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Articles

Soviet Subsidy and Voluntarism: The Economic Anomalies of Revolutionary Cuba

Subsidio soviético y voluntarismo: las anomalías económicas de la revolución cubana

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Abstract. The article analyzes the Cuban economy from 1960 until the fall of the Soviet Union. It shows that after abolishing private ownership of the means of production at the beginning of the revolutionary period, Cuba could not establish a planning system because of Fidel Castro's widespread intervention. The economic consequences were grave. Only the enormous economic aid received from the Soviet Union ensured the survival of the Cuban revolution and the implementation of the System of Direction and Planning of the Economy (SDPE), which was successively dismantled during the rectification process. What happened in Cuba during this period seems to have been an endemic problem of its political system, in which there was no effective counterweight to the *comandante en jefe*, on whom all major political and economic decisions depended. That problem was the main reason for Cuba's poor economic performance.

Keywords: Planning; subsidy; rectification.

Resumen. Este trabajo analiza la economía cubana desde el 1960 hasta la caída del muro de Berlín. Se observa que después de la abrogación de la propiedad privada de los medios de producción al inicio del periodo revolucionario, no se organizó ningún sistema de planificación por la constante intervención de

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Fidel Castro. Las consecuencias económicas fueron adversas, y sólo la enorme ayuda soviética aseguró la sobrevivencia de la revolución y la implementación del Sistema de Dirección y Planificación de la Economía (SDPE), sucesivamente desmantelado con el proceso de rectificación. Lo que sucedió en Cuba en este periodo parece ser un problema endémico de su sistema político donde no había contrapoderes efectivos hacia el *comandante en jefe*, del cual dependían las principales decisiones económicas y políticas y es la razón principal de sus pobres resultados económicos.

Palabras clave: Planificación; subsidio; rectificación.

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INTRODUCTION

On the first day of January 1959, the victorious *barbudos* led by Fidel Castro took the city of Santiago de Cuba, while troops led by commander Eloy Gutierrez Menoyo entered Havana. Although more than 60 years have passed, the Cuban revolution continues to be of central interest to careful analysts and simple *aficionados* alike. For many leftists during the 1960s (Dumont, 1970; Karol, 1970) –and for some still today– the Cuban revolution gave concrete form to the ideals of social justice, liberation from post-colonial exploitation, and redemption of the marginalized masses in developing countries. Among the many factors that have contributed to the aura surrounding Cuba are the country's presumed diversity (compared to other countries of real socialism); Cuba's unequal struggle with its powerful and threatening North American neighbor, and the revolution's legendary leaders, such as Ernesto *Che* Guevara and Camilo Cienfuegos. That aura was made even more mythic by the Castro regime's ability to survive the disintegration of the USSR and the Council of Mutual Economic Assistance. Other commentators are more critical. For example, Domínguez (1978), Pérez-López, (1992), and Mesa-Lago (2000) see Cuba as the latest example (along with North Korea) of the mixture of economic inefficiency and repression that caused the collapse of socio-political structures in the countries of real socialism.

Cuba is unique among socialist countries for its lack, throughout the revolutionary process, of a fully applied economic model (Mesa-Lago, 1989). Cuba's revolutionary government has never given unequivocal answers to questions like the following: What is the remit of the individual bodies responsible for planning? What principles should inspire the activities of state companies once their existence is allowed? Why should people work if material incentives are quite low?¹

In this work, as I analyze the performance of the Cuban economy up to the time when the Soviet Union fell, I will demonstrate that the country's economy had a combination of traits that made it an anomaly among socialist countries: *a)* the huge subsidy that Cuba received from the USSR enabled Cuba to finance a generous welfare system, and to supply consumer goods at lower

¹ If most of the products are purchased with *libreta* to each household at subsidized prices, available to all, and there is no supply on the free market, income ceases to be a stimulus because one can live either on the subsidy or on work.

prices to the entire population; *b*) market relations were almost completely absent, except during what might be considered brief, limited experiments during the early 1980s, and *c*) instead of an ordered planning system, Cuba employed a personalistic, voluntarist management style.

In the first part of this article, I propose an alternative metric for quantifying the first anomaly (*i. e.*, the enormous aid that Cuba received from its Soviet ally). Most of the numerous previous studies that quantified this aid (Central Intelligence Agency, 1976; Domínguez, 1989; Mesa-Lago and Pérez-López, 1985; Radell, 1983; Ritter, 1990; Pérez-López, 1991; Rodríguez, 1992; Turrits, 1987; Zimbalist and Brundenius, 1989) did so by converting trade flows into dollars using the official (overvalued) exchange rate. Ritter (1990) used a method that may seem more realistic, but lacks economic meaning. All of these studies are economically unjustifiable because the trade between Cuba and the USSR was in *moneda convenio* (non-transferable rubles). Thus, for the Cuban government, only a small part of that trade constituted income in foreign currency. For that reason, previous methods for quantifying the anomalously high subsidy from the USSR do not allow us to determine the consequences for Cuba's domestic economy. The alternative measurement that I propose does not make use of the official exchange rate to transform trade flows into dollars.² The measurement is methodologically correct, and arrives at an economically interpretable determination of the Soviet aid that Cuba received. Using this method, I converted most of that into dollars. The results reinforce my conclusions.

In the second part of this article, I review the literature and Cuban statistical sources to clarify the second great anomaly: the prolonged periods during which Cuba employed a personalistic, voluntarist management style rather an ordered planning system like those adopted by socialist countries and the USSR. During these periods, F. Castro –the principal leader of the revolution– frequently interfered in the direction of the economy by making the main decisions in consultation with a restricted group of loyal collaborators. In this way, Cuba's institutional vacuum was covered. I construct indicators for this anomaly from official Cuban statistical sources and –in cases where those sources do not provide the necessary data– from the results of the work of recognized specialists (Bernardo, 1971; Mesa-Lago, 1981, 1988, 2000; Roca, 1981; White, 1987).

