



**Cuba Transition
Project**

**THE FUTURE OF CUBA'S LABOR
MARKET: PROSPECTS AND
RECOMMENDATIONS**

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Executive Summary

Introduction

The Cuban labor force, shaped by the enormous changes that the country has undergone since the Revolution, is very unproductive and relatively well educated. These seemingly contradictory properties are normally reconciled by attributing the low productivity to misuse of the labor force by government planners. Under this interpretation, all that Cuba's labor force needs to become productive is to be freed of the constraints placed on it by the inefficient system of production in which it is currently functioning. This study challenges that view.

The forces that shape the formation of skills in market economies result in a strong relationship between education and earning potential. Such a close relationship need not exist in Cuba, where the process of skill formation has been very different. This study presents evidence that the distribution of skills and occupations in Cuba are different from those observed in market economies. To become productive, Cuba's labor force will require not only an efficient work environment that rewards productivity, but also will have to readjust its distribution of skills to be productive in a future market economy.

Findings

This paper reports on the connection between wages and productivity, points out changes in employment patterns in the 1990s, and compares Cuba's distribution of occupations and postsecondary fields of study with those of other more market-oriented Latin American economies.

1. The range of salaries in Cuba's public sector is very narrow and does not seem to reflect adequately differences in productivity. Private sector wages are far greater than those in the public sector, overstating the difference in productivity between the two sectors and contributing to public sector professionals abandoning their professions for higher paying but lower skilled jobs, where their skills depreciate.
2. The reforms of 1993-1994, designed to enable the regime to

survive the economic crisis caused by the loss of Soviet support, led to a decline in public sector employment and the appearance of a very restricted but significant private sector. Most of the decline in government employment was accounted for by converting state farms into cooperatives, increasing employment in joint ventures between the government and foreign firms, and allowing development of the true private sector-composed of small farmers and the newly permitted self-employed.

3. Cuba's distribution of employment by industry and occupation differ more from average distribution than do those of any other Latin American country on which data is available. Cuba has the lowest percentage of employment in wholesale and retail trade and the second lowest in finance, insurance, real estate, and business services. Cuba also has the highest percentage of professional, technical, and administrative personnel but is relatively light in clerical and service workers.
4. In terms of postsecondary enrollments by field of study, Cuba also differed more than any other country from the average distribution. Cuba had by far the highest percentage of majors in education, health care, and physical education, which together accounted for nearly 70 percent of postsecondary students in the 1990s. At the other end, Cuba had the lowest percentage of business students. The sharp decline in postsecondary enrollments in the 1990s, coupled with the high concentration in the three fields mentioned above, means that in many important fields Cuba has very few students.
5. Only one labor organization is allowed to represent Cuba's workers, and it is widely seen as another instrument of state control. The independent labor movement is severely limited by the government's repressive measures, and its economic impact so far appears negligible.

Recommendations for Reform Under the Existing System

The central idea behind the suggested reforms to be carried out under the current system is to facilitate a future transition to a market economy

by making some of the adjustments now and to slow the loss of valuable skills caused by the highly distorted private/public sector wage differential.

1. Inefficiency is systemic in the public sector, so for productivity to rise, employment in state enterprises must be reduced. It is especially important that the size of the armed forces be reduced and their role in the economy ended. In order for the private sector to be capable of absorbing large numbers of government workers without experiencing a collapse in its productivity, it is recommended that (1) the number of occupations that can be practiced by the self-employed be increased, which will also help slow the loss in skills that now occurs when professionals leave their occupations to work in the private sector; that (2) the severe restrictions on the private sector currently in place, such as limiting employment to family members, be relaxed; and that (3) the vague anti-profiteering law be replaced with a more efficient, progressive tax code.
2. Wages and productivity should be more closely related for all public sector jobs than is currently the case, especially for professionals in those valuable occupations that still cannot be pursued in the private sector.
3. Postsecondary enrollments in those fields whose numbers are already so high that they are unsustainable in a market economy, such as teaching and medicine, should be cut. The number of business students should be increased, but this must be combined with expanded opportunities in the private sector.
4. The current policy of universal free access for most social services should be abandoned. The practice of selling rationed goods at low prices in government stores is inefficient and should be replaced with one that gives the savings directly to the target population or to government employees in the form of higher pay.
5. Opponents of the Castro regime should take care not to push for measures they view as furthering the fight against the current government, but that would nevertheless saddle a future Cuba with inefficient policies. Of special concern in this regard are

independent labor unions. While it may be tempting to encourage such organizations and enlist their help in the political struggle against the current regime in the tradition of Poland's Solidarity movement, they are likely to be a hindrance in a transition to a market economy.

Long-Term Restructuring of Cuba's Labor Market

Cuba's central economic problem now and in a future transition is its low productivity. The recommendations offered for the long-term restructuring of Cuba's labor market, therefore, emphasize efficiency.

1. Labor law should not be placed in the Constitution of Cuba, where inevitable mistakes will be difficult to correct. The Constitution should be a statement of the basic rules of the game and not a wish list of desired and possibly unattainable ends.
2. The right to organize should be respected, but the government should maintain neutrality between workers and firms, discouraging market power wherever it occurs and promoting competition throughout both the private and the public sectors.
3. It is best to let wages and working conditions be determined by market forces. The minimum wage should be as low and regulation of the workplace as unobtrusive as are politically feasible. Unemployment compensation should also be modest and not paid for a long period of time.
4. Except for activities deemed criminal, entry and exit should be allowed into all occupations and industries. This includes removing government-imposed barriers, such as excessive licensing requirements.
5. State funding of basic education should be continued, but alternatives to state provision, such as education vouchers, should be considered. The government should also reduce its current role in the provision of higher education, correcting market failure instead through a loan program.
6. Painful, though necessary, adjustments in the transition to a market economy should not be delayed because some individuals may be unduly hurt. Such individuals should be helped directly through temporary programs that are kept separate and distinct from the permanent safety net that will remain in place after the transition. These programs should be designed so as to create incentives to adjust quickly to the new economic situation.

Introduction

For over 40 years, Cuba has undergone enormous changes that have molded an economy with many unique features, one that in all likelihood is very different from what it would have been in the absence of the Revolution or what it will be after a transition to a market system. During that time, Cuba nationalized foreign firms, collectivized almost all of its agriculture, instituted central planning, and has been embargoed by its largest natural trading partner. It saw Soviet subsidies rise to enormous levels only to be sent into its deepest crisis with the abrupt end of those subsidies. The Cuban government first tried to tough it out but then changed course and in 1993 initiated a series of modest reforms that included legalizing the possession and the use of the dollar, abandoning central planning, and allowing an extremely limited form of self-employment. Despite the limited nature of the reforms of 1993-1994, the Cuban government concluded that they had gone too far, and the process was halted and even reversed to some extent. Cuba's labor market, like all sectors of the economy, has been significantly affected by all of these events.

A transition to a market economy is always challenging, especially when it also involves the struggle out of underdevelopment. At some time in the future, Cuba will probably be involved in such a transition. This paper assesses the preparedness of Cuba's labor force for functioning in a market economy and makes recommendations to help Cuban labor make the transition and to assist its labor markets to function efficiently afterwards. Throughout this work, the focus will be on efficiency because its absence is Cuba's most basic economic problem today, as it will be once a transition is underway. Adjusted for purchasing power parity, the U.S. government estimates per capita income on the Island in 2001 at only US\$2,300 (*World Factbook* 2002). This places Cuba above only Haiti in all of Latin America and the Caribbean. Based on the experiences of Eastern Europe and the Soviet Union, even if a transition in Cuba is peaceful, we can expect a further decline in the standard of living, if only temporarily. Therefore, it is essential for the well-being of the people of Cuba and for the success of the transition itself that economic growth be rapid.

Besides being very unproductive, as demonstrated by the country's low per capita income, the other notable characteristic of Cuba's labor

force is that it is relatively well educated. At less than 5 percent, its reported illiteracy rate is near that of developed countries, and among Latin American countries its secondary school enrollment rate is second only to Uruguay's (CEPAL 2000). These seemingly contradictory properties are normally reconciled by attributing the low productivity to misuse of the labor force by government planners. Under this interpretation, all that Cuba's labor force needs to become productive is to be freed of the constraints placed on it by the inefficient system of production in which it is currently functioning.

