to undermine the climate for investment in Cuba.

## Banking and Credit

Cuba began to modernize its banking sector in 1997. The *Banco Central de Cuba* (BCC) was established to coordinate national monetary policy. This move was seen as a recognition of the greater role of monetary policy in an economy increasingly influenced by the market. The bank is expected by some to work

[37]Carmelo Mesa-Lago, "The Cuban Economy in 1999-2001: Evaluation of Performance and Debate on the Future," p. 6.

[38]Some claim final decisions on joint ventures are made by Fidel Castro himself. Castro has reportedly expressed his irritation in having to "waste his time in meetings with 'idiots and swindlers' who come to Cuba 'with false offers and documents, and all sorts of meaningless proposals,'" Werlau, p. 464.

[39] EIU Viewswire, "Cuba Economy: Move to Soothe Foreign Investors Over Property Measure," July 18, 2000.

[40]Werlau, p. 461.

symbiotically with government economic planners to influence the price level, interest rates, credit allocation, and exchange rates.[41] April 2000 marked the creation of interest-bearing savings accounts for individuals. The existing *Banco Nacional de Cuba* (BNC), which has some 200 branches, has shifted its focus from monetary policy to commercial banking. In addition, exchange houses have been established to provide exchange between pesos and dollars. The traditional savings and loan bank, the *Banco Popular de Ahorro,* is becoming more of a full fledged bank with commercial lending, foreign exchange, and investment services. The banking system is also becoming wired to accommodate automatic teller machines, credit cards and direct deposits.[42]

In spite of these new incentives to keep money in savings accounts or investments, the growth in savings accounts has been very slow. The persistence of a cash driven economy helps to explain low numbers of savings account holders, as do the low interest rates on deposits. Savings accounts are not generally seen as a method of accumulation. Perhaps most importantly, however, is the extent of the formal economy. Because most peso wage-earners have little available to save, their potential savings would come from informal economy activities. Because all banks are state-owned, they can be used to monitor the activities of account-holders. Many of those involved in the informal activity are likely to avoid bank accounts in order to evade taxes or to prevent detection of illegal activities.[43]

## Entrepreneurship

Since 1993, Cubans have been allowed to engage in approximately 140 categories of small-scale private enterprises. These *cuentapropistas* (literally, workers on their own account) generally engage in service or craft oriented enterprises such as driving services, tailoring, tutoring, repair services or household restaurants (under 12 seats) known as *paladares*. Entrepreneurs cannot form businesses, nor can they hire employees. These activities can net 3.5 times the average peso salary[44], and part-time entrepreneurship often supplements government salaries. The number of people engaged in these activities reached an estimated peak of 208,000 in December 1996. The government's suspicion of these activities, together with confiscatory taxes and stifling regulation, had reduced their number to an estimated 162,000 in 2000.[45]

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[41]Armando S. Linde, "The Effectiveness of Cuba's Banking Sector Reforms," in ASCE *Cuba Transition Workshop*, March 25, 1999, p.3

[42]EIU1997, p. 119. However, credit cards issued by U.S. banks are inoperable in Cuba.

[43]EIU Country Reports, "Cuba: Economic Outlook," May 4, 2001.

[44]Philip Peters and Joseph L. Scarpaci, Cuba's New Entrepreneurs: Five Years of Small Scale Capitalism, Alexis de Tocqueville Institute, August 1998 [http://www.adti.net/html_files], p.7.

[45]EIU Country Reports, "Cuba: Economic Policy," May 4, 2001.

### Agriculture

Cooperative farms known as Basic Units of Cooperative Production ( *UBPC*[46]) were established in 1993 in an effort to increase the efficiency of state run plantations. Farmer's markets were legalized by the government in 1994. Envisioned as a source for surplus foodstuffs from the *UBPC*, they instead have been sourced mainly by independent farmers who lease from the state. The productivity of the cooperative farms has been hampered by the continued restrictions placed on them by state planners. Planting regimens and inputs are still prescribed by the government, and that has served as a drag on productivity. According to a 1997 report, sources of supply to the markets were: state run farms (41 %); private supply (50%); and cooperatives (4.8%). [47] Another factor hindering the development of these markets is the restriction on intermediaries to sell the products. Foodstuffs can only be sold by producers, and middlemen are prohibited on ideological grounds.

