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IMPROVING SECONDARY EDUCATION THROUGH INSTITUTIONAL INNOVATION: A REPORT TO UNDP AND UNICEF

EXECUTIVE SUMMARY

This report records the findings of a mission to Cambodia sponsored by the UNDP and UNICEF in August 2006. The objective of the mission was to assess the present state of education in Cambodia and to make recommendations for how new investment might be used effectively to promote continued reform through institutional innovation.

The mission was convened against the backdrop of ongoing negotiations between the US and Cambodia over several PL-480 “humanitarian” loans made to the government of Lon Nol (1970-1975). There is bipartisan interest in the US Congress in allocating these payments to support Cambodia’s continued development. It has been suggested that if and when Cambodia agrees to a repayment scheme, the United States government might use these repayments to endow a special vehicle to support education in Cambodia. For the purposes of this report, this proposed entity shall be referred to as the “Cambodia Debt Repayment Fund.” There are historical precedents for using the repayments of foreign governments to the US to support educational initiatives, including the Boxer Rebellion Indemnity Fund and the Vietnam Education Foundation.

Primary Findings:

The mission met with stakeholders in Phnom Penh, Kampong Chhnang, Kratie, Kampong Cham, Battambang, Kampong Thom, and Siem Reap. Oftentimes a “focus group” format was used to maximize the number of individuals with whom the mission could speak. The mission made the following observations about the current state of education in Cambodia:

Access and Enrollment. Although enrollment rates have increased since the advent of the Cambodian government’s Priority Action Programs, retention rates have not improved and drop-out rates remain high.

Role of Scholarships and Financial Assistance. Scholarships can be critical for keeping poor students in school, but only if the value is sufficient. Government scholarships are often too low and cannot prevent students from dropping out.

Knowledge: Quality and Relevance. Education quality is low. Existing efforts to improve educational outcomes on the supply side are primarily focused on improving access and supporting basic enhancements to the learning environment. There appears to be relatively little emphasis being placed on improving the substantive knowledge of teachers.

Education for All versus Education for a Few. Focus groups endorsed universal basic education. They also endorsed initiatives which would provide a small minority of students with the

opportunity to pursue an education of very high quality. Focus groups supported the concept of a magnet secondary school for bright students, provided that the admissions process was transparent and not corrupted by elites.

Poverty is the Primary Barrier. Poverty is the principal barrier to improving educational outcomes. Until rural incomes increase, keeping students in school will be an uphill battle. *Promoting rural economic development must be regarded as central to education policy.*

Autonomy & Decentralization. Education is centralized, with policies regarding management, personnel, curricula, and financing determined by the Ministry of Education, Youth and Sport. A commitment to provide new institutions with much more autonomy than existing schools enjoy will be necessary to ensure US government support for the Cambodia Debt Repayment Fund.

Proposed Activities of the Cambodia Debt Repayment Fund:

In light of preceding observations, the mission recommends that the Cambodia Debt Repayment Fund pursue a three-pronged strategy consisting of the following activities:

1. *Support Education for All.* The most efficient way for the Fund to support Education for All is by providing additional resources to existing initiatives. The Fund's work in this area could address the "bottleneck" which many studies have identified as beginning in upper primary school. Conditional cash (or in kind) transfers to poor families who keep their children in school is one promising approach.

2. *Create a Teachers College.* This new institution would be mandated to provide high-quality education to primary and secondary school teachers. It would provide two years of education aimed at expanding teacher's subject knowledge as well as equipping them with new approaches to teaching, curriculum development, and management.

3. *Create a Magnet Secondary School.* This school would consist of both lower secondary (grades 7-9) and upper secondary (grades 10-12). It would recruit talented students from around the country with special emphasis on students from poor families. The objective of the magnet school would be to prepare students for university education abroad. Student selection should focus on identifying native intelligence and potential. Regional quotas may need to be allocated to ensure adequate representation of remote areas. Criticisms that this institution will accelerate "brain drain" are unpersuasive; foreign educated talent will be critical to Cambodia's future.

The mission recommends that international academic institutions be selected to serve as "anchor partners" in the teachers college and the magnet secondary school. A key selection criterion will be a willingness to make a significant multiyear commitment to the endeavor. Southeast Asian academic institutions might also participate.

Centrality of Governance:

The new institutions proposed here are different from "model school" initiatives because they will be accorded with autonomy to develop new governance systems. Governance will be central to the success of both the teachers college and the magnet secondary school. Without the right set of rules even significant investments are unlikely to produce desired outcomes. The basic tenets

of good governance include: *autonomy, academic space, meritocracy, financial stability, and accountability*. These are necessary prerequisites for attaining excellence.

Alignment with Government Priorities:

We believe that the mix of support for education for all coupled with institutional innovation will advance the policy priority areas laid out in the Ministry of Education, Youth and Sport's *Education Strategic Plan 2006-2010*.

Revitalizing Rural Cambodia: Swapping Oil for Development:

Given the lack of economic activity in rural Cambodia, and the misery of the lives of the overwhelming majority of people who live there, it is not possible to envision genuine improvement in educational opportunities without dramatic reform to the entire rural system.

Dismantling Cambodia's high cost economy and creating a policy environment conducive to the development of a vibrant rural economy must be viewed as integral prerequisites for improving Cambodian education. Until Cambodia's rural population enjoys greater opportunity to participate in the national economy, education beyond a few years of primary school is likely to remain as it is today, a luxury that few can afford.

Large levels of investment are needed to bring energy, transportation, and health infrastructure to the countryside. Fortunately, Cambodia will have a significant amount of revenue from oil exports if the projections being made by several oil experts are correct. The extent to which the Cambodian government spends its oil revenues efficiently to create the conditions needed for rural development will largely determine the country's future.

OVERVIEW

This paper presents the finding and recommendations of a mission to Cambodia between August 22 and September 1, 2006 that was sponsored jointly by the United Nations Development Program (UNDP) and the United Nations Children's Fund (UNICEF). The objective of the mission was to consider strategies for improving educational outcomes in Cambodia. The mission was composed of independent consultants and a representative of the Supreme National Economic Council (SNEC) of the Royal Government of Cambodia.¹ This paper is divided into three sections. Section One describes the objectives of the August mission and the project architecture it sought to evaluate. It then presents a set of observations made by the mission which have important implications for the project's design and ultimate success. Section Two proposes a revised program architecture in light of these findings. It highlights the critical role which governance will play in determining the ultimate success or failure of these new institutions. Section Three argues that Cambodia will only see comprehensive and lasting improvement to its education system if the proceeds of its expected oil revenue are invested in the development of the country's rural areas. Conversely, the economy will need the skills developed in better quality and more widely spread education, especially at the secondary level. Of course, ongoing efforts to improve access to and quality of primary education must be continued.

SECTION ONE

I. Introduction

A. Background

The August mission was convened against the backdrop of ongoing negotiations between the United States and Cambodia over several PL-480 "humanitarian" loans made by the US to the government of Lon Nol (1970-1975).² In the event that Cambodia and the US reach agreement on partial repayment of this debt, as now seems likely, there is considerable bipartisan interest in

¹ The mission team was composed of Tom Valley and Ben Wilkinson of Asia Programs at the John F. Kennedy School of Government, Harvard University; Ms. Frances Zwenig of the US-ASEAN Business Council; and Mr. Pum Huot of SNEC and the Royal University of Law and Economics (RULE). While he did not participate in the August mission, Professor David Dapice of Tufts University and the Kennedy School Asia Programs unit played a key role in the development of the initial working concept and in the drafting of this report. The authors wish to acknowledge the support they received from the Cambodian missions of UNICEF and UNDP and from SNEC and the Ministry of Education, Youth, and Sports of the Royal Government of Cambodia. We also extend our gratitude to World Education, especially Kurt Bredenberg, Richard Geeves, and Mark Kowalski, for coordinating our visits to Kratie and Kampong Cham provinces and generously sharing their extensive knowledge and experience with us. Valuable feedback on the first draft of this report was provided by UNDP and UNICEF. We also thank Mr. Pum Huot, Mr. Chhuon Nay, and Professor Tony Saich of the Kennedy School of Government for their comments on earlier versions of this document.

