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The Impact of the Global Crisis on Cuba's Economy and Social Welfare

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Abstract. The mechanisms by which the world economic crisis has been transmitted from developed to developing economies are conditioned by domestic factors that may attenuate or accentuate external economic shocks and their adverse social effects. Cuba is a special case: it is an open economy and hence vulnerable to trade-growth transmission mechanisms, but at the same time, it is a socialist economy with universal social services. This article reviews the literature, summarises Cuba's domestic socio-economic strengths and weaknesses prior to the crisis, evaluates the effects of the crisis on the macro-economic and social services indicators, assesses the government response and suggests alternative socio-economic policies.

Keywords: Cuba, Cuban Revolution, global crisis, transmission mechanisms, social welfare, social policy

Introduction

The global financial–economic crisis that began in 2008 generated transmission mechanisms from developed to developing economies that were in turn conditioned by domestic factors that might attenuate or accentuate the economic and social effects of the recession. Cuba is a special case, however. It is an open economy in the sense that it is exposed to trade-growth transmission mechanisms, but its socialist centralised economy and widespread free social services may attenuate the effects of the crisis.[1]

The Economic Commission for Latin America and the Caribbean's (ECLAC) preliminary 2009 report noted that the strongest effects of the global crisis on the region were channelled not through the financial sector but through the economy, by a decline in exports, commodity prices, remittances, tourism and foreign direct investment. The Latin American

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[1] Despite the government's controls on the current account and the capital account of the balance of payment, Cuba has a high dependence on trade (both goods and services); in that sense we suggest that it is an open economy.

countries' financial systems did not deteriorate, currency markets were relatively calm, and external obligations were met:

> The emergence from this crisis has been quicker than expected, largely thanks to the ramparts that the countries of the region had built through sounder macroeconomic policy management … The Latin American economies went into the crisis with unprecedented liquidity and solvency … The positive stimulus of fiscal policy action was one of the distinctive features of economic management in 2009.[2]

The Inter-American Development Bank (IADB) report on the impact of the global crisis concluded that the region avoided the currency and debt crises and bank runs so typical of previous episodes of global financial turbulence thanks to the strength of its macro-economic fundamentals: low inflation, twin external and fiscal surpluses, a sound banking system, a large stock of international reserves, and more flexible exchange rate regimes. These strengths allowed governments to respond with counter-cyclical monetary, fiscal and credit policies to mitigate the adverse impact of the global crisis. In addition, a key innovation in this episode of global financial turbulence was the readiness of the world community to act as an international lender of last resort by providing assistance to emerging markets.[3]

This article documents how Cuba was an exception to the regional experience during the crisis as described by the ECLAC and the IADB. Before the impact of the global crisis, the island endured a growing external debt, limited international reserves and twin external and fiscal deficits. The government's response to the crisis was to maintain a fixed exchange rate and implement a belt-tightening policy. Cuba was not a member of international and regional financial organisations, and hence did not receive financial help to overcome the crisis.

The tight relationship between economic growth and the external sector in the island's small and open economy has been widely demonstrated.[4] Such economic openness makes Cuba vulnerable to declines in export prices, the selling of professional services abroad, reductions in tourism and

[2] Economic Commission for Latin America and the Caribbean (ECLAC), *Preliminary Overview of the Economies of Latin America and the Caribbean, 2009* (Santiago, 2009).

[3] Inter-American Development Bank (IADB), *The Aftermath of the Global Crisis: Policy Lessons and Challenges ahead for Latin America and the Caribbean* (Washington DC, 2010).

[4] See Juan Carlos Moreno-Brid, 'Crecimiento económico y escasez de divisas', in Comisión Económica para América Latina y el Caribe (CEPAL), *La economía cubana: reformas estructurales y desempeño en los noventa* (Mexico City, 2000), pp. 238–48; Yenniel Mendoza and Leonel Robert, *El crecimiento económico y las restricciones en el sector externo: una aplicación al caso cubano* (Havana, 2002); José Antonio Alonso and Jorge Mario Sánchez-Egozcue, 'La competitividad desde una perspectiva macro: la restricción externa al crecimiento', in Rubén Tansini (ed.), *Tecnología, competitividad y capacidad exportadora de la economía cubana: el desafío de los mercados globales* (Havana, 2005), pp. 5–44; Pavel Vidal and Annia Fundora, 'Trade-Growth Relationship in Cuba: Estimation Using the Kalman Filter', *CEPAL Review*, no. 94 (2008), pp. 97–116.

remittances, and reductions in foreign investment and access to credit.[5] The relationship between economic growth and the external sector has been shown by Anthony Thirlwall's 'balance-of-payments-constrained growth' (BPCG) model that highlights the role of demand for exports in economic growth.[6] Thirlwall and Hussain's expanded version of this model includes external financing and terms of trade, alongside exports, as factors that could relax or restrict the balance of payments constraints in the short and medium terms.[7] The BPCG model is applicable to countries like Cuba, which rely on imported intermediate inputs for the day-to-day running of the economy and on imported capital goods to increase productive forces. Economic growth is therefore constrained by the availability of hard currency to meet imports. In this article's economic section, the expanded model is used to support the analysis of the transmission mechanisms of the global crisis to Cuba's economy.

To the best of our knowledge, there is no similar model showing the mechanisms of crisis transmission to the social sector. There is some literature, albeit scarce, on the social effects of the global crisis in Latin America, particularly on employment.[8] The International Labour Organization (ILO) has approached this topic, both globally and in Latin America, in the context of the concept of 'Decent Work'.[9] The IADB has dealt with the effects of the crisis on issues such as employment, education and nutrition.[10] The International Social Security Association (ISSA) has reported the effects of the crisis on social security in the world,[11] and Carmelo Mesa-Lago has thoroughly analysed its impact on pensions, healthcare and social assistance in Latin America and the Caribbean.[12]

[5] For an analysis of the impact of the global crisis on these variables, see Lorenzo L. Pérez, 'The Impact of the Global Financial and Economic Crisis on Cuba', in Association for the Study of the Cuban Economy, *Cuba in Transition*, vol. 19 (Washington DC, 2009), pp. 116–23.

[6] Anthony Thirlwall, 'The Balance of Payments Constraint as an Explanation of International Growth Rate Differences', *Banco Nazionale de Lavoro Quarterly Review*, no. 128 (1979), pp. 45–53.

[7] Anthony Thirlwall and Mohammed N. Hussain, 'The Balance of Payments Constraint, Capital Flows and Growth Rates Differences between Developing Countries', *Oxford Economic Papers*, vol. 34, no. 3 (1982), pp. 498–509.

[8] CEPAL, 'Crisis en los mercados laborales y respuestas anticíclicas', *Boletín CEPAL/OIT*, no. 2 (Sep. 2009), available at www.eclac.cl/publicaciones/xml/3/37293/2009-638-Boletin_CEPAL-OIT-WEB.pdf.

[9] International Labour Organization, *América Latina y el Caribe frente a la crisis financiera: recomendaciones de la OIT e iniciativas de los países* (Geneva, 2009), and *The Financial and Economic Crisis: A Decent Work Response* (Geneva, 2010).

[10] IADB, *Social and Labour Market Policies for Tumultuous Times: Confronting the Global Crisis in Latin America and the Caribbean* (Washington DC, 2009).

[11] International Social Security Association, 'Social Security Responses to the Financial Crisis', *Social Security Observer*, no. 5 (June 2009).

[12] Carmelo Mesa-Lago, *World Crisis Effects on Social Security in Latin America and the Caribbean: Lessons and Policies* (London, 2009).

Cuba was not affected by the serious debt crisis of the 1980s in Latin America because it was protected by Soviet credits, price subsidies, donations and soft loans. In 1989 the country was at its economic peak and ahead of the region in all social indicators except for housing. The end of economic aid and drastic reduction in commerce with the vanished socialist camp, preceded by errors and frequent changes in domestic economic policies, caused a 35 per cent drop in GDP between 1989 and 1993, a 78 per cent decrease in real social expenditures per capita, an increase in unemployment to 8 per cent, and a deterioration in social indicators. Such adverse effects forced timid market reforms during what was officially labelled the 'Special Period in Peacetime'. In 2004–7, however, GDP increased at an annual average of 9.2 per cent, largely due to Venezuelan trade, economic aid and price subsidies; unemployment decreased to 1.8 per cent; and some social services improved.[13] The global crisis of 2008–9 provoked serious adverse economic and social consequences in Cuba; the key question is whether previous domestic economic-social factors (strengths and weaknesses) ameliorated or aggravated that impact.