## Transportation and Communications

The economic hardship resulting from the end of Soviet assistance is apparent from the state of the nation's infrastructure. By developing country standards, Cuba had an advanced, though uneven, system of transportation, power and water. Although infrastructure has become frayed by a decade of underinvestment, a recent report described its condition as "serviceable."[48] Cuban officials see the nation's infrastructure as an opportunity to attract foreign investment.

### Air

Air transportation has received priority attention for new investment because of its relationship to the tourism industry. The opening of a new terminal at José Martí International Airport in Havana reflects the role of Canadian financing. Prime Minister Jean Chrétien joined President Castro at its opening ceremony in 1997. The new terminal costs $62 million, $26 million of which was provided by Canadian export financing, and it can accommodate 3 million passengers per year. Improvements at other domestic airports reflect the importance to the government of improved air service. The national airline is *Cubana de Aviación.* It serves 36 destinations in Europe, Canada and Latin America. Two other smaller airlines supplement domestic flights. In addition, forty overseas airlines serve Havana.

### Railways

Cuba has an extensive rail network that links all major cities with passenger and freight service. Over half of its 8900 miles of track were constructed for and

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[46] *Unidades Básicas de Producción Cooperativa*

[47] Roger R. Betancourt, "Cuba's Economic 'Reforms': Waiting for Fidel on the Eve of the Twenty-First Century," in *Internal and External Factors in Cuba's Economic Transition*, Shaw, Pittman, Potts and Trowbridge Cuba Transition Workshop, March 25, 1999.

[48] EIU1997, p. 127.

maintained by the sugar industry. The passenger network carries 20-25 million travelers per year and is a principal method of inter-city transport. Considerable investment is needed to upgrade and modernize the trackage and rolling stock for both networks. In 2000, a French trade mission announced a $9 million agreement to modernize trackage and replace rolling stock on the Havana-Santiago de Cuba mainline. [49] The Cuban government invested more than $7 million for railway upgrades in 2000 and 2001, including acquisition of 44 railcars, technical repairs, and training of Cuban technicians abroad. Vice President Carlos Lage announced that between the years 2002 and 2003, Cuba would acquire about 200 used railcars from Germany and Mexico for restoration on the island.[50]

## Roadways

The road network has also been neglected. The road network consists of 18,000 miles of highways, primary, and dirt roads. The pre-revolutionary *Carretera Central*, a 720 mile national highway stretching from Pinar del Rio east to Santiago de Cuba serves as the spine of the road network. This roadway is being supplemented by the *Autopista Nacional*, a controlled access divided highway. The motorway, halfway complete, has been halted for lack of funds. Tolls were implemented in 1996 in order to raise funds to repair roads, and toll revenue is meant to lure investors to joint venture roadway projects.

## Shipping

*Cuba has seven major sea ports and 20 sea terminals.* The reorientation of trade away from the United States after the revolution led to a restructuring of the nation's ports. Previously, commerce with the coastal United States could proceed with relatively light ships or even ferries. This type of shipping was adequately handled by the island's many small ports. Conducting trade over much larger distances (with the Soviet bloc) made necessary the construction and consolidation of port facilities. Export facilities were constructed at Matanzas, Guyabal and Cienfuegos to handle the emphasis placed on the sugar traffic. Cuban ports continue to operate in the post-Soviet era at reduced capacity, recently reported to average 27 million tons.[51] This infrastructure can make Cuba a pivotal transhipment point for future Caribbean trade.

## Telecommunications

Basic telephone service, much less Internet access, is financially out of reach for most Cubans. There are approximately 75 lines per 1,000 residents in Cuba, and the use of communal and pay phones are the norm. The state telephone company, *Etecsa*, has entered into a joint venture with the Italian telecommunications firm *Stet*, to modernize the telephone network. Digitalization of the switching network is reported

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[49]EIU Country Reports, "Cuba: Infrastructure,"August 3, 2000.

