

THE MISERY OF MERCHANDISE EXPORTS AND THE SUSTAINABILITY OF THE CUBAN BALANCE OF PAYMENTS

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The evolution of Cuba's merchandise exports since the early 1990s is a source of deep concern. The value of exports plunged from 1990 to 1994 owing to the elimination of Soviet price subsidies on sugar, nickel, and oil. Then, during the entire period from 1994 to 2018, exports of goods rose slowly in value and fell in relation to GDP (Figures 1 and 2), reflecting the continued collapse in sugar exports and the poor performance of other exports. During that period, exports of oil products (refined in Cuba using imported crude from Venezuela) had no long-term effect on the growth on aggregate exports, although there was a pronounced but temporary spike from 2010 to 2016. Non-oil exports increased slightly faster than total exports from 2004 to 2018, a dismal performance in a period of rapid growth in world trade. The poor showing of exports, together with rapid growth of imports (including oil), contributed to a significant widening of the trade deficit.

Since the turn of the century, the deterioration of Cuba's merchandise trade balance has been offset by a surge in exports of services, most of which represented payments by Venezuela and other "friendly" countries for the work of Cuban professionals—mostly health care practitioners, but also educators, soldiers, and security thugs. Most of these payments were not paid to the professionals but were grabbed by the Cuban government. A fraction of the surge in exports of services represented payments for Cuban oil imports, primarily from Venezuela and, to a lesser extent, from Algeria. But some of it was paid not in petroleum but in cash, investments, or loans. The worsening political and economic situation in Vene-

zuela, led to a deep cut in oil shipments to Cuba. These cuts, together with the termination of doctors' programs with Brazil, Bolivia, and Ecuador in 2018, illustrate the vulnerability of the Cuba's external position to politically-based trade and financial arrangements.

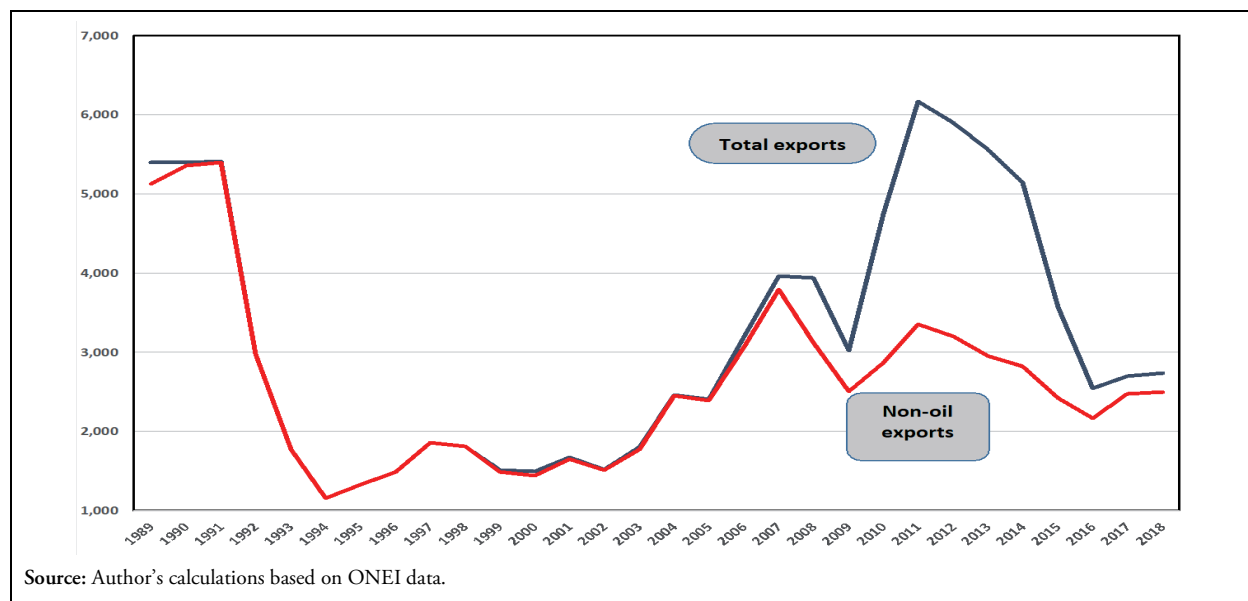
Over the last decade, a strong rise in private remittances from abroad and an increase in revenue from tourism have also helped to compensate for the impact of the worsening trade position on the current account of the balance of payments. These positive factors were partly offset by sizeable payments on Cuba's external debt obligations and, apparently, by a mysterious rise in current transfers to unidentified countries.

The worldwide economic recession caused by COVID-19 will result in sharp declines in tourism, remittances, and exports of goods, thus exacerbating the pressure on Cuba's current account. This has already required deep cuts on imports, with substantial negative effects on the economy.