Macro-economic Transmission Mechanisms of the Crisis

Macro-economic indicators prior to the crisis, 2001–8

The evolution of Cuba's key macro-economic indicators in 2001–8 is summarised in Table 1. Compared with a period of stagnation in 2001–3, most indicators improved notably after 2004. GDP in constant prices accelerated and reached double-digit rates in 2005–6. Exports of goods and services contributed to the economic expansion by relaxing external constraints to growth.[14] They grew from 11.5 per cent of GDP in 2002 to 21 per cent in 2005, thus helping to generate a positive trade balance and GDP growth for four consecutive years. The trade balance in goods was negative, however, and deteriorated from −7.1 per cent of GDP in 2002 to −10.7 per cent in 2007, whereas the balance of services was positive and improved from +6.1 per cent of GDP to +13.5 per cent. Cuba's economic reliance on trade increased rapidly during this period: trade intensity (defined as (exports + imports)/GDP) increased from 29.4 per cent in 2001 to 43.7 per cent in 2008.[15]

Cuban fiscal and monetary policies ensured that a low fiscal deficit was maintained and kept inflation low, as well as tightly controlling the money

[13] Carmelo Mesa-Lago, 'Historia y evaluación de medio siglo de políticas económico-sociales en Cuba socialista, 1959–2007', in Consuelo Naranjo (ed.), *Historia de Cuba* (Madrid, 2009), pp. 507–37.

[14] Vidal and Fundora, 'Trade-Growth', pp. 97–116.

[15] Oficina Nacional de Estadísticas (ONE), *Anuario estadístico de Cuba, 2001* (Havana, 2002), and *Anuario estadístico de Cuba, 2008* (Havana, 2009).

Table 1. *Macro-economic Indicators, 2001–8 (in Percentages)*

Indicators	2001	2002	2003	2004	2005	2006	2007	2008
GDP (constant prices)	3.2	1.4	3.8	5.8	11.2	12.1	7.3	4.1
Exports/GDP (current prices)	13.2	11.5	13.0	16.0	21.0	18.7	20.3	20.4
Imports/GDP (current prices)	16.1	13.2	13.6	15.3	18.3	18.5	17.6	23.3
(Exports + imports)/GDP (current prices)	29.4	24.7	26.6	31.3	39.4	37.2	38.0	43.7
Trade balance/GDP (current prices)	−2.9	−1.7	−0.7	0.7	2.7	0.2	2.7	−2.9
Goods	−9.0	−7.1	−7.2	−7.6	−12.3	−12.0	−10.7	
Services	6.1	5.4	6.5	7.1	14.9	12.2	13.5	
Terms of trade	14.0	−7.9	15.2	9.9	−2.3	26.2	4.9	−34.3
External debt/GDP (current prices)[a]	10.4	9.8	10.3	15.2	13.8	14.8	15.2	15.8
Fiscal balance/GDP (current prices)	−2.3	−3.0	−3.0	−3.7	−4.6	−3.2	−3.2	−6.9
Money supply/GDP (current prices)	38.9	40.5	37.6	38.0	46.1	38.2	37.2	40.6
Inflation (in Cuban pesos)	−1.4	7.3	−3.8	2.9	3.7	5.7	2.8	−0.1

Sources: ONE, *Anuario estadístico de Cuba 2007, 2008* (Havana, 2008 and 2009); ECLAC, *Cuba: evolución económica durante 2008 y perspectivas para 2009* (Mexico, 2009).

[a] Excludes debt not subject to negotiation since 1986: US$ 7,592 million.

supply. In 2005 a significant increase in the money supply in Cuban pesos occurred without inflationary effects because it resulted from monetary substitution of the US dollar as part of the de-dollarisation process implemented by the Central Bank in 2003–4.[16] Dollarisation and monetary duality had begun in the early 1990s, in connection to the economic crisis of that time. In 2003–4 a 'convertible' peso replaced the US dollar. Since then, two locally issued currencies have circulated: the Cuban peso (CUP) and the convertible peso (CUC).[17] Monetary duality and dual exchange rates have enormous costs for business since they distort economic measurement and decisions on allocations of resources, reduce the potential of the domestic market, provoke adverse segmentation and diminish economic linkages, thus weakening the economy. The Cuban government has recognised the costs and distortions of monetary duality and has set currency unification as a goal, but by mid-2010 no specific measures towards this had been taken.

When the global crisis began in 2008, the Cuban macro-economic scenario was no longer positive, but weak. The rate of GDP growth decelerated from 7.3 per cent in 2007 to 4.1 per cent the following year. Exports stagnated at

[16] Banco Central de Cuba (BCC), *Economic Report, 2007* (Havana, 2008).

[17] The main problem with monetary duality lies in the multiple exchange rates for the CUP/CUC: 24 × 1 for the population and 1 × 1 for enterprises. The currency exchange markets must be unified to eliminate the dual monetary system, but this would require a correction in the overvaluation of the CUP in enterprises.

21 per cent of GDP, and the balance of trade turned negative (−2.9 per cent of GDP in 2008). External debt, which had grown from 9.8 per cent of GDP in 2002 to 15.2 per cent in 2004, increased further to 15.8 per cent in 2008. The fiscal deficit doubled that year and reached its highest level in the decade. Cuba lacks a domestic market for public debt, meaning that the fiscal deficit is directly financed by the Central Bank; the monetisation of the fiscal deficit was the source of money supply growth that reached 40.6 per cent of GDP in 2008, a return to the 2002 level (Table 1).

Several domestic factors that predated the world crisis afflicted the Cuban economy. There was a decrease in sales of Cuban professional services (physicians, nurses, teachers etc.) to Venezuela, the main source of expansion for Cuba's exports of services since 2004. These exports had initially experienced a boom based on beneficial agreements with Venezuela, but they soon stagnated due to limits on the number of health personnel that Cuba could export without seriously curbing its domestic provision. Simultaneously, other economic sectors were left behind, partly because of the low multiplier effect of professional service exports due to their poor linkages with the domestic economy, in contrast to the agro-industrial sugar and tourist sectors that had been engines of growth in previous decades.[18]

In addition, the Cuban economy suffered two severe external shocks in 2008. The terms of trade fell 34.3 per cent, the worst decline of the decade, due to the collapse of the world market price of nickel, Cuba's main export, and the escalation in world prices of oil and food, Cuba's two most significant imports.[19] Three hurricanes in 2008 caused losses estimated at US$ 9,722 million, mainly in housing and food production, which required an increase in imports from 17.6 per cent of GDP in 2007 to 23.3 per cent in 2008, the highest degree of dependence on imports in the decade (Table 1).[20] Fiscal expenditure was equally affected by the damage inflicted by the hurricanes, and by the rise in world oil and food prices that forced an increase in state subsidies on domestic prices of such goods.[21] Thus Cuba was already in a fragile macro-economic situation when the global crisis arrived. The slowdown in exports of professional services and the two external shocks in 2008 aggravated the external restrictions to GDP growth and

[18] Vidal and Fundora, 'Trade-Growth', pp. 97–116.

[19] Cuba consumes around 160,000 barrels per day in petroleum products, more than 50 per cent of which comes from Venezuela under preferential financing arrangements. The rest is pumped from the north-west coast. Some oil is also processed at a joint-venture refinery with Venezuela in Cienfuegos province, and then exported to other countries in the region. However, Cuba is still a net importer of oil, with the result that price increases have a negative effect on its balance of payments.

[20] For more details about the costs of the hurricanes, see *Granma*, 28 Dec. 2008.

[21] ONE, *Plan económico y social y presupuestos del estado para el año 2009* (Havana, 2008).

pushed the fiscal deficit to 6.7 per cent of GDP and the balance of trade deficit to 2.9 per cent of GDP (Table 1).

External constraints to growth, 2009

In 2009 the growth rate of Cuba's GDP decelerated to 1.4 per cent. An analysis based on the BPCG model indicates that the global crisis worsened the external constraints and explains the severe slowdown in GDP. Two variables of the model, external financing and exports of goods and services, fell significantly in 2009.

According to the minister of external trade, Rodrigo Malmierca, 'At the end of the third quarter of 2009, statistics show that Cuba's total trade in goods was 36 per cent lower than in the same period of 2008'.[22] Venezuela is Cuba's main trading partner (27 per cent of total trade volume), and the decline of Venezuelan GDP in 2009 reduced demand for Cuban exports and the sale of professional services. A similar negative effect was caused by the decline in GDP in Cuba's other major trading partners, such as Canada, the European Union and Russia, which together account for 25 per cent of Cuba's total trade volume. The crisis had a negative impact on exports of tourist services, as revenue from these decreased by 11.1 per cent in 2009. These factors explain the 16.6 per cent drop in the value of exports in 2009.[23]

With regard to the other two variables of the BPCG model, the 2009 data show that the terms of trade had improved by 7.3 per cent.[24] There are no official data for external financing in 2009. The Economist Intelligence Unit reported a reduction of the current account deficit from US$ 2,600 million in 2008 to US$ 300 million in 2009, which would imply an 88.5 per cent decline in net external financing.[25] However, Cuban banks forcedly seized external financing in 2009 by freezing bank accounts (US$ 600 million was the minimum value estimated by ECLAC).[26] If this sum is added to the current account deficit in 2009, external financing was US$ 900 million and the decline in 2009 was 65 per cent.

