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Cuba: the surge of export-oriented services

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Abstract

Since the inception of the special period and the loss of its traditional export markets for sugar and other goods, Cuba has turned towards services as new sources of foreign exchange. Tourism has been reactivated and its performance has been broadly satisfactory, yet its long term growth potential should not be overstated. Since the mid-2000s, a new sector - professional services - has become the island's largest foreign exchange earner. Cuba's comparative advantage in this sector is the product of decades of human capital investment in social services. Yet, the sustainability of Cuba's present trade structure cannot be taken for granted. In the future, export-oriented professional services, and the health cluster in particular, might not only contribute to release the balance of payments constrain, but also play a pivotal role in steering the evolution Cuba's economy towards a knowledge-based development path. To this purpose, however, major changes in the area of industrial and macroeconomic policies are required.

1. The rebirth of tourism

In Cuba health, education, and other social services have been prioritized since the early years after the Revolution, and grew constantly even in the resource-starved 1990s and 2000s.¹ On the other hand, non-social services were relatively underdeveloped, consistently with the pro-material production bias prevailing in most socialist countries at the time. While tourism, in particular, had been an important component of pre-revolutionary Cuba's economy and of its external trade structure, its economic role almost withered out. Thus, Cuba's services exports did not play any significant role until the early 1990s.

The situation changed completely under the extreme penury of the special period, when policy-makers were forced to reactivate tourism as the only sector holding a potential for substantial foreign exchange gains in the short term, besides exerting an important multiplier impact through its multiple backward linkages with the rest of the economy. The rapid growth in the exports of tourist services and of other ancillary services sub-sectors, such as travel services and services supplied to foreigners inside the national territory) was even more crucial to allow Cuba's progressive (if partial) economic recovery² because it was paralleled by a dramatic decline of goods and commodities exports³. As a result, tourism and other commercial services came to constitute the bulk of Cuba's total exports during most of the 1990s and until the early 2000s (see Pico García and Rodríguez 2006).

The tourism cluster was accorded a much higher degree of priority than in the past, and some of its components benefited from the moderately liberalizing reforms enacted since 1994 and by the inflow of FDI. Most hotel building construction was carried out entirely by Cuban firms, but upscale hotels were managed mainly by the

¹ As most social services were provided free or quasi-free to the population, their relative contribution to GDP ended up being underestimated. This bias ended with the introduction of the new GDP estimation methodology in 2003. The new methodology evaluates the contribution of social services to GDP on the basis of a kind of "shadow prices" based on international comparisons. However, the new approach is not fully immune to critiques either, and has been accused by some observers of provoking a bias of opposite sign with respect to the , i.e. of leading to an overestimation of the true value of Cuba's social services (see Pérez-López and Mesa-Lago 2009).

² Vidal and Fundora (2008) show econometrically the crucial relevance of the balance of payments constraint for Cuba's growth.

³ Exports from the goods-producing macro-sectors declined both in price and in volume terms.

foreign partners as part of a joint venture arrangement.⁴ By the mid-2000s, the tourist sector was generating directly and indirectly about 30000 jobs and about 2 bn dollars. Most visitors are from Canada and Europe, but in recent years arrivals of Cuban-Americans from the US and of citizens of ALBA countries have been on the rise.

Contrary to the negative trends prevailing in most other goods-producing areas, Cuba also managed to enact a successful process of import-substitution in some niche sub-sectors that supply inputs and intermediate goods to the hotels and other tourist facilities. As a result, the leakage effect was substantially reduced, and by 2005 2/3 of the purchases by tourist firms were supplied by Cuban producers of goods and services. Among the success stories there are those of beer (95% of tourist consumption is supplied by Cuban producers) and of the "casas de sombra"(shadow houses), over 1000 specialized agricultural micro- enterprises that produce vegetables all the year long.⁵ The tourism cluster has grown into a consolidated, internationally competitive, as well as (relatively⁶) efficient and sustainable component of Cuba's economy. Yet, its expansion appears to have peaked - at least in a medium term horizon - in the mid- 2000s⁷ (see Table 1), due to diverse factors such as the progressive exhaustion of the potential constituted by the best natural spots, the negative impact of the re-centralization policy shift, the bank crisis, and the depressing effect of the worldwide recession on global tourism services demand.

⁴ About 40% of Cuba's hotel are run by mixed enterprises.

⁵ According to estimates, domestic purchases by tourist firms have about an income generation impact of the order of 1.5 through the multiplier effect, and the leakage effect has been considerably reduced: for each dollar of tourist earnings, up to 70 cents stay in Cuba (Figures Perez 2004).

⁶ In spite of their high degree of autonomy with respect to most other enterprises, hotels and other tourism firms are negatively affected by the bank crisis, the recurrent non-availability of inputs and consumer goods, the overvaluation of the CUC and many other structural distortions. Moreover, the long-term sustainability of natural resources-based tourism development is always questionable.

⁷ Income from tourism increased slowly in the early 2000s, stabilized afterwards in 2005-2008 at around 2.3 bn CUC (pesos convertibles) and fell in 2009 to 2.1 mn. The number of visitors increased in 2000-2005, from 1.77 mn in 2000 to 2.3 mn in 2005, fell slightly in 2006-2007 and recovered afterwards, reaching 2.43 mn in 2009. The average rate of room occupation has declined in the mid-2000s (probably due to the construction of many new hotels) and then has kept oscillating around 60% (see Table 1).