[50]Yahoo!, "Cuba efectua millonaria inversión para modernizar sistema ferroviario," October 14, 2001.

[51]PRS Risk Services, Cuba, May 1, 2000.

to be 65% completed in Havana and 40% completed in the rest of the country. There are also currently two cellular telephone services available on the island. Internet access is beginning, but its future growth may be complicated by government suspicions and prohibitive pricing. According to the Economist Intelligence Unit, official government policy is to seek to maximize access to information technology, and to that end, a program was launched in 2001 to provide universal access to e-mail via internet terminals in every local post office in Cuba.[52] Yet, it has recently been reported that the government has implemented new legislation to severely restrict the sale of personal computers and data storage devices. Acquisition of computer equipment must now be cleared by the Ministry of Internal Commerce.[53] While it is estimated that about 60,000 Cubans (out of a population of over 11 million) have e-mail accounts, out of 110,000 computers on the island, only a few hundred have full access to the world wide web. This indicates that access to many internet resources is unavailable even to the small number of Cubans who do have access to e-mail, and even then it is controlled by the government as a tool of propaganda to further the ideals of the Cuban Revolution.[54]

## Agriculture

Cuba's economy has traditionally relied on agricultural output. Sugar has always been the staple crop, but tobacco, citrus, and coffee have also been important. Today, the agricultural sector occupies 23 % of the workforce, though it contributes only 14.5 % of GDP[55]. It is characterized by low capital investment and low-yield production techniques. Before the revolution, land was distributed unequally with 8% of the population owning 70% of the land.[56] Plantations were the traditional type of organization and 25 % of the land mass was owned by Americans. These large scale production operations were replaced with state-owned agricultural collectives. Some small scale tenant holdings continued, and private property has never been eliminated completely in the agriculture sector.

[52]EIU ViewsWire, "Cuba: Transport and Communications," November 12, 2001.

[53] *CubaNews,* June 2002, p.13.

[54]Shanthi Kalathil and Taylor C. Boas, "The Internet and State Control in Authoritarian Regimes: China, Cuba, and the Counterrevolution,"Carnegie Endowment for International Peace Global Policy Program Number 21, July 2001, pg. 10-11.

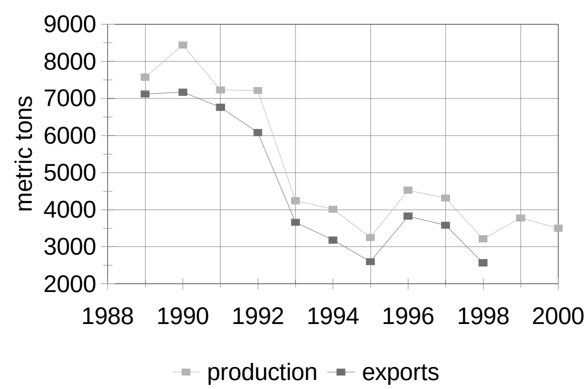
[55]Ministerio de Economia y Planificacion, "Cuba: Informe Economico Ano 2000," http://www.cubagov.cu/des_eco/mep/cuba2000.htm.

[56]"Cuba's Agriculture: Collapse and Economic Reform," *USDA Agricultural Outlook*, Oct 1998,(USDA), p.26.

