HEALTH AND EDUCATION

IN GREATER MEKONG SUBREGION:
POLICIES, INSTITUTIONS AND PRACTICES

A GMS-DAN PUBLICATION

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Acronyms and abbreviations

AEC	Audiovisual Education Centre
CHSC	Community Health Service Centre
DESB	District Office of Education and Sport Bureau
EFANPA	National Plan of Action for Education for All
FDI	Foreign Direct Investment
GOYPPG	General Office of Yunnan Provincial People's Government
HOI	Human Opportunities Index
JICA	Japan International Cooperation Agency
LSIS	Lao Social Indicators Survey
MDG	Millennium Development Goal
MICS	Multi-Indicator Cluster Survey
MOE	Ministry of Education
MOES	Ministry of Education and Sport
MOF	Ministry of Finance
MOF	Ministry of Finance
MOH	Ministry of Health
MOH	Ministry of Health (before 2013)
MPI	Ministry of Planning and Investment
NDRC	National Development and Reform Commission
NGO	Non-Government Organisation
NHFPC	National Health and Family Planning Commission of the People's Republic of China (New name of MOH after 2013)
NHSDP	National Health Sector Development Plan
NSEDP	National Socio-Economic Development Plan
ODA	Official Development Assistance
PDES	Provincial Department of Education and Sport
SC	State Council
TEC	Technology Education Centre
UNDP	United Nation Development Program
WHO	World Health Organization
YNDOE	Yunnan Department of Education
YNDOF	Yunnan Department of Finance
YNDOH	Yunnan Department of Health

Chapter 1
Health and Education in the Greater Mekong Subregion: Policies, Institutions and Practices

Srinivasa Madhur and Jayant Menon

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1. Introduction

The Greater Mekong Sub-region (GMS) countries have taken major strides in improving the health and educational status of their people in the past two decades. Even the people of Cambodia and Laos, the poorest countries in the GMS after Myanmar, lead healthier lives than in the mid-1990s. Both these countries are also now close to achieving universal primary education, although progress in secondary and higher education has been more sporadic across the GMS. Despite these impressive achievements, the GMS countries, especially Cambodia, Laos, Myanmar and Vietnam (CLMV), face significant challenges in further improving access to effective, quality health and education services at affordable prices (CDRI 2014). There is a need for making access to affordable health care and education more equitable and inclusive, across regions and across rich and the poor (Madhur and Menon 2014).

In the area of health, further reducing maternal deaths by increasing the number of births attended by skilled attendants is the most challenging for Laos, followed by Cambodia, Myanmar and Vietnam; the scope for further reductions in under-five mortality rates is the largest for Myanmar, Cambodia and Laos and more modest for the other GMS countries; curbing the spread of tuberculosis is the most pressing for Cambodia and Myanmar, but that task must not be underestimated even for Laos, Vietnam and Thailand; Thailand and Cambodia, the two countries with very high HIV prevalence rates in the mid-1990s, face the challenge of making further reductions, while Myanmar, Vietnam and Laos face the challenge of preventing the incidence of the disease from escalating; the scope for improving nutrition and reducing undernourishment appears to be the largest for Laos and Cambodia (perhaps Myanmar too) and somewhat less crucial for the other countries.

Although GMS countries either have or are close to achieving universal primary education, there is significant scope for improving the quality of primary education especially in Cambodia, Laos and Myanmar, even in Vietnam. In secondary education, while Cambodia and Laos have the twin tasks of raising both enrolment and education quality, other GMS countries have to focus more on improving the quality of education even as they maintain the hard-earned gains in secondary enrolment rates. As for higher education, almost all GMS countries have huge challenges in improving both the quantity and quality of education especially in STEM subjects (science, technology, engineering, and mathematics) but these challenges are more daunting for the CLMV countries and China, and somewhat more manageable for Thailand.

All these underscore the need for well-coordinated policy actions. For both policy formulation and implementation, institutional reforms in both health and education sectors of the GMS countries are crucial. It is against this background that the subsequent stages of the GMS-DAN project aim to analyse the role of GMS countries' policies and institutions for strengthening their health and education sectors. This chapter provides a synthesis of the key policy messages and conclusions from the individual country studies of the second stage of this GMS-DAN research project. The country studies draw on strategy and policy documents and other published data and information to decipher

the goals, objectives and contents of their country's health and education policies. To translate these policies in to better health and education outcomes, countries have put in place institutional frameworks for policy administration and management.

Institutional frameworks typically involve many actors: government ministries and departments, private sector agencies, civil society organisations (CSOs), bilateral and multilateral donors often referred to as development partners, and similar other institutions such as research institutions and think tanks. These actors play key roles in policy dialogue and formulation, and can have a direct impact on the success of the policies and programmes that emanate from them. Policy implementation takes place within varying settings: the economic, political, social and cultural conditions prevalent in a country may affect the implementation of some policy issues. Ultimately, health and education outcomes are determined by not just policies but also by country-specific institutional frameworks and socio-political-cultural factors (Ostrom, Gardner and Walker 1994; Gibson et al. 2005; Anderson 2006; Basu 2011; Acemoglu and Robinson 2012).

The institutional perspective on policy-making and implementation implies that even good policies could result in bad health and education outcomes either because the institutional frameworks are not well-suited for converting good polices into good outcomes, or because the institutional frameworks, however robust they are on paper, are unable to implement the good policies into good outcomes. There could thus be many gaps between good policies and good health and education outcomes. The main objective of this study is to better understand the nature of these gaps among the GMS countries and draw comparative country lessons.

The focus of the paper is thus on the institutional frameworks and their effectiveness in policy-making and implementation in health and education and not so much on assessing whether these polices themselves are appropriate. In assessing institutional effectiveness, the paper does not purport to be comprehensive but selective in that it looks at only a few key issues: national, especially public, resource commitments; intra-governmental coordination, both vertical and horizontal; the roles of non-state actors, including private sector, civil society organisations and civil society more generally.

Section 2provides the backdrop to the institutional analysis by briefly summarising the health and education strategies and policies among the GMS countries. Section 3 details the similarities and differences in the formal institutional frameworks. Section 4 examines the functioning (or lack of it) of the institutional frameworks for health and the main constraints these face in practice. Section 5 offers a similar institutional assessment, but focusing on education. Section 6summarises the main conclusions.

2. Goals and policies in health and education

2.1 Health

Nested within national development strategies, and articulated in the Rectangular Strategy and the National Socioeconomic Development Plan (NSDP), Cambodia's national health policies are based on five key pillars: (i) improving health service delivery, (ii) improving health financing, (iii) increasing human resources for the health sector, (iv)

enhancing the health information system, and (v) improving health system governance through decentralisation. Based on this broad policy framework, the Ministry of Health identifies three areas for special focus: maternal and reproductive health, communicable diseases, and non-communicable diseases.

In Laos, the National Growth and Development and Poverty Eradication Strategy (NGPES) clearly identifies the health sector as one of the four top priority sectors (along with agriculture, education and infrastructure). Within this overall development framework, the health sector policy identifies four major policy goals: (i) creating a robust health infrastructure (covering basic materials and technological hardware), (ii) developing sustainable health financing modalities, (iii) expanding and strengthening the overall health system, and (iv) achieving health sector Millennium Development Goals (MDGs). Various programme and projects are then implemented to achieve these health sector goals.

Within the overall framework of Vietnam's development strategy for 2011-2020, the main objectives of health policy are to increase the supply of healthcare services to meet the increased needs of a growing economy, achieve social equity in access to healthcare, and improve the quality of healthcare services. These strategic objectives are backed by government legislation and health sector policy implementation guidelines of the Ministry of Health. The latter identifies five major elements of health policy: (i) strengthening grassroots health networks to reduce overcrowding in healthcare centres, (ii) reforming the public financing system for health, (iii) formulating and implementing universal health insurance, (iv) reducing the spread of communicable and parasitic diseases, and (v) ensuring that the poor receive adequate healthcare services and medical treatment.

Thailand, being at a higher stage of development than CLMV countries, focuses its health policy on developing further the country's hospital system (already becoming a regional centre for medical services within ASEAN) and strengthening the health insurance system with the objective of achieving universal coverage.

China is somewhat unique among the GMS countries in that rapid growth, accelerating urbanisation, gradual demographic transition that has led to longer life spans and concomitant epidemiological changes are leading to major changes in its health profile. While typical public health problems of a poor country related to maternal and child health and communicable diseases are subsiding, lifestyle-related non-communicable diseases such as diabetes, cardiovascular disease and cancer are becoming the major causes of ill health and mortality (Yang et al. 2013). That said, reflecting the continental size of the country (both in geography and population), disease patterns and health profiles show significant variations across the country: the more prosperous coastal regions experience more lifestyle-related disease patterns whereas the poorer regions such as Yunnan still suffers from the conventional public health problems. As a result, even as the country attends to the unfinished agenda for public-health problems, it is increasingly required to focus on tackling these lifestyle-related diseases. The 2009

healthcare reforms and future priorities are set against this emerging health profile of the country's population.

2.2 Education

Like in the area of health, Cambodia's education policies are nested within the government's overall development strategy. The 2014-18 NSDP emphasises the need for: (i) ensuring equitable access for all to education services, (ii) improving the quality and relevance of learning, and (iii) enhancing effective leadership and management of education staff (Cambodia chapter, this volume). Within this overall framework, the Education Strategic Plan (ESP) of the Ministry of Education singles out three key areas for special focus: (i) equitable access for all to education services, (ii) quality and relevance of learning, and (iii) effective leadership and management of education staff at all levels (MOEYS 2014, 13). Twelve years of education from grade 1 to grade 12 are free of cost in public schools to all children. A nine-year basic education programme, that is, six years of primary education and three years of lower secondary education up to grade 9, is treated as compulsory for all children.