With respect to the policy options that the government might consider to maintain and enhance the considerable progress achieved so far, the most fundamental question revolves around the ownership of the main means of production. In my view, taking into account the strategic role of tourism for the sustainability of Cuba's economy, the present state-centred policy approach is basically correct. In fact, tourism is obviously different from social services, yet it presents some similarities with respect to the justification of a strong presence of the State, at least in the upper, large scale, fully formal segment of the sector.⁸ On one hand, particularly in a rather small island country like Cuba, tourism should not be left to spontaneous market forces. On the contrary, this activity requires a fair dose of both economic and physical planning, as its sustainability depends on the availability of transport and communication infrastructure and on the preservation of natural resources⁹. On the other hand, formal and relatively large-scale tourist activities are bound to be characterized by a high degree of property concentration and monopoly power and by a significant dependency on foreign capital and know-how, no matter whether the domestic counterpart is mainly State- or privately-owned. Moreover, even assuming the likelihood of some efficiency losses, the prevalence of state ownership can be justified on distributional grounds, taking into account the implicit monopoly rents that it generates.

However, the Cuban State is also well-advised in avoiding overstating the long-term growth potential of tourism. This sector is already fairly developed in Havana and in the few other urban centers that present a significant historical, artistic and cultural interest, and also in many of the suitable seaside locations. So far, the pressure on the natural environment is broadly sustainable, but there is little room for further quantitative expansion. Relevant, yet progressively diminishing gains can be obtained mainly through upgrading and better integrating the tourism value chain, thereby strengthening its multiplier effect. Progress can and should be achieved especially in areas such as the further reduction of leakages, the promotion of inter-

⁸ Through backward linkages stemming from tourists' demand of locally supplied nonessential goods and services, tourism can generate and sustain a myriad of individual and small-scale commercial and productive activities. In Cuba, most of these activities are still overregulated and excessively repressed, but a process of liberalization is presently under way...

⁹ Disastrous counterexamples of anarchic tourism development that led to the destruction of the natural environment for the benefit of the few are rife both in developing and developed countries.

sectoral linkages, and the quantitative and qualitative enhancement of the supply of non-hotel ancillary services¹⁰ (such as bars, restaurants, and urban transportation).

Table 1.

Tourism statistics

	2000	2005	2008	2009
International arrivals (000s)	1774	2319	2348	2430
America	784	1216	1380	1536
Europe	949	1048	909	838
Foreign exchange earnings (Mn CUC)	1948	2399	2347	2106
Rate of room occupation (annual average)	74.2	63.6	60.1	59.8

Source: ONE 2010

2. The boom of professional services exports

Since the mid-2000s a new services sector has become prominent in Cuba's trade structure. For the first time, the potential comparative advantage created by decades of human capital investment in social services began to be exploited for an economic, non-(directly) social purposes: to contribute to redress Cuba's structural balance of payments disequilibrium. Almost overnight, thanks to the new, more favourable regional geopolitical external scenario created by the emergence of friendly governments in Venezuela and other Latin American countries, exports of health and other professional services overcame tourism as Cuba's largest foreign

¹⁰ Contrary to the core component of the tourism business - hotel services - these ancillary services activities are not generally suitable to direct state management, and should be left mostly to individual and private entrepreneur, consistently with the new policy approach launched in the summer and fall of 2010.

exchange earner (see Pico García 2003,2004, Pico García and Rodríguez., 2006 Triana Cordoví 2008,, 2010, Triana Cordoví, Torres Pérez and Martín Fernández 2005).

Health services exports (including teaching services in the area of health) can in principle be realized according to all the four modes of supply covered by the **WTO General Agreement on Trade in Services (GATS)**: cross-border supply (Mode 1), . consumption abroad (Mode 2), commercial presence (Mode 3), and presence of natural persons (Mode 4) (see WTO 2010), .Telemedicine is a classical example of a service delivered cross-border in real time (Mode 1). According to mode 2, patients travel abroad to be attended in the service- exporting country (health tourism). Under Mode 3, a public or private agent in country A establishes a commercial presence in county B, in order to manage a hospital, a clinic, a medical consulting centre, or to supply health services in some other form. Under Mode 4, health professionals such as doctors, dentists, nurses, technicians, and other skilled personnel temporarily migrate abroad in order to supply health services to the local population.

In the case of Cuba, the most important modes of exporting health services are Mode 2 and mode 4. The first health services exports were recorded in 1980¹¹ under Mode 2. Health tourism and health teaching activities were subsequently expanded with the creation of SERVIMED¹² in 1987 and in the 1990s, as part of the overall development of the tourist sector. SERVIMED was later transformed into a larger entity, Cubanacán Turismo y Salud, that runs three main sets of programs: International Medical Services, Tourist Medical Services, and Life Quality Services. International Medical Services is the most important one, and it consists in attracting foreign patients who are attended both in specialized facilities and in hospitals and clinics belonging to the National Health System. Among Cuba's "specialties" that contribute to sustain its comparative advantage the following are worth mentioning : rehabilitation therapies for drugs and alcohol addicts¹³; treatment of pigment rethinosi, vitiligo, psoriasis, alopecia; surgical and clinical programs, including esthetical surgery and , neurological restauration; health checks and check ups (see Cuba Health Tourism 2010). Nowadays, many patients attended in Cuban health

¹¹ Between 1963 and 1984 over 18000 Cuban health workers travelled to Algeria and many other countries, to provide assistance to the local populations in a framework of non-commercial internationalist solidarity.

¹² Now Cubanacan Turismo y Salud (CTS).

¹³ One famous beneficiary of Cuba's specialized expertise in this area was Diego Maradona.

facilities come to the island in the framework of the intergovernmental agreements with Venezuela and other countries belonging to the Bolivarian Alternative for Americas (ALBA)¹⁴.

Tourist Medical Services focuses on tourists temporarily residing in Cuba through a network of specialized clinics and ambulatories established in hotels and tourist destinations. Life Quality Services advertises and commercializes programs of life quality improvement, including esthetical treatments, thalassotherapy, and SPAs. In the 1997-2005 period over 30000 foreign patients were treated in Cuba¹⁵, and their numbers have been increasing further during the second half of the decade.