THE FIRST ANOMALY: SOVIET SUBSIDY

The support that the USSR provided to the Cuban revolutionary government during the 1960s continued into the second half of the decade, even after F. Castro replaced centralized planning with special plans. The Soviet Union increased its aid to Cuba substantially in the early 1970s, when economic relations between the two countries entered a new phase that resulted, in part, from the marked rise in sugar prices during the first five years of the 1970s. That price had been very low during the previous decade. Now, Cuba's increased purchasing power, in the form of convertible currency, induced western governments to reconsider the island as a loan recipient. As a result, Cuba could import consumer goods from the capitalist area –a phenomenon that explains why Cuba's excess of money fell from 86.2% of GDP in 1970 to 36.5% in 1975, as reported by J. L.

² In summary, the commercial trade that did in fact take place between Cuba and the Soviet Union is compared to that which might have occurred in the world market. The values of Cuba's exports of sugar and nickel –which accounted for almost all of Cuba's exports to the Soviet Union during that period– are measured in world-market prices, in order to quantify the imports that Cuba would have been able to buy according to this alternative scenario. The Soviet subsidy to Cuban economy is calculated as the difference between the total imports that Cuba received from the Soviet Union, and the total that Cuba would have been able to buy on the world market.

Rodríguez (1990, p. 301) and C. Mesa-Lago (1981, p. 48). In addition, Cuba was able to reform its labor market by reintroducing the material stimuli that had been criticized and eliminated during the *fidelist period* (1966-1970). These positive developments encouraged the USSR to increase the subsidy to Cuban economy. In 1972, the two countries signed a new trade agreement that increased the price of Cuban sugar and nickel.³

Soviet economic aid, which until 1972 had been in the form of credits for trade and development, was augmented with a system of preferential prices for sugar and oil. But how might we quantify that aid, which took diverse forms over the course of decades?

The traditional methods of measuring the subsidy that Cuba received from the Soviet Union in the form of preferential prices for sugar and oil (after being admitted to the Council of Mutual Economic Assistance) have not been satisfactory; although that trade was conducted mainly in non-transferable rubles, Cuban researchers attempted to measure it in US dollars using the official exchange rate for the conversion. In order to better assess the impact of that aid on the Cuban economy, I have formulated new indicators that are conceptually much more consistent, and that solve the problem of combining forms of aid in non-transferable rubles with others (such as oil re-exports) that were measured in convertible currency (Sovilla, 2021). I estimate⁴ that between 1968 and 1975, Soviet aid averaged 9.15% of Cuban GDP, and then increased by a factor of three between 1976 and 1988. Moreover, aid in the form of loans grew by almost 50%, while that which was transferred through the preferential-price mechanism increased almost seven-fold (from 2.6% of Cuban GDP to 17.9%). These increases resulted from a new agreement (reached between the two countries in 1975) that maintained stable, preferential prices in favor of Cuba by introducing a price-indexing mechanism for the principal trade goods (J. L. Rodríguez, 1986, p. 14).

In this section other methods of measuring the Soviet subsidy to the Cuban economy are proposed. I quantify it in dollars when possible, but without using the official exchange rate for the conversion.⁵ As I have clarified (Sovilla, 2021) I do not mean that the subsidy was in convertible currency, but instead I intend to give an idea of its magnitude, avoiding the “thorny issue” (Turits, 1987) of the exchange rate. I thus show the extent to which the privileged economic relations that the USSR granted to the island allowed an artificial or “largely illusory” (Ritter, 1990, p. 132) increase in economic indicators such as the global social product or the national income created (INC). Above all, the privileged relations enabled Cuba to finance universal and free social services –an important factor in explaining the support that the government still has among a sector of the population.

Below I present the two methods that I suggest adopting, and the results obtained.

³ The island also obtained better conditions for repayment of the loans received up to that date. The USSR allowed 25 interest-free years for the repayment of the credits granted to Cuba, plus a 13-year grace period. A subsequent agreement in 1984 postponed the start of the repayment until 1991. The dissolution of the USSR that same year meant the de facto cancellation of Cuba's accumulated debt. In 2014, the Russian parliament approved the condonation of the debt that Cuba had contracted with the former USSR.

⁴ The detailed description of the method used to measure the subsidy can be found in Sovilla (2021).

⁵ The proposed methods do not contradict my criticism measuring the subsidy in dollars, since I do not use the official exchange rate to convert into dollars the trade between Cuba and the USSR that was financed in *moneda convenio* (*i. e.*, in non-transferable rubles). On the other hand, I consider that quantifying this subsidy in dollars allows me to analyze it from another perspective, even making comparisons with other countries that have received significant aid.

Method 1

The first method is a direct one with three steps: 1) evaluate Cuban exports of sugar and nickel to the USSR, at world market prices; 2) measure in dollars the Cuban imports from the USSR that were tradable on the international market (amounting to almost 60% of total imports from USSR in the period 1976-1988); 3) measure the dollar part of the aid by subtracting the value of Cuba's exports (found in step 2) from the value of the imports (found in step 1). There remains a part of the subsidy in non-convertible currency (transferable rubles). That part can be found subtracting, from total imports, the sum of the following terms: *a*) imports that can be measured in dollars, and *b*) Cuban exports other than nickel and sugar. Term *b*) amounts to 1-2% of Cuban imports from the USSR. Table 1 shows the percentage of Soviet exports to Cuba that the USSR could have sold on the world market. During the period considered (1976-1988), the average percentage was 59.1%, but increased in the later years.

TABLE 1. PERCENTAGE OF CUBAN IMPORTS FROM THE USSR THAT WERE TRADABLE ON THE WORLD MARKET^a

Years	Percentage
1976	54.10
1977	55.30
1978	54
1979	53.80
1980	52.60
1981	58
1982	60.90
1983	61.40
1984	62.60
1985	64
1986	63.60
1987	63.60
1988	64.30
Average	59.10

^a [=100% × (value of the tradable imports) / (value of the total imports)]

Source: Calculations with data from *Anuario Estadístico de Cuba* (1981, 1985, 1988).