With minor differences, Laos' broad objective and policies for education are very similar to that of Cambodia. The Education for All National Plan of Action (EFA NPA) seeks to achieve equitable access, improved quality and relevance and strengthened education management (Laos chapter, this volume). Within this broad policy framework, the EFA NPA focuses on four aspects: (i) early childhood care and development, (ii) primary education, (iii) lower secondary education, and (iv) non-formal education and skills training. Five years of primary education is free and compulsory in public schools for all children in Laos. (The EFA NPA also emphasises the need for the private sector to play a greater role in education provision at all levels, and aims to increase the share of public expenditure on education in the budget from the current level of 12 percent to about 18 percent in the next few years).

Vietnam's development plans accord high priority to education. The country's education law underscores the need for an education policy that aims at enhancing people's knowledge, improving human resources and nurturing human talent (Vietnam chapter, this volume). Within this overall legal framework, raising enrolments (quantity) and improving education quality at all levels are emphasised. Pre-schooling plus nine years of education beginning from primary school up to lower secondary education are free in public schools and compulsory for all children in the relevant age-group.

Education in Thailand is more advanced than in CLMV countries. The country has long achieved universal primary education and enjoys robust secondary and tertiary education enrolment rates. The key objective of Thailand is to consolidate past gains and strengthen education quality at all levels but especially in higher education, aptly summarised in the country's slogans: "All for Quality Education and Quality Education for All" and "Graduates with Quality and Social Responsibility" (Thailand country chapter, this volume). By the end of the 1980s, Thailand had already introduced comprehensive higher education plans. The Ministry of University Affairs was created and a 15-year higher education plan covering 1990-2004 formulated. Learning from these past experiments,

the country recently developed a Long Range Plan on Higher Education for 2008-2022. Cast within the context of the AEC, the Plan aims to improve quality, accessibility and affordability of higher education, including technical and vocational education and training (TVET) (Thailand chapter, this volume).

China has made impressive progress in primary and secondary education. The country has achieved universal primary education and its secondary gross enrolment rate of 81 percent is the highest among the GMS countries (Madhur and Menon 2014). Progress has been less impressive in tertiary education. China's tertiary enrolment rate of 26 percent is much lower than Thailand's 48 percent and is only marginally higher than Vietnam's 24 percent. The main objective of China's education policy is to increase the tertiary enrolment rate and improve the education quality at almost all levels. Increasing the access to higher education, especially by potential students from outside the major cities, especially from the country's western regions, is a key objective of education policy, as is improving the quality of education. In this context, Yunnan, one of the less developed provinces of China, faces education policy issues quite similar to that of, say, Vietnam.

3. Institutional framework for health and education

A wide range of actors can have an influence on health outcomes, but not all of these actors may be included in planning and implementing health sector policies. Existing institutional arrangements for health are country-specific; they are a reflection of each country's culture, norms, governance structure and level of development at a given point in time. For instance, in former planned economies, institutional arrangements for health may continue to be government-centric, with the public sector playing the roles of policy-maker, service provider, and financier. In more developed, market-oriented economies, a more diverse set of actors may be involved in fulfilling these roles. Given the complexity of these interactions from an institutional perspective, we restrict our analysis to arrangements for policy-making and policy implementation, focusing on health care provision and financing.

3.1 Arrangements for policy-making and health administration

The institutional arrangements for policy-making and health administration in Cambodia, Laos and Vietnam are all highly centralised and vertically controlled by the Ministry of Health (MOH), which has overall responsibility within the government for health matters. In these countries, the tasks of the MOH include not only policy-making and administration, but also resource mobilisation and allocation, monitoring and evaluation of national health targets and outcomes, and overall coordination of the health system with the rest of the government (both vertically with the subnational layers of governmentat the provincial, district, and commune levels and horizontally with other ministries and departments). All three countries have a decentralised structure with the MOH at the centre, and local governments at provincial, district and commune levels administering health policies, programmes, and projects at subnational level.

All three countries engage many actors, ranging from external development partners to CSOs, in health policy-making and administration. In Cambodia, the MOH coordinates closely with external development partners, the private sector, health service providers, health care users and CSOs (Cambodia country chapter, this volume). In Laos, a Sector Wide Coordination (SWC) mechanism helps to coordinate actions at policy, operational, and technical levels. The SWC is made up of high-level representatives from government, health, labour, social welfare and finance ministries, and development partners (WHO Laos Country Health Service Delivery Profile 2012). In Vietnam, domestic research institutes, universities, hospitals and clinics provide policy advice. Professional associations and CSOs such as the Vietnam Women's Union, Youth Union, Vietnam General Confederation of Labour, and the War Veterans Union are also involved in policy-making. In particular, the Women's Union and Youth Union have been active in the country's HIV/AIDS initiatives (Vietnam country chapter, this volume).

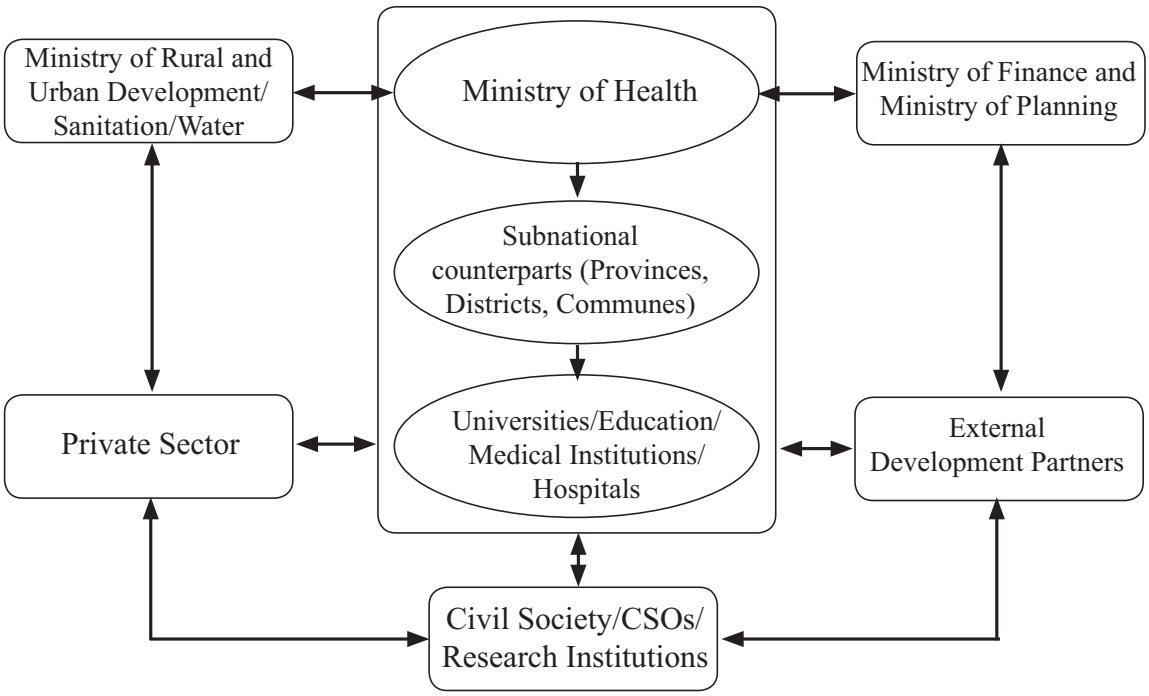
Until 2002, Thailand's institutional framework for health was very similar to those in Cambodia, Laos and Vietnam, but the enactment of the National Health Security Act and the adoption of the Universal Coverage Scheme in 2002 introduced substantial changes. Three new autonomous institutions—the National Health Security Office (NHSO), National Health Security Board (NHSB), and the Standard and Quality Control Board (SQCB)—were created to manage the Universal Coverage Scheme. The NHSB (chaired by the Minister of Health and consisting of another 29 members drawn from other ministries, local governments, NGOs and private hospitals, as well as health professionals and experts from various fields such as law, finance and the social sciences) is responsible for setting the healthcare financing policy, i.e. the allocation of budget to different health service items, making decisions on the benefit packages, deciding on appropriate payment methods, and setting rules and guidelines. It is accountable to the cabinet and parliament. The NHSO is an autonomous body that performs the health care purchasing role under the direction of the NHSB and the SQCB. Under the new institutional framework, the centralised control of the health system by the MOH is vastly reduced and health care purchasers are separated from health care providers (purchaser-provider split).

Thailand has created a number of formal mechanisms to increase public participation in the development of health policies. The National Health Act of 2007 called for the creation of three categories of health assemblies—the Area-Based Health Assembly (AHA), the Issue-Based Health Assembly (IHA) and the National Health Assembly (NHA)—that would provide a forum for all stakeholders to discuss health policy issues. The NHA is made up of representatives from area-based constituencies, civil society, government organisations, health professionals, academia and the private sector. The National Health Commission (NHC) is mandated to convene the NHA at least once a year, and submits recommendations to the National Assembly based on the outcomes and resolutions of the NHA (WHO Thailand Country Cooperation Strategy 2012-16).

China's institutional framework for health is more akin to those of Cambodia, Laos and Vietnam than to that of Thailand. The National Health and Family Commission (NHFC), a government body similar to the health ministries in other countries, is at the helm of

health policy-making and implementation, with health bureaux/health departments at the provincial, district, and commune subnational layers of the government working under the NHFC's jurisdiction and guidance. However, other aspects of the healthcare system, including social health insurance, have been divided and are now managed by different ministries (WHO China Health Service Delivery Profile 2012). Within this framework, a large number of stakeholders, including the private sector, external development partners and others influence both policy-making and implementation (Figure 1.1).

Figure 1.1: Prototype institutional framework for health in GMS countries



National health ministries are at the helm of institutional frameworks, with health departments and health centres at provincial and commune levels supporting the implementation of national heath polices, programmes and projects. The model of health sector governance is one of policy-making at the national level and policy implementation at the subnational levels of government. National health ministries also have the task of the horizontal coordination of health policy and public health funding with the ministries of finance and planning. Since health issues are inextricably linked to rural and urban development, particularly in the provision of sanitation and drinking water, health ministries are supposed to act in coordination with ministries responsible for sanitation, water and waste management.