Cuba is also experimenting with cross-border supply and commercial presence in the area of health services, although the activities carried out under these two modes are to be seen mainly as ancillary to the promotion of services exports under Modes 2 and 4.¹⁶ Telediagnosis, teleconsulting and teleteaching services are sometimes provided to foreign customers free of charge, mainly as form of advertising for the country's health services industry. Cuba has established branches of the Placental Histotherapy Clinic in Spain and in several Latin American countries, and since 2004 has been participating in setting up assistance facilities, not only in ALBA countries but also in other developing countries such as Algeria and China. Yet, as information on the extent of Cuba's share in the ownership on most of these facilities is not available, it is not clear to what extent they actions represent forms of commercial presence in the proper sense.¹⁷

Exports of medical teaching services started in the early 1990s with postgraduate courses in ophthalmology and in other areas. The goal was originally that of raising some funds in order to achieve a degree of self-financing for the

¹⁴ Only part of the health services received by these patients is paid, thereby generating exports. The rest is constituted by donations. Cuba keeps providing health and health/related services to foreigners free of charge under a number of other modalities, such as the activities of the Latin American Medicine School near Habana, the Integral Health Program, and the Miracle Operation, aimed at attending low/income patients affected by serious sight disturbances from Venezuela and other Latin American countries. As most health services activities benefiting foreigner patients in the framework of ALBA are attended by the newly/formed institution Servicios Medicos Cubanos, Cubanacán is increasingly focusing on medical cooperation with non/ALBA countries.

¹⁵ Source: Pico García and Rodríguez, 2006 (estimate).

¹⁶ At least, so far. Both cross-border supply and commercial presence health service delivery modes hold a potential for future development, that could be exploited provided appropriate support policies are enacted.

¹⁷ According to GATS rules, commercial presence requires full or controlling ownership rights.

Centers of High Medical Education and for the national health system at large, in a period of acute scarcity of funds. With time, these programs have been growing, attracting up to 500 students and generating earnings of the order of 10 million dollars per year.

Over 100000 Cuban health workers have been travelling abroad, often for prolonged periods, since the early 1960s. Exports of health services under Mode 4 in the proper sense¹⁸ started in 1985, when 313 Cuban professionals were contracted to supply health services in Libya, Algeria, and Kuwait¹⁹.

Cuban health workers are deployed abroad under two modalities, Technical Assistance and Technical and Professional Services. Only Professional and Technical Services, which are delivered both in the framework of intergovernmental agreements and in other forms, including contracting by international organizations, generate foreign exchange earnings for the country.²⁰ Most Cubans providing professional and technical services are in Venezuela and other ALBA countries.²¹

According to estimates, only a small minority (about 12%) of all the health personnel sent abroad by Cuba since the 1960s have done so under a foreign-exchange-generating modalities, but their numbers have been soaring since 2003. In that year a new major health program focusing on the establishment of a network of community doctors in poor neighbourhoods (Barrio Adentro I) was launched in Venezuela. The program was subsequently expanded to cover the needs for specialized medical treatments in newly-created facilities spread all over the country (Barrio Adentro II). As a result, the number of Cuban health professionals working in

¹⁸ I.e., under foreign-exchange generating arrangements (usually in the framework of intergovernmental agreements), rather than as donations.

¹⁹ See Pico García and Rodríguez 2006. It is noticeable that (as the Kuwait example shows) the opening of this new export opportunity cannot be attributed only to the previous existence of special inter-governmental political linkages. This shows that, since the beginning, Cuba's health services exports developed to a large extent on the basis of a genuine comparative advantage, that could be exploited according to the prevailing structure of world relative prices.

²⁰ Technical Assistance consists in sending health workers and other skilled personnel to countries affected by particularly harsh sanitary conditions or natural disasters. Cuba provides these services free of charge, as a form of aid.

²¹ Other forms of specialized health-related activities are carried out by the Henry Reeve international team of doctors specialized in disaster and grave epidemics.

Venezuela climbed at over 23000 by end-2005²², and kept increasing thereafter - at present, it is estimated at over 30000.²³

Policy-makers realize the strategic role of knowledge-intensive and potentially tradable sectors, and are supporting several promotion initiatives and programs also in areas different from or only partly related to the health cluster. The Cuban centre for the promotion of foreign trade (CEPEC in Spanish) identified a set of potentialities in "other scientific and technological services" (STS) areas, where Cuba has already reached a certain degree of development, such as geology, geophysics, environment, engineering, hydrology, and civil construction projects and postgraduate education (including on line teaching). Among others, specialized activities involving STS are being carried out and further promoted, such as: technological and feasibility studies; laboratory analyses; specialized consulting; reverse engineering; scientific and technological information management; geological, mining, and hydrological exploration and prospecting, radiological, sport medicine, and environmental services. According to Pico García "studies on the STS in Cuba showed that there is a set of entities, institutions, R&D centers which do hold a potential to deliver several high quality services, some of which have been exported, among which...environmental studies, ...management systems, industrial security studies...(Pico García 2009a, p.7)."

Yet, this potential is severely constraint by Cuba's lack of international integration and the dearth of domestic investment in key technological facilities and infrastructure. There are, however, some promising exceptions. Since the issuing of the strategic directives for the informatization of society in 1997, Cuba made important investments in the computer and related services sector. Computer skills teaching was generalized, all educational institutions were provided PCs, computers, and one new specialized higher-education institution (the university of informatics, UCI in Spanish) was created. Notwithstanding its limitations,²⁴ the UCI, albeit

²² In the framework of the Barrio Adentro I and Barrio Adentro II programs, Cuban health workers attended over 17 million Venezuelans in 2005, carrying out 175 million consults/visits.