While acknowledging that Cuban labor, like all factors of production, has been used inefficiently, I believe the problem is deeper. The very same decisionmakers who have used labor inefficiently also directed the labor force's development of the skills they now possess. In this study, I argue that there are good reasons to believe that the distribution of skills of Cuba's present-day labor force may not be very well suited to a market economy. As a consequence, the adjustment that will be required of Cuba's workers will be more difficult than one would expect, given Cuba's apparently high levels of education. This pessimistic conclusion informs several of the recommendations presented in this paper to facilitate Cuban labor's transition to a market economy.

Education and Earnings in a Market Economy

Before beginning the discussion of Cuba's specific situation, we need to understand the central concept in modern labor economics, that of human capital. This concept formalizes the common observations that individuals who possess skills valued by the market earn more than those who do not and that many of the skills that are more highly valued can be acquired either through formal education or informally through on-the-job training. Human capital—analogueous to the concept of physical capital—is the capacity of individuals to generate a stream of income or direct consumption.

While formal education normally results in the acquisition of certain skills, it is not necessarily the case that those skills have much market value. In market economies, however, schooling is so closely related to earnings that most researchers use years of schooling as a proxy measure of human capital. The reasons for this are simple. In market economies,

individuals (or their families) both receive the bulk of earnings from their labor and face many of the costs of schooling, especially with regard to higher education. Even when schooling is subsidized, most people still bear the opportunity cost (foregone income) of going to school. When an individual chooses a course of study leading to a certain career, he or she foregoes either other careers with similar educational requirements or going to work. Consequently, in choosing the duration and type of education they receive, individuals acknowledge potential earnings. This does not mean that people care only about making money or that years of schooling will be perfectly correlated with earnings. Occupations that are attractive to a large portion of the population, for example, will tend to have lower earnings than less popular occupations requiring similar levels of education. Conversely, unappealing occupations will have to pay a premium in order to attract workers. The result is that wages, like all prices in a market economy, will reflect the relevant information concerning the population's preferences over various occupations and the costs of acquiring the necessary skills. These wages, in turn, will guide individuals in making their educational and occupational choices.

Wage-guided choices determine the labor force's skill and occupational distributions at a point in time and how those distributions change over time. If demand for certain skills rises, the wages of those possessing such skills will increase. Some individuals who currently do not possess the newly demanded skills will be induced to acquire them, and they will either shift occupations or not go into the occupations they were previously considering, thereby changing the skill and occupational distributions of the labor force. Whether the adjustment is completed quickly or slowly depends on how costly it is to acquire the required skills. The costliness of acquiring the new skills depends on how occupationally specific they are. Some forms of human capital are very general and are useful in almost all occupations. An example would be the ability to read and write. An increase in demand for an occupation where the only required skill is knowledge of how to read and write will likely be satisfied quickly if almost everyone in the population is literate. Other forms of human capital are more specific to a given career, occupation, job, or even to a particular firm. It takes longer to satisfy increases in demand for such skills because they have to be learned.

An economic transition involves economy-wide shifts in demand.

Demand for some skills and occupations will rise, and for others it will fall. Those who possess the skills for which demand has risen will experience an appreciation in their human capital, while the others will experience a depreciation. The magnitude of the relative changes and the speed of adjustment will depend on the specificity of the human capital involved. The speed and ease with which the Cuban labor force will adjust in a future transition to a market economy, therefore, will in part depend on how closely today's distribution of skills resembles that which will prevail after a successful transition.

The Shaping of Cuba's Labor Market

For over 40 years, Cuba's skill and occupational distributions have not been shaped by the decisions of individual workers reacting to efficient, market-determined prices. Consequently, it may be that the high level of education of Cuba's labor force overstates the stock of human capital and underestimates the adjustments that will have to be made in a transition to a market economy. Before exploring this question further, some of the forces and events, especially since 1990, that have shaped Cuba's labor markets will be discussed.

Before 1993

Prior to 1993, wages played a very small role in determining the occupational and skill distributions of the Cuban labor force because the country's command economy did not rely very much on prices to allocate jobs or schooling. The government decided what jobs would have to be filled, what fields of study would be offered, and so forth (though it was probably impossible to eliminate completely all roles for individual choice). Carmelo Mesa-Lago (2000) reports ratios of highest to lowest wages of 4.9:1 and 4.5:1 in 1979 and 1987, respectively. These are far lower than one finds in market economies. From my own research, I reported a range of monthly average product per worker by industry in 1989 of 243 to 2031 pesos but a range of average salaries of only 164 to 207 pesos. Not only is the range of salaries much narrower than that of productivity, but the two are not correlated across industries (Locay 2003). Despite the introduction of bonuses in 1994 (Mesa-Lago 2002), it

is safe to say that to this day public sector wages do not adequately reflect productivity differences across professions, occupations, or workers.

By the 1980s, Soviet assistance to Cuba had reached perhaps as much as one-third of national output (Madrid-Aris 1997). Between 1989 and 1992, this assistance abruptly ended, as did many of Cuba's trading relationships with the Eastern Bloc, generating the country's worst economic crisis. At first, the Cuban government tried to weather the crisis without making any structural changes, resisting cuts in public sector employment while sharply increasing subsidies to state enterprises (Hernandez-Catá 2000). But by 1993, real gross domestic product (GDP) had fallen by 31.6 percent from its 1989 level, and per capita GDP had gone down by 34 percent.¹ The Cuban regime's continued existence was in jeopardy.

The Reforms of 1993-1994

In late 1993, the Cuban government began implementing a series of policies that would stabilize the economy and result in modest recovery. The new policies decriminalized the possession and use of hard currency legalized transfers of dollars from abroad, and allowed very limited forms of self-employment. State farms were converted into cooperatives, and farmers' markets, where most products could be sold at free market prices, were legalized. Foreigners were allowed to own property, and foreign investment in the form of joint ventures with the government were encouraged. Government employment was reduced. Over the period between 1993 and 2000, real GDP grew by 29.3 percent and per capita growth by almost 26 percent. Yet by 2000, GDP and GDP per capita were still 12 percent and 17 percent below their respective 1989 levels.

The reforms of 1993-1994 can best be viewed as attempts to weather the crisis caused by the collapse of the Soviet Union, while maintaining at least some of the key features of socialism, most importantly, not giving up so much control that the regime's continued existence would be placed at risk.² Despite the modest nature of the reforms of 1993-1994, the Cuban leadership became concerned about the expansion of the private sector, and in 1996 the process of liberalization was ended and reversed. Taxes and fees were sharply increased, and fines were imposed. Many of the new entrepreneurs were driven out of business or into the informal sector. Economic recovery slowed. Since the terrorist attacks on

the United States of September 11, 2001, Cuba's recovery appears to have slowed further.

Like the rest of the economy, the Cuban labor market has been significantly affected by the events of the 1990s. Soviet assistance had permitted Cuba to maintain a very inefficient system of production designed to achieve the regime's political objectives. With the collapse of the Soviet Union, this system became untenable, and after initial resistance the Cuban government was forced to reduce state employment and allow the appearance of a small, but significant, private sector to absorb some of the displaced workers. Other workers were absorbed through government joint ventures with foreign firms, mostly in the tourism sector. These firms have to hire their workers through a government employment agency. The salaries of such workers are paid in dollars to the government agency, which then pays the workers in pesos at an exchange rate of one-to-one. The market exchange rate has not been below 20 pesos per dollar since possession of dollars was legalized, so the effective tax rate has been 95 percent or higher.³ Some reduction in state employment also appears to have been achieved through early retirement.

From 1989 to 1998, the state sector's share of employment fell from about 95 percent to 79 percent, or about 687,000 workers, and the civilian government workforce fell by about 583,000, according to my research (Locay 2003). Most of the decline followed shortly after the reforms of 1993-1994. This decline in government employment was accounted for by (1) converting most state farms into cooperatives (264,000 workers), which, though they have some autonomy, are far from being private enterprises; (2) increasing employment in the joint ventures between the government and foreign firms mentioned above (131,000 workers); and (3) the true private sector, made up for the most part of small farmers and the newly permitted self-employed (254,000 workers).⁴ The remaining decline in public sector employment was accounted for by declines in the labor force (82,000 persons). Unemployment was actually lower in 1998 than in 1989 (a decline of 65,000). The official data does not adequately account for informal activity, so the relative decline of the state sector may be understated. From 1989 to 1998, the size of the working age population rose (with 424,000 more people), and postsecondary enrollment fell (by 140,000 fewer students). Together with the declining size of the labor force, these numbers suggest an increase in the informal

sector. Furthermore, there is anecdotal evidence that at least some government employees work at their official jobs only a fraction of each day, devoting much of their time to informal market activity. Other observers claim, however, that this effect is modest. While they agree that underemployment is huge, they claim it is difficult for government employees to turn free time into informal market activity. It is also frequently claimed that the formal self-employed report only a fraction of their income (the usual proportion is one half), so that many in the formal sector may also be acting informally. Though these data may not accurately measure the division of employment between the public and private sectors, the official figures probably do indicate general trends.