The calculation in dollars of the part of Cuban imports from the USSR that could compete in international markets was made by multiplying those imports by the price Cuba paid to buy those same products from other countries in the capitalist area. If there was more than one seller, the price paid to the main seller was used. For example, in the case of beans I used the price of beans imported from Mexico, the capitalist country that was the main exporter to Cuba of that product. I used world market prices for oil (petroleum), and for two food products (oil and canned meat)

that *Anuario Estadístico de Cuba*'s reports as coming from "other countries" without specifying the selling country. In the case of wheat flour, the only price available was the Soviet price, which I have converted into dollars at the official exchange rate⁶ (see table 2).

TABLE 2. ESTIMATED SOVIET AID IN MILLION DOLLARS AND PERCENTAGE NATIONAL INCOME CREATED (METHOD 1)

Years	(A)	(B)	(C)
1976	509	392	6.30
1977	719	477	6.50
1978	1 301	767	8
1979	2 427	1 930	11.10
1980	2 185	2 104	11.20
1981	2 736	2 536	9.40
1982	3 110	1 987	10.10
1983	3 244	2 184	10.50
1984	3 297	1 966	11.40
1985	3 614	2 281	12.30
1986	2 034	756	8.70
1987	2 312	1 049	10.50
1988	1 615	719	2
Average	2 239	1 473	9.10

Notes: (A) Cuban sugar exports are valued at world market prices. (B) Cuban sugar exports are valued at the preferential price paid by the United States.

Sources: International Financial Statistics (1993, pp. 166-167), for the price of sugar and nickel on the world market *Anuario Estadístico de Cuba* (1981, pp. 207-212 for the period 1976-1980; 1985, pp. 430-441, for the period 1981-1985; 1988, pp. 464-475, for the period 1986-1988).

For the period 1976-1988, the subsidy measurable in dollars adds up to more than two billion dollars if sugar is valued at the world market price, but is reduced by almost a third if quoted at the North American preferential price. In this case, the subsidy decreases to an average value of 1 473 million dollars, reaching its highest level in 1981 (2 540 million dollars). The part of the subsidy that is expressed in non-transferable rubles remains constant at around 9% of the national income created.

In table 3 I transform into dollars the part of imports from the USSR that were not tradable on the world market, discounting them by 20% (Ritter, 1990, p. 127) to consider the lower quality of Soviet products and their slightly higher price compared to the same products on the world market. This calculation seeks to measure Soviet aid converted into hard currency, limiting the

⁶ Cuba imported these products both from the USSR and from other capitalist countries, paying the latter in freely convertible currency. The products are the following (the countries in parentheses are the respective main capitalist countries of origin): canned meat (others); powdered milk (UK); fish (Japan); wheat (Canada); corn (Argentina); wheat flour (USSR); beans (Mexico); animal feed (Peru); fats (Belgium); wood (Canada); food oils (others), fertilizers (West Germany); tires (Japan); steel sheets (Spain); tinplate (Japan); steel pipes (Japan), trucks (Argentina); oil (world market).

use of the official exchange rate only to the share of non-tradable imports in the world market. The result is that the Soviet subsidy averages 3.63 billion dollars per year if sugar is measured at its free market price, and 2.86 billion if sugar is measured at the US CIF preferential price.

TABLE 3. MEASUREMENT IN MILLIONS OF US DOLLARS
OF ALL SOVIET AID TO CUBA

Year	(A)	(B)
1976	1 170	1 060
1977	1 560	1 310
1978	2 440	1 900
1979	3 710	3 210
1980	3 740	3 660
1981	4 130	3 930
1982	4 510	3 390
1983	4 750	3 690
1984	4 880	3 550
1985	5 320	3 980
1986	3 900	2 620
1987	3 900	2 640
1988	3 150	2 250
Average	3 630	2 860

Notes: (A) Sugar at world market price. (B) Sugar at North American preferential price.

Source: International Financial Statistics (1993, pp. 166-167), for the world market price of sugar and nickel.

It should be pointed out that with method 1 I arrive directly at a dollar estimate of most of the Soviet subsidy, although some components (*e. g.*, development credits) are ignored.

Method 2

Based upon the results obtained by using method 1 to estimate the Soviet subsidy to Cuba, I have constructed method 2, a procedure that is less direct, but more complete, to estimate in dollars a part of the subsidy. This procedure attempts to aggregate all the typologies, then specifying the part measurable in currency.

Starting from the measurement of the subsidy in relation to imports (Sovilla, 2021, p. 854),⁷ it can be concluded that in all years the sum of the three groups of imports (oil, food, and selected others) that meet international standards of competitiveness is much lower than the share of imports that is part of one or another form of subsidy. In this case the subsidy measured in dollars is equal to the sum of the three groups of imports measurable in convertible currency. In contrast, the share in non-convertible currency is measured as the difference between the total value of the subsidy and that of competitive imports in international markets. The results are summarized in table 4: the ratio between the subsidy in hard currency and exports to capitalist countries is equal

⁷ In the period 1976-1988 the subsidy measured in all its components, in relation to the total imports of the USSR, was on average 89.9%. In Sovilla (2021, pp. 854-857) I explain the methodology used to arrive at that measurement, which does not use the official exchange rate.