² In light of the extraordinary political circumstances in which the loans were made, the tragedies which subsequently befell Cambodia, and the country's current poverty, it is the opinion of the UNICEF and UNDP missions in Cambodia, and of the authors of this report, that the United States should forgive these debts. However, given that both governments have made clear their desire to resolve the debts through some repayment scheme, we believe that investing the proceeds of Cambodian repayments in the education of the children of Cambodia is the "second best" option.

the US Congress in allocating these payments to support Cambodia's continued development. Although the final value of the debt repayment will only be known when negotiations are completed, in August Cambodian government officials with knowledge of the process reported that a total repayment obligation of \$317 million was likely. Depending upon the repayment schedule, which will be determined by the Paris Club of international creditors, this will likely mean an annual repayment from Cambodia to the US of \$7-10 million over a period of perhaps thirty or more years. Members of the mission and others have proposed that if and when Cambodia agrees to a repayment scheme, the United States government should use these repayments to fund a special vehicle to support education in Cambodia. For the purposes of this paper, this proposed entity shall be referred to as the "Cambodia Debt Repayment Fund." While the anticipated flow of funds will certainly not be sufficient to address the many pressing needs in Cambodian education (indeed, it will be dwarfed by Cambodia's expected oil revenues), if invested wisely the Cambodia Debt Repayment Fund could nevertheless have a significant impact.³

There are historical precedents for using the repayments of foreign governments to the United States to support educational initiatives. In 1908, the US Congress created the Boxer Rebellion Indemnity Fund, which used overpayments by the Chinese government to create an academy in China to prepare Chinese students for foreign study. This academy, known at the time as the "American Funds School," became Tsinghua University, now one of the leading universities in Asia. More recently Congress allocated repayments made by Vietnam on debts incurred by the pre-1975 Saigon government to create a special fund to provide scholarships for Vietnamese nationals to pursue graduate study in science at American universities.

While these earlier efforts provide legislative precedent for using Cambodian debt repayments to strengthen education, the mission operated on the assumption that in Cambodia the focus must be at a lower level in the education system. Because so few Cambodian children complete secondary school (approximately 1 child in 10), any effort that focused exclusively on tertiary education would not benefit the overwhelming majority of Cambodian young people, especially the rural poor. Prior to the start of the August mission, we prepared a working concept to field test. This concept was to create an elite "magnet" secondary school (grades 7-12) with a nationwide mandate to identify top students, with special emphasis on students from poor families. Our decision to focus the mission on secondary education was informed by a recognition that, as more and more students complete primary school, there will be great need for enhanced capacity at the lower and upper secondary level. This is, of course, hardly an original insight; as one expert on Cambodian education wrote three years ago, secondary is "the next great frontier of the Cambodian education system."⁴ According to our working concept, students who graduated from the magnet secondary school would be well-qualified to pursue undergraduate education abroad. It was expected that this new school would have a positive impact on the Cambodian education system as model for institutional innovation, a producer of high-quality course materials, an incubator of human capital, and by providing incentive for students and

³ One particular advantage of this structure is that it would likely have a lifespan of several decades; this would enable the Cambodia Debt Repayment Fund to make the long-term commitment necessary to nurture fledgling institutions, in contrast to the short term approach which too often typifies conventional donor initiatives.

⁴ Bredenberg, Kurt, (2003) "Cambodia Secondary Education Study: Educational Demand in the Basic Education Sector and Strategies for Enhancement," Phnom Penh, World Bank, 1.

teachers to excel. (The original Terms of Reference for the August mission are included at Appendix Four.)

B. The Case for Institutional Innovation (Part 1)

The approach advocated by the mission is to use the Cambodian Debt Repayment Fund to support the creation of new academic institutions, with independent governance systems designed and supported by international institutional partners. This strategy is informed by a belief that creating new institutions can have important spillover effects across the education system, benefiting many more individuals than the necessary limited numbers who can study or teach there. The value of such model institutions is magnified in a country like Cambodia, where for a variety of reasons the quality of its public institutions, including educational ones, is very low. We recognize that some may criticize the choice of establishing institutions instead of providing support to existing ones. However, we believe that in the absence of strong institutional frameworks, pouring additional money into existing schools may result in much-needed improvements to learning environment but is unlikely to facilitate lasting enhancement to quality and governance. Moreover, in an environment like Cambodia's, in which there are few if any academic institutions of recognizable quality, the value of creating one institution of quality can be significant if it can serve as a model for others to learn from and emulate.

This approach is informed by the experience of Harvard University's Kennedy School of Government in building and operating a school of public policy in Vietnam. While Vietnam did not suffer the same devastation of its education system that befell Cambodia, its academic institutions, particularly at the tertiary level, suffers from widespread institutional failure. It was in this context that Harvard was asked by the United States government to establish the Fulbright School in Ho Chi Minh City in 1994.⁵ The Fulbright School is unique within the Vietnamese system because it enjoys an independent operating system modeled on the basic principles of good governance which academic institutions around the world enjoy. (A discussion of these characteristics is provided in Section Two.) In contrast to their colleagues at other Vietnamese institutions of higher learning, the Fulbright School's Vietnamese faculty members enjoy complete autonomy to determine what and how they teach. Of equal importance is the Fulbright School's personnel system, which enables it to identify and reward individuals on the basis of their talent and achievement. The Fulbright School is widely recognized as the leading center of applied economics and public policy in Vietnam. Its curricula and approach to teaching have been closely studied by Vietnamese universities.⁶

III. Primary Findings

A. Methodology

Over the course of twelve days the mission met with a range of stakeholders in Phnom Penh and six provinces: Kampong Chhnang, Kratie, Kampong Cham, Battambang, Kampong Thom, and

⁵ The Fulbright School, known formally as the Fulbright Economics Teaching Program, receives core funding from the Fulbright Program of the US Department of State through a grant to Harvard. It is also supported by a range of other organizations including the United Nations Development Programme and the Ford Foundation.

⁶ More information about the Fulbright School and its OpenCourseWare content delivery system is available at <http://www.fetp.edu.vn>

Siem Reap. In all of its meetings the mission sought to acquire an understanding of key policy challenges in the development of quality secondary education in Cambodia. We also tried to engage the many individuals with whom we met in a discussion of the strengths and weakness, as they saw them, of the institutional innovation concept described above. In Phnom Penh, the mission met with government officials and representatives of bilateral and multilateral donors, including members of the Education Sector Working Group. To maximize the number of individuals with whom the mission could speak, meetings in the provinces were often conducted in a “focus group” format. Important stakeholder groups were assembled, composed of students, parents, teachers, school principals, teacher trainers, and provincial and district level education officials. As much as possible groups were organized to encourage participants to feel comfortable speaking frankly. The objective of the meetings was only partially to collect data. The more important goal was to engage participants in a dialogue about their expectations for the education system, their criticism of the existing system and recommendations for improvement. We made a particular effort to discuss one of the defining characteristics of the institutional innovation strategy, which is investing considerable resources in institutions which can by necessity educate a very small cohort.

A. Access and Enrollment

As other studies have documented, there has been a marked increase in primary school enrollment rates in Cambodia over the past six years. One important factor in this increase has been the launch of the government’s Priority Action Programs (PAP), which by eliminating entrance fees have made it possible for poor families to send their children to school in far larger numbers than in the past. However, it is not clear that dismantling barriers to initial enrollment has been accompanied by improvements in retention rates. In many of the schools the mission visited, drop-out rates remained constant. Moreover, as the Ministry of Education, Youth and Sport notes in its *Education Strategic Plan 2006-2010*, enrollment rates in lower secondary school remain low at 26.1%.⁷ This is in sharp contrast to the goal of achieving 100% lower secondary enrollments by 2015. Aggressive actions would be needed to make approaching this target at all realistic.

⁷ Here it must be said that Cambodia does not compare favorably to other countries which have suffered intense national trauma. Ethiopia and Cambodia have the same rate of secondary school enrollments, about one in four. Ethiopia is a very poor nation that has faced devastating droughts and wars and government upheavals. It is in an isolated part of the world with poor and often hostile or troubled neighbors. Cambodia is better situated than Ethiopia in many respects; its per capita income is three times higher.