Though severely limited and heavily taxed, private sector prices and wages are mostly determined by market forces. Not surprisingly, wages in the private sector are much higher. According to Mesa-Lago (2002), the poorest private farmers tend to have incomes that are four or five times those of engineers or university professors employed by the state, while owners of *paladares*, small home restaurants, can make much more. Such income disparities probably overstate the differences between wages in the two sectors. As stated previously, many public employees do very little actual work, and private economic activity, whether practiced formally or informally, has substantial risks and costs requiring that a compensating differential be paid. Even taking these considerations into account, the earnings differences between the private and public sector appear to be very large. Such earnings differentials could not be maintained in the absence of severe restrictions on occupational choice. Most professionals, for example, are not allowed to practice their professions in the private sector.

Wages have played a more important role in occupational choices since 1993 than was previously the case, at least as far as private-public sector choice is concerned. The role wages have played, however, is a pernicious one. Since private sector wages are the only ones set by market forces and since that sector is severely restricted, the differences in earnings between private sector and government workers almost certainly overstate the productivity differences between the two. Private sector wages are so out of line with those in the public sector that they have probably acted to distort occupational and educational choices even further, distancing them further from efficient levels. It is widely believed

that the distortions in wages between the two sectors have contributed significantly to the sharp decline in university enrollments and to the exodus of professionals into higher paying but menial jobs in the private sector.

After decades of central planning followed by recent distortions caused by the creation of a few relatively free markets, it would be an incredible coincidence if Cuba's skill and occupational distributions were anything like the distributions that will prevail once the country makes a transition to a market economy. If these two types of distributions are very different, then the concern would be that years of schooling and work experience may have led to the acquisition of skills that are not very marketable in a future market-oriented Cuba.

Comparison with Other Latin American Economies

If we knew the skill distribution that would prevail in a future market-oriented Cuba, we could then compare it with the current distribution and thereby know what changes need to be made, as well as get an idea of how difficult the transition will be. Such knowledge, however, does not exist. In my research (Locay 2003), I explored a more modest question that can be answered: do the distributions of occupations and skills in Cuba today resemble those in more market-friendly Latin American countries? If Cuba falls within the variation that exists among other Latin American economies, then there is hope that the adjustments Cuba's labor force will have to make to function in a market economy will not be great.⁵ If, however, Cuba is an outlier in a sample of Latin American economies on the basis of broad occupational and schooling categories, it would suggest that despite Cuba's high level of education, optimism for a future transition should be tempered. The result that I found is that Cuba is indeed an outlier. This section is devoted to a summary of those findings.

Distribution of Employment by Industry

Countries can differ considerably in their distribution of employment by industry due to their levels of economic development and their comparative advantages. To mitigate this problem, the comparison below

excludes the two industries most sensitive to the level of economic development and to comparative advantage: (1) agriculture, including forestry, hunting, and fishing, and (2) mining and quarrying. Table 1 shows how much the distribution of employment by industry for the remaining industries for each country differed from the sample average. The measure of difference used is the sum of the *relative* absolute deviations (not including the “not specified” category) from the mean occupational distribution of the countries in the table, excluding Cuba’s state sector.⁶ As can be seen, Cuba’s economy deviates the most from the sample mean. If Cuba’s state sector in 1997 is treated as a separate economy, it would deviate even more from the sample mean distribution of employment by industry than the economy as a whole.

Table 1.
Relative Deviation of Employment by Industry from the Average
of a Sample of Latin American Economies

| Countries (year) | Relative Deviation from Sample Average |
|----------------------------|---|
| Chile (1997) | 1.80 |
| Colombia (1997) | 1.62 |
| Cuba (1997) | 2.53 |
| Ecuador (1997) | 1.30 |
| El Salvador (1997) | 1.17 |
| Honduras (1997) | 2.16 |
| Paraguay (1996) | 1.16 |
| Uruguay (1995) | 1.31 |
| Venezuela (1995) | 0.83 |
| Average Deviation | 1.54 |
| Cuba, Public Sector (1997) | 3.34 |

Source: Locay 2003.

A look at individual industries reveals that Cuba had the lowest percentage of employment in wholesale and retail trade, which includes restaurants and hotels, of any country in the sample (16 percent versus a sample average of 25 percent), and the second lowest in financing, insurance, real estate, and business services (2.4 percent versus a sample average of 5 percent). This is not surprising, as it is well-known that Marxist governments tend to de-emphasize trade and financial services. At the other end, Cuba had the highest percentage of employment in a category called community, social, and personal services (42.5 percent versus a sample average of 34.2 percent).

Distribution of Employment by Major Occupational Categories

Table 2 shows relative deviation from the sample average for major occupational categories. Column two shows the deviations for a set of countries on which data on all five categories were available. The deviations shown in column three are limited to only three categories but are for a larger set of countries on which partial information was available. Once again, Cuba deviates the most from the mean distribution of employment. Cuba has the highest percentage of professional, technical, and administrative personnel but is relatively light in clerical and service workers.

Distribution of Postsecondary Enrollments by Field of Study

Given that professional, technical, and administrative personnel make up an unusually large portion of Cuba's workforce, it would be useful to know their distribution by fields. Such data are not available, but we can compare the distribution of fields of study (majors) of postsecondary school students. This is done in Table 3. Once again, we see that Cuba is an outlier among Latin American countries.

Table 2.**Relative Deviation of Employment by Major Occupational Category from the Average of a Sample of Latin American Economies**

| Countries | Relative Deviation from Sample Average, All Occupational Categories* | Relative Deviation from Sample Average, Limited Occupational Categories** |
|---------------------------|---|--|
| Chile (1997) | 1.06 | 0.97 |
| Colombia (1997) | 1.25 | 1.28 |
| Cuba (1997) | 2.32 | 2.67 |
| Honduras (1997) | 2.15 | 1.26 |
| Panama (1997) | 0.75 | 1.26 |
| Paraguay (1994) | 0.66 | 0.39 |
| Uruguay (1995) | 0.80 | 0.96 |
| Venezuela (1995) | 0.29 | 0.35 |
| Bolivia (1996) | | 0.93 |
| Costa Rica (1997) | | 0.44 |
| Dominican Republic (1997) | | 1.61 |
| El Salvador (1997) | | 1.01 |
| Mexico (1997) | | 0.88 |
| Peru (1997) | | 1.20 |
| Average | 1.16 | 1.1 |

Source: Locay 2003.

* The categories are (1) professional, technical, and related workers; (2) administrative and managerial workers; (3) clerical and related workers; (4) service workers; and (5) other workers.

** Only the first three categories are included.

Cuba had by far the highest percentage of majors in education (34.2 percent versus a sample average of 12.3 percent) and in health care (26.3 percent versus a sample average of 11.7 percent) among the sample of countries in Table 3. Its fourth most popular major was physical education (7.8 percent), which is a category that is not reported separately for other countries. Together, education, health care, and physical education accounted for nearly 70 percent of postsecondary students in the 1990s. At the other end, Cuba had the lowest percentage of business students (4 percent versus a sample average of 19.5 percent), again, not a surprising result.

Table 3.
Relative Deviation of Postsecondary Enrollments by Field of Study (Majors) from the Average of a Sample of Latin American Economies

| Countries (year) | Relative Deviation from Sample Average |
|-------------------------|---|
| Argentina (1994) | 4.6 |
| Bolivia (1991) | 3.3 |
| Brazil (1994) | 3.0 |
| Chile (1996) | 5.8 |
| Costa Rica (1994)* | 2.6 |
| Cuba (1996) | 7.8 |
| Ecuador (1990) | 3.7 |
| El Salvador (1996) | 5.1 |
| Haiti (1989) | 6.5 |
| Honduras (1994) | 2.6 |
| Mexico (1994) | 3.0 |
| Nicaragua (1995) | 3.3 |
| Panama (1994)* | 4.3 |
| Peru (1991)* | 2.4 |
| Uruguay (1996) | 6.2 |
| Venezuela (1988) | 3.3 |
| Average | 4.2 |

Source: Locay 2003.