FALLING EXPORTS OF GOODS

Figure 1 shows the evolution of merchandise exports since the late 1980s. The top blue line represents total exports, the bottom red line non-oil exports, and the difference between the two lines denotes oil exports. Total exports were quite large in the 1980s, owing to huge Soviet price subsidies for sugar and nickel and the provision of guaranteed markets in the U.S.S.R. and its satellites. Exports collapsed following the breakdown of relations with the Soviet Union (and then Russia), reaching a low point in 1993.

Figure 1. Cuba: Total and Non-Oil Exports (Million US Dollars)



During the rest of the 1990s both total and non-oil exports stagnated; they recovered strongly during the first decade of the XXI century, but both were basically unchanged from 2008 to 2018.

Exports of oil products were negligible through the 1990s and the early 2000s, but they surged from 2009 to 2011 as a result of an agreement between Cuba and Venezuela. But they fell just as precipitously after 2011 as the world price of oil collapsed and Venezuela cut shipments to Cuba by about half—thus denying the island's export industry much of the crude oil required for its blending and refining operations. By 2018, Cuban oil exports had almost disappeared.

A comparison with other Latin American countries also reveals the miserable performance of Cuban merchandise exports. Table 1 shows the long-term growth of exports for Cuba and for a group of Western Hemisphere nations of roughly similar magnitude. For the period 1990–2018, Cuba was the only country in the sample (except Jamaica) to register negative export growth. For the other countries, exports increased at average annual average rates ranging from 5% to 30%. Things look a little better if the rates of increase are calculated from 1994 (i.e., just after the post-Soviet economic collapse). On that basis, Cuban export growth is positive (roughly 5% per

annum), but still much smaller than for the other countries (except, by slim margins, Jamaica and the Dominican Republic.)

Table 1. Selected Latin America Countries: Merchandise Exports

	(Billion US dollars)			% changes at annual rates 1990–2018 ^b
	1990 ^a	1994	2018	
Bolivia	1.1	1.1	9.0	29.9
Chile	8.5	11.4	75.5	28.2
Costa Rica	2.2	2.2	11.3	17.2
Dominican Republic	4.1	4.1	8.9	5.3
Jamaica	1.4	1.4	1.3	-0.3
Paraguay	1.0	0.8	9.0	30.0
Uruguay	1.9	1.9	7.5	12.3
Total	20.2	22.9	122.5	20.9
Cuba	5.2	1.2	2.7	1.8

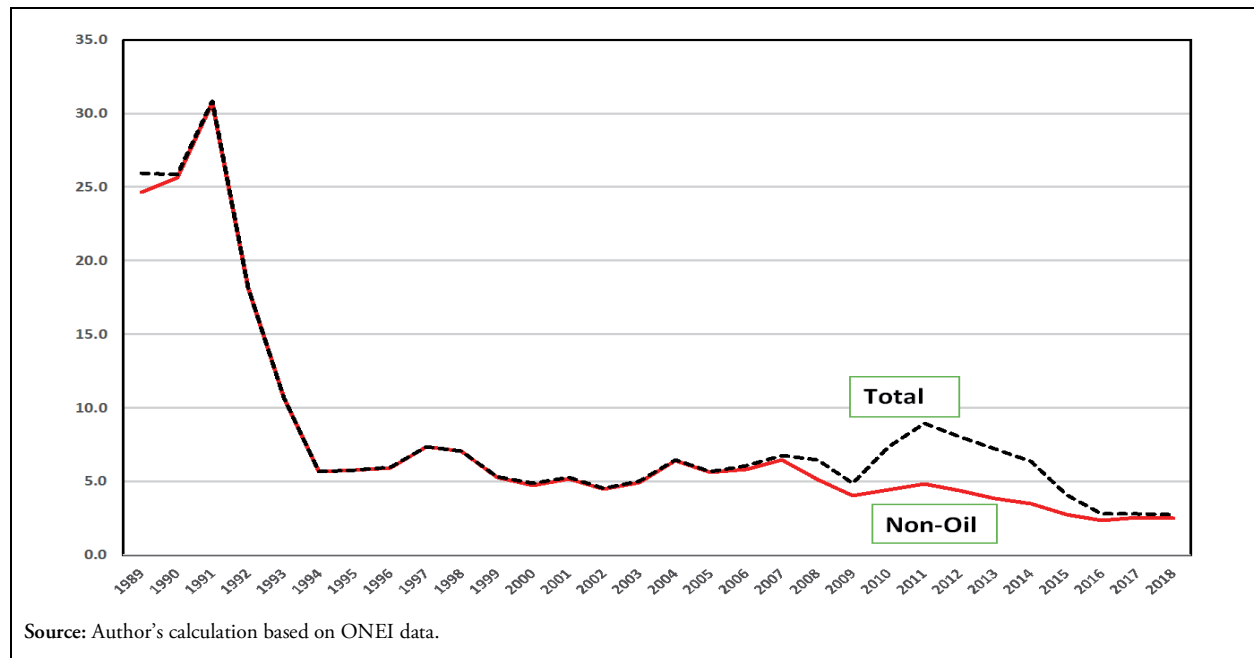
Source: ONEI and UNCOMTRADE

a. The starting date is 1994 for Bolivia, Costa Rica, and Uruguay; in 1996 for the Dominican Republic and Jamaica.