## Sugar

Cuba's economy is dependent on sugarcane. In the 1860s, Cuba produced 1/3 of world sugar output. During the 5-year period before the revolution, sugar production averaged approximately 5.4 million tons. Subsidized sugar prices during the Soviet era led to maximized production. Sugar remained at levels between 74 % and 80% of total Cuban exports during the Soviet area.[57] During Cuba's peak production year in 1970, 9.2 million tons were produced and nearly half the land mass of the country was utilized to produce cane.[58] Today, approximately 40 % of the land continues to be used for sugar production, and sugar accounts for one-third of total merchandise exports. The 2001 harvest of 3.5 million tons was the third-lowest in 56 years. Sugar production was forecast to increase to 4 metric tons during the 2001-2002 season, but it is estimated that Hurricane Michelle destroyed up to 10 % of maturing cane and damaged between 35 and 50 % percent of the crop. By May 2002, it was estimated that the harvest would not exceed the 3.5 million tons of the 2001 harvest.[59]

**Figure 9. Sugar Production and Exports, 1989-2001**




Source: ECLAC 2000, EIU

Sugar production is controlled by the *Ministerio del Azúcar*. Until very recently, the ministry has resisted ceding control over any aspect of the sugar crop to joint ventures or foreign investment. This reflects the legacy of foreign (primarily U.S.) domination of the sugar industry before 1959. The Cuban government is now seeking partners to modernize the sugar industry and to invest in sugar cane derivatives. One joint venture being undertaken is a $10 million investment with Spain to distill alcohol for beverages, pharmaceuticals and cosmetics.[60] In early March 2002, the government announced the formation of a joint venture company with an unnamed foreign investor to engage in the sugar export trade. This company,

[57]William A. Messina, Jr., "Cuban Agricultural Trade, Past, Present and Future," Prepared Testimony before the International Trade Commission, September 20, 2000.

[58]Canadian Trade Commissioner Service(CTCS), *Cuba: A Guide for Canadian Business*, {http://www. infoexport.gc.ca/docs/view-f.asp?did=214&gid=193}, p. 14.

[59] *Latin American Monitor/Caribbean,* May 2002, p.7.

[60]EIU Country Reports, "Cuba: Agriculture," August 3, 2000.

*Compania Internacional Azucarera, S.A.*, is expected to assume the duties of *Cubazucar*, the sugar export entity of the Ministry of Foreign Trade.[61]

It is apparent that the sugar industry faces structural challenges. While the sugar ministry is implementing a drive for efficiency at the expense of maximized production, the major reform in the sugar sector occurred in 1993 when the large state controlled plantations were split into the UBPCs. These cooperatives were designed to use worker incentives to increase production by allowing workers to share profits. Yet, these units must still obey planting and delivery targets which may require sub-optimal harvesting. Most UBPCs continue to operate at a loss. Yield per hectare is approximately 1/3 less than international standards.[62] They suffer from shortages of fertilizer and spare parts. In addition, there is overcapacity in the sugar refining sector. UBPCs are estimated to operate 74% of Cuba's sugar cane plantations, in part explaining the failures of the sugar sector in the recent past.[63] The ministry left approximately one-third of the least productive sugar processing mills idle during the1999/2000 harvest,[64] and it is estimated that even fewer mills were used during the 2000/2001 harvest (105 mills, down from 112 the previous season).[65] In June 2002, it was reported that the government was proposing to radically restructure the sugar industry by closing 71 of the state's 156 mills, reducing the amount of cane in cultivation, and reducing the sugar industry workforce by up to 200,000 employees.[66]

## Tobacco

Cuba's climate and soil provide an ideal locale for what many consider to be the world's finest cigar leaf. Cigars and tobacco leaf form Cuba's third largest export earner, after sugar and nickel, and brought in $150 million in revenue in 2000.[67] Currently, tobacco is cultivated primarily by private farmers in cooperatives using land in long-term leases. In 2000, 226 million cigars were sold around the world, primarily to Europe, but also to the Middle East and Asia. Eighty million Havana cigars were produced in the first half of 2001, putting production ahead of schedule to meet the year's target output. While there is room for cultivation improvements, there are capacity constraints. The most fertile lands in the river valleys are already

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[61] Reuters, "Cuba's new Sugar Exporter Seeks Profitability," March 8, 2002.

[62] EIU Country Reports, "Cuba: Agriculture," August 3, 2000.

[63] Carmelo Mesa-Lagos, "The Cuban Economy in 1999-2001: Evaluation of Performance and Debate on the Future," p. 10.

[64] EIU1997, p.78.