* Universities only.

During the 1990s, postsecondary school (mostly university) enrollments in Cuba fell dramatically. They went from 242,434 in 1990 to only 102,598 by 1998 (ECLAC 2000). The decline in enrollments, together with a distribution of majors heavily skewed toward education, medicine, and physical education, means that in some fields Cuba will be producing very few professionals. By 1996, Cuba already had the second lowest levels of enrollments per capita of any country in Table 3 (only Haiti had fewer in 1989) in law, social sciences and communications, and natural sciences. In two fields many would consider important for a successful transition to a market economy, business and technology, Cuba ranked second and third lowest, respectively, in the sample of 16 countries.

My 2003 study also compared postsecondary enrollments in Cuba with those of Chile, the most market-oriented economy in Latin America. Cuba's big lead in education and medical students declines throughout the 1990s, so that by 1998, both countries are close in terms of enrollments per capita in these two fields. In technology and business, however, Chile's lead in 1990 grows dramatically, so that by 1998, Chile has more than nine and six times as many students per capita, respectively, than does Cuba in these two fields. In total students, Cuba's slight lead in 1990 was completely reversed by 1998. In that year, Chile had almost three times as many undergraduates per capita as Cuba had postsecondary students per capita.

Quality of Skills

Besides the question of the disparity between the current skill distribution in Cuba and the distribution that would prevail in a market economy, there is the question of the quality of the existing skills. In some professions, ideological purity is the paramount consideration. A good example is teaching. When a characteristic other than ability (such as ideological purity) is used in the selection process, the quality of performance suffers. Furthermore, in some fields such as business, educational expertise may be lacking, and the opportunities for practicing severely limited. Depreciation of skills for lack of use may also be a serious problem, even in professions where the initial skills acquired were fine. This is happening not only to those professionals who have abandoned their fields to work in the private sector, but also to many in

the public sector. Extensive underemployment has led many professionals to do the work of mid-level technicians—electrical engineers doing the work of electricians is an example—which also leads to a depreciation of human capital. A related problem arises because in some fields Cuban industry is quite primitive and there are insufficient opportunities to apply and develop new knowledge. A good example of this problem is agriculture, which due to a lack of inputs, especially fuel, has been reverting to a pre-industrial state. According to knowledgeable observers, two industries where Cuban workers are well trained by international standards are mining and tourism. It is noteworthy that mining and tourism industries are subject to international competition and that such enterprises in Cuba are often under foreign management.

Cuba's Labor Policies and Economic Efficiency

Cuba's labor force has a relatively high level of education, as well as unusually high levels of professional, technical, and administrative personnel. As stated in the introduction, Cuba, nevertheless, has a very unproductive labor force. The low productivity is due in part to the inefficient use of resources, including labor, and in part to the inadequate formation of skills. In other words, the primary objective of investment in education does not appear to have been economic efficiency. This conclusion is supported by Manuel Madrid-Aris (2000), whose research indicates that Cuba's increases in education, though large, contributed little to economic growth in the period 1963-1988. It is also consistent with the results discussed above that Cuba's distribution of employment by industry and occupation, as well as its distribution of postsecondary enrollments by field of study, appear to be quite different from the other, more market-oriented, economies of Latin America.

There are other bits of information illustrating that efficiency has not been a primary objective of the Cuban government when it comes to determining its occupational and skill distributions. From data gathered by ECLAC (2000) for 1996, one can compute that Cuba had the highest ratio of teachers to students at the combined primary-secondary levels of any country in Latin America. Given education's low contribution to growth, even before the collapse of the Soviet Union, the productivity of

these teachers must be very low. Furthermore, high numbers of teachers were maintained in the face of falling enrollments. Between 1990 and 1998, postsecondary enrollments fell by 58 percent, but the number of postsecondary teachers fell by only 4.6 percent (ECLAC 2000).

Cuba has many more doctors per capita (more than twice what the United States has) than other countries with similar or better health indices (Locay 2003). Doctors are reportedly working in the private sector in occupations requiring much lower educational levels, yet medicine continues to be the second most common field of postsecondary study (second only to education). Cuba reports more personnel devoted to nonmilitary research and development than any other country in Latin America, including those that are much larger (Locay 2003). The productivity of such technical workers must also be close to zero (or even negative), as Cuba has had very low technological progress (Madrid-Aris 1997).

The Cuban Government's Image at Home and Abroad

One of the aims of the Cuban government's labor policies appears to be to enhance its image at home and abroad. Maintaining huge numbers of doctors and teachers is a good example. The general public mistakenly views large numbers of doctors and teachers as always being a good thing for two reasons. First, they ignore the opportunity costs of having unduly high numbers of persons in these professions. Not only are such professionals expensive to train, but because the Cuban government encourages so many students to become doctors and teachers, society foregoes the benefit from the productive careers such individuals would have had in other occupations. Second, the general public does not realize that the productivity of any profession tends to fall as the number practicing it rises.

Such ignorance of basic economics among the public provides an incentive for the Cuban government to have too many people in certain professions (and too few in others), even though it is inefficient. Having a large number of doctors, for example, is simply viewed by the general public at home and abroad as an indication of the importance the Cuban government attaches to the health of the people of Cuba. Some occupations can help improve the image of the Cuban government indirectly

through their impact on commonly used indices of well-being. An example would be teachers and literacy. Even the large number of physical education professionals can also be viewed as contributing to enhancing the image the Cuban government projects through their role in maintaining an extensive sports program.

Control of the Populace

Government policies toward occupations and careers can also be used as an instrument of control. First, access to a certain occupation or career can be used as a way of rewarding supporters. Clearly, this seems to be the case, for example, in awarding workers jobs with foreign firms. Such jobs are highly coveted because they pay relatively well, even after the government takes the bulk of the earnings. Other jobs or careers may not pay as well but carry high prestige and light workloads. Such positions can represent significant rewards, especially to persons who otherwise could never aspire to them. Second, some occupations play an important role in indoctrination. The obvious example here is that of teachers, whose training includes considerable ideological content. Third, some occupations can help to control some segment of the population directly. An example would be coaches and trainers, some (perhaps most) of whom may be more concerned with controlling athletes (that is, to keep them from defecting) than with their training.

The importance of maintaining control of the population is clearly seen in the Cuban government's policies regarding labor unions. Only one labor organization, the Confederación de Trabajadores de Cuba (CTC), is allowed to represent government workers, while employees of foreign firms must be hired through the government's employment agency. The CTC is fully integrated into the state apparatus and is widely regarded by workers and international labor groups as a repressive instrument of the government rather than as a representative of workers' interests (Brito and Sabatini 2003).

Despite international condemnation of the lack of alternatives available to Cuban workers, the government vigorously continues to repress the nascent independent labor movement. There are at least four independent labor organizations with a relatively small membership spread throughout the country and across industries (Brito and Sabatini

2003). Their leaders are often dismissed from their jobs, allowing the government to claim that they cannot represent their respective industries because they are not employed in those industries. Beyond that, there are jail and exile, where one can find many of the movement's leaders. These repressive measures have severely limited the effectiveness of the independent labor movement. Nevertheless, it has had some modest successes in making the plight of Cuban workers known outside of Cuba, although its economic impact appears negligible.

Equity

The pursuit of equity (or at least the appearance of equity) appears to be another important aim of the Cuban government. Mesa-Lago (2002) claims that “the current crisis of the regime’s legitimacy results from the violation of the principle of equity” resulting from the reforms of 1990s. The Cuban government may not be concerned with equity in and of itself, but only as a means to another end. Paying workers according to their productivity, for example, would result in some individuals accumulating significant amounts of wealth. Such independent sources of wealth could be used to support opposition to the regime, as well as cause resentment among government employees, who do not have access to such sources of income.