TABLE 4. ESTIMATED SOVIET AID TO CUBA (METHOD 2)

	<i>Cuban sugar at world market prices</i>		<i>Cuban sugar at preferential US prices</i>	
	<i>Millions of dollars</i>	<i>Percentages INC</i>	<i>Millions of dollars</i>	<i>Percentages INC</i>
1976	1 376	6.30	1 376	5.70
1977	1 561	6.50	1 561	5
1978	2 060	8	2 060	4.30
1979	3 327	11.10	3 327	9.40
1980	4 027	11.20	4 027	10.90
1981	4 045	9.40	4 045	8.60
1982	4 018	10.10	4 018	5.10
1983	3 995	10.50	3 995	4.70
1984	3 802	11.40	3 802	3
1985	4 047	12.30	4 047	3
1986	2 632	8.70	1 970	0
1987	2 971	10.50	2 614	0
1988	2 655	2	1 895	0
Average	3 117	9.10	2 980	4.60

Sources: International Financial Statistics (1993, pp. 166-167), for the price of sugar and nickel on the world market. *Anuario Estadístico de Cuba* (1981, pp. 207-212; 1985, pp. 430-441; 1988, pp. 464-475).

on average to 3.79, and the subsidy in non-convertible currency is 9% of the Cuban national income created. In absolute terms, the income in convertible currency is equal, on average, to 3.11 billion dollars each year. It is worth noting the regularity of the income in convertible currency: during 1980-1985, that income is estimated at 4 billion dollars per year, and in 1984 is six times the value of exports to capitalist countries. Re-doing the calculations, and using the US preferential price for Cuban sugar instead of the world market price, the results are as shown in the second part of table 4: the subsidy in convertible currency decreases slightly, to 2.98 billion dollars annually, while the subsidy in non-convertible currency drops by half (from 9.1 to 4.6% of the Cuban national income created).

The estimation of the Soviet subsidy to Cuba shows that measuring sugar exports at world market prices, Cuban exports to the USSR would not have paid for Cuba's oil imports at any time during 1976-1988, and that evaluating Cuba's sugar exports at the preferential price of the USA would have paid for the oil imports (with a slight excess) only in 1986 and 1988. That is to say, the estimates discussed in the previous paragraph indicate that in 1986 and 1988, the subsidy in dollars is equal to the quota of imports in convertible currency that are part of the Soviet subsidy, other than oil. However, in all the other years the subsidy is equal to the value in convertible currency of all imports –excluding oil– that meet the required standard of competitiveness in international markets, plus all the other imports which are part of the subsidy and are not tradable in the world market, that was calculated as a percentage of national income created.

This enormous transfer of resources in favor of the revolutionary government, justified by the importance for the Soviet Union of having an ally so close to the United States of America –its main political opponent– allowed Cuba to survive the failed experiments of rapidly building communism in the late 1960s and reorganizing the economy by applying the Soviet management and planning system.

THE SECOND ANOMALY: LACK OF AN ECONOMIC MODEL

After almost abolishing private ownership of the means of production through its expropriations and the first agrarian reform, Cuba's revolutionary government found itself unprepared for the difficult task of planning the economy. The government's plan for the period 1962-1965, drawn up in 1961 with the help of Czechoslovak planners, could not be implemented (Mesa-Lago, 2000).

Moreover, in the revolutionary fervor of those years, the young, inexperienced rebels who stayed in the government thought that the country could soon diversify agricultural production, thereby doing away with production of sugarcane –the symbol of the colonial yoke. Thus, the government decided in August 1961 to create space for other crops by reducing the acreage (at that time, 130 000 hectares)⁸ destined to sugar cultivation (J. L. Rodríguez, 1990, p. 96). However, reality did not heed the wishes of the ruling class: sugar production fell, and with it the income that Cuba had been earning in the form of convertible currency. Financing of the industrial sector, which needed imports of capital goods, suffered as a result.

Problems such as these led to a radical change in the development strategy: a plan was drawn up in 1964 to increase sugar production to an unrealistic 10 000 000 tons by 1970. Cuba's failure to implement this plan led to increased economic dependence upon the USSR, which continued (between 1966 and 1970) to provide the island with the agreed-upon quantities of consumer and producer goods while receiving only half the stipulated amounts of sugar.

The Cuban ruling class's errors of idealism during the early 1960s might be excusable given the revolutionary effervescence of those years; the need to resist the North American embargo (declared by president Eisenhower in 1960); and unforeseen factors such as the massive exodus of technicians, administrators, and professionals from important productive centers. The management of those centers was left in the hands of young revolutionaries who had much enthusiasm, but lacked technical preparation and experience. *Che* Guevara called the work of these newly minted managers *guerrillerismo administrativo*. However, the difficulties that the revolutionaries encountered in drafting Cuba's construction of socialism were deep, and structural.

Between 1963 and 1965, advocates of two very different approaches to that construction clashed in the *great debate*: Proponents of the first approach supported economic calculation and the traditional path taken by the Soviet Union and its satellite countries, while the second group favored the budgetary financing system. The first group brought together the philo-Soviets led

⁸ In the words of R. Boti (1961), the Finance minister at that time, the aim was to ensure a high, stable level of sugar production while increasing non-sugar exports in order to reduce the relative contribution of sugar exports to the total economy. However, C. R. Rodríguez (1963, p. 71) clarified that "the mistake made consisted of leaving sugarcane aside as if it were indispensable to diversify agriculture at the local level, that is, to transform each farm into a mosaic of crops".

by economist C. R. Rodríguez, director of the National Institute for Agrarian Reform,⁹ while the second was spearheaded by one of the revolutionary government's most charismatic figures: E. Che Guevara himself, who was then the minister of Industry. Several researchers (Bettelheim, 1964; Infante, 1964; Mora, 1963; Rom, 1964)¹⁰ have clarified the two proposals, which sought to define the system of economic management that would govern the construction of socialism in Cuba. For my purposes, the important thing is that the leaders of the two groups left the scene in 1966 after two years of debate –in which F. Castro did not participate. Meanwhile, the economic calculation approach had been partially implemented in the agricultural sector, and the budgetary financing system in the industrial sector. Che Guevara had left Cuba in 1965 to foment an unlikely revolution in Bolivia. Now, in 1966, Castro himself replaced C. R. Rodríguez as head of the National Institute for Agrarian Reform.