b. Ending date for the Dominican Republic and Jamaica is 2017.

Looking at the commodity composition of non-oil exports, the most striking feature is the collapse of sugar exports, which tumbled from \$4463 million in 1985 to \$758 million in 2003 and to \$184 million in 2018. During the period from 1993 (the last year of the post-Soviet contraction) to 2018, sugar exports fell at an average annual rate of 3.7%, while total non-oil exports rose by 2.7%. The saving grace was

Figure 2. Cuba: Total and Non-Oil Exports in Percent of GDP



that mining (mainly nickel) and tobacco exports increased rapidly during this period, erasing much of the drop in sugar deliveries. Exports declined in the other sub-sectors (non-sugar agriculture, fisheries, coffee, and beverages). There is no indication that new products have contribution in any way to the performance of exports.

In sum, the growth of non-oil exports from the end of the Soviet subsidies to 2018 has been very weak at 2.7% per annum.) This resulted in large measure from the collapse of sugar exports—which in turn reflected the sad story of the entire sector. Sugar production had been very high during the 1980s owing largely to very high demand from the U.S.S.R. and Soviet subsidies, but they fell dramatically from 8.12 million metric tons (MT) in 1989 to 3.3 million MT in 1995. Production stagnated through the end of the XX century, and excess capacity continued to prevail following Fidel Castro's foolish decision to provide large and costly domestic subsidies to the sector. Finally, in 2002 the government launched a comprehensive plan to downsize the sugar industry, with the aim of reducing excess capacity and achieving efficiency and competitiveness in the sector. Almost half of the sugar mills were shut down, and acreage was sharply reduced.

Sugar production continued to decline, from 3.8 million MT in 2002 to 1.2 million MT in 2011. Since then, output has recovered modestly, but has remained below the 2 million MT mark annually, in spite of a rise in world market prices. This depressing story is well told by Pérez-López (2016) and by Pérez-López and Alvarez (2002). Throughout much of the period, the catastrophic performance of the sugar industry has reflected the failure of the communist modes of agricultural production, and of Soviet technology. Some of the difficulties facing agriculture have been toned-down during Raúl Castro's administration by various reforms, including notably the right of independent private farmers to cultivate land in usufruct. But major difficulties remain.

Aside from the problems affecting sugar, three factors have contributed to the poor performance of non-oil exports.

- **The inefficiency of the state-controlled agricultural sector.** Public agricultural enterprises were hindered by controls on output prices. They also operated in an uncompetitive environment, and they lacked incentives (for managers as well as for workers) to produce efficiently. The state monopoly on foreign trade has constrained the ability of state firms to obtain foreign currencies

to finance imported inputs and to expand their presence in foreign markets

- **The interference of government agencies in the operation of private producers and agricultural cooperatives** like the Basic Units of Cooperative Production (UBPCs) and even the somewhat more independent Cooperatives of Credit and Services (CCS).
- **The severe discrimination of the exchange rate system against exporters.** Beginning in 1994, Cuban households bought and sold dollars against non-convertible pesos (CUPs) at a floating exchange that probably mirrored market conditions. Throughout the 2000s, the exchange rate for households has been fairly stable at around 22 CUPs per US dollar. In sharp contrast, the exchange rate for enterprises (and notably for exporting firms) has remained fixed at the highly overvalued official rate of 1 CUP per dollar, implying a huge competitive disadvantage in world markets. (Recently, however, less appreciated rates were introduced for the tourism and sugar sectors, transforming the dual exchange rate into a multiple exchange rate system.)

Resolving the first two problems mentioned above would require a fundamental policy change that appears unlikely at this stage. As regards the third problem, the authorities have announced their intention to liberalize and unify the exchange system, and a comprehensive reform has recently been rumored. Unfortunately, however, because of the gradualist approach adopted by the government (and apparently because of the opposition of special interest groups), there has been very little progress in achieving this key objective.¹ So the self-inflicted discrimination against exports continues.