Profile #1: El San

El San is a student in the 7th grade in Roleapha-ea District, Kampong Chhnang Province. Her family is very poor; her father, who is handicapped, cannot work. El San, who is Cham, lives 15 kilometers from her school. She makes the exhausting journey by bicycle everyday, including Sunday, when she and her classmates gather to practice English with volunteer English teachers from Phnom Penh. Just getting to school everyday requires enormous effort, making her academic achievements all the more remarkable. The principal at El San's lower secondary school, who is Khmer, proudly describes El San as his best student. El San's school does not have electricity, rendering useless the two computers it has received from an aid agency. El San's principal enthusiastically endorses the concept of creating a new secondary school for top students like El San, even if only a handful of students, or none at all, from his district were able to attend. He is confident that given the chance, poor students like El San can perform as well or better than richer students in Phnom Penh.

Focus group participants generally concurred that there had been significant increases in enrollment at the primary school level. Teachers and administrators frequently cited PAP funding as playing an important role in this process. We note, however, that there was no general sense that the *quality* of education had improved, indeed many teachers with whom we spoke felt that students were actually less educated now than they were earlier. (Issues of quality are discussed below.)

B. Role of Scholarships and Financial Assistance

The mission's observations corroborate studies identifying the importance of scholarships in keeping students in school. However, focus group participants reported that scholarships were often too small to prevent students from dropping out. At \$40 per year, government scholarships were universally regarded as insufficient, and teachers reported that many scholarship recipients dropped out, a trend which was particularly pronounced for girls. The mission calculated that \$130.00 would be an appropriate amount. (The basis for this calculation is provided in Appendix Three.) Participants in the focus groups overwhelmingly endorsed conditional cash (or in-kind) transfers to families to offset the economic loss of keeping a child in school, although designing a subsidy system to be both affordable and extensive is a challenge.

C. Knowledge: Quality and Relevance

The mission has serious concerns about the quality of education being provided in Cambodia's primary and secondary schools. We observe that government, donor, and NGO efforts, on the supply side, seem primarily focused on improving access, by eliminating barriers presented by poverty, and in supporting basic improvements to the learning environment. UNICEF's Child Friendly Schools program is an example of the latter. The mission visited Child Friendly Schools in Kratie and Kampong Cham; the quality of the classroom learning environment was noticeably higher than in schools not yet participating in the program. However, the mission observes that donor efforts have not for the most part been focused on improving the *substantive knowledge* of the teachers. In-service training for teachers appears focused on providing pedagogical skills. NGOs working in the education sector are also focused on achieving incremental improvements

within the severe constraints of teacher capacity. These efforts do appear to be enhancing the quality of the learning experience for students but they are not expanding teachers' knowledge of the subjects they are expected to teach. In particular, the mission encountered a widespread belief among stakeholders that mathematics and science are not being taught well in Cambodia. The purpose of our observations is not question the value of these interventions; however, we do believe that improving secondary school education will require that more resources be invested in teacher training.

Worryingly, there appears to be relatively little emphasis on subject knowledge at provincial and regional teacher training centers. In the standard two-year program at provincial teacher training centers, the mission was told that the first year is typically remedial, reviewing subject matter which is supposed to be taught in secondary school. The second year is focused on pedagogy and teaching methodology. While these skills are important, subject knowledge is equally important, and harder to acquire once individuals begin their careers.⁸

With all of its focus groups the mission explored the relevancy of the existing curriculum. This is admittedly a difficult issue for students and parents in particular to assess. Belief in the importance of education was nearly universal. However, when asked about the differences in earnings between an individual who completes primary school and one who does not, focus group participants were generally in agreement that additional years of primary schooling did not correlate strongly with improved economic circumstances. This is hardly surprising given the extremely poor environment for economic development in rural Cambodia, a topic which is addressed in Section Three of this report. Many participants, particularly parents, expressed their support for greater inclusion of "life skills" in the primary school curriculum.⁹ Interestingly, the focus groups which could most readily articulate the value of basic education were those composed of ethnic minorities. In particular, members of the Phnong ethnic group with whom the mission spoke in Kratie province said that it was important to them that their children be able to speak the Khmer language and understand Khmer customs. They viewed education as necessary to ensure that their children were not subject to discrimination. This same group appeared far less certain about the value of learning Phnong language and concepts.

⁸ A breakdown of total classroom hours for teacher training programs is included in Yael Duthilleul, "Learning to Teach in the Knowledge Society: The Case of Cambodia," 2/2004, a draft paper for the World Bank.

⁹ Sewing was the skill most often mention when parents were asked what they believed would be beneficial for their children to learn.

Profile #2: Sen Molina

Sen Molina is the top student in her lower secondary school. She has entered grade nine. Everyday Sen Molina, who is Cham, rides her bike a total of 30 kilometers to get to and from her school. She excels in all subjects, and particularly enjoys studying English. Sen Molina has heard about the Internet but has never seen a computer with access to the World Wide Web. She has remained in school despite the opposition of her parents, who believe that she should drop out. Sen Molina's family is very poor. If she were to work in a garment factory in Phnom Penh she could earn \$40.00 per month, a sum which would help her family enormously. Sen Molina's principal and teachers have supported her decision to keep studying by giving her a scholarship equal to about \$40.00 per year. Her teachers know that this scholarship is inadequate; they estimate the \$100.00 year would more fully cover the costs of Sen Molina's education. They fear that she will not be able to stay in school much longer.

Cambodia has made "Education for All" (defined as universal education through the ninth grade) one of the Cambodian Millennium Development Goals (CMDGs), with a target date of 2015 for achieving universal enrollment. Ensuring that people possess basic literacy, numeracy, and life skills is clearly a fundamental prerequisite for a society's socio-economic development, and the mission fully endorses this important objective. Focus group groups expressed unanimous support for universal basic education. However, the mission also found strong support for a program which would provide an opportunity for a small minority to pursue education of a higher quality. In every focus group session the mission presented the concept of a magnet secondary school which would select the brightest students from around the country, irrespective of their economic background or the ability of their parents to contribute financially to the cost of the education of their children. (The genesis of this concept is explained in the mission's original Terms of Reference, included in Appendix Four.) The concept received universal endorsement, with the important caveat that the student selection process be based on merit. Focus groups consistently expressed their skepticism that the admissions process could be implemented in such a way so as to prevent the rich and well-connected from using their power to corrupt it. Given the reality of Cambodia today this is of course an entirely legitimate concern and one which any effort to create high quality public academic institutions will need to consider seriously.

E. Poverty is the Primary Barrier

We observe that poverty is the principal barrier to improving educational outcomes in Cambodia. At present many Cambodian families simply cannot afford to keep their children in school. Until rural incomes increase, keeping students in school will be an uphill battle. *Accordingly, promoting rural economic development must be regarded as central to education policy.* Professor David Dapice and the authors of this report have analyzed the barriers to the emergence of a vibrant private sector and rural economy generally in other papers.¹⁰ The crux of the matter is that Cambodia's is an extremely high cost economy. Dismantling the high cost economy will

¹⁰ See Dapice, David (2004) "Reducing Poverty in Cambodia: Where Does Cambodia Stand and What Can It Do?" Dapice, David (2005) "A SWOT Analysis for Cambodia," and Dapice, David, et al. al. (2006) "Raising Farm Family Incomes."

require both a new set of policies and an increase in investment in hard and soft infrastructure. This reality informs our recommendation, discussed in Section Three, that Cambodia use the revenues it is likely to receive from oil sales to finance the transformation of rural Cambodia. Such investments would accelerate the pace of rural electrification, through building a national grid and investing in more affordable sources of electricity. Rural roads would also be necessary. Hard infrastructure alone will be insufficient; equally important will be changes to the policy environment needed to enable the growth of a genuine private sector with a level regulatory playing field and competition among firms. We observe that private sector activity is in effect “semi-private” in the sense that businesses of any size must depend upon close relationships with senior officials in government in order to secure favorable treatment. However, with better infrastructure even modestly sized businesses could earn more and support higher school enrollment ratios.