3.2 Arrangements for health service provision and financing

Health services can be provided by (i) the government, either through a centralised national health service or through autonomous public health care facilities, (ii) private, for-profit healthcare organisations, such as private hospitals, (iii) private, non-profit organisations, such as voluntary or charitable institutions, like the Red Cross, or (iv)

private individuals, such as private practitioners or traditional healers. Meanwhile, health care can be financed through general taxes, earmarked taxes, social insurance, private insurance, loans and grants from donor agencies, private donations and out-of-pocket payments. The healthcare systems covered in this report occupy different spots on the public vs. private spectrum in terms of provision and financing.

In Cambodia and Laos, healthcare services are predominantly provided by a government-owned and operated network of health centres and hospitals, with varying degrees of private sector provision. Public health service delivery in Cambodia is organised through two levels of services: the Minimum Package of Activities, which is provided at health centres, and the Complementary Package of Activities (CPA), which is provided at referral hospitals. There are some private practitioners and international NGOs, but these do not provide the minimum or complementary packages and only deliver a limited range of services (WHO Cambodia Health Service Delivery Profile 2012). The private health sector in Laos is also small, but expanding; private facilities typically provide only basic treatment. Most of these private health facilities are owned by public health staff who offer services after hours and at weekends. The existing facilities are likely to face some competition from the foreign-owned and joint venture clinics and medical centres that have begun to spring up in the cities (Laos country chapter, this volume).

Although health services are predominantly state-owned, services are financed primarily by out-of-pocket expenses, as both countries allow public facilities to charge user fees. In Cambodia, the minimum and complementary packages and medicines are subsidised by the government but only in terms of facilities, equipment, staff salaries and essential medicine; users must shoulder consultation and treatment fees, as well as medicines that are not in stock at public facilities. In Laos, consultations with health care professionals are free, but users must pay for patient registration and ancillary services. User fees for drugs are set at cost plus 25 percent (WHO Cambodia and Laos Health Service Delivery Profiles 2012).

To ensure that the poor and vulnerable are able to access services, both countries have social safety nets such as fee exemption schemes and donor-funded health equity funds which reimburse health providers for services delivered to targeted beneficiaries. In Cambodia, health equity fund beneficiaries are entitled to a comprehensive package that includes transport cost and food allowance (Tangcharaensathien et al. 2011).

Risk-pooling insurance schemes are in their nascent stages. Eighteen operational districts in Cambodia have voluntary community-based health insurance targeting the informal sector (WHO Cambodia Health Service Delivery Profile 2012). Laos introduced social health protection in 2002 and currently has: a social insurance scheme for public and private sector employees, a voluntary community-based health insurance scheme, and the Health Equity Fund. However, these schemes are estimated to cover only 18.5 percent of the population (WHO Laos Health Service Delivery Profile 2012; WHO Country Cooperation Strategy, Laos 2012-15).

Health care in China is also mainly provided by the state, and covers 90 percent of emergency and inpatient services. The private sector is becoming more active in providing outpatient care, and its share of this segment has increased in recent years. China's financing sources are diverse and include not just tax-based general revenues, but also social health insurance and private medical insurance. There are four social insurance schemes in China: the Urban Employee Basic Medical Insurance (UEBMI), the Urban Residents Basic Medical Insurance (URBMI) the New Rural Cooperative Medical System (NRCMS), and the recently established Urban–Rural Medical Assistance System, which targets poor and vulnerable groups (WHO China Health Service Delivery Profile 2012; WHO Country Cooperation Strategy, China 2013-15).

Health service delivery in Vietnam features a more public-private mix. Active government support, an expansion in private medical practice since 1986, and the deregulation of the pharmaceuticals industry have given private services a much greater role in service delivery (Vietnam country chapter, this volume). Currently, however, private sector provision consists primarily of outpatient clinics and pharmacies, with a few hospitals (WHO Vietnam Health Service Delivery Profile 2012). Government allowed user fees in hospitals in 1989, and since then Vietnamese hospitals have been given greater autonomy in managing their services, finances and human resources. This seems to have empowered hospitals in urban areas to effectively reorganise services and mobilise investments (Vietnam country paper, this volume).

Different components of national poverty reduction programmes and projects seek to improve access to health, particularly for the poor (Vietnam country paper, this volume). A national social health insurance scheme has been in place since 1992, and compulsory participation is slowly being rolled out to cover the whole population (WHO Vietnam Health Service Delivery Profile 2012). The scheme offers a comprehensive benefit package, but co-payment can be substantial, ranging between 5-20 percent of medical bills (Tangcharaensathien et al. 2011).

Thailand has also been promoting private sector involvement since 1992, when it began providing tax incentives to encourage investment in private hospitals. This increased the number of private hospitals. More recently, the government's decision to develop Thailand into a medical hub has helped revive the private health sector. CSOs are also actively involved, particularly in the control of HIV/AIDS, malaria, tuberculosis, emerging infectious diseases, tobacco and alcohol (WHO Country Cooperation Strategy, Thailand 2012-16).

Thailand arguably has the most sophisticated and successful model for health care financing in the GMS. Its social health protection schemes include the Civil Servant Medical Benefit Scheme (CSMBS), the Worker Compensation Scheme (WCS) and the Social Security Scheme (SSS) for private employees, and a Universal Coverage Scheme coveringthe rest of the population. All of these schemes offer a comprehensive benefit package, but the financing sources, payment schemes and service providers for each are different (Thailand country chapter, this volume).

3.3 Institutional framework for education

Cambodia's institutional structure for administration and management is very similar to that for health. The Ministry of Youth, Education and Sport (MOEYS) is largely responsible for designing strategies and policies, providing guidance, examining budget plans and ensuring quality for general education; subnational layers of government at the provincial, district and commune levels work with MOEYS and the schools and education institutions within their jurisdiction (Cambodia chapter, this volume). There is a variation when it comes to the higher education segment, though. While general higher education in colleges and universities is still under the jurisdiction of MOEYS, TVET is under the overall responsibility of the Ministry of Labour and Vocational Training (MOLVT). In addition, a few more specialised higher education institutions are within the purview of their respective sectoral ministries (Sen and Ros 2013).

With minor variations, the institutional structure for education in Laos is very similar to that of Cambodia. The MOEYS is at the helm of policy-making and implementation. It is also responsible for vertical coordination across the subnational education units and horizontal coordination across the other national-level ministries and departments (Laos chapter, this volume). As in Cambodia, TVET is administered and managed by the Ministry of Labour and Welfare.

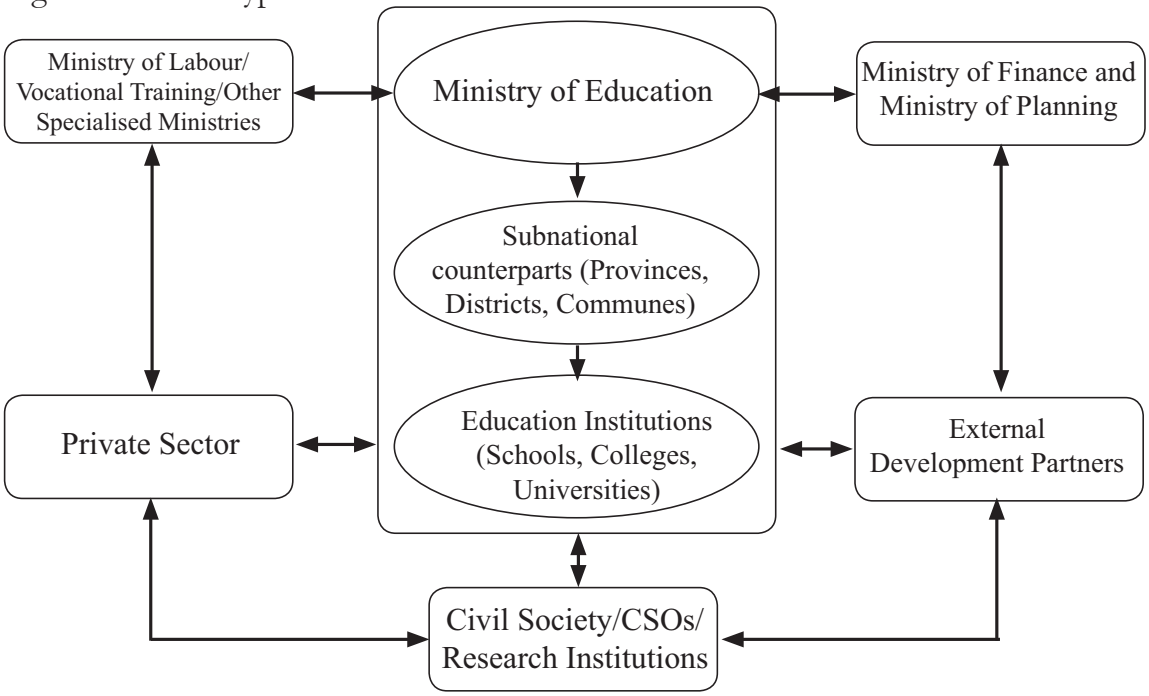
Vietnam's institutional framework for education is strikingly similar to that of Cambodia and Laos. The Ministry of Education and Training (MOET) is Vietnam's apex ministry responsible for education policy-making and implementation along with educational units at the subnational (provincial, district, and commune/township) levels; it also facilitates horizontal coordination with other ministries at the national level (Vietnam country chapter, this volume). The Ministry of Labour, War Invalids and Social Affairs (MOLISA) is responsible for the administration and management of TVET.