RISING IMPORTS

Figure 3 shows the evolution of total imports (top blue line) and non-petroleum imports (bottom red

line), with the difference between the two representing oil imports (mostly crude). As in the case of exports, imports fell sharply from 1989 to 1994, reflecting the end of Soviet subsidies and the impact on the demand for imports of the extremely deep post-Soviet recession. After that, however, both total and non-oil imports increased almost continuously through 2008; they plunged in 2009 in the aftermath of a severe financial crisis, but they recovered immediately. Beginning in 2013 total imports dropped sharply owing to the collapse in oil imports which in turn reflected the fall in the world price and cutbacks in Venezuelan deliveries.

The strong increase in non-oil imports from 1993 to the end of the period was broadly based among groups of products. But it was particularly strong for machinery and equipment, manufactured goods, and chemical products. Imports of foods and beverages also increased rapidly.

It should be noted that changes in Cuban imports reflect not only the evolution of aggregate demand, but also the degree of tightness of official controls—which the government has used as an instrument of balance-of-payments policy. This has been evident in the recent years. ONEI has not published trade data since 2018, but more up to date estimates can be obtained by using partner country information on world exports to Cuba, as reported by the United Nations (UNCOMTRADE) or by the International Monetary Fund (Direction of Trade).² Using IMF data, Luis R. Luis (2020) finds that Cuban imports have declined by more than half during 2019 and the first three months of 2020, probably in response to a sharp decline in foreign exchange earnings.

From 1993 until the early 2000s there was very little change in oil imports. From then on, however, the evolution of total imports was dominated by oil trade: fuel imports increased rapidly from the turn of the century to 2013, a period of “Venezuelan eupho-

1. There have been reports that a special (less appreciated) exchange rate has been introduced for at least part of the sugar and tourism sectors. ONEI has not published data on this rate.

2. These data are not fully comparable with those reported by ONEI. In a 2016 article I suggested that the difference between the ONEI and the U.N. estimates represents a deliberate overstatement of imports by Cuban importers seeking to capture the difference for their own profit.

Figure 3. Cuba: Total and Non-Oil Merchandise Imports (Million US dollars)

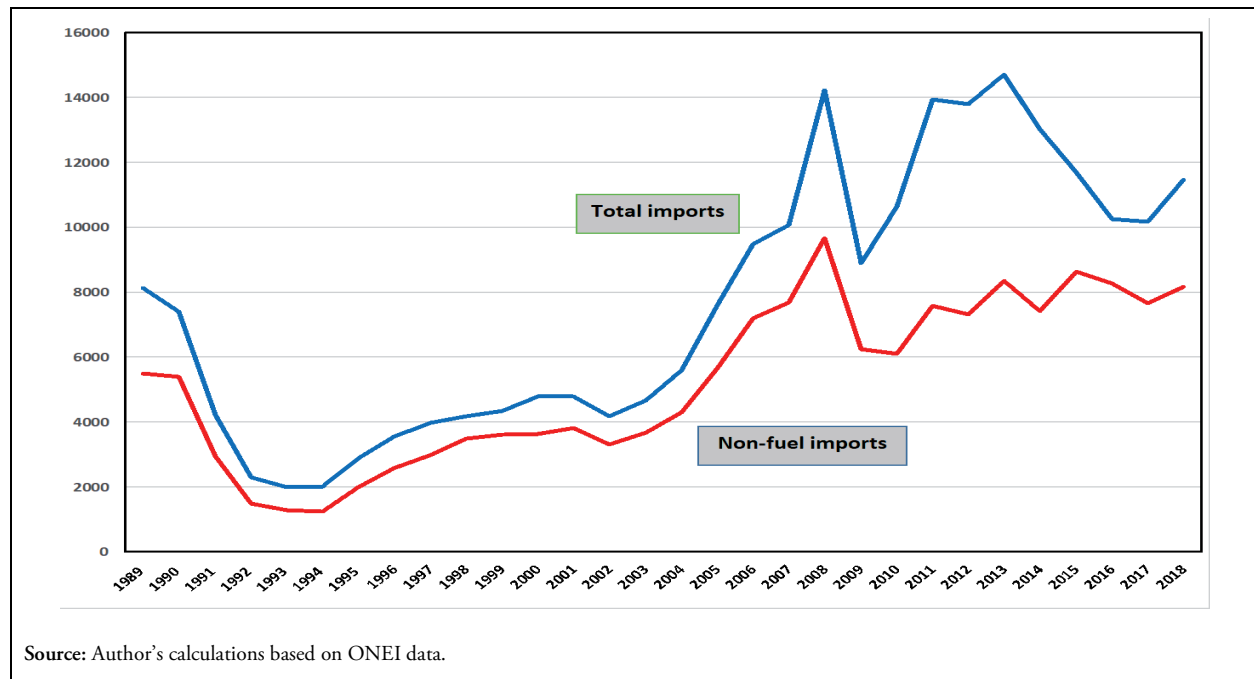
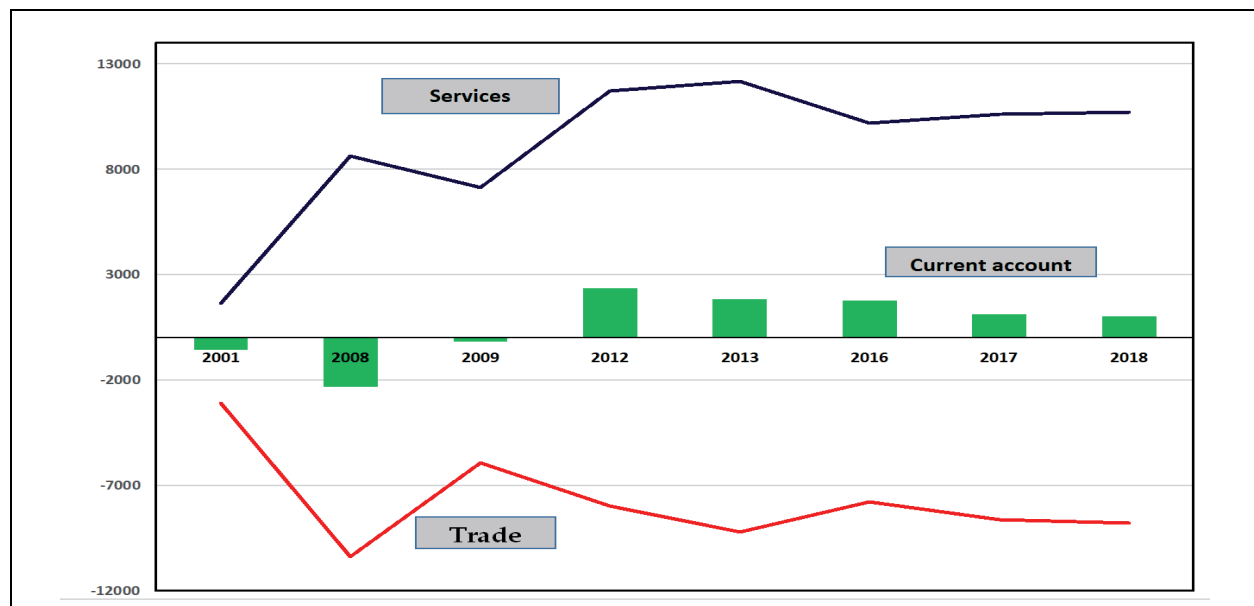