[65] *CubaNews*, "Authorities abandon cost-control efforts as they push to produce sugar at any cost," May 2001.

[66] *Reuters*, "Cuba Shifts Sugar Strategy After Recovery Flops," June 6, 2002.

[67] *Reuters*, "Cuba produces record 80 million cigars in first half," July 16, 2001.

under cultivation: moving to less desirable terrain will affect the quality and cachet of Cuban cigars.[68]

## Coffee

The 2000-2001 coffee crop of 12-15 million kilograms represented a 30 percent decline from the previous year's harvest. Initial estimates of the 2001-2002 harvest, which began in August, called for an output increased by 20 % over last year's crop, but due to damage from Hurricane Michelle it is unknown if the harvest will reach these estimates. Coffee production is organized either in state run plantations, or in a manner similar to tobacco, that is, private farmers cultivating leaseholds organized into cooperatives. The latter organization, from 1994, has attracted approximately 6,900 smallholders who produced 15 % of the coffee crop. Yield continues to lag in the state run farms, however. New organic coffee production is being established in the Sierra Madre and Escambria Mountains, although production in the former is hurt by a persistent drought that has affected the eastern provinces.

## Fruits and Vegetables

Cuba produces oranges, grapefruits and limes for export. Analysts estimate that Hurricane Michelle destroyed between 15 and 20 % of Cuba's 2001-2002 citrus harvest. Cuba is the third largest producer of grapefruits in the world after the U.S. and Israel. Israeli and Chilean citrus concerns were some of the first foreign investors to set up joint ventures in the Cuban agricultural sector. An Israeli-Cuban joint venture in Matanzas province cultivated exports worth $76 million in 2000.[69] Citrus sector production was reported to be 744,500 tons in 1998. Vegetables are consumed primarily in the domestic market. Shortages of inputs and storage facilities have hampered growth and possibilities for export. The lack of agroindustrial inputs such as fertilizer, pesticides and herbicides may increase the opportunity for export of organic foods.[70]

## Fisheries

The Cuban fishing industry was hampered by the introduction of 200 mile economic exclusion zones by Caribbean nations in the 1970s. With Soviet help, Cuba acquired a deep sea fishing trawling capability. This fleet, dependent on cheap oil, has been mothballed since the 1990s. The long-distance fleet operates only sporadically, subject to fuel availability, and usually in Canadian waters with whom Cuba has a bilateral fishing agreement. The coastal fleet is remains in operation, with the catch going to the tourist or export markets.[71] Cuba is now focusing its

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[68]Joseph M. Perry, et.al., "The Cuban Cigar Industry as the Transition Approaches," in ASCE *Cuba in Transition 1999*, p. 414-425; EIU Country Reports, "Cuba: Agriculture," August 3, 2000. ; Maybarduk, "Measures" p.4.

[69]EIU Country Report, "Cuba: Agriculture," May 4, 2001.

[70]USDA, p. 29.

[71]Chuck Adams, "Recent Changes in Management Structure and Strategies of the Cuban
(continued...)

fishing industry efforts on high-value, non-traditional products. The tourist trade has provided a renewed market for local seafood such as shrimp, tropical lobster, and reef fish.[72] A new autonomous enterprise, called Pescavente, has been created to facilitate foreign investment in the fishing sector. Despite this optimism, it has been reported that the Fisheries Ministry has been beset by a major corruption scandal that has called into question the ability to reform economic sectors without privatization or foreign management.[73] The goal of the industry's five year development plan is to increase the gross catch by over 50 %, bringing it to 400,000 tons. The gross catch for 2000 was 162,000 tons.[74]