A critical input for increase in rural livelihoods is providing access to inexpensive electricity. Electricity is needed for irrigation and is a prerequisite for the development of off-farm employment. Without affordable electricity neither income growth nor education will easily improve. (Of the schools visited by the mission, only those located in provincial capitals possessed electricity, even those just a few kilometers outside of provincial capitals did not.) *Electricity is a basic input for education in the 21st century.* It expands the range of learning resources a teacher can draw upon and improves the basic learning environment. It also makes evening classes a possibility, as well as the introduction of IT curricula.

If poverty is a primary barrier to more education, it is also true that a lack of skilled workers is already and will soon become an even greater barrier to rapid economic growth in both urban and rural areas. Adopting and adapting new technology is difficult and costly with few educated workers. While foreign workers can be imported, they are expensive and often leave, taking their knowledge learned from working with them. Cambodia will have many more choices for upgrading industries and skills if it aggressively improves the quality and coverage of its secondary schooling.¹¹

F. Autonomy & Decentralization

The mission observes that education remains highly centralized in Cambodia, with policies regarding management, personnel, curricula, and financing determined by the Ministry of Education, Youth and Sport. Focus groups conducted at primary and secondary schools, including teachers and administrators, did not generally cite lack of autonomy as a barrier; most felt that their schools would be ill equipped to exercise increased autonomy efficiently. Provincial education officials and teachers and administrators at regional teacher training centers did identify a lack of autonomy as a challenge. The issue of autonomy is likely to be one which the Cambodia Debt Repayment Fund will confront. The mission learned of two recent donor-supported initiatives which were not implemented, apparently at least in part because of Ministry

¹¹ Although no rate of return to education studies are available for Cambodia, one recent study for Indonesia found that secondary education investment had a rate of return of 16% to 21% in the late 1990’s and early 2000 period. This is much higher than returns to many heavy industrial projects being considered, which provide few jobs and low returns at world prices. (See “Estimating the Returns to Education in Indonesia, 1890-2002” by Bas van Leeuwen, a researcher at the International Institute of Social History. Available at http://www.iish.nl/research/returns_to_education.pdf)

opposition to the autonomy of the projects.¹² The mission makes the following observations. First, the US government is unlikely to agree to the creation of the Cambodia Debt Repayment Fund without assurances that its activities will enjoy necessary autonomy. Second, as we discuss in Section Two below, autonomy is not synonymous with an absence of accountability. Although the governance structure will emerge after careful planning and research, the Cambodian government will be expected to play an important role in the initiative; for example, the new institutions to be created by the Cambodia Debt Repayment Fund would include a board of trustees tasked with representing the interests of the initiative's stakeholders, including government. Indeed, the creation of strong and productive linkages to the rest of the education system is an important element in ensuring the success of the institutional innovations proposed here, and one which can only result from close collaboration with the country's education authorities.

Profile #3: Kungkim San

Kungkim San, who is currently in grade 9, has faced many challenges in his young life. He is an orphan, and he suffers from extremely poor eyesight. Since his parents died he has lived with an aunt, who is a primary school teacher. Although he must sit in the front row in order to read the blackboard, Kungkim San has managed to overcome his physical disability and the loss of his parents to become the number one student in his lower secondary school, earning top marks in every subject. His teachers are proud of his accomplishments. Given the opportunity to study in an improved learning environment, Kungkim San's teachers are confident that he would thrive, even in comparison with students from rich families in urban areas.

SECTION TWO

From the observations described above we distill three basic conclusions with important implications for the activities of the Cambodia Debt Repayment Fund. The first is that poverty is the primary barrier to improving educational outcomes in Cambodia, especially in rural areas. We therefore believe that, whatever else the Fund does, it must support ongoing efforts to keep poor students in school. Second, Cambodia and its development partners have focused the lion's share of their attention and resources on getting more children into school; there has been less emphasis on improving the capacity of teachers to transmit knowledge to their students, especially at the secondary level. In light of these findings, we propose that the Cambodia Debt Repayment Fund pursue a dual strategy of supporting existing initiatives to keep poor students in school and funding institutional innovation by creating a secondary school and a teachers college.¹³

¹² These projects include a Belgian proposal to support capacity building within teacher training centers by involving the Rajabhat Institutes in Thailand and a Swedish project to establish an institute of educational policy.

¹³ The mission recommends that these institutions be established adjacent to each other in a province not more than a 30 minute drive from Phnom Penh. A strong case can be made for locating the teachers college and magnet secondary school outside of Phnom Penh. However, because these institutions will

I. Activities of the Cambodia Debt Repayment Fund

The program descriptions below are intended to identify priority areas which, in the opinion of the mission, the Cambodia Debt Repayment Fund might support. The ideas below will of course need to be elaborated upon before proceeding to the implementation phase.

A. Education for All

We believe it is essential that the Cambodia Debt Repayment Fund contribute significantly to Cambodia's goal of providing education for all of its citizens. Ensuring that children enter school early and do not drop out is necessary to ensure that the Fund's other activities--the teachers college and the magnet secondary school--are able to recruit from the largest possible pool of applicants. The most efficient way for the Fund to support Education for All is by providing additional resources to existing initiatives. In other words, the Fund ought to function as a development venture capitalist, working with other organizations to expand the scope of their activities.

The objective of the Fund's work in this area could be to address the "bottleneck" which many studies have identified as beginning in upper primary school. According to a recent study, "Most of the recent gain in primary net enrollment rates is due to a net gain in the proportion of children that enter school, most of whom are over age, rather than children staying longer in school. In other words, there has not been any significant change in school progress."¹⁴ Focus group participants were particularly supportive of providing conditional cash (or in-kind) transfers to families who keep their children in school. Such programs, which are intended to compensate families for the income a child's labor would generate, have been successfully implemented in a number of countries since they were pioneered by the *Progres*a program in Mexico. In Cambodia, the NGO World Education has successfully implemented *Progres*a-type programs in several provinces through its ESCUP initiative. We understand that UNICEF has also supported analogous initiatives. Government policy also recognizes the significant impact of scholarships—the Ministry of Education, Youth, and Sport's *Education Sector Support Program 2006-2010* makes secondary scholarships for the poor a "Recurrent Budget Program Priority." The Cambodia Debt Repayment Fund would certainly lack the resources to provide every eligible family with conditional transfers; it would be advisable for the Fund to focus on several cohorts. Girls in regions most at risk to following victim to trafficking is one potential group. Very bright students from poor areas would be another possibility.

B. The Teachers College

The new teachers college which the Cambodia Debt Repayment fund could finance would be mandated to provide high-quality education to primary and secondary school teachers. It would primarily recruit students from the pool of existing primary and secondary school teachers, although applications from individuals outside of the education system should be considered. The teachers college would provide two years of education aimed at expanding teacher's subject knowledge as well as equipping them with new approaches to teaching, curriculum development,

have national mandates and would, at least initially, require significant international participation, the benefits of being located outside the capital must be weighed against the convening power of the capital.

¹⁴ The World Bank, (2005) *Cambodia: Quality Education for All*, 1

and management. Initially the teachers college might provide three tracks: primary education, secondary education (mathematics and sciences) and secondary education (humanities and social sciences). A number of Cambodian and international experts with whom the mission met identified math and science as subject areas in particular need of improvement; the teachers college might fruitfully place particular emphasis on these fields. Each track would also include a life skills component as well as a practicum, which could take place both at the magnet secondary school and at other schools in the system. A number of focus group participants expressed the opinion that the teachers college should include a track for school administrators. We concur with this view; there is clearly a pressing need for increased administrative and managerial capacity.

During focus group discussions, strong support was voiced for the creation of a new teacher training facility. Important concerns were also raised. A number of teachers and teacher trainers with whom we spoke emphasized the importance of providing a re-entry mechanism so that students at the teachers college can smoothly transition back into their teaching careers after graduation. This would require an assurance that those who attend the teachers college could maintain their position within the civil service. Focus group participants also felt it would be important that graduates be provided with a financial incentive to resume their teaching careers, in light of the fact that their training would likely increase their options to seek employment outside the education sector.