Figure 4. Cuba: Trade, Services and Current Account Balances (Million US dollars)



ria”, but they plunged after that reflecting a sharp decline in the price of oil and the effect on volume of Venezuela’s cutbacks.

SURGING SERVICES EXPORTS

From the turn of the century to 2013 the stagnation of exports coupled with fast growth of imports led to substantial widening of the trade deficit. How is it

then that the overall balance of payments did not implode? The answer is provided in Fig. 4: since the early 2000s the large and deepening trade deficits have been more than offset by a historically unprecedented expansion of services exports. This reflected several factors.

Table 2. Cuba: Composition of Exports of Services

	2004	2008	2012	2013	2016	2017	2018
Exports of Services	3,634	8,566	12,760	13,027	11,144	11,379	11,764
Tourism & international travel	2,113	2,347	2,613	2,608	3,069	3,302	2,909
Communications	26	279	517	553	628	675	7622
Other services	292	464	559	585	698	740	764
Exports of professional services	1,203	5,476	9,071	9,281	6,749	6,662	7,369
of which medical practitioners	1,045	4,755	7,877	8,059	5,861	5,785	6,399

Source: ONEI and author's estimates.

Table 3. Cuba: Current Account of the Balance of Payments (Million US dollars)

	2001	2008	2009	2012	2013	2016	2017	2018
1 Current account	-553	-2308	-162	2382	1850	1796	1150	1051
2 Goods and services, net	-864	-1736	1,246,	3771	2991	2463	2036	1937
2a Trade balance	-3076	-10373	-5917	-7970	-9207	-7756	-8605	-8785
2b Services balance	1662	8637	7163	11741	12196	10115	10641	10722
3 Current transfers	—	482	235	-394	-220	617	209	209
3a Private remittances, net	1011	1447	1653	2605	2835	3445	3575	3692
3b Other current transfers	—	-965	-1418	-2999	-3055	-2828	-3366	-3483
4 Investment Income	-502	-1055	-1643	-995	-922	-1284	-1095	-1095

Source: Morales (2019), ONEI, and authors' estimates.