# Manufacturing

## Mining

Cuba possesses 1/3 of the world's supply of nickel and is one of only four countries to have significant reserves of cobalt. Nickel production reached 76.6 thousand tons in 2001, but a 50% drop in prices has reduced the value of exports by approximately $150 million from the previous year.[75] The mining sector was one of the first to establish joint ventures to replace necessary inputs and parts no longer supplied by the Soviet Union. The legal basis for joint ventures in mining was promulgated into law in 1994. The Office of Mineral Resources in the Ministry of Basic Industries enters into contracts with joint venture partners for 25-year concession periods. Ownership of all mineral resources remains with the state. Joint ventures have been established with mining concerns in Canada, South Africa and Australia. These firms have entered agreements to modernize Soviet era (or earlier) processing plants. While modernization has brought increasing production, the viability of present operations at current world prices has become an additional worry for the regime.[76]

## Energy

Subsidized energy was one of the most salient features of the Soviet presence in Cuba. Russia's policy of providing cheap oil to Cuba has also been a factor in the economic difficulties in the post-Soviet period. Oil was provided to Cuba at below market prices in the form of barter agreements for Cuban sugar. Sugar provided in

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[71](...continued)
Fishing Industry," in *Cuba in Transition X*, Association for the Study of the Cuban Economy, 1999.

[72]*Ibid*, p. 29.

[73] *CubaNews*, February 2002.

[74]Carmelo Mesa-Lagos, "The Cuban Economy in 1999-2001: Evaluation of Performance and Debate on the Future," p. 9.

[75]EIU Viewswire, "Cuba Industry: Nickel Sector Hurt by Low World Prices," March 5, 2002.

[76] *Ibid.*

this arrangement was priced considerably above the world price. At one time in 1986, the Soviets bought sugar for 51 cents per pound during a time when world prices averaged 6 cents. Usually, however, sugar was more moderately valued, averaging three times the world price.

This arrangement has had two lingering effects for the Cuban economy. Energy efficiency was not a concern to planners or to enterprises. Hence, much of the post-1959 economy was built without energy costs as a significant factor of production. Power plants, industrial facilities, and machinery were delivered without concern for energy efficiency. The collapse of the socialist economies and the end of cheap oil, meant much of the socialist infrastructure became not only obsolete, but prohibitively expensive to operate.

Overdependence on cheap energy continued to haunt Cuba after the Soviet era. Electricity has often been rationed and priority is given to export earning enterprises. However, this shortfall has spurred Cuba to explore new sources of supply. Cuba does not have extensive reserves of oil and the oil it does possess is inferior grade, thick and sulfuric. During the 1990's, however, it has increased the supply of domestically produced oil. This oil is primarily suited for powering Cuba's Soviet and Czech power plants.[77] Domestic production now provides 42.% of Cuba's total energy needs: of the remaining 58% covered by imports, 46% are oil derivative imports and 12% crude oil.[78]

Joint ventures have provided much needed investment in the energy sector. French and Russian firms are engaged in offshore exploration and drilling. Mexico has invested $100m with the state firm CUPET to reopen the refinery at Cienfuegos to process both domestic and Mexican crude oil. [79] Projects to modernize five Soviet and Czech thermoplants have been undertaken by French firms and projects to update other power plants have been announced involving Canadian, Spanish, Chilean and French firms.[80]

Cuba also exploits biomass (*bagasse)* generated from the harvest of the sugar crop. It is burned to generate steam and electricity for sugarcane mills and other generating facilities, and provides Cuba with about 25% of its energy needs.[81] The Soviet Union broke ground on a nuclear reactor at Juraguá in Cienfuegos province in 1982, and it provided over $1billion in assistance for this project before Russia

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[77]Economic Commission for Latin America and the Caribbean, *The Cuban Economy: Structural Reform and Economic Performance,* (Mexico City: United Nations, 1997) (ECLAC1997), p. 259.

[78]Carmelo Mesa-Lagos, "The Cuban Economy in 1999-2001: Evaluation of Performance and Debate on the Future," p. 7.

[79]Tom Baranauskas, *Foreign Military Markets-Cuba,* Forecast International/DMS, August 2000, p. 4.

[80]Jonathan Benjamin-Alvarado, "Investment and International Cooperation in Cuba's Energy Sector," ASCE *Cuba in Transition*, 1998, p. 180.