The Informal Sector

The existence of an informal sector can significantly limit what government can do. This is true for the current regime in Cuba as well as for a future democratic government. Many policies that aim at changing market-determined outcomes can end up having results opposite to those intended. Rather than changing behavior in the desired way, such policies often push people out of the formal and into the informal sector, where government has even less control over the actions of individuals. Raising the minimum wage, for example, reduces formal employment, pushing workers into the informal sector, where they drive down wages. The differential in productivity and wages that is created between the two sectors is inefficient, in that it lowers the national income. Furthermore,

at least part of the differential in wages between the formal and informal sectors will be dissipated in the competition for higher paying formal jobs. So before discussing recommendations for reforming Cuba's labor markets, it is instructive to consider briefly what a large informal sector tells us about an economy and how it interacts with social policy.

The relative size of a country's informal sector depends on (1) the costs of entering and operating in the formal sector, (2) how intensely the authorities suppress informal activity, and (3) the benefits of being formal (de Soto 1989). The first is determined by the restrictions, bureaucratic procedures, and taxes that are imposed on formal enterprises. The primary benefit to being employed in the formal sector is the recognition and enforcement of one's property rights by the government. Holding suppression of informal activity constant, the informal sector will be relatively larger the more costly it is to enter and operate formally, and the weaker a country's system of property rights. Thus, the relative size of the informal sector provides an inverse barometer of how well a country's institutions, laws, and policies promote productive activity.

The ultimate restriction is a properly enforced prohibition on an activity. Since most productive activities are outlawed in Cuba, the costs of entering and operating in the formal sector are very high. At the same time, the benefits of being formal are low because of the very limited property rights recognized by the government. While we do not know the size of Cuba's informal sector, it is probably not as large as that of most other Latin American countries. Consequently, we can conclude that the government must be devoting significant resources to its suppression.⁷

Cuba's informal sector seems to have increased along with the formal private sector following the reforms of 1993-1994. There is also anecdotal evidence that it may have increased relative to the formal sector following the halting of the reform process in 1996. This suspected relative increase after 1996 shows how the existence of an underground economy can limit the options available to policymakers. The Cuban government imposed greater restrictions and higher taxes on private enterprises, but these could be avoided by simply becoming informal. So whatever behavior or outcome the government wished to repress with the new restrictions and taxes could to a great extent continue to be carried out informally. To prevent this, the government would have to devote more resources to suppressing informal activity. Furthermore, once people

learn how to operate informally (acquire human capital in the informal sector) as they have done in Cuba, it will prove more difficult to suppress the underground economy.

If the current government of Cuba implements the recommendations presented below to increase the size of the (formal) private sector, it will not only facilitate a future transition and increase productivity, but it will increase the resources at its command through greater tax revenues as well as savings from a lower need to suppress informal activity. It will probably even shift some activities currently being done informally back into the formal sector, where the government can exercise more control. A future democratic government of Cuba must also understand the limitations the informal sector will place on its actions, especially as it will be more restricted in its capacity to suppress the underground economy than the current regime.

Recommendations for Reform Under the Existing System

In this section, I present recommendations for reforming Cuba's labor market that could be carried out within the existing institutional structure. The recommendations are based on the analysis presented above and are intended to facilitate a future transition to a market economy. While these recommendations do not assume a full-fledged transition to a market economy, they do presuppose a willingness on the part of the current leadership in Cuba to resume the reform process that ended in 1996.

Reduce Public Sector Employment

In 1993-1994, the Cuban government responded to the crisis caused by the loss of Soviet subsidies by reducing the size of some public sector industries. There is widespread recognition that further reductions are necessary if productivity is to rise. The question then is how to reallocate resources across sectors and industries. Because the most politically important of resources is labor, this question often takes the oversimplified form of what to do with displaced workers. One possible answer is to shift workers and other factors within the public sector.

Assuming that one can identify what the most inefficient industries

are (not an easy task, given that relative prices are so distorted that they are close to meaningless as indicators of relative value), shifting of workers and other factors of production within the public sector is not likely to work. For one, inefficiency is systemic within the public sector.⁸ Second, shifting employment to other industries will reduce the productivity of labor in the receiving industries. Third, limiting the shifting of workers to other jobs within the public sector increases the likelihood that workers will be moved to industries for which they are not well suited. Government economists couple shifts of employment within the public sector with plans to increase the efficiency of government enterprises, but these plans seem to consist more of wishful thinking than of concrete strategies.

So public sector employment needs to be reduced. According to Mesa-Lago (2002), official plans had called for such reductions before reforms stalled in 1996. These should now be implemented. With corresponding reforms toward increasing the private sector, a reduction in public employment will not only increase productivity, it will also allow a future Cuba in the throes of a transition to avoid making such necessary, though painful, adjustments. Special attention should be given to the size of the armed forces, a form of government employment that has the potential of causing major problems for a future transition.

Military Employment

According to official figures, noncivilian employment fell by 105,000 persons between 1989 and 1998, though at the end of the period it still accounted for nearly 13 percent of the total labor force (Locay 2003). Though official figures are not available, it is clear that the Cuban military is heavily involved in the country's economy, especially in sectors that earn hard currency, and its officers run many of the largest state enterprises (Latell 2003).

Putting so many resources under military control gave the Cuban Armed Forces a stake in maintaining the current system and cushioned them from the full impact of the economic decline following the collapse of the Soviet Union. The danger that such a military, so heavily involved in productive activities, poses for a future transition is obvious. It may be extremely difficult for a future democratic government in Cuba to reform

the economy in opposition to the group that controls the country's arms. It is crucial, therefore, that the current role of the military in the economy be terminated by the present regime.

It is the existing regime, however, that gave the military its current role, so they are unlikely to wish to change this. The military will also resist changes that make it worse off. This is a very difficult and serious problem. The only possibility for a solution that I can see lies in the fact that all militaries are fairly inefficient enterprises, so a different way of organizing production may lead to sufficient gains, so that both the armed forces and the regime will benefit from a change.⁹

One way to begin getting out of this dilemma is to start giving more autonomy to state enterprises run by the military, with full privatization as the best goal. The upper echelon military officers currently operating these enterprises would be given a choice of remaining in the military at their current ranks or retaining their current management position in the newly created firms. Military employees of such enterprises would remain with the firm, perhaps with assurances of employment for a specified period, but would have to leave the military. Quasi-ownership of the new firms—the receipt of at least a good portion of a firm's profit—would also be given to military personnel on the condition that they become civilians. Everyone working for or receiving quasi-ownership rights in the new enterprises would leave the military. Upper echelon officers may resist such a change even if their compensation is attractive because they may fear that being out of the military makes them vulnerable, especially if there is a political transition. This can be countered by making the package attractive, in terms of their stream of profits, to lower echelon soldiers. Without the support of their men, upper echelon officers will be in a weakened position. While the government will lose some control over production, increased productivity may make possible an arrangement that is mutually beneficial to the government and military personnel.

Allow for an Expansion of the Private Sector

Cuba's formal private sector is struggling under some very burdensome restrictions that severely limit its size and scope. Among these restrictions are prohibitions on the ownership of property, hiring people

other than family members, purchasing many other factors of production, and professionals working in their professions as self-employed, along with high taxes and a vague antiprofitteering law that has been applied retroactively. The intent and effect of these laws is to limit the size of the private sector by keeping it out of many industries and to prevent individual entrepreneurs/workers from becoming wealthy. The informal sector has the added burden of existing outside the law. Under the current institutional structure, the private sector is also not very productive and is limited, in its formal as well as informal versions, to a few industries. As stated before, some government workers may already devote much of their working time to informal activity. To shift such workers to the informal or formal private sectors may amount to not much more than official acknowledgment of their true occupations. In any case, a significant increase in private sector employment under current restrictions will result in further declines in that sector's productivity. Even the large decrease in public employment in the 1990s was mostly accounted for by the transformation of state farms into cooperatives. Such "easy" shifts have been exhausted, and any future large transition of workers from the public to the private sector would involve drastic changes in occupation, as well as concentration into a few industries whose productivity would quickly decline. For the private sector to be able to absorb significant numbers of additional workers without a collapse in productivity, it needs to operate under a more market-friendly institutional structure. Even if the current administration falls short of creating a truly free market system, the following recommendations would allow the private sector to absorb displaced public sector workers, increase the economy's productivity, slow the depreciation of valuable human capital, and facilitate a future transition to a market economy.