²³ Source: Pico García 2009a (estimate). In Venezuela and, to a lesser extent, in other ALBA countries, this massive influx of Cuban doctors and other professionals dramatically altered the structure of the domestic private market for health services. Not everybody liked this development, and some social sectors developed an aggressive negative attitude towards Cuban health workers (see Pico García 2006).

²⁴ The process of human capital formation taking place in this new excellence centre is in practice quite de-linked from the rest of the country's economy.

supported by other entities, is basically the only institution where software production takes place and some (still modest) foreign exchange earnings are generated from software exports (to Venezuela).²⁵

3. Is Venezuela subsidizing Cuba ?

The relative de-integration of Cuba's economy, with its exceptional degree of tertiarization and the parallel under-development of industry and agriculture, have contributed to some statistical inconsistencies since the introduction of the new GDP estimate methodology in 2004²⁶. The most relevant implication of these inconsistencies is likely to have been an overestimation of the GDP growth rate in the mid-2000s.²⁷ As the reform led to a higher estimate of services GDP since the year when it started, it might have led to estimates of GDP growth rates higher than those that would have resulted from the old methodology for that very year (because the value produced in services activities GDP was now computed on the basis of higher prices, without correspondingly reducing the value of goods-producing activities). Afterwards, the GDP growth rates estimated with the new methodology were probably higher than those that would have resulted applying the old one, because services kept growing faster than goods.²⁸

These critical observations, however, do not imply that the surge in Cuba's professional services export is a statistical fabrication, a sort of fig leaf covering a

²⁵ The UCI might advance especially in "unorthodox" software domains such as the development of developing "free" software products (i.e. like Linux), possibly in cooperating with foreign partners.

²⁶ The introduction of the new GDP evaluation methodology was initially criticized by the CEPAL (the UN commission for Latin America and the Caribbean), which published its own set of estimates. Subsequent discussions between CEPAL and the Cuban government led eventually to a new partial methodology change, that was considered satisfactory by both sides (see CubaEncuentro 2008).

²⁷ With respect to the international relative prices prevailing in world markets and to standard statistical evaluation and measurement methodologies.

²⁸ Even if this were the case, this would not mean that the methodology reform was squarely wrong, as far as the new and higher prices attached to services activities are in fact more correct and more close to those which would prevail under standard international evaluation methodology practices. For a critical discussion of the difficulties that can be encountered in interpreting Cuban official statistics and especially for using them to make meaningful international comparisons, see for instance Pérez-López and Mesa-Lago 2009, González-Corzo 2009.

huge degree of subsidization on the part of Venezuela. Actually, only scant ²⁹ available information is available on the prices and the payment and financing conditions established in the framework of the Cuban-Venezuelan trade agreement for medical services and oil respectively. As official data on the price of Cuban professional services exports in particular are lacking, the issue is object of speculation. Mesa Lago 2008, on the basis of calculations he does not detail, proposes an estimate of €144,000/year for the average annual cost paid by the Venezuelan state to purchase the services of one Cuban health worker. Taking into account that Cuba's health workers are not only doctors, but also nurses and technicians, he claims that "this is obviously an overestimate (of the true value of these services), as "a Venezuelan (doctor)... does not make that kind of money. So there is an implicit subsidy in this operation." (Mesa Lago 2008, p.16).

This estimate, along with the preferential prices paid by Cuba for importing Venezuelan oil, leads Mesa -Lago to claim that the special bilateral trade agreement between the two ALBA countries actually hides a huge implicit subsidy: "Cuba started to receive substantial subsidies; for instance Venezuela sends Cuba 100,000 barrels of oil a day at a preferential price of US\$27 while the average world price per barrel was US\$65 in 2006 and US\$75 dollars in 2007. So the subsidy Cuba received was worth US\$2.5 billion in 2007 (€1.700 billion)." (Mesa -Lago 2008, p.7)

As a matter of fact a very rough comparison of the orders of magnitude of Cuba's services exports does appear to lead to a rather high valuation for the export price of professional services. according to a EIU estimate (see EIU 2010). According to independent estimates, exports of professional services in 2009 were 7.7 bn CUC (roughly correspondent to 9bn US dollars or 6.4 bn euros), while the number of Cuban professionals working abroad is estimated at about 50000 (see EIU 2010, Gazon 2010).³⁰

²⁹ Cuba and Venezuela have ample and legitimate economic, political, and military reasons not to disclose the details of their strategic trade agreement.

³⁰ This estimate is partly based on data released by the Ministry of Foreign Trade in November 2009. The same source puts tourism revenues at 2 bn CUC, and would therefore indicate that Cuba's total services exports in 2009 were of the order of 10 bn CUC.

A back-of-the-envelope calculation shows that Cuba appears to be receiving³¹ for each of them a sum of the order of 130000 euros per year, lower than Mesa Lago's estimate³² but of the same order of magnitude. These numbers are about twice as big as those of an unofficial estimate circulating in Cuba in mid-2010, that was of the order of 50- 60000 euros per year. However, even if the highest estimates proposed above were approximately correct, they would not fully validate Mesa Lago's assertion that they amount to a Venezuelan subsidy to Cuba. Even if it is true that Venezuelan doctors earn less, Venezuela would not be in a position to hire enough doctors inside the country to accomplish the tasks that are presently carried out by Cubans in the framework of the Barrio Adentro and other programs, due to two the simple reasons. The first is that there are not enough doctors in Venezuela. The second is that very few of them would accept to work in the marginal areas where the Cubans do go, much less to live there. Finally, it has to be taken into account that the cost of specialized services supplied by very qualified foreign professionals in a developing country should not be compared to the prices of nominally similar services in the domestic market, but to the prices prevailing in the international market for professional services.