[81]Carmelo Mesa-Lagos, "The Cuban Economy in 1999-2001: Evaluation of Performance and Debate on the Future," p. 7.

mothballed the facility in 1993. Periodically, Cuba, Russia or western companies announced plans to complete the facility, but these plans never materialized for lack of funds. Today, the plant remains idle, approximately 75 % complete, primarily lacking instrumentation and control systems.[82] In December 2000, it was reported that high level Cuban officials had announced that the government had abandoned plans for completion of the plant because it was no longer "economically viable."[83]

## Industrial Manufacturing

Cuba imported manufactured goods primarily from the United States before 1959, and so did not develop a large manufacturing sector until after the Revolution. The dislocation of trade patterns associated with the U.S. embargo necessitated Cuba's search for alternate sources of goods. With increasing Soviet assistance, Cuba attempted to develop an industrial model based on self-sufficiency that relied on the integrated use of its existing agricultural economy. Cuba would focus its manufacturing efforts on products it needed for its agricultural and extractive industries such as fertilizer, chemicals, steel and machinery. Thus, Cuba's industrial development strategy depended on political as well as economic factors.

The development of manufacturing industries as linkages to the agricultural sector, their reliance on imported capital goods from the Soviet bloc (which usually rendered them not only obsolete but inappropriate to the size and capacity of the Cuban economy), and trading arrangements based on socialist fraternity, rather than economics, has created an unwieldy and unsustainable industrial infrastructure. As the Economic Commission for Latin America and the Caribbean (ECLAC) has noted, easy credit terms from socialist states promoted manufacturing capacity in Cuba, but "with little discipline in selecting technology or investment projects." Hence, Cuba is saddled with idled, inefficient, manufacturing concerns that it cannot afford to operate.[84] Light, consumer oriented manufacturing has shown the greatest promise in adapting to market signals. This sector employs approximately 100,000 workers, and is the force driving GDP growth. This sector is being encouraged to substitute imports to supply the tourist sector and supply the dollar markets.[85]

## Biotechnology

Cuba has developed a promising biotechnology and medical equipment industry. The genesis of this industry was President Castro's interest in producing the anti-cancer drug, interferon. A Center of Genetic Engineering and Biotechnology was established in 1986 to produce and develop interferon, other drugs, and new products. Sales primarily have been to former East bloc trading partners and to developing countries. Questions have been raised about the thoroughness of testing practices for these drugs and the continued ability to market essentially copied

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[82]See generally, Alvarado, pp. 173-191.

[83]*Washington Post,* December 20, 2000.

[84]ECLAC1997, p. 194-5.

[85]EIU Country Reports, "Cuba: Manufacturing," August 3, 2000.

pharmaceuticals in a stricter world intellectual property regime.[86] Of Cuba's approximately 150 scientific research laboratories, 100 are dedicated to pharmaceutical applications and 20 specialize in developing medical equipment. Many of the vaccines and medicines are derived from sugar and sugar byproducts.[87] Cuba's medical supplies importer, Medicuba, has recently become an exporter of medical products, and exports medicines and biotechnology products to over 20 countries in Latin America, Africa, Asia, and Europe. Medicuba has patented or registered most of its 260 products in 34 countries.[88] Cuba also engages in a program of "exporting" or "exchanging" Cuban medical personnel, and "importing" patients for medical treatment. This medical tourism is becoming an increasing source of income for the country.

## Tourism

The bright spot in the Cuban economy has been its expanding tourism sector. Cuba traditionally has been a popular tourist locale. Prior to the Revolution, it was the most traveled destination abroad for Americans, who accounted for 85 % of the 350,000 yearly visitors. Linked in socialist ideology to exploitation and American domination, tourism from capitalist nations was de-emphasized during the period of Soviet influence. While it proved to be a popular tropical destination for Russian and East European officials, tourism from these countries only averaged approximately 30,000 visitors per year.