By far the most important was the huge increase in *exports of professional services* (particularly doctors) to Venezuela, Brazil, Algeria, and other countries. (ONEI has published data on these services only for 2018; Table 2 shows how estimates for this variable can be constructed for earlier years.)

To a far lesser extent, the rise in *tourism*. Revenue from tourism and international transportation rose from \$1946 in 2000 to \$2968 in 2018, an average annual growth rate of 19%.

Moving from the balance of goods and services to the current account, the growth of *private remittances* almost certainly helped to offset part of the trade deficit. But there is uncertainty about the magnitude of these remittances, an issue examined below.

SHARPLY INCREASING EXPORTS OF PROFESSIONAL SERVICES

In 2018, for the first time in history and at the insistent request of foreign creditors, ONEI published

data on the composition of services exports, from which numbers for the value of the services of Cuban professionals abroad can be gleaned. But the data is only for the year 2018; no official information is available for earlier years. An attempt to construct a time series for these services is shown in Table 2.³ It is generated by subtracting from total services exports data for tourism and international travel, and estimated values for communications and other services.⁴ The services of Cuban professionals are then obtained as a residual. They show a huge increase from \$1.2 billion in 2004 to a peak of \$9.3 billion in 2013. They declined to \$6.7 billion in 2017, as expected given the decline in oil imports from Venezuela, but then rose to \$7.3 billion in 2018. The decline in export of professional services after 2013 is surprisingly small given the considerably larger decline in Cuba's oil imports from Venezuela, for which a large share of these services is swapped. The reason might be that services are registered on an accrual basis, while imports are on a cash basis, imply-

3. As mentioned above, the bulk of these earnings is confiscated by the Cuban government—a form of exploitation of workers by the Marxist bureaucracy. This practice was condemned by free trade unions worldwide, by the International Labor Office, and more recently by Brazil.

4. Historical data for total services and tourism are published annually by ONEI. Estimates for communications and other services are obtained by using ONEI's recently published data for 2018, and generating past numbers using Venezuelan data for communications, and nominal GDP for other services.

ing that professional services have not been paid in full and therefore that Venezuela recently has been accumulating a debt to Cuba.⁵

It is not easy to assess the composition of professional exports by type of activity. A rough estimate based on ONEI's numbers for 2018 (examined in detail in Annex 2), suggests that about 80% of these services are performed by health practitioners, 16% by security specialists and military officers, 3% by teachers, and 1% by personnel involved in culture and sports.

SURGING PRIVATE REMITTANCES

The Cuban government does not make it easy to gauge the evolution of remittances sent to Cuban residents by their families and friends abroad, mainly in the United States. ONEI did publish data on these remittances until 2001. But after that they provided data only for what it calls *net current transactions*. The question then is how to estimate *gross* remittances from 2001 to the present, and to discover the reason for the difference between gross and net transfers.

The approach adopted in Table 3 is to subtract from ONEI's net current transfers an estimate of (gross) private remittances provided by Emilio Morales (2019). On that basis, private remittances grow from \$1 billion in 2001 (the last observation provided by ONEI) to an estimated \$3.7 billion in 2018.⁶ Subtracting these amounts from ONEI's numbers for net transfers yields a large, unexplained debit on *other* current transfers, raising questions about what these transfers are and who receives them.

This conclusion is fairly robust, however. Even if you thought that Morales' estimates of private remittances are too high, the conclusion would remain qualitatively unchanged. Suppose that incoming private remittances had remained constant at their 2001 level of \$1 billion—an implausibly pessimistic assumption.

Even so, the number for the mysterious outgoing “other transfers” would still be a negative number of roughly \$800 million in 2018.

Another way to solve the puzzle is to assume that, after 2001, ONEI simply omitted private remittances from its estimate for current transfers. This is not impossible. But it is hard to believe that the Cuban authorities would report a current account surplus that is smaller than what they know to be correct.

A FRAGILE CURRENT ACCOUNT

Table 3 displays the main components of the current account for selected years since the beginning of the XXI century (2001 is the beginning of the oil-for-doctors agreement with Venezuela; 2008–2009 are the years of financial crisis; 2013 is the peak year for professional exports receipts). The table shows that, after 2009, services exports have more than offset a widening trade deficit so that the current account has been repeatedly in surplus. Net investment income (a consistently negative number that includes mostly payments on Cuba's external debt) has exceeded net current transfers. Nevertheless, the current account shifted from a large deficit in 2008 to sizeable albeit diminishing surpluses, thereafter, reflecting mainly the evolution of goods and services exports.