As a result of the external financing constraints, planned investment growth in 2009 was cut from 46 per cent to 2.8 per cent, the greatest adjustment of all GDP components on the expenditure side (see Table 2).

[22] EFE, Havana, 2 Nov. 2009.

[23] ONE, *Panorama económico y social, 2009* (Havana, 2010). [24] *Ibid.*

[25] *Ibid.*, and the Economist Intelligence Unit (EIU), *Country Report: Cuba, 2009* (London, 2010). The current account deficit estimated by the EIU in 2009 is credible, and matches the official data for the trade balance reported in ONE, *Panorama, 2009.*

[26] ECLAC, *Preliminary Overview, 2009.*

Table 2. *Adjustment in 2009 Plan*

Indicator	Initial plan December 2008 (%)	Adjusted plan April 2009 (%)
GDP (constant prices)	6.0	2.5
Exports (current prices)	13.3	−12.5
Imports (current prices)	6.2	−22.2
Investment	46.0	2.8
Consumption	14.8	2.6
Main sectors		
Tourism	6.1[a]	0.1[a]
Agriculture/cattle	8.5	6.5
Industry	4.1	1.9
Construction	7.6	−0.9
Transportation	8.0	4.8

Source: Ministerio de Economía y Planificación, *La economía cubana: situación actual y perspectivas* (Havana, 2009).

[a] Number of tourists.

Before the global crisis, low domestic savings were used to repair hurricane damage and to meet the increased cost of imports. After mid-2008, state banks and enterprises faced mounting difficulties in obtaining external credit due to rising Cuban debt and the breach in obligations with foreign creditors.[27] The global crisis was the final blow to the island's finances.

The negative contribution of these three variables to Cuba's economic growth in 2009 can be computed using the elasticity of GDP growth on external constraints in the BPCG model estimated by Vidal and Fundora: exports (0.373), terms of trade (0.169) and external financing (0.139).[28] It should be emphasised that this is only an estimate designed to provide an empirical approach to external constraints in 2009 and to assess the possible magnitude of each variable's effect on GDP growth.[29] Figure 1 shows the resulting contribution once the elasticity is multiplied by the change in each variable in 2009.[30] The major impact of the global crisis was through the external financing constraint (a negative contribution of 4 per cent of GDP); the second-largest impact was the decline in exports (2.9 per cent of GDP); the terms of trade had a positive contribution (0.5 per cent of GDP). The contribution of the three variables combined accounted for −6.4 per cent of GDP.

[27] Reuters, 17 Dec. 2008.

[28] Vidal and Fundora, 'Trade-Growth', Table 5.

[29] At the time of writing there were only preliminary data for 2009, and there are reservations about the predictive capabilities of the model in the short term.

[30] The same methodology of Vidal and Fundora was applied: the last estimation of the elasticity was multiplied by the logarithmic difference of the real values of the variable. The increase of 7.3 per cent in the terms of trade was used to estimate the real values of exports and external financing.

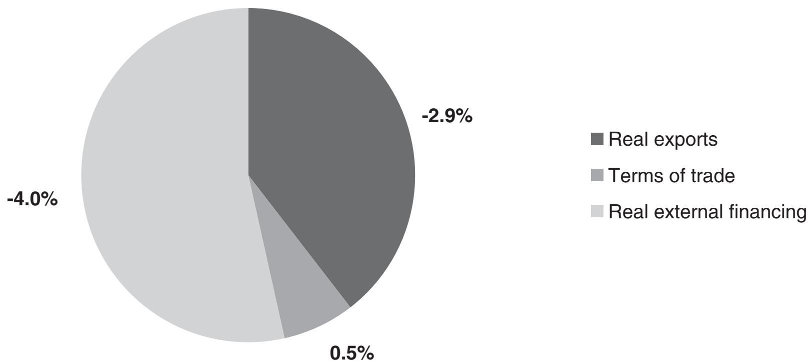

Fig. 1. External Constraints of the Global Crisis; Contribution to Economic Growth, 2009 (% of GDP). *Source*: Authors, based on Pavel Vidal and Annia Fundora, 'Trade-Growth Relationship in Cuba: Estimation Using the Kalman Filter', *CEPAL Review,* no. 94 (2008), pp. 97–116; ONE, *Panorama económico y social, 2009* (Havana, 2010); and Economist Intelligence Unit, *Country Report: Cuba 2009* (London, 2010).

The BPCG model estimated by Vidal and Fundora showed a significant trend growth rate in the Cuban economy of 2.6 per cent annually. The BPCG model's predicted value for GDP growth in 2009 was thus −3.8% (−6.4% + 2.6%). It is surprising, then, that despite those external constraints, according to official estimates Cuba's GDP grew by 1.4 per cent in 2009, considerably better than the average decrease of 1.7 per cent suffered in Latin America and the Caribbean. However, the measurement of Cuban GDP, with its heavy weight on services (80 per cent), might explain the positive outcome. The reported GDP growth of 1.4 per cent in 2009 is disaggregated as follows: a 1.2 per cent increase in 'basic services', a 4 per cent increase in 'other services' and a 3.6 per cent decrease in production of goods.[31]

Foreign remittances were another possible transmission mechanism for the global crisis, although this is not explicit in various versions of the BPCG model. No hard data are available to evaluate the hard currency restrictions to growth that might have resulted from remittances in 2009. While the US recession might have reduced remittances, President Barack Obama's lifting of previous restrictions created incentives to increase them.

In short, the contraction of external financing and the decline in Cuban exports, in that order, were the most evident transmission mechanisms through which the global crisis had an impact on the Cuban economy. The crisis amplified the balance of payments constraints and accentuated the previous slowdown in GDP. Evidently, this was only the first round of this transmission mechanism; external constraints placed more pressure on

[31] Based on ONE, *Panorama, 2009*.

existing macro-economic imbalances and had adverse consequences on macro-economic stability.

Macro-economic stability, 2009

The balance of payments deficit produced an imbalance in the currency exchange market: a combination of increasing imports, falling exports, higher external debt and the collapse of external financing led to excess demand for hard currency. Monetising the fiscal deficit while the domestic economy slowed down added to this demand. Exchange market disequilibrium was not adjusted through devaluation of local currencies.

Cuba's fixed exchange rate policy helped to keep inflation under control. In 2009 the Consumer Price Index (CPI) measured in Cuban pesos dropped by 0.1 per cent, while the CPI in convertible pesos rose by 1.4 per cent. Moreover, money supply expanded by only 2.1 per cent in 2009, a year in which the budget deficit was reduced but still remained the second-highest in the decade (5 per cent of GDP).[32] The intervention of the Central Bank in the currency exchange market in order to support the fixed exchange rate thus sterilised the monetisation of the fiscal deficit.

Until mid-2010 the impact of the global crisis on macro-economic stability was concentrated on the banking system, not on inflation, and the crisis did not prompt a devaluation of the exchange rate. The banking system endured a liquidity crunch at the start of 2009. The excess of hard currency demand that has already been noted, together with the major external financing constraints imposed by the global crisis, hurt the banks' balance sheets. ECLAC estimated that Cuban banks' non-payments were between US$ 600 million and US$ 1,000 million.[33]

This liquidity crunch was not a result of massive withdrawals from the savings accounts of individuals, but was rather due to the collapse of the enterprise payment system. Financial operations related to savings accounts were functioning normally, but international payments and capital outflows from the bank accounts of foreign and state enterprises were restricted. The enterprise payment system, particularly with regard to payments by state enterprises to foreign suppliers, investors and creditors, was halted. There was a considerable delay in bank transfers; payments that would normally be delayed for a few days took months to arrive. External trade and domestic economic activity were in an extremely difficult situation as a result.

Since the mid-1990s, the Cuban economic authorities had improved the banking system, bilaterally renegotiated part of the foreign debt, expanded international financial links, recovered price and financial stability,

[32] *Ibid.*

[33] ECLAC, *Preliminary Overview, 2009*, p. 137.

de-dollarised the economy (after 2004) and issued Central Bank external bonds on the London Stock Exchange for the first time.[34] The global crisis has clearly undermined the confidence and standing won by Cuba's monetary and financial system in the previous two decades, however, and this will not easily be restored in the short or medium term.

This loss of confidence generated a vicious circle by discouraging the entry of new financial flows and deepening the liquidity shortage, thereby obstructing the recovery of the banking system. The stabilisation of the banking system requires an international/regional lender of last resort; this is particularly difficult as Cuba is not a member of the major international or regional financial organisations.