It is thus fair, in my view, to acknowledge that even if the terms of trade established in the bilateral trade accord are somehow more favourable to Cuba than those that would prevail if both oil and professional services were sold exactly at their respective international market prices³³, it is also probably the case that Venezuela actually got a unique bargain. In fact, Venezuela managed to dramatically extend and improve the provision of basic medical health services to its population over a very short period of time, to an extent that would not have been thinkable otherwise, either on the basis of its domestic sectoral supply potential, nor on that of acquiring these services on international markets from any other source. Actually, there was only one country in the world that could materially export these services in such a huge quantity - Cuba. Such a major improvement in Venezuela's its social welfare function

³¹ Cuban workers abroad are paid in form of wages and benefits a fraction of what the country earns thanks to their activities. Yet, compared to wages in Cuba, incentives are strong enough to produce a fierce competition for the posts abroad among doctors and other professionals.

³² CML 's estimate referred to 2005, when both Cuba's foreign exchange earnings from professional services export and the number of Cuban professionals working abroad were lower than in the late 2000s.

³³ Due to the extremely heterogeneous nature of professional services, the notion of a standards world market price for each of them is more difficult to grasp than that of the world price of oil.

- at least, as interpreted by its government, as it is the case in any real-world situation
- was achieved at the relatively modest cost of foregoing the convertible exchange rate earnings from a fraction of its huge oil exports.

4. Sources of Cuba's international competitiveness

Cuba's relatively high degree of international competitiveness in professional services is thus a real and important phenomenon, that has been made possible mainly by three factors. The first one,, as mentioned above, is the traditional priority accorded to health and education in the centralized process of resources allocation, on the basis of social rather than economic motivations..

Another one, less immediately recognizable, source of Cuba's competitiveness stems from the intrinsic characteristics of social services. These activities are based to a large extent on direct human interactions, with a relatively high degree of de-linking from most other relations of production and exchange. Their basic nature implies that ensuring universal access to key social services is an utmost policy priority. As opposed, for instance, to agriculture - where decentralized micro-management decisions must continuously be taken by local producers to respond according to ever-changing climatic and other natural conditions - the core actions constituting health and education activities (such as carrying out vaccination and anti-illiteracy campaigns, besides regularly delivering standardized packages of teaching and health care services all over the national territory) are quite amenable to a central planning approach. Conversely, the functioning of social services require a relatively smaller role of market regulation and material incentives etc with respect to most commercial services and goods-producing activities.

Thirdly, health and education these sectors are human, rather than capital intensive, and not very import-dependent. Therefore, in these areas so decisive for basic human development, considerable progress can be achieved in a quasi-autarchic fashion, even in the midst of an overall context characterized by a very stringent

foreign exchange constraint and by a general decay of material infrastructure and the production of goods. Yet, this particular form of non economically driven (human) capital accumulation can - as it did in Cuba - eventually lead to the generation of a latent international competitiveness susceptible to be harnessed in terms of services exports

The growth potential of the health services "industry" as a foreign exchange earner and an engine of growth for the Cuban economy as whole is substantial, at least in principle. However, this goal cannot be achieved expanding further the sheer number of health personnel working abroad, which is actually hardly sustainable at its present level. As a matter of fact, the inevitable negative consequences of such a massive (albeit temporary) migration of skilled practitioners on the quality of the health services provided to the Cuban population are already being felt.³⁴

In order to exploit its growth potential in the domain of health services exports, Cuba should deepen and intensify the ongoing investment and reorganization efforts aimed at upgrading and diversifying health services supply and delivery capabilities. Health tourism (a form of exporting services according to under Mode 2) holds particularly favourable growth prospects. Both the number of foreign patients in Cuban hospitals, clinics, and SPAs, and the average foreign exchange earnings per patient are amenable to increase, not only under intergovernmental agreement modalities, but also attracting relatively wealthy individual patients in global world markets. There are interesting development possibilities as well in the still-underdeveloped area of telemedicine and tele-teaching in health (delivered under Mode 1), and in the interaction between Modes 3 and 4 through the expansion of the commercial presence abroad of Cuban health organizations and institutions. Cuba might also specialize further in the provision of consulting services in the area of planning and managing decentralized, multiple-tiered public health services networks, exporting them to countries willing to improve their public health systems and to extend access to basic health services to the poorest population groups.³⁵

³⁴ See below, note 44.

³⁵ Cuba might further specialize in the provision of consulting services in the area of planning and managing decentralized, multiple-tiered public health services networks, exporting them to countries willing to improve their public health systems and to extend access to basic health services to the poorest population groups. Some pilot programmes of bilateral cooperation between Cuba and China in

In general, Cuba should exploit the possibilities offered by the malleability of trade in services, promoting project-related multi-modal and inter-sectoral services exports, upgrading their value added and favouring the development of multiple intra- and inter-sectoral linkages between the health cluster and the rest of the economy..

5. *Cuba and the offshore services global value chain*

To fully exploit its potential in the area of professional services, Cuba should elaborate and implement an integral export promotion strategy.. Crucial components of such a strategy are the creation of a favourable, export-oriented legal and institutional environment and an array of actions aimed at support international competitiveness (Pico García 2009a).

The ultimate goal remains that of ascending in the global value chain of traded professional services, transforming knowledge into value (see Triana Cordoví 2010). To this purpose, Cuba should try to jump on the fast train of the offshore services global value chain (see Gereffi and Fernandez-Stark 2010), and especially in the most advanced segments of the pharmaceutical industry. This new and booming industry exploits the potential offered by the most modern ITC technologies in order to segment more and more the productive process, outsourcing an ever-increasing

the areas of consulting , designing and implementing new forms of public health services delivery at local level are presently being carried out in some Chinese localities on an experimental basis (see People's Daily 2010).

number of activities outside from the large firm and offshoring³⁶ them towards low-cost locations, more and more in the developing world. As a result, even in the global integrated value chains ultimately aimed at the production of goods (i.e. medical products) formerly in-firm activities that were traditionally considered as fully belonging to the manufacturing sector are transformed into services: "The highly competitive environment forces these firms to change their procedures and be ready to meet new demands (these demands refer to more complex activities at lower prices). For this reason, as knowledge workers become the main source for creating value, the focus of business strategies is to gain advantage through talented workforce. Thus, while India and China currently lead supply in these segments, the fact that demand is being led by small and medium-sized companies offers a great opportunity for smaller countries with a pool of highly educated workers to begin to export services." (Gereffi and Fernandez-Stark 2010, p.38. See also Sen & Shiel, 2006).