In keeping with Thailand's emphasis on higher education, the country has put in place an institutional structure with the Ministry of Education (MOE) playing a key role (Thailand country chapter, this volume). Directly under MOE's jurisdiction are the Higher Education Commission (HEC) and the autonomous universities. With the exception of two autonomous Buddhist universities, the other 168 higher education institutions, public or private, come under the purview of the HEC of MOE. The HEC is responsible for policies and planning, standards and quality, personnel management, and monitoring and evaluation of higher education institutions. As with other countries, such as Cambodia, TVET is outside the purview of MOE, but instead under a separate government agency—the Vocational Education Commission. In addition, five more line ministries/government bodies in public health, defence, transport, culture, science and technology, and the Bangkok Metropolitan Administration are in charge of various specialised higher education institutions.

China's institutional apparatus for education administration, management and governance of the education system is very similar to that of the other GMS countries. The Ministry of Education is at the top of the institutional hierarchy coordinating the education system both vertically (across the subnational governmental layers) and horizontally

(across the other ministries and at the national level), in addition to its responsibility to engage with other stakeholders such as the private sector and external development partners. Directly within the jurisdiction of the MOE are 32 institutions and social organisations and 75 universities and colleges (China chapter, this volume). Thus, with a few country-specific variations, a prototype institutional framework for policy-making and policy implementation among the GMS countries can be depicted (Figure 1.2).

Figure 1.2: Prototype institutional framework for education in GMS countries



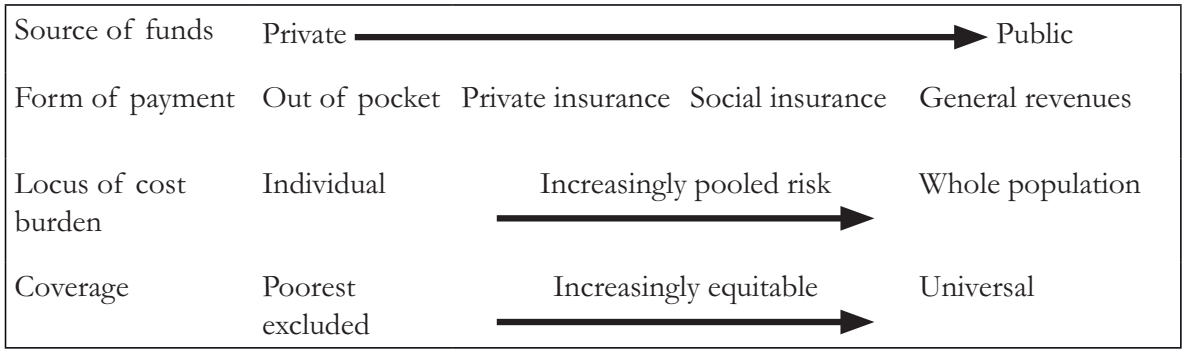
The national education ministry, its subnational counterparts and the education institutions (schools, colleges and universities) form the core of the framework. The education ministry has a two-fold task of intra-governmental coordination, vertically with its subnational counterparts and the education institutions under its jurisdiction and horizontally with the ministries of finance and planning on the one hand and with the ministries of labour/training and a few other specialised ministries on the other. It also has the responsibility of engaging many other stakeholders in the education sector such as external development partners, the private sector, domestic think tanks and research institutions and civil society more generally. A notable country-specific feature in Thailand in recent years is that the Ministry of Education has to work with three national education commissions that have much broader representation and play a key role in education policy-making and implementation. To some extent, therefore, ministerial control over the education sector is somewhat less in Thailand than in the other GMS countries (Thailand chapter, this volume).

4. Health: resource commitments and institutional arrangements in practice

4.1 Resource commitments

The institutional arrangements for financing described in the previous section underpin the patterns of health expenditures in the GMS region. This is a very important issue not just in terms of health outcomes, but in terms of equity as well. The manner in which healthcare is financed is critical because it could lead to the exclusion of certain segments of the population (Figure 1.3). Health care that is paid for largely by out-of-pocket payments will hit the poor the hardest, and could result in them being unable to seek care when needed.

Figure 1.3: Health financing: impact on cost burden and coverage



Source: WHO World Health Report (1999)

There are wide variations in total health expenditure (THE) trends across the GMS region (Tables 1.1 and 1.2). In 2011, THE as a percentage of GDP was highest in Vietnam at 6.8 percent, followed by Cambodia (5.7 percent), China (5.2 percent), Thailand (4.1 percent), Laos (2.8 percent) and Myanmar (2.0 percent). In Yunnan, China's total spending was far less than the national average at 2.7 percent.

Table 1.1: Health expenditure (percentage of GDP), 2011

	Total	Public	Private	Private out of pocket	Private insurance
Cambodia	5.7	2.1	3.6	3.2	0.4
Laos	2.8	1.5	1.3	1.1	0.2
Myanmar	2.0	0.2	1.8	1.6	0.2
Vietnam	6.8	2.6	4.2	3.8	0.4
Thailand	4.1	2.9	1.2	0.6	0.6
China	5.2	2.0	3.2	1.8	1.4
Yunnan	2.7				

Source: UNDP Human Development Report (2014)

However, a closer look at the composition of THE reveals that while Vietnam and Cambodia may be at the top of the league table in terms of total spending, much of this is actually coming from private sources, particularly out-of-pocket payments, which accounted for 90.5 percent of private health spending in Vietnam and nearly 89 percent

in Cambodia. In Laos, although public spending made up the bulk of THE with a share of nearly 54 percent, out-of-pocket payments still accounted for close to 85 percent of private health spending.

Table 1.2: Composition of health expenditure (percentage to total health expenditure): 2011

	Public	Private	Private out of Pocket	Private Insurance
Cambodia	36.8	63.2	88.9	11.1
Laos	53.6	46.4	84.6	15.4
Myanmar	10.0	90.0	88.9	11.1
Vietnam	38.2	61.8	90.5	9.5
Thailand	70.7	29.3	50.0	50.0
China	38.5	61.5	56.3	43.8
Yunnan	37.6	62.4	59.2	40.8

Source: UNDP Human Development Report (2014); for Yunnan, Yunnan Department of Health

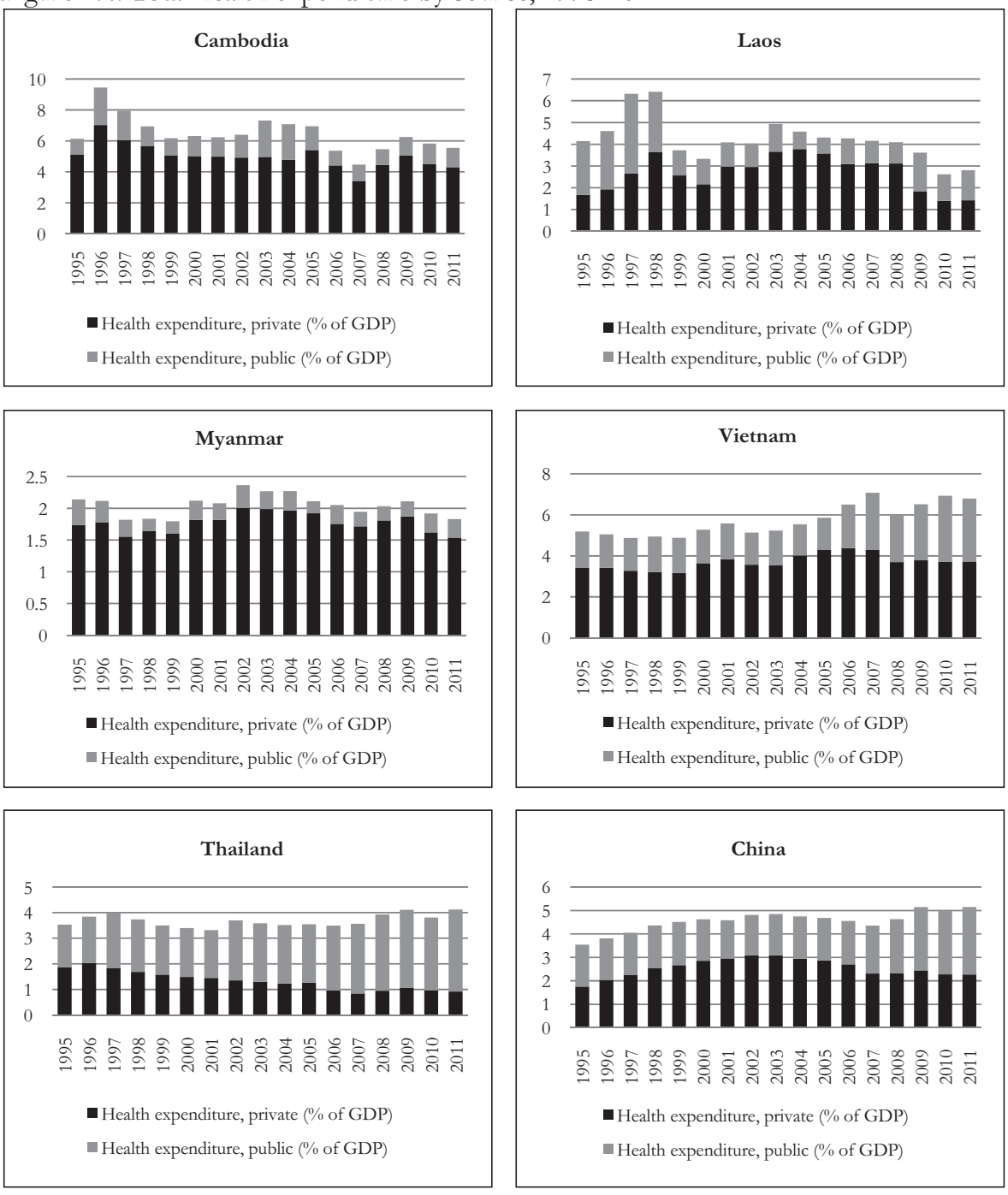
Myanmar's case is particularly alarming. Not only does it have the lowest level of total and public health spending in the region, it also has one of the highest rates of out-of-pocket spending: almost 89 percent of private expenditures in 2011.