Between 1966 and 1970, F. Castro led the dismantling of the revolution's nascent economic system, with disastrous results that the *comandante en jefe* himself acknowledged at the first congress of the Cuban Communist Party in 1975 (Castro, 1990). Although several authors have misunderstood the economic model that Castro implemented during this period with the budgetary financing system-based one proposed earlier by Guevara (Bernardo, 1971, p. 11; Lataste, 1971, p. 51; White 1987, p. 154; Zimbalist and Brundenius, 1989), the sole person responsible for economic-policy decisions between 1966 and 1970 was F. Castro.¹¹ Therefore, the only label that can be assigned to his experiment is that of the *Fidelist* model (Valdés, 1979).

Castro's 1966-1970 experiment restructured the economy around unattainable goals, such as the special plans (in the popular jargon they were called *planes Fidel*) and the production of 10 000 000 tons of sugar in 1970. All of these plans failed.¹² Sugar production for the period 1966-1970 was half of what had been programmed (Mesa-Lago, 2000). In response, the Soviets decided to forgive Castro's intemperance, and to save the economy again. They did so in spite of Cuba's ill-conceived economic measures that culminated in the revolutionary offensive of 1968, which wiped out all small businesses and shops on an ideological whim of the maximum leader. The Soviets also let slide Cuba's persecution during that same year of the *microfraction*: a group of Cuban communists, led by Aníbal Escalante, who were accused of a counter-revolutionary attitude in favor of the USSR.

⁹ National Institute for Agrarian Reform was created to carry out the agrarian reform, on May 13, 1959. After that, the institute was in charge of reorganizing the agricultural sector, delivering the inputs to agricultural State farms and controlling the whole collection system, and centralizing the collection and marketing of the products of the independent farmers. In fact, it came to fulfil the functions normally pertaining to the Ministry of Agriculture.

¹⁰ A good compendium of that *great debate* can be found in Silverman (1971).

¹¹ All the aforementioned authors agree that the economy was directed by the maximum leader in that period. However, only Valdés (1979, p. 18) recognizes as a “pivotal point” the distinction between the Guevarist and Fidelist models. For a discussion see Mesa-Lago (1968) and Sovilla and García (2013).

¹² In the words of Dumont (1970), who was an eyewitness and agronomy expert (and on several occasions economic advisor to the government during that period): “The history of these *planes Fidel*, which were very costly, is more of a series of disasters than of successes. The Plan of the Orchards in Pinares de Mayarí was made on friable land[s] (...) that were not suitable for vegetable cultivation and were also in the process of laterization; for this reason, they were not to be touched: the pine forests are more suitable for those places. The San Andrés de Caiguánabo Coffee Plan (...) was a disaster. In the eastern part of Havana, on non-irrigable calcareous slopes, coffee plantations [...] did not receive more than one meter of water with months of drought that were too long [...]. The Banao de las Villas plan, based on strawberries, vines, asparagus, garlic, onions, is a failure” (pp. 70-71).

Thus, the Soviets accepted a reduction in sugar imports to compensate for the amount of sugar that Cuba could not produce, without reducing their deliveries to the island. That arrangement contributed to the growth of Cuba's trade deficit with the USSR between 1966 and 1970: Cuban exports to the USSR covered only half of the country's imports (calculations based on data from J. L. Rodríguez, 1992, p. 63). For example, sugar deliveries to the USSR in that period were 10 580 000 tons, versus the 22 000 000 tons that had been stipulated in the 1964 agreement (Fernández, 1989, p. 197; Torres, 1981, p. 289).

It is not easy to describe the economic crisis at the end of the 60s using economic indicators because reliable statistics are lacking. Researchers' estimates are contradictory and not always easy to interpret, apart from those for some agricultural products that suffered a dramatic drop in production (Ritter, 1974, p. 191). Nevertheless, Brundenius (1984) and Mesa-Lago (1981) estimate that the per capita GDP contracted by 9.6% between 1965 and 1971.

It should be clarified that in planned economies, macroeconomic imbalances do not affect official prices, which are either administered or arbitrarily fixed by a committee of specialists who adhere to the government's policy guidelines. Latent inflation is thus determined in an underground economy (black market) to which many products are diverted, and where prices are set on the basis of supply and demand. Expansion of the black market is the best indicator of inefficiency in the formal sector. The fuel and measure of that expansion is the so-called "excess of money": the amount of that cannot be converted into goods and services in the formal sector, in the form of either financial assets or real assets.¹³ J. L. Rodríguez, Finance minister between 1994 and 2003, agrees with Mesa-Lago (the dean of scholars of Cuban economy) that the monetary surplus increased by a factor of four between 1966 and 1970, then fell again during the first five years of the 1970s, when economic recovery began (Rodríguez, 1990, p. 301; Mesa-Lago, 1981, p. 48).

With the Cuban economy having been rescued from the brink of the abyss in 1970 thanks to Soviet support, F. Castro began a self-criticism that culminated five years later in a *j'accuse* that he delivered at the first congress of the Cuban Communist Party. On that occasion *el líder máximo* acknowledged the irrational economic decisions during 1966-1970 that had put Cuba on the wrong paths. In his words, "Ideally, interpreting Marxism... we wanted to establish our own methods... we established a management system that was far from both the economic calculation, which was generally applied in socialist countries, and the system of budgetary financing that had begun to be applied in Cuba... accompanied by a new system of economic registration... with the suppression of collections and payments among state enterprises" (1990, p. 104). As we have seen, the Cuban economy recovered during the 1970s (Mesa-Lago, 2000; Rodríguez, 1988; Zimbalist and Brundenius, 1989) thanks to increased Soviet aid and financial support from the Paris Club. However, none of this would have been possible without Castro's aforementioned radical change of attitude, which led to the "institutionalization" of the revolution. After the Cuban Communist Party congress in 1975, the Planning Board (Juceplan) regained some autonomy, with H. Pérez as president and M. A. Figueras (former collaborator of Che Guevara in the Ministry of Industry) as vice president. Both men were prominent economists.