These technological and business trend, and especially the fact that many previously internal manufacturing activities are transformed into specialized services that can be supplied cross-border under Mode 1 potentially offer a golden opportunity to a country like Cuba. In fact, the island is favourably endowed with specialized human capital and some specialized facilities, and thus has a distinctive comparative advantage in some knowledge-based areas (mostly related to the health services and medical cluster). Yet, Cuba lacks the physical capital and the overall industrial base that would be needed to carry out the whole set of integrated manufacturing processes that characterize advanced, high-tech manufacturing sectors..

The offshore services global value chain "revolution" can in principle allow to "jump" altogether those crucial stages of a broad-based national industrialization process that proved indispensable to underpin sustained growth and modernization in the history of most developing countries in the XXth century, allowing a country like Cuba to insert itself directly in the most convenient segment of the global value

³⁶ A firm is outsourcing when it externalizes tasks that were previously performed in-firm to an external specialized provider, usually in the same country. If, the process involves a foreign external provider, the term offshoring is used. External providers might be more or less independent from the enterprise that produces the final goods or service. However, a transaction process (even if in some cases of intra-firm nature) consisting in the sale and purchase of services does take place. In the case of offshoring, and in general where firms in the various parts of the value chain are located in different countries, the result is an expansion in international trade in services.

chain. Alas, this opportunity cannot be seized by Cuba under the present circumstances. Even the elite knowledge-based clusters are still plagued by the country's overall lack of integration with the world economy³⁷, and especially with the TNCs that control and impulse the spread of the offshore services global value chain "revolution" in the present historical phase.

Another extremely crippling constraint is constituted by the extreme underdevelopment of ICT, internet, and new generation telecom facilities in the island, which implies difficulties of access and prohibitive operating and communicating costs³⁸. In this particular domain, the policy space for the Cuban government is the strictly economic area is very limited, as most of these problem are direct or indirect consequences of the set of hostile measures enacted by the US to sabotage the economy of the island, among which the trade embargo is only the most egregious one. In the key area of international electronic communications, the US refusal to allow it to access Internet through one of its submarine cables obliges Cuba to get the signal from a satellite, thereby enormously increasing the cost of the service, curtailing its speed, and severely limiting its availability to users. Moreover, the embargo does not allow Cuba to get hold of relatively simple software packages, as the informatics firms that produce and control them are mostly US based.³⁹ In a more indirect way, Cuba's access to Internet and more generally its capability to participate in the global services value chain are also jeopardized by several other specifically anti-Cuban US laws, many of which have an extraterritorial scope. The negative impact of these measures is felt especially in the areas of financing and subcontracting⁴⁰.

³⁷ Progress is being made especially in the area of regional and South-South cooperation, noticeably in the ALBA framework.

³⁸ As mentioned above, Cuba is endowed with a specialized university campus focusing on ICT and telecom technologies. The problem, as usual, is that this far-reaching investment in human capital has not been matched so far by a correspondent investment in hardware, telecom infrastructure, and other physical capital endowments.

³⁹ Even if these firms were based elsewhere, they would easily be blackmailed by the anti-Cuban embargo dispositions, due to the crucial importance of the US market.

⁴⁰ These observations on the severe impact of the US anti-Cuban legislation have been suggested to the author by D.ra Nieves Pico García in a written communication received on October 13, 2010.

Quite apart from the future of direct Cuba-US negotiations, however, the impact of the embargo is already, if slowly, weakening, along with the loss of centrality of the US as a lone superpower and the emergence of China and other new economic, technological and political powerhouses (see...). In this context, Cuban policy-makers might strive to multiply their already on-going efforts to strike strategic alliances with non US, rival TNCs (mainly those operating in the health, drugs and medical manufacturing), and keep developing various forms of technological and financial cooperation and integration with countries such as Venezuela, China, Russia, Brazil, and the like. An important example in this domain, that holds the potential to release most of the constraints imposed on Cuba's access to international communications by hostile US legislation, is the ongoing project to lay an undersea high speed fibre-optic cable from Venezuela to Cuba. The project is being executed by the Venezuelan/Cuban joint venture Telecomunicaciones Gran Caribe (TGC)⁴¹, and is expected to become operational in July, 2011 (Fiercetelecom 2010)⁴².

⁴¹ TGC was granted a licence in November 2009 to install a submarine cable between Caracas (Venezuela), Havana (Cuba) and Kingston (Jamaica). The concession also includes a spur to Haiti. TGC is 60% owned by state-run Telecom Venezuela, and the remainder is held by Cuba's Telco Transbit. In March 2010 Cable & Wireless announced it had struck a deal with TGC to build the Jamaica-Cuba link. The hardware and equipment for the project is supplied by Alcatel-Lucent Information Policy 2010).

⁴² The agency was reporting a declaration to the Cuban newspaper Granma by Alberto Rodriguez, Cuba's vice minister of information and communications.

6. *Challenges*

Notwithstanding the merits of their stellar performance in recent years, professional services face some serious problems that jeopardize their capability to keep playing a pivotal export role in a sustainable fashion.