The banking crisis, then, had adverse consequences on external credit, flows of foreign investment and foreign trade transactions. The most visible symptom of this was a shortage of imported goods for the domestic market due to the withdrawal of foreign suppliers and investors. A short-term rebound of GDP growth under this scenario was highly unlikely in 2010.

The Role of Social Services and the Effects of the Crisis

According to most scholars, Cuba's greatest achievement in the first three decades of the revolution was universal free access to education, health care and social security pensions, a domestic factor that can play a positive role during a crisis. In this section we identify the strengths and weaknesses of Cuba's social services prior to the global crisis, comparing indicators for 1989 and 2008 in order to take into account the impact of the 1990s crisis and recovery. We then assess the effects of the global crisis, summarise the measures implemented by the government, estimate social services costs between 1989 and 2009, and evaluate their long-term financial sustainability.

In 2008, Cuba had the highest allocations for social services within Latin America: 34.7 per cent of GDP and 52.6 per cent of current budgetary expenditures, the latter having grown from 29.9 per cent in 1989. During the crisis of the 1990s social services expenditures decreased to 27.4 per cent of GDP in 1991 and, adjusted for inflation, fell by 40 per cent between 1989 and 1998, when most social indicators deteriorated. Expenditure on social services gradually rose with the economic recovery, peaking at 55 per cent of the budget in 2005 but declining thereafter. By 2008 some social indicators had recovered and even surpassed their 1989 levels, but others failed to recover and overall service quality generally deteriorated. Budget allocation trends in social services were diverse: there were declines in education, social security pensions and housing, but an increase in health care, while

[34] BCC, *Economic Report, 2007*.

Table 3. *Social Services Expenditures as Percentage of State Budget Current Expenditures in 1989–2008 and of GDP in 2008*

Social services expenditures	Percentage of state budget current expenditures				% of GDP (2008)
	1989	1991	2006	2008	
Total	29.9	27.4	53.4	52.6	34.7
Percentage distribution	100.0	100.0	100.0	100.0	
Education	39.8	37.4	34.9	34.5	12.0
Health	21.8	23.0	24.5	33.1	11.5
Social security pensions	26.3	30.4	23.2	20.3	7.0
Housing	9.7	7.0	9.6	7.8	2.7
Social assistance	2.4	2.2	7.8	4.3	1.5

Sources: Based on Carmelo Mesa-Lago, *Market, Socialist and Mixed Economies: Comparative Policy and Performance – Chile, Cuba and Costa Rica* (Baltimore MD, 2000); ONE, *Anuario estadístico de Cuba, 2007* (Havana, 2008); ONE, *Panorama económico y social, 2009* (Havana, 2010).

social assistance peaked in 2006 and then declined (Table 3).[35] Data for 2009 showed a rise in social expenditure as a percentage of total budget expenditures, mainly as a result of a significant increase in education and a minor rise in pensions, whereas the remaining categories were stagnant or decreased.[36] Key social indicators in 1989 and 2008 are summarised in Table 4.

Education

The education system is owned, managed and financed by the government, which trains and hires all personnel (private teaching is banned). Universal and free services should play a positive role in times of crises. During the crisis of the 1990s, however, there was a deterioration of infrastructure, maintenance, school supplies and meals, and quality of services. Secondary school enrolment fell from 88 per cent in 1989 to 75 per cent of the corresponding age cohort in 1994/95, and university enrolment declined from 23 per cent to 12 per cent. In absolute figures, university enrolment decreased by 57 per cent (Table 4).[37] In 1989, university professors and physicians were at the top of the salary scale and teachers earned adequate salaries; thereafter, small private farmers, self-employed workers and traders in the free agricultural and black markets became the highest earners. Many professionals shifted their state occupations to jobs in enterprises with foreign capital or in tourism, where they earned part of their wages or tips in hard currency; they also moved to small private sector, informal and black-market jobs, where remuneration was higher.

[35] ONE, *Anuario, 2008*.
[36] ONE, *Panorama, 2009*.
[37] UNESCO, *Statistics* (Paris, 2008), available at stats.uis.unesco.org.

With the economic upturn, secondary school enrolment rose to 87 per cent – the highest in the region, but not a recovery to the 1989 level.[38] University enrolment in 2008/09 had leaped by 167 per cent compared with 1989/90, but with remarkable differences by discipline: the number of students in humanities and social sciences had jumped by 3,737 per cent, in education by 630 per cent, in medicine by 405 per cent and in economics by 336 per cent, whereas agricultural sciences and technical fields grew by only 50–54 per cent, and natural sciences and mathematics fell by 36 per cent (Table 4). Half of the new students learned at home in cultural fields, social work and teaching; others were pensioners enrolled at 'popular universities'. In contrast to the 300,000 graduates reported initially, 71,475 actually finished their studies in 2008/09. The proportion that graduated also varied by discipline: 2.6 per cent in humanities and social sciences, 3.2 per cent in economics and 4.5 per cent in agronomy, but 11.2 per cent in technical fields and 14.2 per cent in natural sciences and mathematics. Between 17 and 30 per cent of students dropped out.[39]

Despite the enormous increase in education graduates, in 2008 there was a deficit of 8,192 teachers in Havana, caused by the exodus of teachers due to low salaries. This forced a reduction in the number of years of training in an emergency teaching programme staffed by 4,500 inexperienced rural youngsters. After flaws in this programme were acknowledged in 2008, retired teachers were encouraged to return to the classrooms, and the salaries of teachers and professors were increased in 2009. Out of 150,655 students enrolled in municipal universities who took examinations in May 2009, however, 40 per cent failed in their last year due to orthographical errors.[40] There was also an estimated deficit of 3,000 agricultural engineers, which was partly blamed for the sharp decline in agricultural output. 'Rapid action must be taken because the deficit of specialists cannot be reversed in the short term', the press reported.[41]

The 2009 education budget was initially increased by 2 per cent, but in mid-2009 several cuts were implemented. First, 'schools in the countryside', one of the revolution's most esteemed programmes, was shut down. Second, higher education enrolment was reduced by 4.4 per cent (18 per cent in economics, 9 per cent in education and 5 per cent in humanities/social sciences). Secondary school enrolment fell by 5.5 per cent and the number of schools by 4.7 per cent, though this was partly due to population decline and the downward trend that commenced in 2005–6.[42] Third, the government ordered entrance tests for municipal universities to trim the number of

[38] United Nations Development Programme (UNDP), *Human Development Report, 2007/2008* (New York, 2007).

[39] *Granma*, 3 Nov. 2008; ONE, *Anuario, 2008*.

[40] EFE, 8 July 2008; *Granma*, 3 Nov. 2008 and 10 July 2009.

[41] *Trabajadores*, 10 Nov. 2008; *Bohemia*, 12 Dec. 2008.

[42] ONE, *Anuario, 2008*.

Table 4. *Social Services Indicators, 1989, Worst Year in 1992–5 Crisis, 2006–7 and 2008*

Social services indicators	1989	Worst year, 1992–5	2006–7	2008	2008/1989 (%)
Education (university enrolment)[a]					
Humanities and social sciences	5,095	5,366	206,246	195,404	3,735
Education	15,529	35,068	125,095	113,473	630
Medicine	37,305	23,457	187,690	188,534	405
Economics	18,789	4,893	93,162	82,003	336
Technical sciences	29,819	13,020	42,741	46,054	54
Agricultural sciences	11,606	4,680	16,034	17,365	50
Natural sciences and mathematics	6,399	4,019	3,922	4,075	−36
Total[b]	242,366	102,598	743,979	646,908	167
Health					
Hospital beds (per 1,000 inhabitants)	6.0	6.0	4.8	4.6	−23
Physicians (per 1,000 inhabitants)	33.1	46.7	64.0	66.3	100
Infant mortality (per 1,000 born alive)	11.1	9.9	5.3	4.7	−57
Maternal mortality (per 100,000 births)	29.2	65.7	31.1[j]	46.5[j]	59
Morbidity rates (per 100,000 inhabitants)					
Acute respiratory	36,804	45,021	43,222	44,236	20
Acute diarrhoea	8,842	10,380	6,159	6,132	−30
Chickenpox	365	1,138	316	173	−53
Food poisoning	n.a.	87[i]	196	196	125
Gonorrhoea	381	412	42	36	−90
Hepatitis	106	295	87	43	−59
Syphilis	82	143	16	14	−83
Tuberculosis	5	14	7	7	40
Immunised population (thousands)					
Double	157	164	112	121	−23
Triple (DPT)[c]	354	510	133	116	−67
Tuberculosis (BCG)	320	149	112	121	−62
Pensions	[e]				
Deficit financed by state (% of expenses)	26.0	36.3	40.5	41.0	57
Deficit (% of GDP)	1.3	3.5	2.5	2.9	123
Cost of pensions (% of GDP)	4.6		6.7	7.0	52
Contribution (% of payroll)	10.0	10.0	12.0	12.0	20
Contribution to eliminate deficit (% of payroll)[d]	13.5	18.8	19.2	20.4	51
Population age 60+ (% of total population)	10.9[f]	12.5	16.6	17.0	56
Ratio of active workers per one pensioner	3.6[g]	3.4	3.2	3.1	−14
Real pension (index 1989 = 100)	100.0	16.1	39.3	44.6	−45
Housing					
Units (thousands)	63.0[h]	20.0	111.4	44.8	−29
Ratio (units built per 1,000 inhabitants)	6.1[h]	1.8	9.9	4.0	−34