Expand Occupations That Can Be Practiced by the Self-Employed

Currently, most professionals cannot practice their professions legally in the private sector. This restriction, together with much lower pay in the public sector, creates an incentive for valuable professionals to abandon their careers. When an individual leaves his or her profession, the human capital that is specific to it begins to depreciate. As the occupations currently legally available in the private sector tend not to require

much education, the loss of skills over time can be substantial. By allowing more occupations to be practiced in the private sector, more public sector professionals could switch to the private sector without having to change their occupations or could change to one where most of their human capital is useful. Following this model would lower the loss of human capital. This measure needs to be combined with free exit out of public sector employment.

Relax Restrictions on Private Sector Enterprises

The best alternative, of course, would be to remove all current restrictions on size, hiring, and the purchase of inputs for private sector businesses. If this is not politically possible, then at least the more extreme restrictions currently in place, such as the prohibition on hiring nonfamily workers, should be relaxed. The prohibition on hiring nonfamily workers effectively rules out many enterprises that cannot be carried out within a family unit. This recommendation should be implemented in conjunction with the previous one. By itself, it would lead to an expansion of nonprofessional private sector employment, thereby accelerating human capital loss. Allowing ownership of at least some forms of property and the purchase of other factors of production would increase the effectiveness of these reforms.

Replace the Anti-Profitteering Law and Quantitative Restrictions with an Efficient Tax Code

The basic purpose of the anti-profitteering law appears to be to make sure that no one can get rich. If somehow one manages to turn a profit, given all the other restrictions, the government always has the anti-profitteering law that it can apply as it sees fit. Its vagueness and arbitrariness create disincentives for any productive activity. The government could address distributional concerns more efficiently with a progressive tax code.

Besides reducing the size of grossly inefficient industries or closing down unproductive plants, as discussed above, experience teaches us to be skeptical about attempts to make the public sector more productive, especially in a socialist setting. There are, however, some changes that

can be made in the public sector that can slow down the depreciation of valuable human capital and probably increase productivity, too.

Increase Pay for Valuable Professionals

Pay should be increased for professionals in fields where there is concern about loss of valuable human capital. The worry here is not that professionals may go into the private sector, but that they would go into menial, but relatively high paying jobs, where their human capital will depreciate. If the previous recommendations to allow an expansion of the private sector are implemented, then the focus should be on those *valuable* occupations that still cannot be pursued in the private sector. For those occupations that can be practiced in the private sector, of course, public sector wages will have to be increased if the government wants to keep some personnel from these occupations in the public sector.

Connect Pay with Productivity

Many of the features that have characterized the Cuban economy under the Castro regime—the lack of connection between performance and pay, the evasion of responsibility, the lack of incentives for risk taking, the view of the law as something to be gotten around—have led to patterns of behavior that would be highly dysfunctional in a market economy. Some economists outside of Cuba worry that these patterns of behavior may have eroded some of the fundamental skills and values that are essential in a market economy. These fundamental skills and values are a form of basic and very general human capital that is useful in all endeavors. No one knows to what extent the harmful attitudes that have developed over the past 40 years will linger once a transition to a market system begins in earnest. Connecting wages and productivity more closely for all public sector jobs than it is currently done will help mitigate this potentially serious problem.

Labor Unions

The current regime correctly perceives an independent labor movement as a threat to its authority. Consequently, it is unlikely that it will

cease to repress such a movement. International labor organizations may prove helpful in providing vocational and other training that could facilitate a future transition to a market economy, but the demand for such training should come from workers pursuing market opportunities, not from government planners trying to restructure the Cuban labor force. Otherwise, there is the real possibility that such training will result in the same misallocation of human capital that characterizes today's Cuban economy.

State-run unions from the communist era were ill suited to the economic environment of the transition economies of Eastern Europe and the former Soviet Union. Their directorates were unable or unwilling to adjust to their new role as defenders of their members' interests. Their power was also undercut by large informal sectors and high unemployment that accompanied the transitions. The conditions in a future transition in Cuba are likely to be similar, so we can expect the CTC to be an ineffective player in that transition, if it survives at all.

Even independent labor unions, such as Solidarity, have not been helpful in economic transitions. Three years after the collapse of the communist regime in Poland, the Gdansk shipyard, where Solidarity was formed, was bankrupt. Solidarity fought the closing vigorously. The government tried in vain to find a western buyer. The shipyard was finally closed down at the end of the 1990s. Solidarity's struggle to keep the shipyard operational imposed significant costs on Poland and delayed inevitable adjustments. Had Solidarity been more successful, the costs would have been even greater.

Educational Reforms

Formal education is one of the primary ways in which human capital is accumulated. Educational reform, therefore, is closely connected with labor market reform. If the private sector is allowed to expand substantially and students are allowed to make their own career choices, many of the educational problems discussed in this paper, such as the total disregard for productivity in determining the number of people that work in the various occupations and professions, will begin to remedy themselves. The recommendations that follow assume that the government will continue to influence how many persons go into various fields of study.

Drastically Reduce Enrollments in Education and in Physical Education

The high number of professionals in education and physical education poses some significant problems for a future transition to a market economy. First, the number of persons in these fields would be unsustainable in a more market-oriented system. Second, the training in these fields is probably not easily applied to other occupations. That is, the human capital of individuals in these fields is fairly occupation specific. Together, these two conditions suggest that professionals in these fields will have an incentive to organize to sustain their bloated numbers through public funding, thus becoming a serious obstacle to market-friendly reforms. This is especially true of the education profession because it is one of the most ideologically sensitive in Cuba, in which Marxist ideology is an important part of the curriculum. This “knowledge” is not very useful in teaching outside a Marxist society, is useless in any other profession in a market economy, and would likely be a hindrance in a future democratic Cuba. Many teachers produced by the current regime are, therefore, of suspect quality; their training may not be desirable in a future Cuba, even in the subject matter for which they were supposedly trained. Reducing the number of individuals in education and physical education now, as well as reducing enrollments in these fields, will further facilitate adjustments later.

Reduce Enrollments in Medicine

The large number of medical doctors is a lesser problem than the excessive number of teachers for at least two reasons. First, the comparisons made earlier with more market-oriented economies may be somewhat misleading, because in many countries the medical profession has been successful, through occupational licensing, in raising wages by reducing the number of doctors. An example of such a country is the United States, where the number of doctors is most likely below an efficient level. Still, it seems unlikely that a country as poor as Cuba will find it desirable (as revealed in the relative wages of various professions) to maintain such high numbers of doctors. Second, doctors have better private sector alternatives than teachers. Even under conditions of great supply, most doctors should find working in the private sector better than

working for the public sector under current conditions. Furthermore, unlike teachers, Cuban doctors are likely to have skills that are valuable in other countries. I expect that many Cuban doctors will emigrate if the opportunity presents itself.

Expand Enrollments in Business

As illustrated above, the high number of professionals in medicine, education, and physical education, along with sharply declining postsecondary school enrollments, implies that professionals in other fields are few in number and falling or not growing very rapidly. This is especially important in business, where a comparison with the most market-oriented economy in Latin America, Chile, highlights Cuba's glaring lack of students in this area. Anecdotal evidence confirms the scarcity of persons trained in business administration, especially in marketing, finance, management, and, to a lesser degree, accounting, where recent efforts have been made to increase the number of accountants. Not surprisingly, Cuba's distribution of employment by industry shows it to have below normal percentages of workers in trade and finance.

Business education is a particular concern, not only because of the low number of students and the low number of trained personnel, but also because one cannot help being skeptical of the quality of business education they are receiving. Business education should be expanded, and foreign business schools should be allowed to operate in Cuba. Many foreign business schools would probably jump at the opportunity to establish a campus in Cuba, and international funding should be made available for such projects.

Expanding business education should complement greater opportunities for on-the-job training in business. Such opportunities are currently very limited because of the severe restrictions on the private sector. Allowing the private sector to expand will help in this respect.

Restructuring of Government Benefits

Cuba's social programs currently do not discriminate on the basis of need or employment status. Mesa-Lago (2002) points out how this actually contributes to Cuba's worsening inequality. Our concern here with

the policy of universal free access is budgetary. Several of the recommendations above require additional funding, and one potential source would be to begin charging those individuals with means or who work in the private sector for social services. Also, the practice of selling rationed goods at low prices in government stores should be eliminated. This is an inefficient method of subsidizing a part of the population. It would be better to eliminate this practice and give the savings directly to the target population or to government employees through higher pay.