¹³ The Cuban planned economy never included a market for real estate (e. g., houses and land) because the sale of real estate was prohibited even though private property was recognized (as in the case of houses). The financial market had been eliminated immediately when the revolution triumphed; the 1961 currency reform was the most extreme measure, which in 48 hours annulled personal savings that exceeded 10 000 pesos.

Between 1975 and 1980, Cuba again established the bases for applying economic calculation as a principle for regulating relations among companies, as well as among the banks, the Planning Board, and the government. These bases were extended to the entire economy. The Soviet model of planning was imported, but without incorporating the changes introduced by the Kosygin reform after Stalin's death. Instead, Cuba adopted the pre-Kosygin Stalinist system of planning, in which economic calculation was applied in a "restricted" way—that is, by reducing the margins of autonomy of public companies. The maximum leader always saw as a necessary concession the implementation of the so-called *sistema de dirección y planificación de la economía* (SDPE). However, he also saw SDPE as a threat to the revolutionary project because it presupposed a view that he never shared: that the technocratic vision of constructing socialism should prevail over politics and ideology (Mesa-Lago, 1981, 2000).

Juceplan tried to introduce market mechanisms in some sectors of the economy where the low development of the productive forces was most visible; where the inefficiencies of the Stalinist model were most concentrated; and where Juceplan could intervene without needing to mobilize great amounts of resources. The most daring of such attempts was undoubtedly the introduction of the peasant free market (MLC) (Deere, Meurs and Pérez, 1991; Deere and Meurs, 1990; Rosenberg, 1992). Although Castro considered the State farm (*granja*) the superior form of production in the agricultural sector, these State companies—which were larger on the average than their counterparts in the USSR (the Sovkhoz)—were very unproductive. Therefore, Cuba needed to pay a lot of currency to import agricultural goods that could have been produced on the island.

In 1977, the government started to expand agricultural-production cooperatives, which reproduced the organization of the *granjas* on a smaller scale, albeit with all the *granjas*' inefficiencies. Nevertheless, in 1975, 30% of the land was still owned by small farmers. The government called for cooperativization, but only a fraction of the peasants responded positively. Strongly attached to their land, and proud of it, most peasants disdained the government and disregarded collective work. Moreover, the peasant sector—despite having fewer resources—was much more productive than the State sector, especially in labor-intensive production.¹⁴ However, because part of the peasant sector's production was diverted to the black market, this sector's formal contribution to food production was much lower than its potential (Deere and Meurs, 1990, p. 19).

For such reasons, Juceplan started to consider opening peasant markets (which would become the aforementioned MLCs) after the 1977 National Association of Small Farmers congress. In those markets, the peasants—just like the workers on the State farms and cooperatives—would sell their surplus production at a free-market price, provided that they had already made their mandatory deliveries to *acopio*.

F. Castro (1990) reluctantly accepted the opening of the MLCs in 1980, as he declared at the fourth congress of Cuban Communist Party, but never ceased to denounce their excesses and inefficiencies until their final closure in 1986. Two of his main criticisms were the high prices of many agricultural products sold in these markets, and the excessive enrichment of intermediaries. At the 1986 agricultural-production cooperatives congress, the MLCs were accused not only of

¹⁴ Peasants were more efficient than the State not only in labor-intensive production, but also in the sugar sector—a highly mechanized activity. According to Forster (1985, pp. 246-247): "... the returns of the private sector were always greater than the productivity of state enterprises. In the case of cassava, beans, cauliflower, and sweet potatoes the differences are enormous, with private-sector yields between 300 and 600% higher than those of state enterprises. In the case of tomatoes, potatoes, and taro there were no such big differences, but the productivity of the private sector was still 50-100% higher. Only in the case of rice were the yields in the state and private sectors similar".

profiteering, but of hindering the development of cooperatives by disincentivizing collective work. Castro's indignation led him to close down the MLCS immediately (Deere, Meurs and Pérez, 1991, p. 145). With that closure, Castro annulled the Juceplan technocrats' flagship reform.

At the macroeconomic level, the period 1980-1985 was positive. The 7.3% annual growth of the social product exceeded programmed rates, even considering the very problematic data of 1981 (the year of the price reform). However, the production of sugar, nickel, and citrus fruits –the main exports to the Soviet Union– decreased without an accompanying decrease in imports from the USSR. On the contrary, the Soviets allowed the Cuban government to receive foreign currency for some of the oil that was assigned to the island, but not consumed. In the mid-80s, these so-called oil re-exports¹⁵ became Cuba's largest foreign-currency entry, and enabled the government to pay the debt obligations that had been contracted in convertible currency with the Paris Club countries (Mesa-Lago, 2000).

Although a profound revision of the SDPE had become necessary by the mid-1980s (Pérez, 1985), F. Castro and the political bureaucracy of the Cuban Communist Party took another direction. Accusing the Juceplan's leadership of being technocrats, Castro and his allies dismissed many of them from their posts. In November 1984, they were replaced by Castro himself and a small group of advisors (*grupo de apoyo*) whom he himself had chosen, and who were subordinated to him directly. With this working group, Castro drafted the plan for the remaining years of the 1980s. In 1986, the group inaugurated the process of rectifying errors and negative tendencies.

As part of that process, the Juceplan was relegated, as in the period 1966-1970, to a merely formal role: all economic decisions returned to the hands of F. Castro and his *grupo de apoyo* (Pérez-Lopez, 1990, p. 31; White, 1987, pp. 155-156). From 1986 onwards, they denounced the economicism of the technocrats constantly, thereby reinforcing the message, once again, that in the construction of socialism the main factor is the political and ideological action of the Party.