Sources: Based on Carmelo Mesa-Lago, *Market, Socialist and Mixed Economies: Comparative Policy and Performance – Chile, Cuba and Costa Rica* (Baltimore MD, 2000); 'Social and Economic Problems in Cuba During the Crisis and Subsequent Recovery', *CEPAL Review*, no. 86 (2005),

Table 4. (cont.)

pp. 177–99, and 'Envejecimiento y pensiones en Cuba: la carga creciente', *Nueva Sociedad*, no. 216 (2008), pp. 123–32; Pavel Vidal, 'La inflación y el salario real', *Economics Press Service*, no. 5 (Havana, March 2007); ONE, *Anuario estadístico de Cuba 2007*, *2008* (Havana, 2008 and 2009), and *El estado actual y perspectivo de la población cubana: un reto para el desarrollo territorial sostenible* (Havana, 2008).

[a] School years 1988/89, 2008/09.
[b] Excludes physical education and art.
[c] Diphtheria, whooping cough and tetanus.
[d] Contribution to balance the system financially in 2008; actuarial equilibrium required a contribution ranging from 29 per cent to 86 per cent.
[e] 1986.
[f] 1981.
[g] 1989.
[h] Annual average in 1981–9.
[i] 2002.
[j] New statistical series that excludes some causes of death, not comparable with the previous series.

students and screen their quality. Fourth, in key disciplines a minimum score of 60 out of 100 points was imposed on high school seniors applying for college. In the current tight situation, a repetition of the outcome of the 1980s crisis could lead to cuts in infrastructure maintenance, school materials and meals (Table 4).[43] On the other hand, data on the budget at the end of 2009 show a 20 per cent increase in education expenditures, as a result of the rise in teachers' salaries in that year.[44] In summary, weaknesses in the educational system began with the crisis of the 1990s; many were not corrected during the recovery, and this has contributed to the problems caused by the global crisis.

Health care

The state owns and operates all health care facilities, which are universal and free, through a nationally integrated public system that employs all personnel and bans private practice. During the first three revolutionary decades there was an impressive expansion in physicians, half of whom were family doctors in neighbourhoods, as well as in hospital beds and real expenditures per capita. There were decreases in infant and maternal mortality, and most contagious diseases were eliminated, the exceptions being chickenpox, venereal infections, hepatitis, and acute diarrhoea and respiratory diseases, which increased. As in education, universal free access to health care should attenuate the adverse social effects of crises.

[43] ONE, *El estado actual y perspectivo de la población cubana: un reto para el desarrollo territorial sostenible* (Havana, 2008).
[44] ONE, *Panorama, 2009*.

The 1990s crisis, however, halted imports of medical supplies from the former socialist camp. Between 1989 and 1993–5, maternal mortality increased from 29.2 to 65.2 per 100,000 and old-age mortality rose from 48.4 to 55.7 per 1,000. Most of the diseases that had been eradicated did not resurface, but those that had shown a rising trend before the crisis did increase (tuberculosis reappeared and rose). Conversely, the ratio of physicians per 10,000 inhabitants jumped from 33.1 to 46.7, the highest in Latin America; hospital beds remained at 6 per 1,000, and infant mortality shrank from 11.1 to 9.9 per 1,000, the lowest in the region (Table 4). These achievements were expensive, and some resources were not efficiently allocated. The costly training of physicians continued despite the fact that many of them abandoned the profession. While the number of hospital beds kept rising, their average occupancy rate fell from 83.9 per cent to 71.3 per cent (56 per cent in paediatric hospitals, 48 per cent in neonatal care); the duration of an average hospital stay rose from an already high 9.9 days to 10.4. Moreover, the effort to reduce infant mortality, which was already quite low, persisted, diverting scarce resources that were urgently required to meet more pressing basic needs, such as repairing the deteriorated potable water and sewage infrastructure. Real expenditures per capita shrank by 75 per cent between 1989 and 1993 (in 1999 they were still 21 per cent below 1989 levels), and combined with import cuts, this provoked a scarcity of medicines and other health care inputs. Falling electricity output affected pumps and the water supply, with the result that water treatment and thus potable water quality decreased, unleashing increases in acute diarrhoea and hepatitis. A lack of prophylactics combined with a rise in prostitution caused a boost in venereal diseases, while reductions in immunisation increased the number of cases of chickenpox and tuberculosis. The efficacy of family doctors declined due to lack of essential medicines and basic inputs.[45]

Despite the recovery, the ratio of hospital beds per 1,000 inhabitants decreased from 6 to 4.6 between 1993 and 2008. Conversely, the ratio of physicians per 10,000 inhabitants rose from 46.7 to 66.3, the highest proportion in the region (Table 4).[46] But an estimated 35 per cent to 48 per cent of all Cuban physicians work abroad, principally in Venezuela, and many have shifted to other occupations due to low state salaries, causing a domestic shortage of doctors, a decrease in access to services and a longer wait for surgery. There is a scarcity of medicines, most of which are available only in hard currency shops. The hospital infrastructure, potable water and sewage systems have deteriorated further. Water pipes are between 50 and

[45] Carmelo Mesa-Lago, 'Social and Economic Problems in Cuba during the Crisis and Subsequent Recovery', *CEPAL Review*, no. 86 (2005), pp. 177–99.
[46] UNDP, *Human Development Report, 2007/2008*.

100 years old and, due to leaks, half of the water pumped is lost, thus increasing energy consumption, while running water in the streets creates the ideal environment for mosquitoes such as *Aedes aegypti*, which can spread yellow fever and dengue fever.[47] Infant mortality declined from 9.9 to 4.7 per 1,000 between 1993 and 2008, the lowest in the hemisphere after Canada; maternal mortality decreased from 65.7 to 31.1 per 100,000 between 1993 and 2006 but rose to 46.5 in 2008 and 53 in 2009 (Table 4).[48] Five infectious diseases were eradicated (diphtheria, measles, paratyphoid, poliomyelitis and whooping cough). Out of eight morbidity rates, five declined notably in the 20 years after 1989, particularly venereal diseases, but three increased: food poisoning, tuberculosis and acute respiratory diseases, as well as unreported dengue fever, haemorrhagic conjunctivitis and leptospirosis. Even those diseases exhibiting rising rates still had among the lowest rates in the region, however. Declining levels of immunisation are a potential risk, especially with regard to the triple DPT vaccine and tuberculosis (Table 4). Another serious hazard is the accumulation of garbage in the streets due to lack of collection trucks. On the other hand, 23,000 foreign students have scholarships for health careers in Cuba, which is laudable but costly (US$ 300 million annually).[49]

In 2009 the health care budget was reduced by 8 per cent in current pesos, the largest cut among all the social services.[50] The weaknesses of the health care system that began with the 1990s crisis and were not corrected with the recovery were aggravated by the global crisis. At the start of 2010 a plan was unveiled to reconstruct the water infrastructure over the next 10–15 years; 2,500 kilometres of water pipes must be replaced in the city of Havana alone. No anti-crisis policies have been implemented so far.[51]

Social security pensions

In the early years of the revolution, a new unified and state-managed pension system was established, increasing labour force coverage from 63 per cent to 91 per cent. Small private farmers, the self-employed and unpaid family workers lack mandatory coverage but may voluntarily join. In 1989 the Cuban pension system had wide coverage and generous entitlement conditions, with very low retirement ages (55 for women and 60 for men) and average retirement spans of 26 years for women and 20 years for men. Workers did not pay any pension contributions, and state enterprises paid only 12 per cent of the payroll. Although meagre, pensions were supplemented by a social protection network: subsidised prices for rationed goods,

[47] *Bohemia*, 9 Nov. 2007; *Opciones*, Havana, Jan. 2008; Lianet Arias and Lourdes Pérez, '¿Con el agua al cuello?', *Granma*, 9 Jan. 2010.
[48] ONE, *Panorama, 2009*.
[49] *Granma*, 11 Feb. 2008.
[50] ONE, *Panorama, 2009*.
[51] *Granma*, 9 Jan. 2010.