There are other causes for concern: in Cambodia, Laos and Myanmar, total health spending has fallen since 2009, and current levels are far below levels reached in the mid-1990s (Figure 1.4). Given constraints on government resources, these three countries also continue to rely heavily on external sources of health financing, possibly posing risks to long-run sustainability. In the case of Myanmar, external sources can be expected to increase further with the entry of more external partners (Figure 1.5). Self-financing options continue to be limited in Cambodia given difficulties with raising domestic tax revenues, and this is likely to persist for some years to come. The share of government revenue in Laos has risen sharply as a result of royalties and resource rents accruing to the government, and therefore the capacity for self-funding has dramatically increased over recent years (Menon and Warr 2013). A related question is whether an increase in public spending on public services such as health will favour the poor? In the case of Laos at least, this appears to be the case (Warr, Menon and Rasphone 2014).

China and Thailand are faring much better than their neighbours in the subregion. In China, while private expenditures still make up the bulk of THE, with a share of 61.5 percent, the share of public expenditures has been rising steadily over the last ten years. Out-of-pocket payments are also slowly being replaced by private insurance, which accounted for almost 44 percent of private expenditures in 2011. Thailand's pattern of health spending has been the most impressive. Public spending has increased steadily over the last few decades to reach almost 71 percent of THE in 2011. Moreover, sources of private expenditures are split evenly between out-of-pocket payments and private insurance.

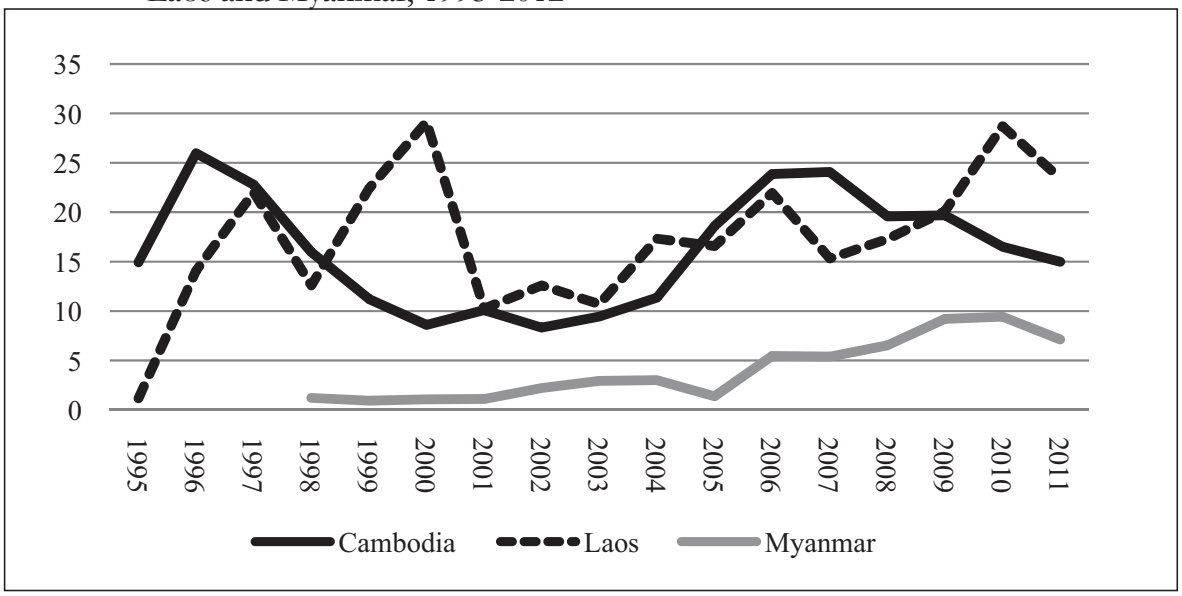
Global experience has shown that encouraging risk pooling through insurance and other prepayment schemes is the best way of achieving universal health coverage, and this is certainly the case in Thailand. Implementation of the Universal Coverage Scheme (UCS) has allowed Thailand to reach nearly universal health coverage, with 98 percent of the population covered as of 2009 (Tangcharaensathien et al. 2011). China's social insurance system already seems to be producing the same results. With their own systems undergoing substantial reforms, Laos and Vietnam will not be far behind. In fact, Vietnam has already started to move away towards capitation and case-mix payment systems like Thailand.

Figure 1.4: Total health expenditure by source, 1995-2012



Source: World Bank (2014), World Development Indicators

Figure 1.5:External sources as a percentage of total health expenditure: Cambodia, Laos and Myanmar, 1995-2012



Source: World Bank (2014), World Development Indicators

Cambodia also seems to be on the right track, with the Strategic Framework for Health Financing 2008-15 and draft Master Plan for Social Health Protection signalling government's intention to adopt a unified social health protection coverage scheme that will extend and combine existing financing schemes (WHO Cambodia Health Service Delivery Profile 2012). This leaves Myanmar with a lot of catching up to do.

4.2 Institutional coordination

Different stakeholders from the public and private spheres are becoming involved in health policy planning and implementation. Even in countries where health sector provision and financing remains predominantly public, there is clearly a movement towards greater private sector and civil society participation. Not surprisingly, however, this transition brings with it several challenges. One common issue facing countries in the subregion is strengthening institutional coordination. This seems to be more pressing in the case of Cambodia, Laos and Vietnam.

In Cambodia, while vertical or upward accountability is functioning effectively, horizontal accountability remains weak due to unclear roles and responsibilities among the different ministries (Cambodia chapter, this volume; World Bank and Asia Foundation 2013). The WHO's report on Cambodia's health service delivery likewise notes continued fragmentation in activities, funding, monitoring, supervision and administrative lines of authority.

The same lack of coordination in planning, implementation and monitoring is evident in Laos. At the planning stage, policy consultation tends to be limited to a group of high-level administrative officials with little knowledge of operational issues, and there are limited opportunities for development partners to bring their evidence-based research to bear on policy deliberations. At the implementation stage, weak lines of

communication prevent policy guidance from reaching the grassroots, and mechanisms are missing that would allow local experiences to feed back into policy-making. Weak coordination among externally funded initiatives has also pushed up transaction costs and led to fragmentation and inefficiency. Meanwhile, monitoring is hampered by the lack of appropriate mechanisms (Laos country paper, this volume).

In Vietnam, creating a close link between agencies responsible for health sector planning, development, policy approval and implementation remains a big challenge. There is "glaring evidence of state failure in oversight, monitoring and evaluation of education and health care delivery, especially locally", citing the absence of grassroots mechanisms for collecting and assessing the needs of communities (Vietnam chapter, this volume). Other challenges include developing comprehensive and inter-sectoral approaches in some service areas, as well as strengthening monitoring and sharing of information with other service levels (WHO Vietnam Health Service Delivery Profile 2012).

In China, the biggest challenge seems to be rationalising the management of health providers across several sectors to improve integration and resource efficiency. There are several health care providers who fall outside the administrative purview of the health ministry, such as medical university hospitals that come under education (WHO China Health Service Delivery Profile 2012).

Lack of institutional coordination also seems to be a major factor behind poor linkages across health care providers. Referral mechanisms between grassroots facilities and higher-level services, and between public and private providers, need to be strengthened. More fundamentally, a better balance needs to be struck in resource allocation across primary, secondary and tertiary services, as well as between rural and urban areas.

4.3 Role of non-state actors

Ongoing efforts to involve a wider swathe of actors in policy-making and service provision and financing is a step in the right direction, particularly in countries where fiscal resources are severely constrained and public sector capacity is weak. Private for-profit as well as non-profit organisations can play a role not just in filling service and financing gaps, they can also be instrumental in raising awareness and mobilising communities. However, this behoves governments to ensure that appropriate governance mechanisms are in place to maximise engagement.

Given the private sector's growing role in service provision and finance, governments must urgently address gaps and weaknesses in regulation and monitoring. This is particularly urgent in countries such as Vietnam and China, where private sector involvement is growing fast. Apart from opening their doors to private providers, it seems China is actively encouraging private investors to sponsor non-profit hospitals, while Vietnam is encouraging private investments in medical equipment in public hospitals (WHO China and Vietnam Health Service Delivery Profiles 2012). Linkages between public and private facilities need to be strengthened, and care should be taken that the expansion in private health care does not come at the expense of publicly provided primary health care. For instance, Thailand's emergence as a medical hub seems to be exacerbating the

shortage of health personnel in public facilities by drawing medical personnel into the private sector (WHO Country Cooperation Strategy, Thailand 2012-16).

Inadequate involvement of communities and end-users in crafting policies and designing interventions often leads to lack of demand for health interventions. Limited opportunities exist for CSOs, communities and end-users to participate in the policy-making process, and participation is still weak in countries such as Cambodia, Laos and Vietnam.

5. Education: resource commitments and institutional frameworks in practice

5.1 Resource commitments

In terms of public resource commitments on education, the GMS countries exhibit large variations (Table 1.3). As a share of GDP, public spending on education now is the highest in Vietnam (6.3 percent) and the lowest in Myanmar (0.8 percent). As a share of the government budget too, education expenditure is the highest in Vietnam (21 percent) and the lowest in Myanmar (4 percent). Although it is difficult to judge what level of public expenditure on education should be considered low or high, UNESCO suggests a benchmark figure of about 5 percent of GDP (UNESCO 2014). Given that, on an average, total government expenditures account for about 20 percent of GDP in most developing countries, public education expenditure should work out to about 20 percent of the government budget.

Table 1.3: Public expenditure on education in the GMS

	Percent of GDP	Percent of Budget
Cambodia (2010)	2.60	13.1
Laos (2012)	4.12	12.1
Myanmar (2011)	0.79	4.4
Vietnam (2010)	6.29	20.9
Thailand (2012)	3.80	17.6
China (2012)	4.00	-
Yunnan (2012)	6.70	19.0

Source: *UNESCO, institute for Statistics (2014),*for Cambodia, Myanmar and Vietnam; Other Country Chapters available in this volume

Only Vietnam at present satisfies UNESCO's benchmark. Overall, lack of public spending is not a major constraint on education delivery in Vietnam; however, there is ample scope for increasing the efficiency of public resource-use (Vietnam chapter, this volume). Although Thailand's public education expenditure is only 3.8 percent of its GDP, the need for improving efficiency of resource use by better teacher and educational quality, not so much a lack of public spending, seems to be the main challenge in the country (Thailand chapter, this volume).

