

# **The Cuban Vocational Education and Training System and its Current Changes**

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**ABSTRACT**

*The main purpose of the article is to inform about the Cuban Vocational Education and Training System. Based on the analyse of different studies, on expert interviews and on field experiences the authors give a clear overview of the Cuban VET-System. This description is embedded in the presentation of the general education system in Cuba and in a short look on the specific Cuban labour market. Due to the beginning economic changes in Cuba the actual development and the future changes in the Cuban vocational education and training system is outlined. Open questions are discussed at the end in the conclusion.*

## **Introduction**

Cuba is a land of contradictions and of political polarisation. The standpoint one takes towards Cuban society depends on the political position of every person and often differs fundamentally. However the Cuban education system is recognized through out the world. The focus of this essay is an examination of the Cuban vocational education system based on data collected from several research trips to Cuba from 2003 till 2010.

Recently, Cuba has experienced dramatic changes brought about by a new international situation, changes within the Cuban government, a large economic crisis caused by a hard economic embargo, the destruction of the socialist bloc in Europe, and internal financial and structural distortion. The governmental change is marked by a new government directed by Raul Castro's presidency. This presidency has developed a new economic concept within a new international context where the ALBA integration and other alliances ask for better productivity effort. Internally the new concept will strengthen the innovative potential and self responsibility of Cuban people. The economy is beset by government defaults on loans and a 13% decline in agricultural production from January to May of 2010. This has meant that a basic staple of the Cuban diet, rice, is now difficult for the population to obtain because the price in the international market is dramatically higher than before. To find a solution the Cuban government is trying to give more opportunity for the population to produce more agricultural foods, and also to develop more individual initiative to cover the people's needs. Since Raul Castro became President many Cubans have had high hopes that reforms will open the economy and improve the living conditions on the island. These reforms have already started, but the government has to achieve a better financial situation in order to insert all of the necessary measurements. For many, these reforms also bring with them many worries that increasing economic freedom will mean a loss of socialist achievements such as free access to education, a dignified existence, free and decent health care, and social equality. In particular, the impressive results of the education system in Cuba have amazed observers worldwide and can be counted as the most successful export of Cuban socialism. (Blum, 2008; Hickling-Hudson, 2004; Hunt, 2003; McDonald, 2000).

In the early years of the Cuban Revolution, education became a main priority for state intervention. Direct intervention began shortly after Fidel Castro's victory in 1959 when he implemented a country-wide literacy program. Since then, all areas of the Cuban education

system have been highly developed. And since 2008, under Raul Castro’s economic reforms, state focus on education has increased and numerous efforts have been undertaken to reform the neglected area of vocational training. (Franquiz, 2008).

In all national contexts the vocational system is closely connected to the general educational system and the labour market. The structure of this article follows the course of this social interdependence. First, the article will give a detailed depiction of the Cuban general education system. In doing so, it considers the labour market and the specific conditions which prevail in the country. After providing an outline of the Cuban vocational education and training system, the article will examine the announced changes in the area of vocational training and in conclusion, it will point to questions still open for discussion. One part of the study is based on data and conversations with experts collected and evaluated by S. Wolf during some research stays from 2003 till 2010 at Sancti Spiritus University. Evidence provided by colleagues in Cuba reveals that no significant changes to the vocational system were made since the 2003 research trip. For that reason, the data collected in 2003 is used to examine the current state of vocational education.

### **Cuba’s Education System**

Cuba was part of the former socialist bloc and historically has placed a strong emphasis on the formation and further development of education. (Dippmar, 2005).The role of education in the socialist system is significant. Under state socialism, education was thought to contribute greatly to the establishment of a socialist society in its role of helping to transform the population into socialist citizens. Thus, education has often been subject to higher

political objectives (Harten, 1998). In this sense, socialist education has served a political responsibility and is not principally concerned with the individual’s education or supplying branches

Tabelle 1: Entwicklung des BIP und des Anteil des PIB für Bildung in Kuba 1990-1996

JAHR	WACHSTUM BIP (%)	% BILDUNGAUSGABEN AM BIP
1990	-0,4	8,5
1991	-11,2	8,9
1992	-9,5	9,5
1993	-15,4	10,8
1994	0,3	10,4
1995	2,2	10,3
1996	7,4	10,0

Quelle: MINED (1999)