First of all, the surge in professional services exports has been made possible so far essentially by shifting towards foreign markets part of the supply potential created by past and present human capital investments, a part which would have been underutilized otherwise.⁴³ But doctors as are not mass-produced manufacturing goods. Before becoming "marketable", they require many years of highly specialized training, and productivity in the "doctor's production function" can hardly improve. As a general rule, productivity can improve fast in the sectors where it is feasible to apply ever-increasing knowledge to the material transformation of nature, producing more and more commodities of ever-increasing quality. Yet, such rapid productivity gains cannot be harvested in the domain of specialized human capital formation, taking into account the very nature of learning and the heavy dependence of teaching from reciprocal human interaction (see Triana Cordoví 2008, 2010, Triana Cordoví, Torres Pérez and Martín Fernández 2005, Gabriele 2010).

The second drawback stems from the fact that professional services have few forward economy and backward linkages with goods producing sectors and also with other services sectors, and their virtuous multiplier and spillover effects are correspondently limited (see Gabriele 2010). Professional services staff actually constitute a kind of elite enclave of very skilled and quite productive (even if badly paid) workers quite detached from the rest of the economy, where most of the workforce is trapped in a vicious low productivity, low wages trap. This elite sub-sector is very human capital-intensive but is not physical- and financial capital-intensive⁴⁴, and has constituted itself into an advanced enclave, largely insulated from the overall underdevelopment and poorly performing scenario prevailing in the

⁴³ Of course, such a process could only proceed at quasi-zero cost to a point, and Cuba has already gone very far in a very short time. People routinely complain that as too many of the best doctors have gone abroad, the functioning of the public health system in Cuba itself (and due also to the lack of drugs and medical equipment, now aggravated by the most recent crisis) has markedly worsened.

⁴⁴ Here the term financial capital is to be intended in a narrow sense, as referring to the liquid financial resources needed to fund any production or formation process.

bulk of the Cuban economy. This dichotomy is made possible by the fact that human capital is the only kind of capital that can be reproduced and expanded virtually by parthenogenesis. Each new vintage can be generated by only a fraction of the labor force embodied in the already-existing human capital stock, and its functioning and reproduction capabilities are largely independent from the performance of the goods-producing macro-sector.

Such peculiarities of professional services have so far constituted an element of strength for Cuba, but in the future they could also imply weaknesses. There are two main risks in the present state of affairs are two. One consists in a progressive isolation of professional services from worldwide scientific and technological progress. The another stems from the insufficient development of inter-sectoral linkages with productive enterprises. In the most advanced and dynamic economies, these linkages allow enterprises' demand for potentially value-creating innovations to drive S&T and R&D developments, technological progress and productivity improvements. The previously strict separation between the transmission and generation of ideas, on one hand, and that of material production, on the other hand, is getting progressively blurred. The ever-faster circulation of new knowledge cannot be absorbed and further developed without the availability of advanced ICT and other specialized infrastructure and equipment, as well as rapid access to online information sources and an active two-way interaction with the enterprise sector.⁴⁵ In Cuba, conversely, due to the specific characteristics of professional services and the structural de-integration of the island's economy, the specialist knowledge embodied in professional services human capital has been be transmitted to the goods-producing macro-sector only to a very limited extent⁴⁶ This limitation does not allow Cuba to reap the potential benefits that could stem from virtuous intra- and inter-sectoral spillovers and from the conversion of immaterial knowledge into industry-wide technical progress, leading to enhanced systemic productivity and innovativeness also in the realm of the material production of goods.

Therefore, the jump in Cuba's professional services exports, in absence of a proper enabling policy framework, would risk to prove itself just a once-and-for-all

⁴⁵ See Gabriele and Khan 2010.

⁴⁶ Among the positive examples there are the pioneering advances in the areas of biotechnology and few niches in the pharmaceutical and medical equipment industry (see Pico Garcia 2003, 2004, 2009a,b, Pico Garcia and Rodriguez 2006, Anaya Cruz & Fernandez 2009).

occurrence. It is not intrinsically unsustainable per se, but it cannot constitute an adequate basis for further development, because essentially it has already reached the upper limits of its potential. In theoretical terms, it constitutes a unique jump of Cuba's production frontier than cannot be simply replicated.

A further paradoxical implication is that the precarious external equilibrium position attained by Cuba since the mid-2000s is largely predicated on the international competitiveness (even if such a competitiveness is mostly revealed ex post in an ad hoc fashion)⁴⁷ of a tiny elite knowledge-based sector. In most developing countries the bulk of the foreign exchange needed to ensure the external equilibrium is generated by masses of unskilled and semiskilled workers operating under capitalist production relations, in export-oriented, labor-intensive goods-producing sectors.⁴⁸ Through their contribution to the balance of payments equilibrium, these poorly skilled and poorly paid factory workers are pivotal in sustaining the subsistence consumption of their counterparts in non-tradable sectors, as well as the conspicuous consumption of the bourgeoisie and the upper middle-class, which enjoy a virtual monopoly on access to specialized knowledge, skills, and more broadly on the upper tiers of human capital formation.⁴⁹

In Cuba, as in many other domains, the situation is different. As there is no conspicuous consumption as a macroeconomic phenomenon to speak of, the bare subsistence consumption of the vast majority of less educated and less skilled workers prisoners of the above-mentioned productivity trap is ultimately dependent on the foreign exchange-generating capacity of a very small group of highly skilled professionals. Thus, focusing narrowly on the respective international competitiveness and value-generating ability of different sectors (were value is measured exclusively in terms of foreign exchange), it might be argued that Cuba is

⁴⁷ I.e., in the framework of bilateral trade agreements where import and export prices do not necessarily coincide with those of international market. As argued before, however, the international competitiveness of Cuba's MS exports, in particular, is confirmed by the modest but significant part of these services exports that is sold directly in international markets, outside the planned framework of bilateral agreements.