C. The Magnet Secondary School

We remain convinced of the value of a new, magnet secondary school. This school would consist of both lower secondary (grades 7-9) and upper secondary (grades 10-12). It would recruit talented students from around the country with special emphasis on students from poor families. The mission appreciates the challenge inherent in creating an institution based on academic merit, as measured through a national examination, which also provides opportunities to students from poor families and disadvantaged communities. In light of the strong positive correlation between family wealth level and academic performance, even in an objective, uncorrupted examination process, wealthier students are likely to outperform poorer students. While much further study of this problem will be required, it is possible to suggest several preliminary responses. First, it may be appropriate to develop a regional quota system, to ensure that students from particularly remote and disadvantaged regions are represented. Second, the selection process should strive to measure native intelligence and learning potential instead of assessing applicant's acquired knowledge. Third, the magnet school will likely need to offer remedial programs to ensure that students begin the secondary school curriculum with generally equivalent levels of knowledge.

The objective of the magnet school would be to prepare students for university education abroad. Focus groups revealed strong support for the concept of a merit-based school for poor students. Every effort was made to ensure that focus group participants understood that only a very small number of students would be able to attend the institution and that the odds that their student of child would be selected were slight. Despite these caveats, focus group participants overwhelmingly endorsed the idea, often suggesting that even if only a handful of students from a district could attend, the existence of such a school would provide an additional incentive for students to work hard and for families to keep their children in school.

Several international professionals working in the Cambodian education sector expressed reservations about this idea, on the grounds that it would facilitate "brain drain." They predicted

that graduates of the magnet secondary school will leave Cambodia and not return. We do not agree with this position, for several reasons. First, Cambodia clearly needs to send more of its students abroad for higher education. Every successful developing country of the last fifty years has sent large numbers of its citizens overseas for training. While oftentimes these individuals did not return immediately upon completing their studies (although many did), this cohort has nevertheless played critical roles in their country's development.¹⁵ Second, the possibility that graduates of the magnet secondary school might not return immediately is not, in our opinion, a persuasive rationale for not providing worthy individuals with the opportunity to continue their education. It is true that in the absence of opportunities in the public and private sector many individuals may elect not to return, but this is not a problem that the education sector alone can resolve. This is why improving education in Cambodia is ultimately dependent on continued economic reform, and why economic reform is needed to fully reap the benefits of educational investments. If there is a productive role for educated Cambodians, many will return. That has been the experience of other Asian nations.

D. Implementing Partners

We recommend that the Cambodia Debt Repayment Fund and its US government fiduciaries identify a group of partner institutions to implement the Fund's initiatives. In each of the three program areas described above, the Fund should consider selecting an "anchor partner" which would be given primary responsibility for program design and execution. With respect to supporting Cambodia's Education for All goals, UNICEF is one strong candidate to play the role of anchor partner.¹⁶ UNICEF has a proven track-record in Cambodia and is arguably the most important international organization working in education. Because UNICEF works as both an implementer and a funder, it enjoys working relationships with a number of other international and local NGOs working in the sector. This experience will make UNICEF well placed to identify other participating institutions.

Identifying anchor partners for the teachers college and magnet secondary school will be difficult because there is really no precedent for this type of undertaking. With respect to the teachers college, the anchor partner will likely need to be an international university with a strong interest in education. This institution would also ideally serve as the anchor partner of the magnet secondary school. A key selection criterion will be a willingness to make a significant multiyear commitment to the endeavor. In addition to the anchor partner, developing the teachers college and magnet secondary school will require the participation of other partners. These additional implementing organizations would be selected based on their ability to contribute relevant experience and expertise. We recommend that the Cambodia Debt Repayment Fund and its fiduciaries seriously consider ways to draw upon teacher training capacity in the region. Thailand, Malaysia, the Philippines, and Singapore have all invested significant resources in teacher training and pedagogical studies; many have experimented with institutional innovation in various forms, experience which could be very valuable to the initiatives recommended here. Some Thai universities, such as the Pedagogy Faculty at Chulalongkorn University, are already training Cambodian education professionals. One institution which could potentially play a

¹⁵ The development experiences of South Korea, Taiwan, Thailand, and more recently China and India exemplify this trend.

¹⁶ We understand that UNICEF's present five-year country program does not include engagement at the secondary education level. Assuming the role of anchor partner is a decision that would require modifying UNICEF's existing priorities.

valuable role in the teachers college is the Rajabhat Institute in Surin, Thailand which has Khmer-speaking faculty members.¹⁷ A multinational consortium of regional academic institutions might be assembled to participate in the activities of the Cambodia Debt Repayment Fund.

A detailed proposal for the design and implementation of these two institutions will require additional research by the anchor partners. At the outset it will be necessary to rely significantly on international personnel, in both administration and teaching. However, development of Cambodian human capital must be the top priority. This will require large investments in long and short-term training to develop Cambodian faculty and managers.

E. The Case for Institutional Innovation (Part 2)

In Section One we argue that supporting the emergence of new institutions which enjoy autonomy and good governance can have an important impact on education at the system level. However, we emphasize that although autonomy is an important prerequisite for success, new institutions will only be influential if they possess a robust outreach mandate and strong linkages to the rest of the education ecosystem. They must be within the system, but not captured by it. Only a new governance mechanism will enable the teachers college and the magnet secondary school to be laboratories of experimentation and reform, but without connections to the rest of system, they run the risk of becoming enclave institutions, isolated from the rest of the system. We wish to emphasize that although we envision that the teachers college and magnet secondary school will become models for improved governance and teaching, they should not be equated with “model schools” in the sense that the term has been used in proposed donor initiatives in Cambodia, such as that promoted by the Asian Development Bank. The “model school” initiatives consist of providing schools with additional financial resources. It is our understanding that the model schools remain subject to existing governance regulations in areas including personnel, management, and curriculum. In contrast, the institutions which would be supported by the Cambodia Debt Repayment Fund would be provided with the autonomy to experiment with new governance systems and to develop new curricular approaches.

One variation of this “model school” paradigm which we are not advocating is the Kampong Chheuteal High School in Kampong Thom province, which the mission visited. The Kampong Chheuteal High School was established with financial support from Princess Maha Chakri Sirindhorn of Thailand. Located in a poor, remote area on the road to Preah Vihear province, the school possesses an impressive campus featuring modern, well-built classrooms and other facilities for students and faculty. The physical plant was indeed far superior to that of any other secondary school the mission visited. Every year top students from Kampong Chheuteal High School are given scholarships to attend universities in Thailand; teachers attend short-term training in Thailand. In all other respects, however, the school does not differ from other secondary schools in Cambodia. Kampong Chheuteal students are taught the same curriculum as students in other schools. Teachers are selected by a lottery system, and other than the opportunity to study in Thailand, are subject to the same incentives as other teachers in the state

¹⁷ We were informed that the Rajabhat Institute in Surin was approached about participating in a capacity-building program with Regional Teacher Training Centers in Cambodia, to be funded by Belgian aid. However, this program was never implemented. The mission appreciates the potential political sensitivities the participation of Thai institutions might arouse in certain quarters, in light of recent difficulties in the bilateral relationship and longer standing cultural tensions. This is one reason why a consortium of Southeast Asian institutions may be desirable.

system. In other words, the school does not appear to enjoy any more autonomy than other schools in the state system. Given how starved Cambodian schools are for resources, there is no question that “hardware” upgrades can improve educational outcomes. Learning-friendly classrooms, electricity, sanitation facilities are important inputs. It is therefore not at all surprising that teachers and students with whom the mission spoke unanimously reported that outcomes were considerably better at Kampong Chheuteal than elsewhere in the province. At the same time, however, there is a pressing need to strengthen soft infrastructure: how schools are organized and operated, how and what teachers teach and students learn; this requires space to experiment and reform which “model schools” like Kampong Chheuteal lack.

II. Governance: Prerequisite for Excellence

A. International Experience

Governance will be central to the success of both the teachers college and the magnet secondary school. Without the right set of rules even significant investments are unlikely to produce desired outcomes. While an institution will always reflect the cultural and political context in which it is located, it is still possible to identify the basic characteristics of good governance. In 2000, an international team of scholars convened by the World Bank and UNESCO compiled an important report, *Higher Education in Developing Countries: Peril and Promise*. Chaired by Mamphele Ramphela of the University of Cape Town and Henry Rosovsky of Harvard, the report concludes that governance is the single biggest challenge to building institutions of higher learning. International experience demonstrates that without governance, broadly defined here as the systems according to which institutions of higher learning are organized, managed, and financed, the other necessary inputs of academic excellence, money and talent, will prove inadequate.