Figure 1: Development of Cuban’s GDP in the 1990 – 1996 and the percentage of the education expenditure  
Source: Agüero Contreras et al.; 2001, 7

of production with a qualified workforce. In other words, the subjective or societal function is subordinated to the goal of building socialism. This political responsibility closely connected to education in Cuba has led to a very high level of literacy and education, one that is more comparable to developed countries than to literacy rates in other developing or poor countries. A comparison of the German and Cuban educational systems by Wolf (2003) using statistical data from UNESCO revealed that, in core areas, the Cuban system does compete with the German system and in fact in some areas surpasses Germany in terms of performance. Educational spending in Cuba, in relation to GDP, shows an increase from 6.8% in 1998 to 8.7% in 2001. Meanwhile, in Germany the spending stagnated at 4.6%. A similar picture emerges when looking at the share of educational spending in proportion to total public spending. Indeed, a comparison of how and where educational spending is distributed shows that Cuba is far ahead of Germany in terms of allocating resources to pre-school and primary education. Even in the context of a economic and social crisis in the 1990s, Cuba's educational spending in relation to GDP increased. This result can also be attributed to the GDP's dramatic decline, which means that in this time of crisis, the education system did in fact suffer.

Education in Cuba is considered a human right guaranteed by the state and is guided by basic educational principles (Ministerio de Relaciones Exteriores de Cuba, 2010):

- Universal access to education independent of gender, „race,“ religion or ethnicity.
- Connections between school and work; the Cuban rural schools also function as agricultural enterprises and students are expected to work there for three hours a day. Urban schools, too, are connected to the agricultural operations and students are required to work on the farms for up to 7 weeks in a year (Agüero Contreras et al., 2001; Singh, 1998; Watts, 1989).
- Participatory democracy of the entire society in education. Authors' observation: democratic participation can only take place within the institutional foundations of the Cuban Revolution, there is no room for participating dissent.
- Co-education and openness of schools to differences.
- A principle of differentiated teaching and integrated schooling.
- Universal access to education.

The Cuban system is conceptualized as a system involving various subsystems at all levels and types (Organización de Estados Iberoamericanos, 2006). The education system is comprised of the following elements:

- Pre-school education
- General and Polytechnic Education
- Special Education - schools for students with special needs (for example, children with mental and physical challenges or learning issues).
- Technical and Vocational Education
- Education and Continued Education for Teachers
- Adult Education
- Higher Education

The school structure has three levels. At first glance, the structure of the Cuban education system may seem surprising when compared to international standards. One noticeable aspect is that secondary education is still considered basic education. Concretely, this has far-reaching consequences in that every Cuban has universal access to both primary and secondary school. The second difference is that upper-secondary school education is assigned to the tertiary sector. The consequence of this assignment is that there is a strong link to higher education, which meets both the government's desire for a well-educated public and the needs of the population for higher education.

Pre-school education (*educación primaria preescolar*) and primary education (*educación primaria*) from the first to the sixth grade are part of the Nivel Basico. After primary education comes secondary education (*educación secundaria*) from the seventh to the ninth grade and this is also part of the Nivel Basico. Tertiary education follows secondary education, which makes up the Nivel Medio. At this level, students attend either a pre-university institute or technical school (*Enseñanza Técnica y Profesional, ETP*). Attendance at a pre-university institute requires good grades and an entrance examination. In the last years, the admission restrictions for these schools were lifted and access to universities was possible without an entrance examination. Moreover, universities offered courses in every community. Now the wide open doors of the universities are closed and an entrance exam has been required since 2010. This appreciation of higher education translates into a comparatively high standard of education on tertiary level. After having completed the pre-

university institute, a student can continue on to vocational training or can begin seeking employment. Generally though, these students continue on to university studies, at Nivel Superior.

### **Schools at Intermediate Level**

The pre-university institutes that focus on the natural sciences (IPVCE) prepare students for university. At the pre-university pedagogical institute students can choose between various pedagogical subjects and prepare for university studies in addition to receiving training for a teaching profession at the intermediate level. The sport polytechnical schools (ESPA) are attended by students who, already in secondary school, switched to specialized schools “Escuela de Iniciación Deportiva Escolar” (EIDE). At this level of intermediate education, there are special military academies, art schools, and educational institutions for technical and vocational training (Agüero Contreras et al., 2001). Once successfully completing the twelfth grade, those students who pass the entrance examination can transfer to university, but are required to continue in the same area of study. Students can indicate their preference for a particular area of study, but in reality students have neither the freedom to choose their program of study nor their profession. Any educational sectors below the university level come under the authority of the Ministry of Education (MINED) and a separate Ministry of Higher Education is responsible for the universities. Additionally, there are special institutions of higher education that have a similar status and are governed by the ministries.