With the Soviet era winding down, Cuba rethought its relationship with the tourism industry. The government set up a state-run enterprise, *Cubanacán*, to develop the tourist sector. Cuba's first joint venture was between this entity and a Spanish firm to develop a hotel in Varadero in 1988. The tourist sector reportedly employed 81,000 in 1998.[89] Over the last five years tourism has grown around 10% annually; but in the wake of the September 11th attacks on the World Trade Center and the Pentagon, tourism has decreased sharply and approximately 20 hotels closed with resulting personnel layoffs. About 1.77 million tourists visited Cuba in 2001, a figure virtually unchanged from 2000, yet tourist revenues declined 8.16% from 2000 levels.[90] The largest percentage of these tourists are from Canada. Americans can travel legally to Cuba under certain specified conditions, or they can receive a Cuban travel card in third countries such as Mexico or Canada that enables the traveler to avoid having their passport stamped. This latter practice is illegal and can result in legal action and the imposition of fines by the Department of the Treasury.

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[86] Carmelo Mesa-Lago, "Cuba's Economic Policies and Strategies for the 1990s," in Irving Louis Horowitz, editor, *Cuban Communism 1959-1995* (New Brunswick NJ: Transaction Publishers, 1995), pp. 207-210.

[87] CTCS, p. 18.

[88] "Medicuba expands into drug exports," *CubaNews* 9.5, May 2001.

[89] CTCS, pp. 11-12.

[90] *Economic Eye on Cuba*, March 18, 2002 quoting Ministry of Tourism figures.

The tourism sector is not without its problems. Observers have noted that the tourism business has been slow to develop linkages with the rest of the economy. Many of the goods used as inputs in the tourism sector must be imported, draining the amount of foreign exchange actually retained.[91] Low occupancy and return-visitor rates are also cause for concern. Some have noted the emphasis on developing tourism is similar to the economy's excess production of sugar in the early years of the revolution.

## Conclusion

During the 1990s, Cuba initiated limited, yet significant reforms. Cuba's reform effort has been compared to the perestroika reform effort in the Soviet Union and the Asian Market Socialism Model (AMSM) practiced in China, Vietnam and Laos. Both of these models have attempted to introduce incentives and improve efficiency while preserving a large measure of state control in the economy and society. The AMSM, however, has differed from perestroika by encouraging foreign investment, the emergence of a private sector, and competition. The Asian model has gradually supplemented central planning with market mechanisms in order to maintain stability while continuing reform.[92]

Fidel Castro has spoken approvingly of the Asian model as a preferable alternative to the "big-bang" approach to privatization, price reform, and trade liberalization that occurred subsequent to the collapse of Soviet-style communism. Yet, Cuba's reforms have often lagged behind those of the Asian socialist economies, and have resembled, in scope and application, the ill-fated perestroika reforms of the last years of the Soviet Union.[93]

Castro has indicated that market reform in Cuba is not being conducted for its own sake, but for the perfection of socialism. Thus, fundamental contradictions between centrally planned and free-market economies threaten to complicate further reforms efforts. For example, attempts to rationalize the exchange rate could lead to a reduced standard of living as prices rise and subsidies are reduced or removed. This reduced standard of living may exacerbate the existing differences between those who earn pesos and dollars. In addition, the government's attempt to promote efficiency and curb subsidies to state enterprises may result, if carried to its logical conclusion, in the closing of money-losing enterprises. Progress in this area, however, will conflict with government's desire to contain unemployment. As a result, tension will probably continue between the regime's desire to introduce market forces and its ideological commitment to Marxism.

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[91]Gary H. Maybarduk, "Measures Not Taken: Issues for Today and Tomorrow," ASCE, *Cuba in Transition,* 1999, p. 285.

[92]Rolando H. Castañeda and George Plinio Montalván, "The 'New' Cuban Economic Model (or Socialism with Cuban Characteristics)," ASCE *Cuba in Transition,*1995 , p.154-190.

[93] Jorge F. Pérez-López, "Coveting Beijing, but Imitating Moscow: Cuba's Economic Reforms in a Comparative Perspective," in *Cuba in Transition,* (Washington: Association for the Study of the Cuban Economy,1995), p. 12-20.