The basic tenets of effective governance as distilled from international experience include:

Autonomy: On an institutional level, institutions require considerable management discretion to choose their teaching programs, funding mix, and other activities.

Academic Space: Scholars must be permitted to pursue academic inquiry free from external meddling and restraints. Constructively critical analysis should be encouraged. Mistakes do not require “discipline” because they will be corrected as other academics examine published work.

Meritocracy: Promotion should be based on professional skill and achievement, not seniority or other non-academic criteria. This applies both to the management of professors, instructors, and administrators as well as to student selection. Without assurances that they will be objectively evaluated on their merits, the most talented individuals are likely to seek employment or training elsewhere.

Financial Stability: Money matters. Ideally over time an institution will draw upon a mix of state and non-state sources. This will connect the university to its ultimate beneficiaries—its alumni and their employers. There should be sufficient funding, with long-term certainty, to allow for rational planning and long-term contracting with faculty.

Accountability: An institution of higher learning must be accountable to its stakeholders. There are different mechanisms for ensuring accountability, one of which is through a board of trustees composed of representatives of key stakeholder groups.

It should be noted that “hard” infrastructure is not included in this list. While basic infrastructure is important—and often lacking in Cambodia—global experience demonstrates that improving material conditions is often less of a challenge than fostering good governance mechanisms. For many reasons, there is a tendency to prioritize improvements to physical infrastructure over less visible institutional and organizational structures. However, just as the economic value of a new bridge will be diminished if the other policies which determine its use—transport charges, gasoline pricing, investment policy, etc.—so too will investments in school buildings be limited if efforts are not also made to improve governance. The mission team observes that Kampong Chhheuteal High School does not possess an operating system infused with these principles.

All of the above tenets are necessary to achieve *excellence*. International experience, from the United States to Thailand, demonstrates that the presence of centers of excellence within an education system is an important prerequisite for and driver of system-level reform. As sources of innovation and incubators of talent, apex institutions can influence the entire system.

B. Application to Cambodia

Academic institutions in Cambodia do not at present enjoy these governance characteristics to an adequate degree. Ensuring that the teachers college and magnet secondary school have sufficient autonomy and academic space will require that the government, in particular the Ministry of Education, Youth and Sports, adopt a new role. The mission was informed of several potentially innovative donor-driven initiatives which were not implemented because of Ministry resistance. Outside observers interpreted the Ministry’s opposition to these programs as stemming from hostility to initiatives with autonomy. Participants in focus groups composed of teacher trainers and provincial education officials cited a lack of autonomy from the Ministry as a significant challenge they faced. In light of this history, higher level support may be required to overcome these problems. To be sure, the activities we recommend that the Cambodia Debt Repayment Fund pursue will only be possible if the government is willing to provide the new schools and their intellectual partners with sufficient space to innovate.¹⁸

C. Alignment with Government Priorities

During the mission’s time in Phnom Penh several aid managers and government officials expressed concern about whether the activities supported by the Cambodia Debt Repayment Fund would further the objectives of the Ministry of Education, Youth and Sport’s *Education Strategic Plan 2006-2010*. We believe that the mix of support for education for all coupled with institutional innovation will advance the Ministry’s three priority policy areas. The first priority is ensuring equitable access to education. By supporting ongoing efforts to keep children in school, the Fund will further this objective. As noted above, one of our recommendations, to expand the provision of scholarships to poor students at the lower secondary level, is a priority of the Ministry’s *Education Sector Support Program, 2006-2010*. The second priority is increasing the quality and efficiency of education services. As discussed above, experience in Vietnam

¹⁸ As noted above, without such a commitment from the government it is highly unlikely that the US Congress would agree to establish the Cambodia Debt Repayment Fund at all.

suggests that in weak education systems characterized, a single institution can serve as catalysts for change and as beacons of reform from which the rest of the system can learn. The teachers college and the magnet secondary school can serve as creators and disseminators of knowledge and approaches to learning which can have important impact on quality across the system.

The third priority of the Ministry's plan is the promotion of institutional development and capacity building for decentralization. At the heart of the approach we recommend here is institutional innovation, facilitating the emergence of higher quality institutions with greatly enhanced governance systems. Without pioneer institutions to blaze a path towards better governance and strengthened management capacity this policy priority is unlikely to be realized. The Cambodian government deserves credit for identifying successful interventions, such as Child Friendly Schools, and incorporating them into national policy. Setting aside the difficulties which such "scale ups" inevitably encounter, this trend demonstrates both the openness of the system to innovation and the value of experimentation to the reform process. We believe that, instead of being viewed as a threat, the institutions we propose can *support* the government's ongoing educational reform process, by serving as a source of new policy innovations. In conclusion, the activities we recommend for the Cambodia Debt Repayment Fund are not only in line with but can potentially advance significantly Cambodia's education sector policy priorities.

During the August mission, team members met with senior officials of the Ministry of Education, Youth, and Sports as well as other government agencies. The leadership of the Ministry expressed interest in the general concept. In the event that Cambodia Debt Repayment Fund or an analogous entity is created, additional high-level consultations will be necessary.

SECTION THREE

A. Revitalizing Rural Cambodia

The objective of our mission was to evaluate a set of strategies for improving educational outcomes in Cambodia. However, given the lack of economic activity in rural Cambodia, and the misery of the lives of the overwhelming majority of people who live there, it is not possible to envision genuine improvement in educational opportunities without dramatic reform to the entire rural system. We argued above that dismantling Cambodia's high cost economy and creating a policy environment conducive to the development of a vibrant rural economy must be viewed as integral prerequisites for improving Cambodian education. Until Cambodia's rural population enjoys greater opportunity to participate in the national economy, education beyond a few years of primary school is likely to remain as it is today, a luxury that few can afford.

There are no easy solutions to the dilemma of revitalizing rural Cambodia: policies and investments will both be critical. New policies will be required to make the economy more open and genuinely competitive. Currently it appears close links to government officials is a requisite for a company to expand; this situation is unlikely to produce internationally competitive firms which can create off-farm employment. Significant investment will also be needed to create the infrastructure, hard and soft, that rural Cambodia will need. As described above, no input is more important than accessible, low-cost electricity. Roads will be needed to link farmers to markets. Implementing better policies and making efficient investments will require a sophisticated

understanding of the Cambodian and international economies. It also requires political will.¹⁹ We note that the government's Rectangular Strategy provides some framework for the multisectoral approach which will be needed to transform rural Cambodia. Certainly the Rectangular Strategy's emphasis on good governance and its four "growth rectangles" address important components of a comprehensive effort to transform rural Cambodia.²⁰ However, the Rectangular Strategy is really only a general statement of government priorities; while impressive it in the absence of the political will to carry them out the quality of life in rural Cambodia is unlikely to improve.²¹

B. Oil for Rural Transformation

Large levels of investment are needed to bring energy, transportation, and health infrastructure to the countryside. Fortunately, Cambodia will have a significant amount of revenue from oil exports if the projections being made by several oil experts are correct. The tax and profit sharing revenue could eventually be in the neighborhood of \$2-3 billion a year, or three to four times total government spending in 2004.²² There are compelling priorities for national development, but they lie largely in creating a true national economy, knitting all parts of Cambodia together with a network of roads and an integrated power grid. Developing the rural areas will require expensive infrastructure, but the benefits of those investments will spread to include the huge majority of Cambodians living in rural areas. Such investments would help to create social stability as well as rural development, and would not require a large fraction of the total incremental revenues. Indeed if 20% of the oil revenues were devoted to rural areas where 80% of the population lives, there would be a considerable impact on the productivity, incomes and livelihoods of most rural people. Additional investments in education, described above, would complement these investments in physical infrastructure. A major challenge would be to get "value for money" and ensure that the projects were built to a proper standard for a reasonable cost. If this were done, it would create a veritable revolution in the rural economy. To demonstrate how investments in education might be pursued, an estimate of the investment required to significantly expand secondary education is included at Appendix Two.

The question for the Cambodian government will be one of priorities and phasing. Oil prices fluctuate. If a large refinery is started and then oil revenues decline, the delay could prove to be very costly. If a network of roads is being built, a delay – while unwelcome - is not so critical.