### **University Education**

University education is divided into four parts. The first phase, the Licenciatura, takes anywhere between four and five years and students complete this phase with the title, Profesional. The second phase involves a more intensive period of study and students complete the degree either with a Diplomado, Maestria or - for students in specific courses coming from industrial companies – with Especialista. Only if a student pursues doctoral studies does he or she complete all four phases. At any time in this process, students are able to leave university and enter into the workforce. However, for those who complete their programs, the state requires them to fulfil two-year of social service work.

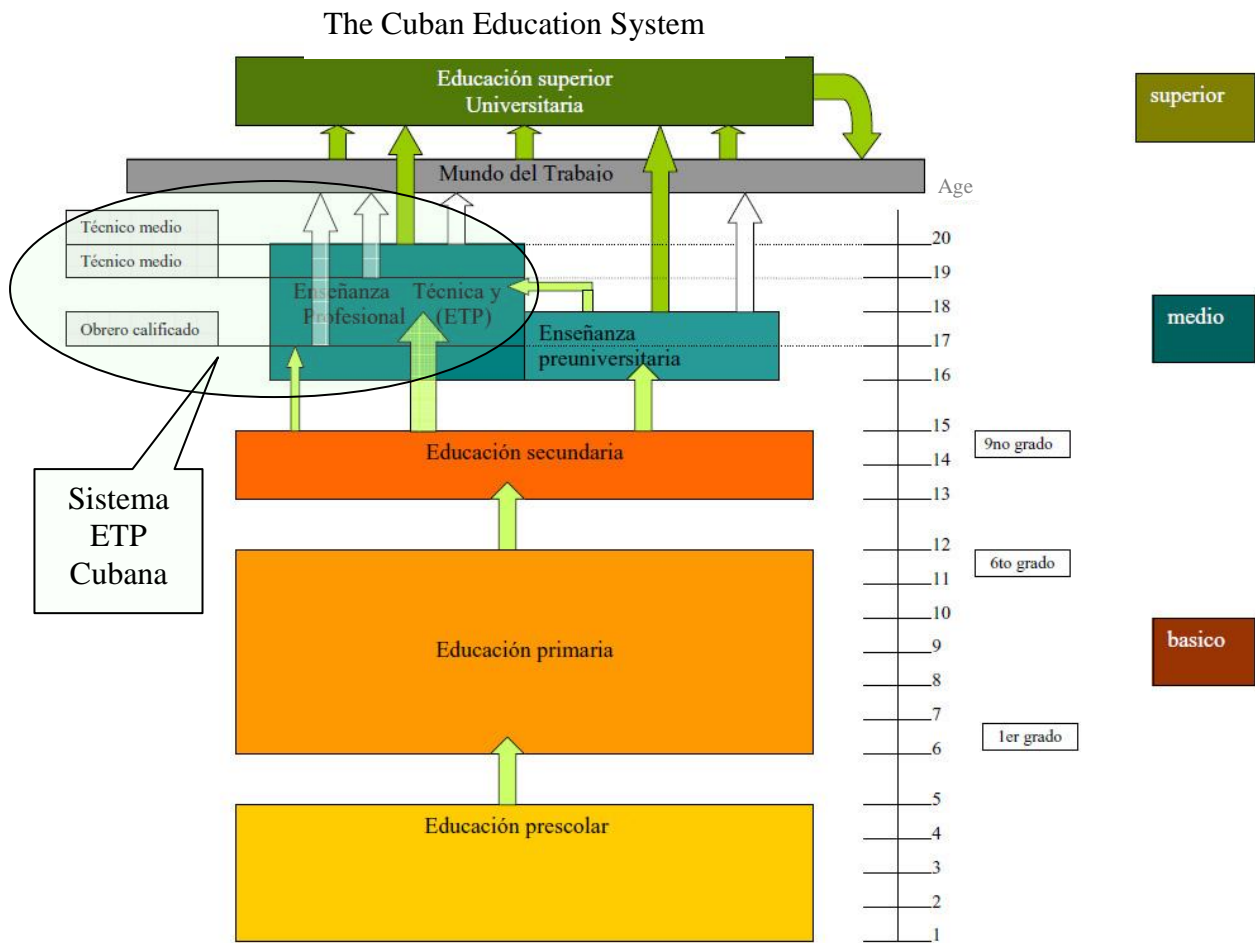


Figure 2: The educational system of Cuba  
Source: Wolf, 2003



## **Cuban Vocational Education and Training System**

### **The Labour Market and Vocational Education and Training**

All work-related activities in Cuba are organized around the economic and social values of the socialist state. So far, a trained and skilled labour force in Cuba that is geared towards corporate needs is not yet existing (Cunha & Cunha, 2004). Rather, vocational training takes after the Soviet model, which was based on schools that worked in conjunction with enterprises that provided the internships for trainees. (Höhns, 2004; Wallenborn, 2010). Moreover, the temporary opening up of Cuba to private initiative and foreign enterprise (mainly in the tourism and transport sectors) in the 1990s had no major influence on the system of vocational training. Those recruited for private enterprise came either from the informal labour market or from the economy of extended family. This informal labour market contributes to a high mobility of skilled workers who are drawn to the foreign-currency economy. Therefore it was in the 90s not surprising to see a trained medical doctor who worked as a taxi driver or tour guide. But in the last few years the Cuban government has made a great endeavour to move the medical staff back into their original work, so that today more than 35.000 medical workers are sent out into the whole world and contribute to form professionals in this sector for many countries. In the last 20 years, any steps in the direction of a private economy came with new possibilities but also with restrictions. These restrictions either introduced disproportionately high taxes or dealt with direct police action against private traders (Cunha & Cunha, 2004; Cruz & Villamil, 2000; Ritter, 1998). In spite of these drawbacks the number of private producers and service individuals has increased and with the current new economic concept it will continue to increase. Due to the vague economic policies of the last ten years, many private economic activities have been pushed into the hidden or informal economy and in turn these inconsistent state economic