free health care services, free or low-rent housing and inexpensive public utilities. The 1990s crisis undermined the positive features of the pensions system: the number of private sector workers increased from 4 per cent to 15 per cent of the labour force between 1989 and 2001, hence fewer of them were mandatorily covered, and self-employed workers and private farmers who voluntarily join the state pensions scheme must now pay 10 per cent of their earnings, a disincentive for affiliation. A 1994 tax law that required private sector workers to pay contributions was suspended for socio-political reasons; later, a 5 per cent contribution was implemented gradually for workers employed by state enterprises under the *Sistema de Perfeccionamiento Empresarial* (one-fifth of all enterprises).[52]

At the end of 2008, Cuba's pension system was still the most liberal in Latin America: retirement ages were four years lower for women and two years lower for men than regional averages; retirement spans were the longest on average, due to the second-highest life expectancy in the region; 25 years of *work* were required to obtain a pension compared to a regional average of 20 years of *contributions*; minimum and maximum replacement rates upon the base salary were higher than regional averages; and the payroll contribution was about half the rate of that found in comparable countries. As a population ages and a pension programme matures, the falling ratio of insured workers to pensioners forces an increase in contributions and retirement ages, a trimming of pensions, or a combination of such measures. In this respect the demographic transition in Cuba is the most advanced in the region: the birth rate decreased from 2.5 per cent to 1 per cent between 1953 and 2008 (the fertility rate has been below the replacement rate since 1978 and is the lowest in the continent); the emigration rate rose from −0.06 per cent to −0.33 per cent during the same period, and the population growth rate contracted from 2 per cent to −0.01 per cent (in absolute terms the population decreased between 2005 and 2008). The cohort of people aged 60 and above increased from 7 per cent to 17 per cent of the total population and will reach 26 per cent by 2025, when there will be as many pensioners as active workers and Cuba's population will be the oldest in the region, aggravating the financial unsustainability of the current pensions system.[53]

Cuba's unemployment rate was 1.6 per cent in 2009, and the pensions system lacks reserves and investment; hence the system has not been affected by the fall in coverage, value of funds and capital returns caused by the

[52] Carmelo Mesa-Lago, 'Envejecimiento y pensiones en Cuba: la carga creciente', *Nueva Sociedad*, no. 216 (2008), pp. 123–32.

[53] *Ibid.*; ONE, *El estado actual*; ONE, *Anuario, 2008*; ECLAC, *Cuba: evolución económica durante 2008 y perspectivas para 2009* (Mexico, 2009).

crisis in the region.[54] But liberal entitlement conditions, system maturity, population aging and insufficient financing pushed Cuban pensions costs from 4.6 per cent to 7 per cent of GDP between 1986 and 2008, and the fiscal deficit rose from 26 per cent to 41 per cent of total pension expenditures (from 1.3 per cent of GDP to 2.9 per cent). To finance growing costs, the 12 per cent payroll contribution should have been raised to 20.4 per cent in 2008 and should continue climbing thereafter. The ratio of workers to pensioners fell from 3.6:1 to 3.1:1 between 1989 and 2008 and will decline to 1.7:1 by 2025. On the other hand, Cuba does not adjust pensions annually to the cost of living; despite nominal increases in 2005 and 2008, the average pension adjusted for inflation in 2008 was 55 per cent lower than in 1989 and grossly insufficient to meet basic needs (Table 4).[55]

The nominal average monthly pension was 235 pesos in 2008 (US$ 10 at the exchange rate for state agencies). Monthly food rations cover only seven to ten days, and their cost, combined with that of public utilities and house rent paid by some, accounts for 60–123 pesos. With the remaining income (112–175 pesos), pensioners must buy food in free agricultural markets and state hard currency shops for the 20–23 days not covered by rations, as well as other essential goods. One pound of beef, half a pound of chicken and fish, four pounds of rice, two pounds of vegetables, two onions, one bottle of soy oil and four eggs cost 213 pesos (90–122 per cent of the remaining average pension). A bar of soap, a detergent bag and a deodorant stick add up to 84 pesos; an energy-saving light bulb takes up 25 per cent of the average monthly pension.[56] The previous social protection network has deteriorated due to reduction of access to health care services and the decline in their quality, transportation difficulties and the decrease in ration quotas. Those collecting the average pension cannot survive unless they receive foreign remittances, family help or earnings from work. A poll taken in Havana in 2000 showed the elderly already to be among the poorest groups: 88 per cent lived in mediocre or bad housing, 78 per cent had an income insufficient to meet basic needs, and most complained about expensive transportation and the lack of old people's homes.[57]

The Social Security Reform Law, enacted on 24 December 2008 in the midst of the crisis, confronted many but not all of these problems. The retirement age was increased by five years for both sexes, raising it to 60 for women and 65 for men, to be phased in gradually over seven years. Pension calculations will be based on the monthly average of the best five annual salaries in the last ten years; a replacement rate of 60 per cent (previously

[54] Mesa-Lago, *World Crisis Effects on Social Security.*
[55] ONE, *El estado actual.*
[56] Carmelo Mesa-Lago, 'The End of Half a Century of Rationing in Cuba?', *Hemisphere*, vol. 17 (2006), pp. 30–4, updated with a list of prices compiled by Cuban economists (Havana, Jan. 2009).
[57] ONE, *El estado actual.*

50 per cent) will be applied; and the number of required work years has increased from 25 to 30. The pension will be increased for each year that retirement is postponed, and nominal pensions have been raised (the minimum by 22 per cent and others from 10 per cent to 20 per cent). The reform also imposes a wage contribution of 5 per cent on workers who attain salary increases. These measures will contain expenditures and increase revenue somewhat, but will be insufficient to ensure the financial sustainability of the system.[58] If a total contribution of 17 per cent had been paid in 2008 (5 per cent by workers and 12 per cent by enterprises), it would still have been lower than the 20.4 per cent required to balance the system financially in that year; even more will be needed in the long run.

Social assistance

State-provided social assistance protects the elderly, disabled, single mothers, parents of deceased workers and pensioners who receive low benefits. The government does not publish poverty data, but an academic study estimated that the urban population 'at risk of having a basic need uncovered' rose from 6.3 per cent to 14.7 per cent between 1988 and 1996 (in Havana it grew from 4.3 per cent to 20.1 per cent). The 'at-risk population' was composed mainly of women, senior citizens, Afro-Cubans, the unemployed and those with only a primary education or living in homes with six or more people.[59] Despite increasing poverty, the real average social assistance benefit decreased by 29 per cent between 1989 and 1994, the worst stage in the crisis of the 1990s, and averaged just 0.6 per cent of GDP in the 1990–2001 period, the lowest proportion among all social services. Social assistance beneficiaries shrank by 1.2 per cent between 1997 and 2000, and the monthly average social assistance pension in 2002 was 40 pesos, insufficient to purchase one day's worth of food in non-rationed markets.[60]

Between 2002 and 2006, the number of social assistance beneficiaries jumped by 122 per cent. These accounted for only 5.2 per cent of the total population, however, whereas 20 per cent were poor in Havana, and probably more in the rest of the country. Social assistance expenditures also climbed and peaked at 7.5 per cent of total social expenditures in 2006, but they fell to 4.3 per cent in 2008 (1.5 per cent of GDP) and to 4.1 per cent in 2009, whereas the number of beneficiaries declined by 3 per cent. In 2009, the monthly social assistance pension was 140 pesos (US$ 6), 40 per cent less

[58] The pensions deficit rose from 41 per cent in 2008 to 41.3 per cent in 2009, one year after implementation of the law (authors' estimate based on ONE, *Panorama, 2009*).

[59] Mayra Espina, *Políticas de atención a la pobreza y la desigualdad: examinando el rol del estado en la experiencia cubana* (Buenos Aires, 2008).

[60] Mesa-Lago, 'Social and Economic Problems in Cuba', pp. 177–99.

than the average social insurance pension and therefore even more insufficient to cover basic needs. The number of social assistance beds for the elderly and disabled shrank by 2.4 per cent between 1999 and 2007, although it recovered to its previous level in 2008.[61]

Despite some improvements between 2002 and 2006, therefore, Cuba's social assistance programme deteriorated in 2008–9 when the crisis hit. The government has been studying ways to replace the current system of universal indiscriminate subsidies with aid targeted to the needy. Raul Castro announced the elimination of rationing in 2010, but later postponed it to 2011.