In recent years, Laos is also inching towards UNESCO's benchmark expenditure-GDP ratio. After hovering between 2-3 percent of GDP during 2000 to 2011, Laos' public education expenditure increased to more than 4 percent in 2012-13. However, public expenditure on education remains highly erratic in Laos, and going forward sustaining the recent gains in these expenditures is a major policy challenge (Laos chapter, this volume).

For the country as a whole, China's public education expenditure is about 4 percent of GDP, higher than that of Cambodia and Myanmar but still lower than the UNESCO benchmark. Public expenditure on education in the province of Yunnan, one of the two provinces of China that are part of the GMS, however, constitutes about 6.5 percent of the province's GDP; it also accounts for about 19 percent of the province's budget. Yunnan's public education expenditure figures are comparable to Vietnam's both in its share in GDP and the budget.

Among the ASEAN members of the GMS, the challenge of increasing public expenditure on education is most pressing for Myanmar and Cambodia. Cambodia has taken big strides in public spending on education in the past two decades. Back in the mid-1990s, Cambodia's public expenditure on education was about 1 percent of GDP, but that figure has since more than doubled to 2.6 percent. A further doubling of Cambodia's share of public education expenditure in GDP is needed if the country were to reach the UNESCO international benchmark. Interestingly, Myanmar's share of public education expenditure in its GDP today is very similar to that of Cambodia and Laos in the mid-1990s (Madhur and Menon 2014).

Inadequate public spending on education in Cambodia leads to significant out-of-pocket education-related expenditures by families with school-going children. As a share of daily median household consumption, such out-of-pocket expenditures constituted about 7 percent per primary school child, about 13 percent per secondary student, and about 25 percent per upper secondary student in 2011 (Cambodia chapter, this volume, annex Table 1.3). "[T]here is still room to raise the allocated … funding (on education) by further cutting defence spending and downsizing the government" (Cambodia chapter, this volume). Encouragingly, Cambodia's government plans to increase the share of public expenditure on GDP from 2.6 percent now to 3 percent by 2018; the share of education expenditure in the budget is envisaged to increase from 13 percent now to 20 percent during the same period. (Cambodia chapter, this volume).

The allocation of public education expenditure on the different layers of education has a similar pattern across the GMS countries. The largest share of public education expenditure is on primary (including pre-schooling) education, followed by secondary and tertiary education (Table 1.4). In addition, Cambodia allocates about 13 percent of its public education expenditure on the non-tertiary, post secondary subsector, mostly on TVET. The shares of public education expenditure on TVET in other GMS countries are much lower than in Cambodia, although data limitations should be kept in mind when drawing firm conclusions on this issue.

Table 1.4: Composition of public expenditure on education in GMS

	Percentage to total public expenditure on education					
	Primary	Secondary	Tertiary	Post-secondary non-tertiary	Other	Total
Cambodia (2010)	44.2	17.9	14.6	12.7	10.6	100
Laos (2012)	33.0	25.1	9.7	5.5	26.7	100
Myanmar (2011)	50.6	24.1	19.0	6.3	0.0	100
Vietnam (2010)	42.9	38.2	14.6	4.3	0.0	100
Thailand (2010)	45.8	23.8	16.5	48	9.9	100
China (2012)	31.0	30.7	22.0	6.8	9.5	100
Yunnan (2012)	33.1	28.2	10.9	7.7	20.0	100

Source: *UNESCO, institute for Statistics (2014),*for Cambodia, Myanmar and Vietnam; for China, Chinese Statistic Book (2012); Yunnan, China Education Fund Statistics (2012);and other Country Chapters this volume

5.2 Functioning of the institutional framework

The ministries of education are the lynchpins of the institutional frameworks for education in most of the GMS countries. That said, decentralised delivery mechanisms imply that sub-national education departments/bodies at the provincial, district and commune levels are expected to play major roles in the system. Within this overall framework, however, there some key differences across the GMS countries.

The allocation of the authority and power to organise the delivery of education takes different forms across the GMS countries. In Laos, Vietnam and China, it takes the form of *deconcentration*, where the national government assigns the task of education service delivery to sub-national governments led by officials appointed by the national government; hence the latter act as the centre's agents. In these systems, governance is centralised, but sub-national governments are given a significant degree of autonomy in organising the delivery of education services. In Cambodia and Thailand, it takes the form of *delegation*, where authority and power are exercised by the elected officials of the sub-national governments but the latter's autonomy is limited. Irrespective of whether it is a form of deconcentration or delegation, all the GMS countries have unitary forms of government. None of them, therefore, resort to devolution as in Australia or India, for instance, where the national government transfers to sub-national governments wide-ranging powers for managing local service delivery, indeed for managing most local affairs (UCLG 2008, 2010, 2013).

Despite the wide-ranging deconcentration and delegation of education service delivery to the sub-national governments, there are substantial differences across the GMS countries in the actual amount of public resources routed through sub-national governments (Table 1.5). In China, about 70 percent of all government expenditures are made by the sub-national governments, about 20 percent by the upper and the remaining 50 percent by the lower layers of government. Cambodia is at the opposite extreme, with the sub-national governments spending negligible shares of total government expenditures. In both Laos and Vietnam, sub-national governments spend closer to half of all government expenditures, while the corresponding figure for Thailand is almost half that in Laos and Vietnam.

Table 1.5: Subnational government's share of total public expenditure in GMS countries

	Share of total public expenditure (percent)			Share of total public revenue (percent)			Subnational expenditure _ revenue gap
	Subnational	Upper tier	Lower tier	Subnational	Upper tier	Lower tier	
Cambodia	< 5	na	<5	<1	na	<1	_
Laos	48	na	na	64	na	na	-16
Vietnam	45	30	15	35	25	10	10
Thailand	26	n.a	na	15	na	na	11
China	70	20	50	40	15	25	30

Source: IMF (2006) and UCLG (2010)

Except for Laos, the share of sub-national governments in government revenues, both tax and non tax, is generally lower than their expenditure shares—by about 10 percentage points in Thailand and Vietnam but by as much as 30 percentage points in China. In sharp contrast, the revenue share of sub-national governments in Laos is 10 percentage points higher than their expenditure share. Except in Vietnam, sub-national governments do not have legal authority to borrow funds.

The decentralised education delivery mechanisms face several constraints of institutional coordination too, especially among CLV countries. In Cambodia, democratic decentralisation in general is highly incomplete. Although political decentralisation has progressed well with regular elections held at the sub-national levels all the way up to the commune councils, administrative and fiscal decentralisation has proceeded much more slowly The revenue raising and spending capacities of the various layers of the sub-national governments are thus severely limited (CDRI 2013). This then constrains effective decentralised delivery of a whole range of public services and education is no exception. As for horizontal coordination of education policies and programmes, the multiplicity of government ministries, especially in higher education, leads to a lack of cohesion in implementing education policies and programmes (Sen and Ross 2013). At the minimum, there is a strong need for much better coordination of education policies and programmes between MOEYS and MOLVT (Cambodia chapter, this volume; Lonn and Madhur 2014).

In Laos, although sub-national governments are better resourced, guidelines and regulations are highly inadequate to support implementation of education policies, programmes and projects by local governments (Laos country chapter, this volume). Indeed, "communication is irregular and sometimes not aligned among the centre, province and districts, so policy guidance is not reaching grassroots level, and operational lessons are not fed back to inform policy" (Laos chapter, this volume). Even information sharing, let alone gaps in communication, is weak among the different vertical layers of the government units in the decentralised education delivery system. Quite apart from these weaknesses in vertical coordination, problems plague horizontal coordination between the different actors in the education sector too. In particular, weak coordination among

the various education sector programmes funded by Laos' development partners results in fragmented programme and project interventions, duplications in these interventions, and thus significant inefficiencies in educational resource use. Lack of monitoring and evaluation of the education policies and programmes adds further to the inefficiency of resource use.

In Vietnam, despite the impressive share of public resources, the government allocates for education (both as a percentage of GDP and the government budget) and robust resourcing of the sub-national governments, both policy-making and implementation remain highly top-down processes. Communes have little voice in district planning, districts have little voice in provincial planning, and provinces likewise do not have much say in national-level policy-making and implementation (Vietnam chapter, this volume). Horizontal institutional coordination is also much to be desired, with very weak coordination between MOET and the Ministry of Home Affairs (MOHA) (the agency responsible for government's personnel management), as also between the ministries of education and planning. And the involvement of too many agencies in managing education results in spreading resources too thinly. Indeed, many ministries and local governments push for opening their own universities, colleges or professional secondary schools leading to huge functional overlap among these different parts of the government and inefficient public resource use (Vietnam chapter, this volume).

Thailand has attempted to restructure its education system more than most of the other GMS countries, the most recent one focusing on restructuring the higher education system's administration and management by creating several autonomous agencies. The system has thus become much less centralised and rigid in recent years. Even so, in practice, the institutional framework is far too complex and lacks policy cohesion; this is partly because much of the budget is spent on the bureaucracy (Thailand chapter, this volume). As for horizontal coordination across ministries and development partners, the system appears to be driven in different directions, partly to accommodate the diverging agendas and priorities of the different development partners. Overall, therefore, "… the higher education system has been criticised as aimless, repetitive and lacking in quality and efficiency" (Thailand chapter, this volume).