Avoid Inefficient Measures That Appear to Help in the Fight Against the Current Regime

Opponents of the Castro regime should take care not to push for measures they view as furthering the fight against the current government, which would saddle a future Cuba with inefficient policies. An example of such a misguided attempt was the labor code of conduct known as the Arcos Principles. The proposal called for foreign firms doing business in Cuba to follow certain labor practices and to pressure the Cuban government to impose the same conditions on domestic enterprises (Castañeda and Montalván 1994). Not surprisingly, the proposal never got off the ground. If the Arcos Principles or something similar had been adopted under pressure by the current regime, a future market-oriented Cuba would find that it had adopted a slew of anticompetitive and inefficient labor policies. Furthermore, it would be difficult to disavow measures that had been advanced against the Castro regime in the name of human rights.

There is probably no more important application of this caution—certainly none is more controversial—than to labor unions. When opponents of the Castro regime think of using an independent labor movement as a way to fight for change in Cuba, they clearly have the example of Solidarity in mind. The role Solidarity played in bringing about the end of Soviet rule is beyond the scope of this paper. As was mentioned above, however, its role in the transition economy of Poland was not helpful. The transitions in Eastern Europe have involved big shifts in employment across industries and occupations. There are good reasons to believe that the same will be true in Cuba. Independent labor unions represent the interests of their members, not of workers in general or the country as a

whole. Those interests will often dictate that they fight the reorganization of production that is likely to accompany a transition to a market economy in Cuba.

Long-Term Restructuring of Cuba's Labor Market

This section provides recommendations for restructuring Cuba's labor markets during and after a transition to a market economy. It should be kept in mind that many economists (the author among them) consider that an important goal of labor codes and legislation, even in market-oriented economies, is not efficiency but restraint of trade. Consider, for example, legislation that dictates working conditions. Good working conditions are part of a workers' compensation package, which is determined by workers' productivity. In competitive markets, workers pay for better working conditions through a reduction in wages and benefits or through higher productivity. Since higher skilled workers tend to receive their higher compensation in the form of both higher pay and better working conditions, raising the latter by law handicaps less skilled workers by either making them more expensive to firms or by forcing on them compensation packages that have a less preferred mix of wages and working conditions. As stated in the introduction to this paper, the emphasis in the recommendations that follow is on economic efficiency, which will not always be what is commonly practiced even in market-oriented economies.

Do Not Place Labor Law in the Constitution

In a newly democratic Cuba, populist sentiment and redistributive tendencies are likely to be strong. Combine this with widespread ignorance of how markets work, and one has a political environment that is not conducive to the making of commercial and labor laws that promote efficiency. From the perspective of promoting efficiency, mistakes are likely to be made. Keeping labor law statutory will make it easier to correct the inevitable mistakes later.

As a general rule, it is best to keep the Constitution as a statement of the basic rules of the game. The new Cuban Constitution should not

become a wish list of desired ends. The constitutions of several Latin American countries, for example, state that their citizens have a right to a job, without giving any consideration as to how this is to be achieved. This has at least two quite harmful effects. First, it reinforces the erroneous, but popular, notion that we can pick and choose the outcomes we want without regard for any constraints that may force us to consider trade-offs among desired ends. Second, because the ends are not simultaneously achievable, the Constitution is violated from the very beginning, making it a useless document not worthy of respect.

Keep the State Neutral Between Firms and Workers

The right to organize should be respected, but it should not be forgotten that labor unions exist to promote their members' interests, and this means restricting entry into their occupations or industries, so that their members' services are more valuable and they can command higher wages and better working conditions. This not only lowers national income, but it tends to make the excluded workers worse off.

Market power on the part of workers can be desirable when on the firm's side there is also market power (monopsony), as there is currently in the form of the Cuban government. In a future market economy, the best policy will be to maintain neutrality between workers and firms and discourage market power on whichever side of the market it appears. Such neutrality may be wishful thinking, given the experiences of most other countries, but at least extreme levels of union power, such as occur in Europe, should be avoided. Strong public sector unions can be a serious problem, especially when the government is weak or associated with them. The best policy is to perform in the public sector only those activities for which the private sector is unsuitable and to promote competition as much as possible.

Regulations of the work environment should be kept to a minimum. Legislation establishing minimum safety and benefit levels, regulating working hours, and the like, are often justified in terms of helping working people. They are often, however, disguised attempts by some firms or groups of workers to impose economy-wide standards that handicap the competition. Working conditions, like wages, should be determined by market forces. Regulation of the workplace, just like business regulation

in general, should be used only in clear cases of market failure and only after other more efficient methods, such as taxation, have been deemed ineffective.

The Minimum Wage and Unemployment Compensation

As has been stated several times in this paper, Cuba's main problem is low productivity. Attempts to redistribute wealth or provide safety nets for those who suffer as result of the transition will inevitably lead to Cuba's small pie getting smaller. This is an unpleasant fact of life, and the people of Cuba will have to understand that their country simply does not have the means to indulge in generous welfare policies. Social welfare programs should be modest and designed to minimize the inevitable efficiency losses they create. Whenever possible, the targets of welfare programs should receive benefits directly. Above all, pressure to use the price system as a redistribution mechanism should be resisted. All prices should be decontrolled immediately and determined by market forces. This includes wages, though it is probably too much to hope for that a future democratic government in Cuba will be able to resist imposing some sort of minimum wage. Cubans have extensive experience getting around government rules, so the primary effect of a minimum wage will probably be to drive some employment into the informal sector. If a minimum wage is imposed, it should be kept as low as is politically feasible, and it should not take the form of a minimum income as it did in Poland (Melnyk 1996).

Unemployment compensation should also be modest and not paid for a long period of time. Generous and prolonged unemployment benefits will reduce formal employment but may actually increase informal employment. That is, people will be encouraged to seek work in the informal sector so that they can continue to receive unemployment benefits. As discussed above, a significant informal sector is a sure sign that a country's institutional structure is inefficient and does not encourage productive activity.

Allow for Free Entry (and Exit) into All Occupations and Industries

Except for activities deemed criminal, entry should be allowed into

all other occupations and industries. Removing explicit barriers may not be enough. Many economists believe that even in well-established market economies such as the U.S. economy, government regulation of labor and business is the most common barrier to entry, and the single most important source of market power. An example would be occupational licensing that goes beyond basic registration and payment of modest administrative fees. Significant barriers to entry will not prevent most activities from being practiced but will simply drive them underground, where they will be less productive (de Soto, 1989).

A future government of Cuba should also not place any restrictions on people or firms leaving an occupation, industry, or region. Barriers to exit raise the cost of doing business or make an occupation less attractive, thus lowering entry into the activity or location the government may wish to encourage in the first place.

Education

Basic education is a very general form of human capital that is useful in almost all activities in a modern market economy. Its quality in Cuba appears to be good, and it would be desirable to maintain it in a future market-oriented Cuba. This does not mean, however, that the current system of government monopoly in the provision of education should be maintained.

Besides the personal benefits received by the individual being educated, there are good reasons to believe that basic education also yields benefits to all of society. This means that basic education has positive externalities, so that a free market in education is likely to underprovide it (Friedman 1962). Consequently, an argument can be made as to why even a very market-friendly society may wish to finance basic education. Financing is not synonymous, however, with provision. So while there is a case for state financing of basic education, it does not follow that the state should also provide it. A future Cuba should not treat the almost universal model of a public school monopoly as inevitable. Even if complete private provision of education is not possible, competition should be encouraged. Voucher systems, which are currently being explored in various U.S. communities, should be considered.

The case for public financing of higher education is much weaker,

and I do not know of any reasonable arguments for state provision. In poor countries such as Cuba, it is difficult to imagine state universities being more than white elephants akin to national airlines. This does not mean that state-run universities do not provide valuable services, but such services can be provided more effectively through other arrangements.

In a future Cuba, at a minimum, the government should not be involved, as it currently is, in determining the fields of study of postsecondary students. It should also reduce its presence in the market for higher education, preferably with the aim of eventually withdrawing completely. Higher education subsidies should take the form of loans, thus letting individuals face more of the opportunity costs of education and leaving the choice of fields of study up to them. Such a loan program is also a good way of dealing with the market failure that exists in higher education: the inability of individuals to borrow against their future human capital. Furthermore, loans can be need-based, and the government could use its market power to obtain preferential tuition rates for holders of its loans. Universal free or low tuition at public universities is regressive, as middle- and upper-class individuals are more likely to undertake postsecondary studies.