policies have encouraged corruption and criminality (Lotspeich, 2003). Authorization or approval of licensed private enterprises was often dependent on having the right authorised position in the society (Blue, 2007; Ritter, 1998). In addition to the economic opening in the 90s an extreme control system was implemented for hygienic standards and for the economic legality of the material used in microenterprises. The restrictions and the strong control system provoked instability and conflicts in the private sector. With the new economic concept of the government the legalisation and the control and taxes placed upon private producers will be made more flexible. But up till now private businesses have still been reliant upon the black market for operational resources unless they were willing to wait out the bureaucratic red tape. Credit lending for small or mid-sized companies is only possible through private loans

since state-supplied credit for private companies does not exist. Only the state enterprises working with foreign exchange affiliated with large foreign internationals are excluded of these restrictions (Burchardt, 2002).

Since February 2008, a number of economic reforms have been put in place and in 2010 further changes to state economic policies are detectable. As a part of this easing of economic controls, the government has begun to tolerate private companies in the service sector. However, these companies are organized or registered as cooperatives due to the political situation from 2008. Economic changes and problems are most apparent in agriculture, where private companies play a significant role. Private farmers, approx. 20% of the total rural population, produce 70% of the food consumed in the country. The remaining 80% of the land belongs to the government or state-controlled cooperatives and have a very low rate of productivity. Cuba is, therefore, dependent on importing two billion dollars of foodstuffs a year to boost its own production. At its annual congress the Cuban farming community announced efforts to ease restrictions on private farmers. Now the supplying of private farming companies with operational resources, e.g. fuel, fertilizer, spare part and others should be organised by the private market. How far-reaching beyond the agriculture sector these economic changes will be is still unclear. According to a speech of the state president from spring 2010, the government announced that it would be relaxing state control of the labour market and predicted more than one million workers from the unproductive Cuban companies will lose guaranteed jobs in state companies. One of the announced solution for this upcoming social problem is the creation of more opportunities for private enterprises. In this period of economic upheaval, vocational training has been given more state attention in order to „train the future workers that this country needs“ (Franquiz, 2008).