China channels a very high percentage of total government expenditures through sub-national government expenditures, making it perhaps the most decentralised resource allocator among the GMS countries. Despite this, China's decentralised institutional mechanism for education delivery suffers from the basic problem of poor communication and collaboration of policy-enforcing departments and institutions. Indeed, "there are problems and some basic problems of communication and collaboration among the personnel in every level and department (China chapter, this volume). Yunnan province is no exception to this national-level problem. Moreover, the public resource-sharing arrangement between central and sub-national governments, where the former provides about 70 percent of the education funds and the latter have to generate the remaining 30 percent, works to the disadvantage of poorer provinces such as Yunnan, as these provinces find it difficult to raise their share of resources. Education service delivery thus suffers in poorer provinces such as Yunnan (China chapter, this volume).

5.3 Role of private sector

In the GMS countries, the public sector provides and finances almost the entire education system up to high school level. However, the private sector plays a more significant role in the provision and financing of higher education in all the GMS countries, although the exact extent of that role varies a great deal across countries. In terms of the number of higher education institutions, the private sector's share is the highest in Laos (about 78 percent) and the lowest in Vietnam (13 percent), with Cambodia's figure close to that of Laos, and that of China closer to that of Vietnam (Table 1.6).

Table 1.6: Share of private sector in higher education

	No. of institutions (2011-2012)			Percentage of enrolment in total higher education institution (2011)
	Public	Private	Of which branches of foreign universities	
Cambodia	39	62	1	
Laos	22	77	_	60
Vietnam	187	28	1(2011)	26
Thailand	98	71	2	15
China	1887	836	13 (2011)	18

Source: Madhur (2013) and UNESCO (2014)

In student enrolments for higher education, which is the more relevant figure for assessing the role of private sector, Cambodia tops the list with the private sector's share in higher education enrolments at 60 percent and Vietnam has the lowest share at 15 percent. The corresponding figures for Thailand (18 percent) and Laos (26 percent) are closer to that of Vietnam. Interestingly, in terms of the private sector's share in total higher education enrolments, only Cambodia compares favourably with most other ASEAN countries including Singapore (64 percent), Philippines (63 percent), Indonesia (62 percent) and Malaysia (43 percent).

Cambodia's high share of private sector enrolments in higher education has been, however, a mixed blessing. It is true that opening up higher education for private investment has helped in partially easing the resource constraint on developing the higher education system. But it has also brought in its wake some unique problems such as too much emphasis on liberal arts education of dubious quality at the neglect of higher education in science, technology, engineering and mathematics, the types of skills increasingly demanded by the labour market of a rapidly growing and industrialising country (Madhur 2014).

To some extent, these problems arise because of the lack of a robust regulatory and supervisory framework and, above all, the government's failure in its stewardship role of enabling the private higher education institutions to provide quality education of the right kind to the country's youth. On its part, the government, as the steward of the higher education system, has also not effectively engaged the private sector in developing a long-term vision for the country's education system, the kinds of courses to be offered, and the development of appropriate curricula for higher education. This disconnect will have to be bridged and a stronger public-private partnership has to be

forged if the higher education system, including the TVET segment, is to effectively close the country's emerging skill gap (Madhur 2014).

In Laos and Vietnam, the private sector is much less significant in the education sector than in Cambodia (Laos and Vietnam chapters, this volume). Neither do these countries exhibit significant collaboration between public and private sectors in policy formulation and implementation. In Laos, however, the 2006-07 amendment to the country's education law specifically aims to increase the private sector's role in the education sector. In Vietnam, in view of the emerging skill mismatches in the labour market, a better collaboration between the public and private sector, with a much closer involvement of the latter in policy formulation and implementation, is crucial in the future (World Bank 2013). As in Laos and Vietnam, the private sector's role in education in Thailand and China in both the provision of education and engaging in the development of the long-term vision, policy-making and policy implementation is very limited (Thailand and China country papers, this volume).

5.4 Role of civil society

Along with the government and the private sector, civil society and civil society organisations can play an active role in the education sector. As an agent of change, civil society can engage in policy-making, policy analysis and policy advocacy. It can also play a major role in monitoring the performance of state and private sector educational institutions and enhance their accountability (Cheema 2011). In general, in GMS countries, civil society organisations such as NGOs play a modest role in providing pre-school education. Beyond this, the direct provision of education by civil society organisations is almost negligible in all the GMS countries. Not just that. The major role of civil society and civil society organisations among the GMS countries appears to be in the sphere of monitoring and strengthening the accountability of the state and the educational institutions in providing quality education to the youth. Even here, the role of civil society seems to be severely constrained among almost all the GMS countries.

Take the case of Cambodia. Despite more than a decade of experimentation with political decentralisation and deconcentration, the roles and responsibilities of civil society remain unclear. The introduction of the School Support Committees for participatory management of schools in Cambodia is a welcome initiative; despite this, in practice, local communities' participation in the management of schools is limited, villages do not have an effective mechanism to demand accountability from the schools, and parents do not have a functioning forum to engage productively in education policy-making and implementation (Cambodia chapter, this volume).

In Laos, the Education Development Committees, consisting of villagers, village heads, school directors and teachers, have mandates that are very similar to Cambodia's School Support Committees. Their actual participation in the management of the schools is quite limited, largely because these committees and other local actors often require directions and guidelines from higher authorities; there is thus a lack of local initiatives in implementation (Laos chapter, this volume).

In Vietnam, the 2007 Ordinance on Grassroots Democracy is supposed to encourage and strengthen local participation in public service delivery. Yet, local participation is quite limited since there are no clear guidelines on the implementation of the Ordinance. Indeed, non-state actors do not have even enough information about the Ordinance nor their rights and responsibilities enshrined in the Ordinance, leading to highly inadequate civil society participation in the education sector (Vietnam chapter, this volume).

The picture is not very different in Thailand and China. In Thailand, for example, there are huge gaps in the collaboration between the government and civil society organisations in terms of policy-making and policy implementation for the education sector (Thailand chapter, this volume). Local communities and civil society more generally have limited participation in China's education system, despite the substantial share of public budget allocated to the sub-national governments (China chapter, this volume). That said, it is noteworthy that two of the country's best known civil society organizations in education - China Children and Teenagers Fund and China Youth Development Foundation – have established more than 16,000 primary schools in poor areas and provided education opportunities for more than 5 million poor children and girls students in mountainous regions.

6. Conclusion

Health and education sectors hold centre stage in ensuring that the fruits of economic growth and development are shared more inclusively in developing countries. Recognising this, all the GMS countries attach high priority to providing equitable access to health and education services at affordable prices in their development strategies and plans. To achieve these development objectives, GMS countries have also put in place fairly detailed and decentralised institutional frameworks. Success of the health and education policies depends critically on the resources that a country commits to health and education development and the efficiency with which the allocated resources are managed to get the desired outcomes. Both these, in turn, depend on a multitude of factors, including the incentive compatibility of the entire system and how well the institutional frameworks work in practice

The policies and the formal institutional frameworks in the health and education sectors are broadly similar across GMS countries. The resource commitments, however, vary a great deal across the countries. Equally importantly, the actual functioning of the institutional frameworks in practice also varies a great deal across countries. Lack of effective government coordination, both horizontal and vertical, seems to plague the institutional frameworks for health and education almost across the GMS countries.

Government coordination failures, in turn, render the decentralised systems that have been put in place to deliver health and education services less effective. In other words, the key issue seems to be that although the formal institutional frameworks are quite similar, their actual functioning in practice is beset with many gaps, although the nature and the degree of these gaps vary quite a bit among the different GMS countries. This problem could also be seen as implementation failures: good polices and robust institutional frameworks, but ineffective implementation of these policies by the institutional frameworks in practice. In

other words, the institutional tunnels through which policies are translated into actual health and education outcomes are blocked (bottlenecks) at different layers of implementation to different degrees among the GMS countries.

Most health and education systems in the GMS countries are mixed/hybrid systems, with the state playing a dominant role in services provision and the private sector complementing that role. In addition to direct provision, the state also has what is called the "stewardship role", facilitating and regulating the private sector to work in synchronisation with the national objectives of health and education policies and strategies. There is also a huge diversity in the extent to which the non-state actors – especially the private sector, the civil society organisations, and civil society more generally, participate in the policy-making and implementation process across the GMS countries. That said, civil society organisations and civil society more generally play only a limited role in policy-making and implementation in the health and education sectors in the GMS countries.

The country chapters in this volume come up with several policy options to improve the actual functioning of the institutional frameworks for delivering health and education services specific to their country contexts. Most GMS countries seem to be in need of much better inter-ministerial (horizontal) and intra-ministerial (vertical) coordination, more effective implementation of the decentralised service delivery process, greater role for the private sector, and increased participation by civil society. The role of the state is to ensure all these things but at the same time effectively playing its own role as a steward for the health and the education sectors.

Evidence-informed policy-making and policy implementation is crucial for enabling the state to play this challenging role. Many GMS countries seem to face severe constraints on this front. In particular, Cambodia, Laos and Vietnam (CLMV) highlight this as a key constraint (country chapters, this volume). Even other GMS countries, for example, China, seem to face this constraint although to a lesser degree (Jiang and Shen 2013). In the CLV countries (as is of course truer in Myanmar), there is inadequate domestic capacity for credible policy-oriented development research (UNESCO 2014).

External development partners, especially multilateral institutions such as the International Monetary Fund (IMF), World Bank, Asian Development Bank (ADB), World Health Organization (WHO), UNESCO and UNICEF, do fill this gap to a large extent. Some of the bilateral donors also play a notable but largely a complementary knowledge-provision role, which development partners play in many of these countries. That said, for various reasons, the research priorities of development partners need not necessarily be always aligned with what is most needed for the countries. The CLMV countries would gain vastly by developing credible domestic development policy research institutions, including higher education institutions, which could better align their own research agenda with the development priorities of the country. Such domestic policy research capacity building is perhaps a more sustainable option for CLMV countries to ensure that their policy-making and policy implementation are much more grounded in research evidence.