The common element of the 1966-1970 and post-1986 periods was the extreme recentralization of power in the hands of F. Castro. Therefore, it should not be surprising that the main post-1986 economic decisions recall those of that unhappy earlier period. Just as during the revolutionary offensive of 1968, the government did away with the few spaces that were open to private initiative: not only the MLCS, but such things as the licenses for private artisans who produced sandals, clothing, backpacks, and leather bags. Under operation *Pitirre en el alambre*, many artisans who sold in the cathedral were imprisoned.¹⁶ The government also prohibited the private sale of

¹⁵ In Sovilla (2021, pp. 841-846) I have discussed the role of oil re-exports in the trade between Cuba and the USSR.

¹⁶ According to the Cuban government, these artisans, who had received permission to practice a profession on their own account and to sell their products directly to the public at a free-market price, had employed workers (which was prohibited) and bought inputs that had been stolen from State stores. As with the revolutionary offensive in 1968, the government confused cause and effect: if the artisans' private activity is legal, but no wholesale market exists where they can buy inputs (because the state doesn't sell inputs to the artisans), then an illegal diversion of materials to the private sector begins. However, governmental repression aggravated the problem instead of solving it: though now made illegal, the artisans' activity continued to thrive due to the high demand among the population and the inability of State enterprises to satisfy it. The theft of resources from State warehouses followed, and private activity became even more lucrative for two reasons: the greater risk it now implied, and the reduction in State supply due to the diversion of materials. The black market grew, and the prices of these products rose, as did the private producers' profits. A very clear example was that of an artisan we knew personally who produced sandals: he was imprisoned in 1986 as a result of the "Cathedral Episode" –the crackdown on artisans who sold in the cathedral– and spent two years in jail. When he was released, he returned to his activity and considerably increased his business and profits –illegally, but in full view of everyone. In the Economics Department of the University of Havana, dozens of students (and I as well) wore the typical sandals produced by this craftsman.

construction materials to families who needed to build or repair their houses. As in 1966-1970, the logic of the special plans was imposed upon orderly planning, this time prioritizing sectors such as biotechnology. The consequences at the macroeconomic level were similar to those during 1966-1970 (see table 5).

TABLE 5. EVOLUTION OF THE MAIN MACROECONOMIC INDICATORS
DURING THE PERIOD 1978-1989

Years	(a)	(b)	(c) Percentage	(d)	(e)	(e)/INC Percentage
1978	100	-133.7	-3.7	49.1	9	-
1979	99.81	-188.3	-5.1	9.9	4.7	-
1980	94.50	-660.3	-14.3	-88.6	3.5	-
1981	114.19	-890.2	-17.4	447.2	3.9	-
1982	119.02	-597.4	-11.2	1 117.7	-420.7	-3.5
1983	124.32	-687.2	-11	68.7	-265.4	-2.1
1984	132.24	-1751	-24.2	204.6	-76.2	-0.6
1985	136.29	-2 043.5	-25.4	165.8	0	0
1986	131.95	-2 274.6	-29.9	89.9	-188.3	-1.5
1987	124.42	-2 181.5	-28.8	-3.3	-609	-5
1988	125.77	-2 061.5	-27.2	451.2	-1 147	-9
1989	123.84	-2 732.2	-33.6	529	-1 390	-10.9

Notes: (a) national income created per capita at 1981 prices (1978=100); (b) trade balance (millions of pesos); (c) trade balance in relation to total imports; (d) evolution of liquidity (millions of pesos); (e) fiscal deficit (millions of pesos)

Sources: for the calculus of (a), (d), (e), Anuario Estadístico de Cuba (1989, pp. 82, 247); for (b) and (c) Banco Nacional de Cuba (from 1986 to 1990) and S. Eckstein (1990, p. 75).

The per capita national income created (INC), the closest indicator to a GDP in Cuban accounting, had increased by more than a third between 1980 and 1985, but then decreased by 10 between 1986 and 1989. Perhaps even more indicative of Cuba's troubles was the rapid rise of the trade deficit. Between 1980 and 1985, it had averaged 1 104 million pesos per year: a level that F. Castro gave as one of his reasons for ending the SDPE. Now, with all economic decisions in the hands of Castro and his *grupo de apoyo*, it doubled (to 2 312 million pesos per year) between 1986 and 1989, which is even more striking when we note that between 1980 and 1985 Juceplan had had to manage the debt with the Paris Club, and therefore had made regular payments of interest and amortizations due.

The public budget had been very balanced during the SDPE period, but the rectification process sent it back into deficits that reached 9% of INC (national income created) in 1988 and 10.9% of national income created in 1989. It should be pointed out that these deficits were not created mainly by an increase in social spending or productive investment (which could have justified them), but rather by a need to finance the deficits of public companies. Table 6 compares the composition of public expenditure during 1989 with that of 1984, the last year in which Juceplan was able to operate. As shown in table 6, social expenditures on education and health during both years were about 20 of the totals. Expenditures for scientific and socio-cultural activities also remained

TABLE 6. COMPOSITION OF PUBLIC EXPENDITURE (VALUES)

Year	Productive area	Housing	Education and health	Scientific activities	Administration and defense	Others
1984	36.7	6.5	20.3	15.5	17.4	3.6
1989	42.7	5.1	20.8	16	12.9	2.6

Source: calculations based on data from Banco Nacional de Cuba (1986, p. 14; 1990, p. 18).

almost unchanged, at about 16% of the totals. However, payments to the productive sphere –that is, subsidies to public enterprises– increased from 36.7% to 42.7% of total public spending because the mechanism for collections and payments among those enterprises were neglected, as it had been during the period 1966-1970.