### **The Structure of the Vocational Education and Training System**

As already mentioned, vocational training is located at the intermediate level of the Cuban education system. Primary and secondary schooling support the technical vocational training (Enseñanza Técnica y Profesional, ETP). It orients from a polytechnic view with a strong emphasis to combining study and work, especially agricultural activities. Students therefore spend long periods involved in productive labour (Harten, 1998: 862). Recent studies (Camacho & Beltrán, 2010) have shown however that this principle does not necessarily lead to a positive attitude toward work; in fact, one of the main reform measures in the secondary curriculum was set up to improve pre-vocational orientation. Secondary education in Cuba is considered a special phase of school training,

“that define lessons at the intermediate level as a point at which students who have completed the 9th grade can pursue either a “mid-level” professional career or proceed to high-school leaving certificate with the goal of attending university.” (Agüero Contreras et al., 2001, 16)

Teachers, with the state’s approval, assign the career paths of students. In this regard, grades play a particularly important role. According to the figures collected by Wolf (2003), in the year 2000/2001 two-thirds of Cuban youth enter vocational education, the remainder attended pre-university institutes and strove to pass a demanding entrance examination. Vocational training takes two to four years depending on the time the program starts and the intensity of specialization (Organización de Estados Iberoamericanos, 2006). Two qualifications complete the end of vocational training, the Obrero Calificado (skilled worker) for those students who have completed nine years of general education and two years of training, and the Técnico Medio (intermediate technicians), for those who do three to four years after their general education.

Different schools are available for vocational education. According to the figures from 2008, the numbers are 150 Escuelas de oficios or educational institutions that are primarily responsible for the training of skilled workers, 325 polytechnic institutions that train intermediate technicians and 125 institutions for further education (Centros de Capacitación

MEDIO SUPERIOR PROFESIONAL		MEDIO BÁSICO PROFESIONAL	
<b>CALIFICACIÓN:</b> TÉCNICO MEDIO		<b>CALIFICACIÓN:</b> OBRERO CALIFICADO	
NIVEL DE INGRESO	DURACIÓN	NIVEL DE INGRESO	DURACIÓN
9no. grado	3,5 ó 4 años	9no. grado	2 años
12mo. grado	2 ó 2,5 años		
<b>CRÉDITO EDUCACIONAL:</b> TÍTULO		<b>CRÉDITO EDUCACIONAL:</b> DIPLOMA	

Figure 3: The two grades of skilled Cuban workers  
 Source: Authors, based on the data from MINED, Cuba

de Organismos) or for further specialized training (Franquiz, 2008). The Ministry of Education (MINED) is responsible for these educational institutions and tightly control the educational centre (Centros de Capacitación) of other ministries. Designated centers of education require permission from the Ministry of Education and for those institutions directly under the control of a state enterprise (empresas y unidades presupuestadas), approval is given by the relevant ministry.

MEDIO SUPERIOR PROFESIONAL				MEDIO BÁSICO PROFESIONAL	
CALIFICACIÓN: TÉCNICO MEDIO				CALIFICACIÓN: OBRERO CALIFICADO	
NIVEL DE INGRESO		DURACIÓN		NIVEL DE INGRESO	
9no. grado	3,5 años	4 años	9no. grado	2 años	
12mo. grado	2 ó 2,5 años				
CRÉDITO EDUCACIONAL: TÍTULO				CRÉDITO EDUCACIONAL: DIPLOMA	

Figure 3: The two grades of skilled Cuban workers  
 Source: Authors, based on the data from MINED, Cuba

The Ministry of Education is responsible for the coordination of vocational training (Decreto-Ley No. 45 del 17 de julio de 1981, Artículo 4 f 2,3) and for the curricula in conjunction with other ministries, companies, and institutes of higher education, in particular the Instituto Superior Pedagógico para la Educación Técnica y Profesional (ISPETP) in Havana (Ayes Amettler & Montel, 2004). According to information given by Cuban vocational education and training experts, training for intermediate technicians takes place both in the classroom and in state-owned companies or industries that are considered future employers. This presents an opportunity for young workers to become acquainted (familiarización) with their future employers. After the first year of vocational education a significant part of training is done by the enterprises. Training in the first year is scheduled so that trainees spend 8 hours a week in the workshops and 6 hours a week in workshop studies (teórica de la taller). Both take place in the vocational schools. In the second year, trainees spend most of their time in the classroom, but depending on the state enterprise, they can also start an internship. However, the mandatory internship usually takes place in the third year (especialización) of training. In the fourth and last year of training, students transition to the working world is on the agenda. Yet the student is still officially in training and is supervised until he or she has completed the final examination. This exam is developed by vocational experts in the provinces in conjunction with state enterprises. A commission of specialists (comisión de especialistas) formulate the exam questions that are comprised of a set of general questions (preguntas de aplicación general) and a set of specialized questions (preguntas de aplicación adicionales). The exam consists of a written and verbal part taken in front of a commission made up of specialists from the given field.