¹⁹ We highlighted the pressing need for high quality policy analysis to inform government decision-making in an earlier paper, also written under UNDP auspices with the support of SNEC. See Dapice, et. al. (2006) "Raising Family Farm Incomes."

²⁰ The Rectangular Strategy's four "growth rectangles" are: 1) enhancement of the agricultural sector, 2) private sector growth and employment, 3) continued rehabilitation and construction of physical infrastructure, and 4) capacity building and human resource development.

²¹ One key area where a more urgent and aggressive response is clearly needed is in energy policy. In an earlier paper we argued that the existing master plan for electrification could and should be accelerated dramatically. See Dapice, et. al. (2006) "Raising Family Farm Incomes."

²² There are a number of high-cost projects, such as a new refinery, that are already proposed or approved that would require using some of this future revenue. These projects have not always been subject to careful analysis to see if they have adequate economic and financial returns. That is, many of them might not be undertaken by a normal company because they are not competitive. Some might argue that the national interest is more important than profit and so some activities should be undertaken for larger reasons of national development.

The task in planning is to define government goals, match investments to those goals as well as to budget constraints, and to allow for uncertainty in both project execution and revenues. The risks in building power grids or roads should be much less than in building much more complicated projects. The benefits of rural investment are likely to help develop many industries and reach very large numbers of people, while the benefits of a refinery are much narrower – there are few workers or linkages to other sectors. *Because higher rural incomes are a major determinant of educational demand, a decision to take the 2015 CMDG's seriously requires a serious economic investment in rural areas.* But, beyond that, rural investments are likely to satisfy a wider set of goals – a strong, stable and growing economy with widely shared benefits. Planning for rural investments is necessary, and the plans should reflect the likely availability of oil revenues. As these revenues grow, the ability of the government to create a modern and integrated rural infrastructure will grow too, and doing this should be of high priority.

APPENDIX ONE

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APPENDIX TWO

Expanding Secondary Education in Cambodia

A. Demographic Data

The US Census develops estimates of the age structure of population for most nations for various years. The 2010 estimates for Cambodia show the following age-group populations: (Population in millions of Cambodians.)

Total Population (2010):	14.91
Age 0-4 years	1.77
Age 4-9 years	1.60
Age 10-14 years	1.53
Age 15-19 years	1.81
Age 20-24 years	1.74

It is possible that the bulge in the 15-19 age group is partly an artifact of age reporting, and most five-year age groups probably lie in a 1.60 to 1.75 million group size. This would mean about 320,000 to 350,000 students per year in the present and next decade.

B. Cost Estimates

In order to estimate the cost of achieving enrollment goals, these goals must be defined. One goal is 100% enrollment up to grade 9 by 2015 and another shorter-term goal would be to achieve 50% lower secondary enrollments by 2010. This would be very ambitious and require a doubling in a short period.

The total costs include the cost of subsidies to support adequate demand for secondary education as well as support for the supply of schools, teachers and materials. While a cost of \$180 per year has been suggested as adequate, it is unclear if this needs to be given to all students in all areas. Logically, younger children might earn less and require a lower subsidy to remain in school. In order to bracket the likely cost of family payments if students remain in school, let us take a low payment of 50,000 riel a month and a high payment of 100,000 riel a month for ten months. This works out to about \$120 and \$240 a year, respectively. If grades 7 to 9 required the lower payment, that would be about \$120 million in universal family subsidies to reach all children. Reaching half of all families would cost one-half this amount. It is true that some fraction, perhaps one in four, would not need the subsidy as they are already studying. However, identifying these families might be extremely difficult. Other approaches, such as restricting payments only to families in rural areas, are possible though then poor urban families would be short changed. However, this approach would reduce subsidy costs by about one-quarter or even more if only half of all students were targeted.

For grades 10 to 12, the higher subsidy amount might be required since the children are better able to earn more money at that point. However, there is not a short-term or even ten year target to raise enrollment rates in secondary school to 100%. If current graduation rates were tripled, then about 100,000 secondary school students per class or 300,000 in all would require support. This would amount to \$72 million in family subsidies. Again, restricting subsidies to rural areas would lower the subsidy bill.

The cost of providing education – the supply cost – is usually related to the level of per capita GDP. In recent years, Cambodia paid about 7% of GDP pc per year of secondary education for one student. However, other nations such as China, Nepal, Bangladesh and Mongolia had costs in the 12% to 14% of GDP pc range.²³ If we assume a \$400 GDP pc for Cambodia and a 12% cost ratio, then a year of secondary school would initially cost about \$50. This would rise in line with GDP pc over time. For one million students in grades 7-9, this would cost \$50 million. Costs of secondary school might be somewhat higher and these costs should be estimated based on hard data. If costs were \$75 per capita initially, the cost for 300,000 students would be \$23 million. This should cover the costs of teachers, supplies and new buildings. Not all of these costs are incremental, since some are already in the budget.

Overall, it appears that achieving high levels of secondary education would cost at least \$100 million a year (even at interim 50% enrollment ratios) if both family subsidies and school supply costs were calculated.

²³ There is a broad range of possible cost ratios. Indonesia, for example, has a cost of secondary education equal to 9% of its GDP per capita, while India has a ratio of 22%. (All data from Table 2.10 of 2006 World Development Indicators of the World Bank.) Indonesia, however, is famous for its extra school fees, so its lower costs might only reflect lower *government* costs. If the goal is to open access to poor students, a higher level of spending that avoids extra charges should be applied.

APPENDIX THREE

Estimated cost of a lower-secondary school scholarship²⁴

The mission concluded that scholarships given by the Royal Government of Cambodia and some foreign aid agencies, around US\$40.00 per year, is inadequate. Many teachers with whom we spoke reported that scholarship recipients continued to drop out in high numbers.

For students at the lower secondary school, we estimate their basic need as follows:

- Extra courses: 1000 riels per day ==> 192,000 riels (annum)
- Daily spending: 500 riels ==> 96,000 riels (annum)
- Clothes (shirts, trousers and other: 6): 60,000 riels (annum)
- Books: 45,000 riels (30 writing books per year)
- Bike (1): 100,000 riels
- Other charges: 40,000 riels (5,000 riels per month)
- Study period: 8 months per year and 6 days a week

Total: Approximately US\$130.00 per year.

²⁴ This analysis was provided by mission team member Pum Huot.

APPENDIX FOUR

Terms of Reference for August 2006 mission

Field-testing “From Village to College”
Education Initiatives Financed by Establishing a Debt Repayment Fund

1. Background

Cambodia and the United States will soon reach agreement over the full or partial repayment of a series of PL 480 loans made more than thirty years ago to the Lon Nol regime. Although the total amount to be repaid by Cambodia is not yet known, according to figures from the International Monetary Fund, the value of the outstanding debt is \$162 million.²⁵ A repayment scheme for this amount would likely take the form of annual payments of \$5-8 million per year for 20 years. There is bi-partisan support in the US Congress to use the proceeds of Cambodian repayments to finance education initiatives in Cambodia. Precedent exists for allocating repayments of foreign governments to educational activities in the repaying country, most recently the Vietnam Education Foundation (VEF). Should the US Congress decide to allocate Cambodian debt repayments for a similar purpose it would likely do so by creating a special trust fund to house this money. For the purposes of this TOR, this entity shall be referred to as the Cambodia Debt Repayment Fund. The objective of this mission is to develop a set of recommendations for what activities a fund should support.