Looking ahead, the key policy question is whether the existing pattern of international transactions is sustainable. As shown in Table 2, services exports in 2017 had already declined (by almost \$2 billion) from their peak in 2012, as earnings from Cuban doctors in Venezuela fell concurrently with the reduction in oil imports. When data for 2019 appear, additional declines are certain to show up (provided the data are correct) because of the elimination of the doctors programs with Brazil at end-2018 (involving perhaps 8,300 health professionals); the dismissal of

5. This would be consistent with reports that the Cuban company CUPET had taken over the 50% Venezuelan share in the Cienfuegos refinery, previously a joint venture of Cuba and Venezuela. Cuban official reports claim that this transaction was financed by a reduction in Venezuelan debt to Cuba.

6. These numbers represent *cash* remittances only. Morales (2019) estimated *total* remittances, including cash and in-kind, at 6.6 billion in 2017. This compares with Luis' (2019) regression-based estimate of \$4.1 billion. Duany (2019, Cuadro 3) reports cash remittances of about \$3.5 billion in 2017, about the same as Morales' (2019) number used in Table 3 of this article. However, Duany's numbers for the period before 2009 are mostly below \$1 billion and thus appear to be too low, since ONEI reported remittances of more than \$1 billion in 2001 and remittances most probably increased substantially from 2001 to 2009.

about 400 doctors from Ecuador; and the expulsion from Bolivia of 700 Cuban doctors and security specialists—although the latter may well be reversed in view of Bolivia’s recent political turnaround.⁷ These developments could reduce the number of Cuban professionals abroad by roughly 9400 or almost one fourth.⁸ (See the scenarios in Hernández-Catá, 2020). Payments from Mexico, Qatar, and other countries appear to have increased recently, but they are too small to compensate for the loss of revenue from Venezuela and Brazil.

The other fundamental question is how Cuba will deal with the effects of the drop in oil imports from Venezuela. Part of the problem might be tackled by expanding recent agreements with Russia and possibly other countries, but it is highly unlikely that new oil shipments from these countries would make up for lower oil imports from Venezuela. Therefore, unless the Cuban government is willing to accept weak growth for an indefinite future, together with rationing of gasoline, power failures, and the collapse of its oil refining industry, Cuba eventually will have to purchase oil from the world market. But this will require new sources of foreign exchange. Which brings us back to the need to encourage non-oil exports by liberalizing the exchange rate system and allowing a devaluation of the exchange rate that applies to enterprises.

In late October 2018, the authorities introduced new regulations that reduce the importance of domestic currencies, particularly the formerly convertible peso (CUC), while expanding the role of the dollar. Households would now be allowed to use bank cards to purchase goods with dollars in newly created consumer markets. Moreover, certain state enterprises selling in those markets would be allowed to use the dollars they earn to purchase imported inputs without official approval. As rightly pointed out by Vidal (2019), these measures are an expedient to deal with

the short-term effects of the Venezuelan crisis on Cuba. They are not a step towards the long-promised goal of unifying and liberalizing the exchange system. In fact, they add a third currency to the mix, thus increasing the complexity and the distortionary effects of the system. The effects of the new rules will have to be evaluated over time, but they are unlikely to end the discrimination against exports of goods.

As if the loss of revenue from exports of professional services were not enough, the Cuban authorities will now have to deal with the effects of the coronavirus. It is too early to estimate the overall magnitude of these effects, but it is clear that they will result in a large reduction in tourism because of the fall in income and employment in North America, Europe, and Latin America, the restrictions on air travel imposed by most countries, and the risks involved in traveling to a country where the government’s capacity to deal with the pandemic are uncertain. Revenue from remittances is also likely to decline considerably due to the fall in personal income among Cuban-Americans and the increased difficulty in making payments to Cuba. Morales (2020) has estimated that remittances to Cuba may have dropped by 32% from 2019 to 2020 as a result of the pandemic-induced world recession. The global downturn would also affect the demand for Cuban sugar, nickel and other goods exports. The related softness in the world oil market may provide a partial compensation, but only if Cuba generates sufficient foreign exchange to take advantage of lower oil prices. All things considered, the impact of the COVID-19 on the current account is likely to be strongly negative and thus involve a sharp reduction in foreign exchange receipts—which in turn would require deep cuts in imports through administrative action and/or a contraction of aggregate demand. A devaluation of the peso would help to smooth the unavoidable adjustment.

7. See Frank (2019). There were also reports of the expulsion of 400 “piratas”, a local jargon referring to security personnel.

8. There would be no net effect on the balance of payments if the decline in professional services exports to Venezuela were to be the counterpart of a fall in oil imports from Venezuela.