The Cuban educational system focuses on the successful completion of higher education and this success rate is highly prioritized by the state. The university entrance examination was eliminated so that normally there was the possibility for those who did not graduate from Grade 12 to pursue evening school or distance education. Every province has a university that

offers special courses for workers. Special regulations are in place for workers that exempt them from work obligations up to 45 days year in addition to their vacation days (Decreto No. 91 del 25 de mayo de 1985, Artículo 4). In times of economic woes, special arrangements were established to make it easier for those unemployed to go to school. Cuba has been remarkably successful in sustaining a high level of education for the entire population (Rangel & Proenza, 2006).

Cuba also has a very high number of academics and the numbers exceed those enrolled in technical fields. In 2009-10, only 2.4% of students enrolled in agricultural studies, 7% in the technical sciences in comparison to 24.8% enrolled in the social sciences and humanities. These numbers however lead to considerable social and economic distortions given that the graduate will not get acceptable jobs in the state economy. Problems could then arise if there is a surplus of academics and not enough workers, an actual problem in the agricultural sector (Eckstein, 1997; Gasperini, 2000).

### **Changes to the Cuban Vocational System**

Along with the economic shifts described above, there are far-reaching cuts to the existing direction of the education system. The quota of students permitted to enter university has lowered, except for in medicine. In 2010, students from the pre-university institutes and universities are being redirected into vocational education. For this purpose, the state allocation to the higher level of education is being used and at the same time more emphasis is being placed upon vocational training. As of 2010, the pedagogical institutes were now given university accreditation and can now grant doctoral degrees. The curricula and the organizational structure of teacher training for higher vocational education at the escuelas politécnicas has been changed. With a recent resolution (Resolucion Ministerial 32/2010), it is now possible for those who fail their final exams at the pedagogical institutes to teach at the lower vocational schools, at the escuelas de oficios. Alongside their teaching hours, teachers are also given preparation time to study in order to retake the exam.

### **Conclusion and outlook**

As mentioned above the Cuban VET-System is still continuing in the former soviet-model, with a strong emphasis on school based vocational education with internships in state companies. This old system is no longer suitable for the changing Cuban economy mainly because its base in the state companies eroded and secondly because the need to develop a Cuban model where the private producers will be playing a bigger roll in the development of

the country. On the other side the Education plays not only a political role but also a societal role, it has an important value for the state, but it also plays a key role in the understanding of Cuban socialism. The Cuban people mainly focussed on the high level education in the university system. The government giving this education while simultaneously strengthening of the vocational system by diverting the graduates from the pre-university schools away from the universities and into higher vocational schools gives a very clear signal to the Cuban people. The vocational training system has to play a more important role to improve the preparation of the people to self sufficient economical development by means of private initiatives. Combined with the proposed shifts in the economic sphere the changes could be the beginning of a clear concept to strengthen vocational education and training in order to develop the capabilities of the Cuban people for the coming market economy. They might also have the ability to produce quality for the home market. Or it might be a reactive activity driven by the economic and financial crisis of the Cuban national economy to reduce the costs of the academic system (Optenhögel, 2010).

How these announced, already implemented or proposed changes to the vocational education system in Cuba will take effect, or the how the problems still facing the system will be resolved is difficult to predict. In particular, is the question of a self-developing economic dynamic, one in which the private sector will play a major role (Burchardt, 2002; Cruz & Villamil, 2000). The integration of this sector into the vocational activities remains an open question. Also the actual situation in the vocational schools, their technical equipment, its material resources and their curricula is a difficult question to resolve because the entrance and the investigation in the schools is still restricted. One other open question is the quality of the vocational education and training, specifically if the former state companies disappeared and the market rules will take the command. How can the Cuban VET-System stabilise and improve the quality for a skilled labour force if the former structures and rules disappear and are replaced step by step by market structure and rules?

More significantly, it will be interesting to see what impact a more open economic system will have on the state's current hold on vocational training and education.

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