Housing

After the revolution the government expropriated rental buildings and houses other than those occupied by the owner, abolished mortgages and granted lessees ownership of the dwelling through monthly payments to the state over 20 years, whereas other lessees paid rent equivalent to 10 per cent of their salary. Unfortunately, ill-conceived housing policies, combined with population growth in the early years of the revolution as well as damage from hurricanes, provoked a growing housing deficit. The problems were exacerbated by a virtual state monopoly on building dwellings; tough restrictions on purchasing scarce construction materials for repairs (owners cannot mortgage their homes to repair them); a notoriously inefficient centralised state agency charged with house maintenance; and a prohibition on buying and selling dwellings (only bartering is allowed, but it is subject to a cumbersome bureaucratic process plagued with corruption). The modest number of dwellings built by the state in the first two revolutionary decades did not compensate for the destruction of the existing stock. In 1980 individuals were authorised to construct their own houses, and the total number built in that decade peaked, but the housing law of 1988 tightened building and barter rules, halted the sale of construction materials to the population, reinforced the state's role, and imposed tough penalties for infringements.[62] The number of new dwellings built per 1,000 inhabitants fell from 6.1 in the 1980s to 1.8 during the worst years of the 1990s crisis and, despite the recovery, to 1.4 in 2003–4; after peaking at 9.9 in 2006, it shrank again to 4 in 2008. While the population increased by 62 per cent in the 50 years that followed the revolution, the number of dwellings constructed was lower than the number destroyed due to hurricanes and lack of maintenance; in 2008 it was 34 per cent below the figure for the 1980s (Table 4).

[61] ONE, *Anuario, 2007* (Havana, 2008); ONE, *Panorama, 2009*.
[62] Mesa-Lago, 'Social and Economic Problems in Cuba', pp. 177–99.

Victor Ramirez, the president of the National Housing Institute, reported in 2008 that 47 per cent of dwellings were in poor or mediocre shape, 85 per cent of buildings with more than three floors required repairs, and even meeting the goal of the 2008 plan to construct 50,000 homes would only fill 5–7 per cent of the accumulated housing deficit.[63] With 8 per cent of the state budget allocated to housing in 2008, 44,775 homes were completed (11 per cent short of the goal), but 600,032 were destroyed or damaged by hurricanes, meaning that the current deficit must be above one million, 25 per cent higher than in 1989. Extensive zones in the capital and its surrounding neighbourhoods are virtually in ruins. Divorced couples often divide the house in two, and many house owners have built improvised mezzanines (*barbacoas*) to expand their living areas.

In 2009, production of cement and other construction materials was 45 per cent of the 1989 level. In January 2009 Carlos Lage, the then vice-president, reported that only 26 per cent of the homes damaged by hurricanes had been repaired. In February Eusebio Leal, the Historian of Havana, stated that 60 per cent of dwellings in the city were in poor shape and an average of three houses collapsed daily, and he requested US$ 1,000 million from the government to save and rehabilitate thousands of houses in the capital.[64] The 2009 budget reduced the housing allocation by 0.3 per cent of total expenditure relative to 2008; 32,800 dwellings were built, equivalent to 2.9 units per 1,000 inhabitants, 53 per cent less than in 1989.[65]

Government Response and Alternative Policies for Dealing with the Crisis

This section summarises the measures taken by the Cuban government to confront the economic and social effects of the global crisis, and proposes alternative policies.

The economy

Until 2010, the government's economic response had fundamentally relied on centrally implemented expenditure cuts. The global crisis caught Cuba with serious macro-economic imbalances and a lack of reserves for a stimulus package – on the contrary, a tough adjustment was implemented to rebalance the economy and stabilise the financial system. This policy managed to cut imports drastically in 2009 (by 37.3 per cent). Investment fell by 16 per cent, and fiscal spending was controlled (0.8 per cent).[66] This was

[63] *Juventud Rebelde*, 9 July 2008.
[64] ONE, *Anuario, 2007*; *Granma*, 1 Aug. 2009. Leal has beautifully reconstructed part of old Havana, but most of the city remains in ruins.
[65] ONE, *Panorama, 2009*.
[66] ONE, *Panorama, 2009*.

done in a centralised manner, without using price incentives, and maintaining the inappropriate fixed exchange rate. An alternative policy would have been to grant some degree of autonomy to state enterprises to decide expenditure cuts and other options capable of addressing the crisis in a decentralised manner. Until mid-2010, measures to boost productivity and stimulate revenue were quite limited.

Cuba's 2009 economic plan, approved in December 2008, did not foresee the important adverse effects of the global crisis: it projected the growth rate of GDP to increase from 4.3 per cent to 6 per cent, with significant increases in all GDP components, government expenditures and the main economic sectors, including a 46 per cent rise in investment (Table 2). It was not until April 2009 that the government recognised the negative impact of the global crisis and made a first adjustment to the plan, reducing the projections for GDP growth from 6 per cent to 2.5 per cent (and to 1.7 per cent in June 2009) and drastically shrinking the plan for exports, imports, investment and consumption, as well as the growth planned for tourism, agriculture, industry, construction and transportation (Table 2).[67]

The annual expenditure plan was revised twice for each of the state enterprises; imports in some sectors were halted or diminished and investment postponed. The greatest emphasis has been placed on the control and reduction of energy consumption in state enterprises and agencies. On 1 June 2009, the government began a plan of 'exceptional measures' to save energy and control electricity consumption.

With respect to fiscal policy, Cuba lacked the reserves that it required for a counter-cyclical expansionary policy when the crisis hit. The government's fiscal policy response was a severe tightening in spending to reduce the fiscal deficit, which fell from 6.9 per cent of GDP in 2008 to 5 per cent in 2009; a new cut to 3.5 per cent was planned for 2010. The government launched a programme of fiscal efficiency that included extensive control and supervision of budgetary expenses, the reorganisation of institutional structures and their functions, and the elimination of gratuities and subsidies in order to gradually phase out the ration card. Belt tightening is not the only way to recover the fiscal balance, however. Greater fiscal efficiency combined with the implementation of economic reforms would raise the tax base and fiscal income, and thus alleviate the contractionary adjustments of fiscal spending.

In terms of monetary policy, the Central Bank responded with a fixed exchange rate policy and sterilised the monetisation of the fiscal deficit

[67] Marino Murillo, 'Informe sobre los resultados económicos del 2009 y los lineamientos del plan económico y social para 2010', *Granma*, 20 Dec. 2009; ECLAC, *Preliminary Overview, 2009*.

through intervention in the currency exchange market. That policy safeguarded the value of the local currencies and controlled inflation but failed to restore equilibrium in the balance of payments and the currency exchange market, and became a driving factor of the liquidity crunch by weakening the position of the Central Bank as lender of last resort. Monetary policy interventions to support existing exchange rates caused a reduction in international reserves and left the Central Bank with less hard currency to support the banking and payment systems.

Monetary policy ought to allow controlled devaluation of the two national currencies, particularly the convertible peso, due to its greater links to foreign trade operations. A devaluation of the CUC would transmit price signals, create incentives for import substitution, export promotion and enhanced competition in tourism, and reduce the purchasing power of the enterprises' bank accounts in order to relieve tensions on the currency exchange market.

The liquidity crunch in the commercial banks was not tackled by the Central Bank due to the shortage of international reserves caused largely by the fixed exchange rate policy, and was worsened by the financial constraints imposed by the global crisis. Stabilisation of the banking system requires a lender of last resort, something that is made difficult by the fact that Cuba is not a member of the main international/regional financial organisations. The negative consequences of the global crisis on Venezuela have made a financial rescue by Cuba's principal economic ally or by the new Bank of ALBA impossible.

In view of the absence of large external loans, the government could open up more spaces and facilitate foreign investment in areas like the sugar industry, where it is prohibited. The current high world price of sugar, as well as the profitability of ethanol, provide incentives to expand the production of sugar and its by-products.

The social sphere

Universal and free social services peaked in 1989, when they were the best in Latin America, except for housing, but their quality deteriorated under the impact of the crisis of the 1990s. Despite some improvement during the recovery, most of the key weaknesses in social services had not been corrected prior to the current crisis, and thus could not act as deterrents to its adverse social effects. Cuba's current economic situation and financial capacity, aggravated by the global crisis, cannot sustain the high and fast-growing cost of social services in the long term. Fiscal revenue for social services must be increased and their expenditures cut through improvements in the allocation and use of scarce resources. The state monopoly and excessively centralised management currently in place should be transformed with decentralised decision making and effective popular participation in management, monitoring and evaluation.

In education, government policies have been to cut some programmes, increase teachers' salaries (to alleviate the exodus out of and scarcity of workers in the profession), trim enrolment in university disciplines that have a glut and screen students to control for deteriorating standards. Further policies needed are a partial shift of elementary and secondary school resources, in view of falling fertility and the decline in the school-age population, in order to improve teachers' salaries further; a prioritisation of university disciplines geared toward development (business administration, modern economics, technical careers), as well as vocational education; an increase in the ratio of graduates to enrolled students; and authorisation for teachers and professors to become self-employed.

The only government measure in health care so far is a medium-term plan to reconstruct the water system. More substantial policies are required: prioritising potable water and sewage infrastructure; reallocating resources away from pursuing a steady reduction in infant mortality, a problem already solved, and towards the improvement of basic infrastructure, imports of medicine, a reduction in maternal mortality and other areas of greater need; discontinuing expensive education scholarships as well as health care aid to foreign countries unless they pay the full cost of such services; converting maternity and paediatric hospitals with low occupancy rates into geriatric hospitals and old people's homes; charging the full cost for private rooms to the highest income strata; attracting more foreigners to receive medical attention in Cuba; and authorising the self-employment of health professionals, as well as establishing health care cooperatives that compete with state services.