Evidence exists that the economy regressed in microeconomic terms under the rectification process. Álvarez Gonzales (1992, p. 10), of the National Institute for Economic Research (INIE), gave the following data: between 1981 and 1985 the quantity of feed needed to produce one kilo of meat decreased from 2.9 to 2.3 kg, and then rose again to 2.6 during 1988-1989. During 1985, 153 g of feed were used for each egg produced, versus 164 g per egg in 1988. Between 1981 and 1985, the tonnes of fuel for every 1 000 pesos of global social product produced fell from 0.8 to 0.5 –a notable improvement in energy savings– then rose again to 0.6 during 1988-1989. Iron imports per million pesos produced in the mechanical sector rose from 300 tonnes to 380 between 1985 and 1988.

In the words of Mesa-Lago (1992, p. 26), the problem was that “The RP [rectification process] has not produced an integrated economic model to replace the SDPE and has not decided on fundamental aspects of a command economy... Cuba is in a paradoxical situation: it is one of the last countries that defend Marxism-Leninism and the planned economy, but it lacks a central plan and an integrated economic model.”

Domenico M. Nuti (1979), another scholar of planned economies, called attention to a political-economic cycle in the countries of real socialism, where the systemic inefficiencies of centralized planning made advisable an economic decentralization combined with political democratization. According to Nuti, this combination would constitute the ascending phase of a cycle that becomes inverted when the political class sees its power threatened. The political class then recentralizes control of the accumulation process, thus initiating a phase of de-socialization that must be understood as a restriction of the “social control on the macroeconomic tendencies” (p. 26).

Based upon the histories and data presented earlier, we might say that Nuti’s cycle manifested itself in Cuba, but in other terms. The “centralization with consequent socialization” of which Nuti (1979) speaks should be understood as the total concentration of power in the hands of F. Castro. That concentration had as a consequence a voluntarist direction characterized by ignorance or contempt for economic categories, and in general a prevalence of the political-ideological element over the economic one. The ensuing economic crisis legitimized the return of the technocrats to the scene, along with an economic logic that took away from Castro and his small group of collaborators the “social control over the macroeconomic tendencies”, as Nuti would say. However, in Cuba one cannot speak of a phase of political democratization as a pre-requisite for the socialization of the means of production, because the “control of macroeconomic variables” oscil-

lated between two groups: Castro and his advisors, and the technocrats of the Juceplan. Political democracy did not progress even when the technocrats of the Juceplan had effective –albeit still limited– decision-making power (1976-1984), which could have triggered a process of decentralization. Instead, the economy remained “in a state of tension and pressure that does not give economic-decentralization measures the possibility of acting in a favorable environment” (p. 28).

In fact, in Cuba the decision-making process in the economic sphere was very different from that in other countries of the “real socialism”. Opposition to the SDPE could have set in motion a virtuous decentralizing dynamic, but was not promoted or supported by “conservative business administrators”. Nor was it supported “by another social group on which the repercussions of the reform fall” (Nuti, 1979, p. 27). Instead, it was supported by the political class itself. In the case of Cuba, it was not the “disappointing results” that inspired the recentralization of 1985-1986, because thanks to the Soviet aid, which reached its maximum level in those years, the standard of living of the Cuban people had improved substantially during the SDPE period. Instead, the recentralization was inspired by F. Castro’s fear of losing power. That is, by Castro’s fear that (in Nuti’s words) “a virtuous process” of political democratization and socialization of the control of the means of production would be set in motion.

Since 1989, the loss of Soviet aid and the strengthening of the US embargo have, paradoxically, given the Cuban government a great pretext for declaring a national emergency and totally recentralizing the decision-making process.

FINAL REMARKS

Until 1990, the Cuban economy variously enjoyed and suffered from two anomalies whose understanding seems crucial for a searching evaluation of the revolutionary process. The first anomaly was that Cuba’s economy benefited from a huge amount of aid from the Soviet Union. This aid seems to me to be a central issue, because upon it depended the strong social and redistributive connotation of the revolutionary government’s policy, which justifies the popular support for the ruling class (especially for F. Castro). This dependence became evident in 1991 when the aid was withdrawn, whereupon the social conquests of the previous decades were quickly re-dimensioned.

The second anomaly can be summarized as follows: Cuba is the only country of real socialism (including China) where no attempt has been made, over a reasonably long period, to apply a system for directing and planning the socialist economy.

This lack caused serious problems in an economy where, from the beginning, the ruling class had renounced the use of any market mechanism, and the level of nationalization of the economy was the highest among all the countries of real socialism. Those problems must be analyzed within the peculiarities of the Cuban revolution, in which local factors have always prevailed over externally imposed models. The tendency of a large part of Cubanology to periodize –and therefore to posit that Cuba moved from a Mao-Guevarist phase to a Soviet one– is, in my opinion, incorrect. Any analysis of the different periods (which certainly exist, along with their respective characteristics) must consider the specificity of the Cuban revolutionary process, in which F. Castro and his *grupo de apoyo*, with strong popular support, have always determined the fundamental choices in greater or lesser degree, according to the historical period. The so-called Mao-Guevarist period (1966-1970) was neither Maoist nor Guevarist, but an original attempt, in which F. Castro’s voluntarist element and unipersonal direction reached paroxysmal and extremely damaging levels from an economic point of view.

Far from introducing a new management system or reforming the old, the rectification process represented the return, albeit to a lesser degree, of the same unipersonal and voluntarist direction that characterized the late 1960s –with very similar consequences.¹⁷ Castro's retreat during the intermediate period had been a strategic one, rather than a rout. Although the technocrats did not manage to start a reform process during that period, they did enjoy sufficient maneuver room to vest competent bodies with the authority for economic planning and decision-making, with positive results for the Cuban economy. But all the while, F. Castro wielded sufficient power to sustain a frontal attack upon the reformists' Juceplan, and ultimately to regain control of Cuba's economy.

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¹⁷ See Mesa-Lago (1990, p. 93) and Roca (1992, p. 109) for a similar conclusion.

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