Annex 1

CAPITAL MOVEMENTS

The Cuban authorities have succeeded in making the analysis of capital flows extraordinarily hard, even by the country's usual standard of statistical obscurity. Until 2001, ONEI had published data on the capital and official reserve accounts. The information provided included direct investment, other long-term capital, and other items (presumably trade credits). From 1993 to 2001, net capital inflows ranged between a low of \$174 million in 1996 and a peak of \$804 million in 2000. Current account deficits were more than offset by net capital inflows, and therefore official reserves increased. ONEI did not report unidentified transactions for that period, so that errors and omissions must have been squeezed into the current and/or the identified capital accounts, probably the latter. This makes it very difficult to interpret the numbers through 2001.

ONEI stopped publishing capital account and official reserve data after 2001, and since then nothing has been available. In 2017, however, Luis R. Luis reported estimates for the capital account (see Table 4) based on numbers he constructed using data from lenders (including development assistance flows), private investors (including direct and portfolio capital) and ONEI (loans). Luis identified persistent net capital inflows from 2009 to 2015 (except for 2012). During most of that period, identified capital inflows added to the surpluses on current account. Significant gains in official reserves took place in 2009 and

2010, but reserves fell in most of the remaining period. (Luis proxies official reserve assets by Cuban claims on banks outside Cuba reported to the Bank for International Settlements, BIS.) The balance of payments identity and the estimates provided by Luis imply large deficits on unidentified transactions.

What these transactions are, nobody knows; but there are three possible explanations.

(i) Errors and omissions could result from an overestimation of current account surpluses. For example, they might reflect over-reported private remittances. This is possible, but unlikely to account for the full amount of the unidentified transactions shown in Table 4.

(ii) The errors and omissions item could reflect unrecorded accumulation of reserve assets. This is unlikely as most countries in the world now report their liabilities to the BIS, including most recently China. It is not impossible, however, that China, Russia, Iran, and possibly Venezuela, might conceal from the BIS changes in their liabilities to Cuba. But the numbers seem too large to fit this explanation.

(iii) Errors and omissions might capture unidentified outflows of capital other than official reserve transactions. I believe, but cannot prove, that this is the correct explanation. If it is, however, it raises another question: what is the nature and the destination of these (presumably clandestine) capital outflows?

Table 4. Cuba: Capital Account of the Balance of Payments (million US dollars)

	2009	2010	2011	2012	2013	2014	2015
Current account	-162	1491	1427	2382	1850	3112	1436
Identified capital	1332	1464	695	-1034	288	221	1029
Direct investment	288	273	433	417	370	239	173
Portfolio capital	0	0	-166	-153	-82	-16Q	-18
Loans (net)	926	1058	3,41	-1384	-99	-111	321
Development finance	118	133	87	86	99	262	555
Net errors and omissions	260	-1840	-3425	-2716	-2610	-2959	-3026
Change in assets at BIS ^a	-1439	-1J15	1293	1368	472	-374	561
Estimated total capital inflows	1592	-376	-2730	-3750	-2322	-2738	-1997

Source: Luis (2017), ONEI and author's calculations;

a. Numbers may differ from those in Luis (2017) because of revisions in current account data.

Annex 2

ESTIMATING THE COMPOSITION OF EXPORTS OF PROFESSIONAL SERVICES

In the 2019 issue of its annual report, ONEI reported for the first time data on the composition of exports of services, but only for 2018. These numbers are shown in column (A) of Table 5, except that the numbers rearranged so as to arrive at a proxy for exports of professional services.

Column (B) shows the estimate used to construct a time series for exports of professional services, which is not provided by ONEI. It is constructed as follows: total exports of services (from ONEI), minus tourism and international travel (also from ONEI), minus communications and other services (from column

A). This is the methodology underlying Table 2. It should be noted that the estimates of professional services in columns A and B are roughly similar.

A surprising aspect of Table 5 is that ONEI's numbers for total exports of services and for tourism and international travel (both reported in column A) differ from those published annually by ONEI in its traditional tables. In this paper, we use the latter numbers to construct the estimates shown in column (B) of Table 5. The differences between the two sets of numbers are shown in column C.

Table 5. Cuba: Composition of Services Exports in 2018 (Million U.S. dollars)

	(A) ONEI Estimates ^a	(B) Table 1 Estimates ^b	(C) Difference
TOTAL	11290	11764	-474
Compensation of professionals	8028	7309	719
Health and social assistance	6399		
Education	250		
Support services	1319		
Culture and sports	61		
Tourism and international transportation	1856	2969	-1113
International transportation	280		
Support of transportation	235		
Hotels, food and beverages.	970		
Docking fees	91		
Retail trade	279		
Telecommunications and information	722	722	0
Other services	684	764	-80
Financial services	156		156
Other identified services ^c	78		156
Unclassified	450		450

Source: ONEI and author's estimates

a. From ONEI, Cuadro 5.17; the selection of items making up the underlined totals are made by the author.

b. From ONEI, Cuadro 15.15.

c. Legal services other professional services, leasing, research and development, maintenance and ??????

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