Dealing with Losers from the Transition to a Market Economy

Any major economic transition, even one that raises general living standards, is likely to worsen the economic condition of some groups. How the potential losers from a transition are dealt with may prove crucial to the success of that transition. It has been argued, for example, that much of the success of Chinese economic reforms is due to the process having improved the lot of almost everyone, with very few losers.

Groups of potential losers from a transition are often defined by the profession or occupation of their members. In Cuba, one such group is the military. Another one is teachers. Their high numbers are probably not sustainable in a market-oriented Cuba. Much of their training may not be directly transferable to other occupations, limiting their opportunities for employment in other areas. Teachers are a ready-made opposition group to many market reforms. They will tend to oppose measures that will weaken their power or reduce their numbers, such as introducing competition into education or reducing the size of the public sector. Teachers can

undermine the reform process in the short-run through such actions as demonstrations and strikes and in the longer-run through their impact on students.

Another group that stands to lose from a transition to a market economy is managers and administrators of state enterprises, from whose ranks may well come some of the strongest opposition to future reform (Locay and Ural 1995). Cuba has a higher percentage of administrative personnel than more market-oriented economies in Latin America have. The number of administrators and managers will almost certainly fall in a transition to a market economy. More problematic is that their managerial and administrative skills, like those of many teachers, may not transfer well to the private sector. They will have an interest in delaying the reform process, as the transition will result in their loss of control. This is crucial, because as the experiences of Eastern Europe and the Soviet Union show, delaying a transition may amount to the same thing as killing it. Furthermore, in state industries that are likely to contract (most of them), management can try to gain the support of workers who fear for the loss of their jobs.

In dealing with losers from the transition, a future Cuban government can use both a stick and a carrot. If an occupation or industry is going to be reduced substantially, it is generally best to do so quickly. While gradual implementation of such policies would give displaced workers more time to adjust, thus making it easier for them, it will also give them more time to organize in opposition to the reforms and place the transition in jeopardy.

To ease the hardships of adjusting to a market economy and to reduce opposition to reform, special assistance programs for displaced workers should be considered. These programs should be temporary in nature and should be kept separate and distinct from the permanent safety net that will remain in place after the transition. While the latter should be need-based, conditioning benefits on employment status, the transitional aid programs should be more like severance pay. Such programs should help compensate individuals for some of the costs of adjustment but should not discourage people from finding employment quickly. It is better to give displaced workers a lump sum of money, for example, than to make benefits conditional on how long one remains without a formal sector job.

Rather than compromise the transition because it imposes hardships

on many Cubans, a future Cuban government should be willing to explore innovative ways of dealing with the transition's adjustment problems. An example of such an idea is to give or sell schools to teachers. Schools would then have to sink or swim in a marketplace financed in part by public funds. Many of the difficult choices would be shifted to teachers, who would have a vested interest in the success of the transition. Another interesting idea is to negotiate with the United States so that Cuban-Americans who may wish to retire to Cuba can spend their Medicare funds there. Such an arrangement would not only help Cuban doctors, but it would probably be cost-effective for the U.S. government and would create additional demand from retirees for a wide array of goods and services. Note that the role of the government in these two examples is limited to creating the appropriate institutional structure and in helping with financing. Private individuals, as consumers, workers, or entrepreneurs, would be allowed to make their own decisions. This should be the pattern to aim for in designing all government interventions.

Conclusion

Cuba's economic decline triggered by the fall of the Soviet Union was arrested with the reforms of 1993-1994. Since then, there has been modest recovery, but Cuba remains significantly poorer than in 1989. Worse still, growth declined following the end of liberalization in the late 1990s and remains low. If market-friendly reforms that could significantly raise living standards and economic growth are not made, increasing inequality means that at best median Cubans face many years before they will regain their already low level of income of 1989.

Cuba's low productivity coexists with an apparently well-educated labor force. This is due to (1) the inefficient way the command economy uses productive factors and (2) past pursuit of aims other than efficiency in guiding the development of the Cuban labor force's skills. The current occupational and skill distributions of Cuba's labor force are probably quite different from what they will be in a future market-oriented economy. Considerable retooling will be necessary. This not only will be costly, but also means that Cuba's relatively high levels of education and large stock of professional talent overstate the earning capacity of the island's labor force.

A future Cuba in transition to democracy will find it extremely difficult to transform its labor force to function well in a market economy at the same time that it is trying to establish efficient institutions. It would be useful, therefore, if some of these adjustments could begin under the current regime. Among some of the policies recommended in this paper for implementation by the present government are reductions in public sector, especially military, employment, easing of restrictions on the operations of the private sector, more incentive pay and competition in the public sector, and a reorientation of postsecondary education away from fields that are saturated with professionals. Such reforms would not only make a future transition easier, but would increase productivity today. The hope is that the potential for capturing a significant part of this increase in productivity will lead the current regime to overcome its reluctance to give up some control and open up the economic system, if only slightly.

For a transitional Cuba, the central economic problem will be the country's poverty. If the economy cannot become productive quickly, all goals will be in jeopardy, including the success of the transition itself. It is for this reason that the recommendations made in this paper stress economic efficiency. For labor markets, this means freeing up prices and wages, maintaining neutrality between firms and workers, keeping regulation of the workplace to a minimum, and designing social programs that are modest while trying to minimize the work disincentive effects that such programs invariably have.

The social safety net should be just that, a safety net—not a program for extensive income redistribution. It should be kept separate from temporary programs designed to help those hurt most in the transition. Both types of programs should be designed with the aim of minimizing the disincentives to work such programs often create. In its current state of underdevelopment, if a Cuba in transition attempts extensive redistribution, it will neither help the supposed beneficiaries of the redistribution, nor foster rapid economic development. The largess of the safety net should be commensurate with the country's wealth. Its benefits should be paid directly to the beneficiaries whenever possible, and use of the price system to redistribute income or provide benefits should be avoided.

The future government should be open to market-friendly approach-

es, even though they may be unconventional. Two examples of such approaches presented in this paper deal with financing education: a voucher system for basic education and a loan program for higher education. The future government should also promote competition among firms and labor in the private sector but remain neutral in dealing with them. The future government should also encourage competition within the public sector. Vouchers and educational loans, for example, should be made available to students at private schools and universities. While this paper recognizes a role for government in the funding of education, it is recommended that the future government of Cuba seriously consider getting out of the business of providing education altogether, especially at the postsecondary level.

The fundamental recommendation for a future Cuban government is that it should concentrate on establishing an institutional structure—the basic rules of the game—that will encourage productive activity. As much as possible it should leave decisionmaking in the hands of individuals operating through private enterprises in free markets. To achieve this, the people of Cuba will have to overcome a mindset that not only has dominated official thinking on the island for over 40 years, but that has also become common among dissidents and even the exile community.

Notes

¹ Measures of GDP vary. These declines were calculated from data in ECLAC (2000).

² For a detailed exposition of this thesis, see Locay (1998), an earlier version of which was presented in 1995 at a conference sponsored by Shaw, Pittman, Potts and Trowbridge of Washington, D.C.

³ This does not take into consideration under-the-table payments or gratuities the workers may receive.

⁴ ECLAC considers (1) and (2) part of the private sector, while the government considers the bulk of the joint venture employment part of the state sector. I believe it is useful to keep them separate.

⁵ This is only a hope. Since the categories used are very broad, even if Cuba falls within the variation of other economies, it does not mean that Cuba is not quite different when we look at narrower categories.

⁶ See Locay (2003) for technical details.

⁷ One caveat to this line of reason is that having a very limited formal private sector makes suppression of the informal sector easier, because in most industries informal enterprises find it more difficult to “hide” among the formal ones.

⁸ This does not mean that measures aimed at improving the functioning of state enterprises, such as the “Perfeccionamiento Empresarial” law, are not useful. While I remain extremely skeptical of any attempt to improve efficiency without introducing competition from the private sector, reductions in employment in state enterprises and greater transparency will facilitate future privatization.

⁹ The general public often views the military as efficient because they incorrectly equate discipline with efficiency. The military is simply a smaller version of a command economy, and such a way of organizing production is never efficient.

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