⁴⁸ In some developing countries and in many least developed countries the most important exporting sector is tourism, a labor-intensive services activity.

⁴⁹ In China and Vietnam there is not a virtual monopoly of a small class on the bulk of the means of production, and access to high-level human capital formation is (at least in principle) based on more egalitarian and meritocratic criteria. However, in market-socialist Asian countries as well the sustainability of the balance of payments is mainly predicated on the value generated by large masses of educated but relatively unskilled workers.

the only country in the world where the many unskilled and less educated⁵⁰ ordinary workers are “exploiting” the few highly skilled and well educated professionals.⁵¹ Such a paradox might be socially progressive, but it needs eventually to be overcome, allowing specialized knowledge to flow smoothly towards the sphere of material production, and thereby contributing to sustainable productivity gains in the bulk of Cuba's industrial and agricultural activities.

7. *Towards a knowledge-based development path?*

In sum, the important progress already achieved in developing professional services into a sector that also (besides directly supplying basic services to the Cuban population) provides crucial foreign exchange earnings cannot be taken for granted, unless it is accompanied by a series of complementary “industrial”⁵² policies aimed at further transforming, enriching and diversify this and other services sectors, and to strengthen their linkages with the rest of the economy .

The latter observation applies particularly to the challenge of nurturing the fledgling health cluster⁵³. Focused industrial policies pivoting on exploiting the latent

⁵⁰ By Cuban standards.

⁵¹ Actually, a partly comparable example exists of a developing country where an advanced, human capital-intensive services sector plays a very important role with respect to the balance of payments, while the bulk of the unskilled working force is trapped in low-productivity equilibrium. The country is India, and the sector is that of offshore IT services. This industry provides over 1/4 of India's export revenues, and generates positive technological and managerial spillovers. Yet it employs “only” about two million of mostly middle class engineers and other very skilled workers, and its direct contribution to poverty alleviation is therefore negligible (see NASSCOM 2009, Gereffi G. & Fernandez-Stark K., 2010).

⁵² Professional services, like any other sector of Cuba's economy, would also benefit from the implementation of a comprehensive macroeconomic program of reforms aimed at overcoming the major structural drawbacks and contradiction of the state socialist model (see Gabriele 2010).

⁵³ Besides the health cluster, there is potential for further development and the creation of international competitive advantages also in other professional services.

spillovers and linkages potential between health services proper and some specialized health-related manufacturing sub-sectors might allow for the formation of specialized high-tech manufacturing niches.

The formulation and effective implementation of suitable sectoral industrial policies, however, constitutes a necessary, but not a sufficient condition for attaining these ambitious goals. The development of advanced services exports is hampered by serious systemic problems, all of them ultimately attributable to the core structural weaknesses of state socialism itself. Therefore, professional services, like any other sector of Cuba's economy, would also benefit greatly from the implementation of a comprehensive macroeconomic program of reforms aimed at overcoming the major structural drawbacks and contradiction of the state socialist model (see Gabriele 2010).

The most binding constraints affecting the development of the export potential of professional services and of the health cluster are the lack of a well-developed export-oriented culture, the insufficient flexibility of the institutional structure, and the inadequate degree of coordination and export-oriented focus of all the public entities involved in the area of tradable services (see Pico García 2009a,b).⁵⁴ Knowledge of services exports modalities and the actions required to promote them its specificities are not widespread enough. In particular, it is common to identify services exports exclusively with Mode 4, thereby underestimating the opportunities and challenges stemming from the increasingly inter-modal and integrated nature of advanced services delivery to foreign clients.

Specific hurdles stem from the obstacles posed by the central planning mechanism to the development of market-based horizontal inter-firm linkages, from the need for each of them to obtain a specific authorization in order to start exporting, and from the still inadequate ability on the part of policy-makers to coordinate the efforts of various layers of firms and other institutions towards the promotion of services exports. Planning institutions such as the Ministerio del Comercio Exterior y la Inversión Extranjera (MINCEX) y el Ministerio de Economía y Planificación (MEP), are endowed with good relatively good human capital resources and are culturally aware of the crucial role of export promotion. Yet, the complex task of

⁵⁴ Analytical and strategy formulation capabilities are constrained by lack of reliable statistics. Personnel formation in areas such as marketing and foreign languages is inadequate, leading in many cases to lack of skills and motivation.

maximizing inter-firm and inter-inter-institutional synergies in the framework of an export-enhancing planning exercise is far from being fully accomplished.

In this respect, it can be observed that the guiding, coordinating and regulatory role of the planning mechanism and the dominance of public ownership⁵⁵ among elite services exporting firms should not be discarded. However, hierarchical and vertical forms of coordination should be at least partially substituted, or at least complemented, by market-based, monetary and commercial forms of inter-firm interaction. In this domain Cuba might profit learning the appropriate lessons from the successful experience of China's predominantly public system of national innovation to improve the country's international competitiveness and export potential in many high-tech domains, after a series of reforms that, among other things, have boosted the development of market-based, incentive-enhancing interactions among state-owned firms and research institutions.⁵⁶

If successful, such systemic reforms might achieve the key goal of consolidating and enhancing the progress already achieved in the area of export-oriented professional services, thereby contributing decisively to the sustainability of Cuba's balance of payments. Moreover, in the long run, professional services and the health cluster in particular might play a vanguard role in steering the Cuban economy as a whole towards a knowledge-based development path.

⁵⁵ However, joint-ventures and other forms of association with foreign enterprises should be actively promoted. In the future, it is also conceivable that, in an overall framework of market-oriented liberalization, privately- or cooperatively-owned specialized, science-based, and export-oriented Cuban firms might emerge as well.

⁵⁶ See Gabriele and Khan 2010.

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