The reform to the pensions system that was enacted at the end of 2008 is positive, but it will not financially balance the pensions system, nor will it increase real pensions. Additional measures are therefore needed: establishing wage contributions for all non-state businesses with a minimum number of employees, thus incorporating them into the system; charging self-employed workers the 5 per cent paid by salaried workers instead of the current 10 per cent (or granting the low-income self-employed a state subsidy to replace their lack of employer contributions); closing the current pensions system to new entrants, making the state responsible for ongoing pensions and creating a new public system for young workers already insured in the old system as well as new workers, with a reserve that is invested to generate capital returns and help in the long-term financing of pensions; and raising pensions levels and adjusting them for the cost of living.

After significant improvements between 2002 and 2006, Cuba's social assistance programme deteriorated just at the time the crisis hit. Hopefully the government will go ahead with the idea of gradually replacing the current universal indiscriminate subsidies with aid targeted to the poor and vulnerable groups of the population, with the goal of creating a wide social safety net that protects all those in need. Churches should be allowed to receive direct foreign aid in order to establish and expand free old people's homes for needy senior citizens.

Finally, there has not been a government response to the difficult housing situation, which has been aggravated by hurricanes and the lack of resources due to the world crisis. Steps for the radical reform required are: eliminating the current system of barter and authorising the buying and selling of housing with adequate regulations; facilitating the population's access to construction materials to repair and build housing; authorising the investment of foreign remittances in these activities; and permitting the use of houses owned by individuals as collateral for loans to finance repairs.

Structural reforms

Cuba's economic model has suffered from excessive concentration in decision making and ownership of the means of production, as well as lack of incentives and low efficiency. These problems have impaired output and productivity and have worsened during the last decade due to structural weaknesses in the pattern of growth: reliance on a sector with low multiplier effects, increase in the external debt and dependence on imports. Economic reliance on Venezuela is significant and dangerous due to the high percentage of Cuba's trade that it involves, the arrangements for payment for professional services supplied by Cuba, price subsidies on oil exports, and substantial direct investment. The deterioration of the Venezuelan economy in 2009–10 has reduced the possibility of a financial rescue, and any potential political change in that country could result in a second 'Special Period' for Cuba. Despite some easing implemented by President Obama, the US embargo continues to be an impediment to Cuban development.

There is a domestic consensus that the centralised state economic model has multiple shortcomings and distortions and needs profound structural changes. In 2007 President Raúl Castro called for 'structural reforms', later endorsed by many Cuban economists, to improve production and productivity.[68] The government has implemented some changes such as relaxing restrictions on buying computers, DVDs and electrical appliances, and allowing Cubans to stay at tourist hotels and have access to cellular phones.

[68] For a summary of the structural reforms proposed by Cuban economists, see Omar Everleny Pérez Villanueva, 'Aspectos globales', in Omar Everleny Pérez Villanueva et al., *Miradas a la economía cubana* (Havana, 2009), pp. 9–27.

Additional steps have provided some flexibility in the labour market, such as authorisation to work in more than one job, elimination of wage ceilings and permission for state enterprises to set salaries based on workers' productivity. The recent reforms in agriculture have many limitations, however, and will not significantly change the deteriorated situation that is evident in that sector.[69] Until mid-2010 such reform measures did not involve a substantial modification of Cuba's economic model, which in essence continues to be closer to the Soviet model than to the market-socialist model of China and Vietnam.

Even if the US embargo is lifted, which appeared an unlikely scenario in mid-2010, for the benefits of such a development to materialise, the Cuban government would have to accelerate and deepen the reforms, because without them it is impossible to generate surpluses for export to pay for imports. Reforms are also needed to improve social services and make them sustainable. Such domestic changes are necessary to reinforce Cuba's capacity to overcome the effects of the global crisis and improve its economy and social services.

Conclusions

The transmission mechanisms of the crisis were in large measure accentuated, rather than attenuated, by domestic economic and social factors. When the global crisis started, the Cuban economy was already experiencing a deceleration of growth and an exhaustion of its surpluses and reserves, and was thereby facing two external shocks. Social indicators that were the best in Latin America in 1989 deteriorated during the crisis of the 1990s and, despite improvement during the recovery, most of their major flaws had not been tackled by 2008. Cuba did not capitalise on the high growth rates of 2004–7 since there were no structural changes to reduce external dependency, improve trade diversification, increase agricultural and industrial production/productivity, and eliminate monetary duality.

The global crisis reduced the levels of external financing and foreign demand for exports, thus aggravating external constraints and leading to a deceleration of growth in Cuban GDP. The combination of the balance of payments deficit, slower growth, the contraction of external financing, the monetisation of the fiscal deficit and the policy of fixed exchange rates has led to a collapse in bank liquidity, international reserves and the payments system. The Cuban government managed to maintain price stability, but could not avoid the banking crisis.

[69] Armando Nova, 'Agricultura', in Pérez Villanueva et al., *Miradas a la economía cubana*, pp. 43–98.

The state lacked resources for a counter-cyclical expansion. Instead it had to implement belt-tightening measures to rebalance the economy, with negative consequences for short-term economic growth. The government underestimated the likely effects of the global crisis, thus further complicating the financial scenario and forcing extreme *ex post* adjustment measures on the expenditure side, taken in a centralised manner. So far, the modest reforms and economic incentives to increase revenue that have been applied are insufficient. The Cuban socio-economic model requires profound changes to address the crisis effectively, to reactivate export growth and GDP, and to provide the necessary financial underpinning for social services.

The liquidity crunch, combined with the lack of a lender of last resort, is the most urgent challenge faced by Cuba's economic policy. The extended banking crisis and the structural fragilities of the island's economic model do not bode well for a rapid rebound and instead increase the probability of widespread recession for several quarters. Cuba is likely to be among the last economies in Latin America to overcome the impact of the global crisis.

Despite some improvement during the recovery, most of the key weaknesses in the provision of social services were not corrected prior to the global crisis, and thus could not act as deterrents to the adverse social effects of the crisis. Cuba's economic situation and financial capacity, aggravated by the crisis, cannot sustain the high and fast-growing cost of social services in the long term. The government took some steps in the social arena: cuts in some services, trimming university enrolments, a plan to reconstruct the water system, a pension reform to reduce expenditures somewhat and to raise income in the medium term, and the idea of replacing universal food subsidies with social assistance targeted at the poor. However, it included nothing on housing. These measures are mostly on the expenditure side, and some of them are in the planning stage. They are geared to contain the worst social effects of the crisis but do not go to the roots of the problems. Structural economic reforms, therefore, are also fundamental to secure the sustainability of social services in the long run. The magnitude of the crisis might push the government to speed up and deepen the urgently needed socio-economic reforms discussed in this paper.

Spanish and Portuguese abstracts

Spanish abstract. Los mecanismos por los que la crisis económica mundial ha sido transmitida de las economías desarrolladas a las en desarrollo están condicionados por factores locales que pudieron atenuar o acentuar los impactos económicos externos y sus efectos sociales adversos. Cuba es un caso especial, ya que es una economía abierta y por lo tanto vulnerable a los mecanismos de transmisión comerciales y de crecimiento económico, pero al mismo tiempo es una economía socialista con servicios sociales universales. Este artículo revisa la literatura existente al respecto, sintetiza las fortalezas y debilidades socioeconómicas de Cuba antes de la crisis, evalúa el efecto de la crisis sobre los indicadores macroeconómicos y de servicios sociales, analiza la respuesta gubernamental, y sugiere políticas socio-económicas alternativas.

Spanish keywords: Cuba, Revolución Cubana, crisis global, mecanismos de transmisión, bienestar social, política social

Portuguese abstract. Os mecanismos que transmitiram a crise economica global das economias desenvolvidas às economias em desenvolvimento são influenciados por fatores domésticos. Estes fatores atenuam ou exacerbam os choques econômicos externos e seus efeitos sociais adversos. Sendo uma economia aberta, vulnerável aos mecanismos de transmissão do comércio-crescimento e ao mesmo tempo uma economia socialista, com serviços sociais universais, Cuba representa um caso especial. Analisando o que tem sido escrito sobre a questão, o artigo sintetiza os pontos fortes e as fraquezas socioeconômicas internas de Cuba antes da crise, avaliando seus efeitos sobre os indicadores macroeconômicos e os serviços sociais. Considera-se a reação do governo, e sugerem-se políticas sócioeconomicas alternativas.

Portuguese keywords: Cuba, Revolução Cubana, crise mundial, mecanismos de transmissão, bem-estar social, políticas sociais