With the proper structure, the Cambodian Debt Repayment Fund can play an important role in Cambodia as a transformative model of institutional innovation in education. Clearing an accessible path from village to college will provide many Cambodian young people with a far brighter future than they can currently contemplate. Promoting systemic reform to the Cambodian education system can help create the knowledge infrastructure critical for Cambodia’s continued socioeconomic development. The mission’s vision is informed by two related observations. The first is that large-scale donor initiatives too often fail, in large part because they seek to impose preconceived templates on complex societies, ignoring local knowledge and local innovators.²⁶ Accordingly, a basic tenet of the approach we advocate is that to keep young people from poor families in school, the Cambodia Debt Repayment Fund should act like a venture capitalist, not an aid manager, identifying programs which are working and providing the resources needed to expand them. Second, the objective of all activities must be to create *Cambodian* institutions and develop *Cambodian* human capital. Bluntly put, the Cambodia Debt Repayment Fund will fail if it becomes a mechanism for financing foreigners to do what Cambodians can do better.²⁷

There are compelling reasons for the Cambodia Debt Repayment Fund to focus exclusively on secondary education. First, for individuals, secondary schooling provides the most dramatic benefits in terms of skills and earning potential. According to a recent study, in Cambodia today

²⁵ See “Cambodia: Selected Issues and Statistical Appendix,” Country Report No. 06/265. International Monetary Fund, July 2006. (Earlier estimates put the size of the debt at \$300 million; the revised estimates represent a much lower burden on the Cambodian people but, if spent wisely, could still produce valuable outcomes in Cambodian education.)

²⁶ William Easterly makes a powerful case for this approach in his book *The White Man’s Burden: Why the West’s Efforts to Aid the Rest Have Done So Much Ill and So Little Good* (New York: Penguin Press, 2006).

²⁷ The writer Paul Theroux penned a devastating indictment of the failure of foreign aid to promote local institutional development in a recent op-ed piece (“The Rock Star’s Burden,” *New York Times*, 15/12/05).

secondary education significantly increases opportunities for individuals to secure paid employment.²⁸ Although primary enrollment rates in Cambodia compare favorably with regional averages, secondary enrollment rates are extremely low, behind even Laos and Myanmar, according to the study cited above. Of course, in the absence of improvements to both access and quality of secondary education, university education will remain the preserve of a privileged minority. Second, on a macro-level, an educated workforce is a prerequisite for continued economic development, the emergence of a private sector and the attraction of foreign investment. If currently low enrollment rates persist, Cambodia is likely to face a severe shortage of skilled labor, slowing growth when it is needed most. To these development considerations we add a third, strategic concern: we believe that the Fund is far more likely to make a positive impact if its resources are carefully targeted based on a narrowly focused mandate.

Improving secondary education in Cambodia will require a commitment to *equality, excellence, and governance*. Any effort to promote institutional innovation in secondary education must address the fact that access to secondary schooling is highly unequal. A range of interventions will be necessary to provide talented children from poor families with an opportunity to benefit from the activities which the Cambodia Debt Repayment Fund might support. To succeed, all components of the initiative must be dedicated to maintaining the highest standards. Only through an uncompromising commitment to excellence can the activities we propose serve as a persuasive model and agent of change.²⁹ Achieving excellence will require top talent, Cambodian and international. But equality and excellence require an effective governance environment capable of providing incentives to attract human capital and management structures to organize it effectively. Cambodia presently lacks such governance systems and institutional innovation will be necessary to create them. There is little debate over the basic principles of effective governance, including academic independence, merit-based selection and promotion, accountability, and transparency.³⁰ However, implementing a new governance system will present imposing challenges; international experience suggests that governance is often the primary barrier to improved education outcomes in developing countries.

The basic program architecture the mission team will field-test during this mission is two-pronged, consisting of 1) a series of interventions targeted at boosting secondary school enrollment rates in a select group of provinces, and 2) the creation of a “magnet” lower and upper secondary school (grades 7-12) in Phnom Penh for top students from around the country. It must be emphasized from the outset that the funding level which would likely be available (\$5-8 million per year) is not enough to solve the myriad problems facing secondary education in Cambodia. Therefore it will be important that the proposed activities are carefully designed and targeted, perhaps by beginning a select group of provinces or localities and expanding over time.

2. Objectives:

The United States and Cambodia are currently in the final stage of negotiating a debt repayment scheme for several loans which the US made to the Lon Nol government in the 1970s. The total

²⁸ See *Cambodia: Halving Poverty by 2015? Poverty Assessment 2006* (The World Bank, Phnom Penh: February 2006) 105.

²⁹ A common misunderstanding is the idea that “high standards” or “excellence” means that irrelevant and overly academic standards would be the goal of a program such as that being proposed. Standards are excellent when they are appropriate to the situation. Cambodia need not copy Singapore to be excellent.

³⁰ An effective governance system is not only crucial for attracting talented faculty and ensuring the desired educational outcomes; influential members of the US Congress have made clear that their support for the Cambodia Debt Repayment Fund is contingent upon assurances that all activities in Cambodia will be managed according to a transparent operating system.

of payment, approximately US\$162 million, would be made by the Cambodian government to the US Department of the Treasury. The objective of the mission is to develop the architecture of a set of programs to improve secondary school outcomes which would be funded by the Cambodia Debt Repayment Fund.

3. Methodology:

The in country mission will be organized by the UNDP's Insights for Action Initiative and will draw upon the resources of UNDP's talented country team. Experts from the Supreme National Economic Council (SNEC) of the Royal Cambodian Government will also participate. International mission members will include Ms. Frances Zwenig of the US-ASEAN Business Council, Mr. Thomas Vallely and Mr. Ben Wilkinson, Asia Programmes, Harvard University. Ms. Zwenig will bring a sophisticated knowledge of the US-Cambodia relationship, as well as wide contacts within the Cambodian government and business community. The mission will bring experience promoting institutional innovation in Vietnam through a hybrid Fulbright mechanism as well as a broad familiarity with Cambodia acquired during previous collaborations with Insights for Action and SNEC.

During the mission's time in Cambodia it will meet with experts in Phnom Penh and in the provinces. These meetings will be arranged by the Insights for Action team. At the beginning of the mission, the team should meet with the leadership of UNICEF to discuss the mission's objectives in the context of UNICEF's activities and country strategy for Cambodia. Other important initial meetings include the US Embassy, for an update on the current status of the bilateral debt negotiations; and World Education, an NGO working in the education sector. The mission should also meet with the authors of a recent/forthcoming *Moving Out of Poverty* study by CDRI. The mission will also visit at least several (ideally all) of the following provinces to explore the establishment of interventions to boost enrollment rates: Battambang, Siem Reap, Kampot, and Kratie.

4. Some Related Broad Activities

First, the mission must acquire an understanding of the current state of secondary school education in Cambodia, by reviewing existing literature and meeting with key stakeholders. The Insights for Action Group can identify potentially valuable informants from the government and civil society who can brief the mission on system-level issues; site visits to secondary schools in Phnom Penh and outlying provinces are also desirable. Special emphasis should be placed on identifying organizations and individuals pursuing innovative responses to institutional failure, inequality of opportunity, etc.

Second, the mission will need to consider the feasibility of the two-pronged approach proposed in this memorandum. The mission should identify existing interventions aimed at increasing enrollment rates and quality which might be expanded by meeting with organizations like World Education and others to evaluate their ability to participate. It will also be necessary for the mission to consider a possible role for Peace Corps volunteers. A careful consideration of the steps needed to create the Phnom Penh magnet school will also be necessary, including governance and student selection.

Third, the mission must assess available Cambodian human resources, including teachers and administrators to staff the Phnom Penh magnet school as well as personnel to coordinate lower-

secondary school interventions. Because there appears to be a fairly high level of private sector activity in education, the mission should evaluate private sector participants both to identify sources of individual talent and to assess the feasibility of public-private partnerships. The mission should meet with a representative sample including international schools in Phnom Penh as well as local private schools and academies.

Fourth, the mission should make recommendations regarding the management structure of the initiative. This will require discussions with United States government stakeholders in Cambodia and Washington as well as with organizations which may be considered for important roles in the initiative.

5. Outputs:

A final report of maximum 20 pages, including a succinct two-page executive summary to help ensure clarity and readability, will submit to the United States Embassy in Cambodia, UNDP, and the Supreme National Economic Commission including a series of recommendations for structuring a series of innovative efforts to improve secondary education through institutional innovation. (The 20 pages maximum limit does not include appendices and possible technical background papers prepared as a basis for the final report.)

6. Timeframe:

The proposed mission should be start form August for a total period of 15 days, including preparation, field-testing in Cambodia and follow up activities.

- Early August: Preparation
- August 23 to September 1: In country mission – Field-testing
- 3rd week of September: Submit first draft report
- Mid-October 2006: Submit final report
- Washington, DC visit: Follow up