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Chapter 2
Health and Education in the GMS: The Case of Cambodia

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Executive summary

Using a Human Opportunity Index (HOI) and Institutional Analysis and Development (AID) framework, the study examines policy and institutional factors contributing to access to basic education and health services. The analysis focuses on demand and supply. The study is mainly motivated by the observation that both access to basic and particularly secondary education, and health indicators are relatively low. The objectives of the paper are (1) to identify and analyse current national policies and institutional arrangements that support inclusive development in health and education and (2) to identify areas for improvement or changes in these policies and frameworks in order to achieve more inclusive development in the sectors. Net attendance and on-time completion rates are educational indicators; vaccination coverage, antenatal care and delivery in public hospital are health variables. The paper uses quantitative and qualitative methods. A few rounds of Cambodia Socio-Economic Surveys of households (National Institute of Statistics 2007, 2009 & 2011) are utilised for the former technique, whereas secondary information is analysed for the latter. A village panel data set of 2009, 2010 and 2011 was also constructed for quantitative analysis.

The results show that Cambodia has made considerable progress toward achieving universal nine years of education and is most likely to meet goal 2 of its Millennium Development Goals by 2015. This is evident through the increased coverage and reduced "dissimilarity" index during the observed periods, contributing to a high HOI. For example, the HOI for net attendance improved between 2007 and 2011 for all levels of basic education; however, the upper secondary index is relatively low due to low coverage and uneven distribution. A similar trend is observed for on-time completion. There is no serious gender difference in the two education indicators, and in some circumstances, girls perform better than boys. Parents also invest as much in girls' education as in boys'—a positive achievement attributable to gender-sensitive policies and programmes. The results of AID show that lack of access lies more on the supply than the demand side, particularly the lack of quality; relatively low, albeit growing, government funds for education; corruption in service delivery; low and uncompetitive incentives for teachers; and a lack of systematic coordination. Institutionally, the analysis of secondary data, combined with the results of previous studies, shows that the still weak vertical accountability of the district to the Ministry of Education, Youth and Sport (MoEYS) and limited involvement of local citizens in education matters potentially affect service delivery and teachers' incentives. The study argues that decentralising financial and managerial power to commune/*sangkat* or village chiefs is crucial. The deconcentration and decentralisation programme is an initiative to achieve that; however, discussion on functional assignments and finance is still at an early stage. The policy implication is that action should be taken before more damage is inflicted on the system and its graduates, specifically when the regional economy is becoming integrated and competitive. The authors argue that both national and sectoral education policies and plans are adequate to tackle the challenges. Nonetheless, effective implementation and institutional capacity should be the main focus of reform.

Considerable progress has been made in vaccination of children aged 0-23 months and the percentage of women who seek antenatal care during pregnancy. However, the percentage of women who give birth in public health centres is still low. Area of residence and per capita household consumption are the main contributors to the probability of women delivering using public health facilities. This implies disparities of region (rural vs urban) and family status (rich vs poor). The survey data, however, show increased use of trained midwives over traditional birth attendants, a positive development. The AID demonstrates that that also relies more on supply than demand issues. Remaining challenges in providing quality health services are limited coverage; not enough health facilities, equipment and medicines; and high cost.

While the demand side might also explain the observed low level of interest in education and health, the paper argues that the supply side is the main culprit. Thus, providing 12 years of quality education and some basic health services such as vaccination, antenatal care and public facilities for safe delivery could equalise individuals' opportunities to compete at a later stage. This surely is the basic role of government.

1. Introduction

Cambodia has performed satisfactorily on access to primary education, achieving almost universal access with a net enrolment rate of 96.9 percent in 2012-13 (MoEYS 2013). However, secondary and tertiary education challenges remain in both quantity and quality, constraining efforts to improve human capital. A few observations could be drawn from Figure 2.1, which illustrates net lower and upper secondary attendance rates (NAR) tabulated by time and consumption distribution. The NAR at both levels improved on average during the observed periods and across consumption quintiles. As expected, children in the bottom 40 percent of the distribution had the lowest NAR, and the situation is worrisome even in upper secondary. Despite improvement, children's performance, measured by completion on time, is also an issue, particularly at 12th grade (Table 2.1). Regional disparities also exist, children in rural areas achieving lower completion on time. There seems to be no serious gender gap in the figure at 12^{th} grade.

The results clearly suggest that one unfinished agenda in education and health is to know exactly the root causes of unsatisfactory progress and to examine how important actors could work together to resolve the issues. The study, therefore, investigates how policy and institutional changes could help progress in health and education. The exercise is motivated mainly by the previous results of the country assessment of inclusive development, which suggest that, despite remarkable achievement in growth and poverty reduction in the last two decades, Cambodia's performance in social dimensions, especially health and education, is still below expectations. Therefore making development of those areas more inclusive has become a priority for sustainable and equitable growth.

The objectives of the study are (1) to identify and analyse current national policies and institutional arrangements that support inclusive development in health and education and (2) to identify areas for improvement or changes in national policies and institutions in order to achieve more inclusive development.

This study is surely not the first of its kind. Similar regional and country-specific works examine root causes of lower-than-expected secondary and tertiary progress (quantity and quality). Wan and Francisco (2009) synthesise factors affecting unequal access to basic services and illustrate best practices and policies used by a number of developing countries to make access to services more inclusive, especially for the poor. They examine supply and demand and institutional factors, specifically focusing on governance and corruption. Hang (2014) provides a quick review of progress in education and outlines a reform agenda to improve quality and quantity in Cambodia. The review also postulates some important constraints on progress. However, the exercise lacks an empirical base.

Our work provides an in-depth investigation of the barriers to good service delivery by employing a two-pronged approach—Human Opportunity Index and Institutional Analysis and Development. On education, we focus on basic education for three reasons. We argue that quality secondary education is a precondition for tertiary success. There

are studies that show that more focus should be given to improving secondary quantity and quality. Using Benefit Incidence Analysis, Tong and Phay (2014) conclude that public spending on primary and lower secondary education in Cambodia is pro-poor, while upper secondary spending tends to benefit middle income children. The authors also suggest that more funds should be allocated to primary and lower secondary education if public spending on education increases. Secondly, social and private returns to basic education are higher than to tertiary education. Lastly, we observe the lack of scientific research on education in Cambodia. Although there have been reports on progress and remaining challenges in the sector, they are mostly qualitative and lack an analytical framework. Using Institutional Development Analysis combined with Human Development Index, we provide a more comprehensive examination of the multifaceted interactions within the entire system. There are similar reasons to focus on primary health services because of their significance in poverty reduction and long-term performance of children.

Section 2 briefly describes data sets, while Section 3 discusses results on education and Section 4 discusses findings on health. Section 5 concludes and provides recommendations. Appendix provides detail accounts of the two-pronged approach.

2. Data

Cambodia Socio-Economic Surveys of households (NIS 2007, 2009, 2010 & 2011) are employed for the quantitative part. The study also utilised three rounds of village panel data (2009, 2010 and 2011) to investigate important village attributes that could further explain observed trends. CSES provides the most comprehensive and nationally representative data on a number of socio-economic characteristics. The survey has been conducted every year since 2007 with a sample of 3500 households and every five years with 15,000 households. The survey is in three stages, with the village as primary sampling unit. With this design, we need to account for sampling weight in calculating different estimates. The qualitative part is mainly based on secondary data analysis because of insufficient time to conduct representative key informant interviews.

The variables of interest are as follows. Net attendance rate is the percentage of children in the age group that officially corresponds to primary/secondary schooling who attend primary/secondary school. The on-time completion rate is the percentage of children in the age group that enters the last grade of primary/secondary education. The vaccination rate is the percentage of children aged 0-23 months old who received a vaccination, while the antenatal care rate is the percentage of women who seek care during their pregnancy. Delivery in public health centres is the percentage of women who give birth in public health centres.

3. Results and discussions: Education

3.1 Inequality of opportunity

Barros et al. (2009) argue that three factors influence inequality of access to certain services: individual efforts, the availability of services and circumstances over which individuals have no control. Tables 2.4 and 2.5 illustrate the net attendance rate and

completion on time by school levels. It is worth explaining the meaning of each element and how the results could be interpreted. Average opportunity represents the access rate of a service by eligible children—in this case access to primary and secondary education. It also signifies the availability of the services. The D index indicates how available services are distributed among the subpopulation; it is interpreted as the fraction of the opportunities that need to be reallocated from the better-off to the worse-off to equalise opportunity. HOI summarises the two components into one index. The index could be increased either by raising availability of services and/or improving distribution across population.

In one of the education indicators, NAR in primary education, average opportunity (access) improved to 85 percent in 2011 from 82 percent in 2007. The D index dropped from 7 to 1 percent in the same period, indicating improved distribution of the available service without discriminating, especially against individuals' circumstance variables. Increased average access and improved distribution resulted in a high HOI of 84 percent in 2011, from 76 percent in 2007. The overall lower and upper secondary trends are similar, yet a few observations should be pointed out. First, average opportunity tended to be lower at higher levels. This could mean either the availability of the service *per se* is low or distribution is concentrated. Access to lower and upper secondary education averaged 35 and 21 percent, respectively, during the observed periods. Secondly, the D index was rising, signifying possible discrimination against certain groups, particularly the worse-off. The D index for upper secondary education in 2007 indicated that 31 percent of the available opportunity needed to be reassigned to the poor to make opportunity equal. Lastly, the decrease in access and increase in dissimilarity resulted in a low HOI. Another education indicator is on-time completion rate. Children performed better at sixth grade, having a completion rate of 56 percent in 2011. The D index was also low, 12 percent, in the same year. However, access and distribution become an issue in higher grades, specifically grade 12. The completion rate was only 32 percent in 2011, with a D index of 20 percent. Another observation is an apparent correlation between consumption inequality and inequality of opportunity. This relation is explained by the high D index in education in 2007—a year in which consumption inequality increased (World Bank 2009a: ix).

The calculation of HOI for net attendance rate in lower and upper secondary education by province in 2011 reveals some interesting trends. In lower secondary, HOI in Phnom Penh, Takeo and Battambang is above the national average, Phnom Penh showing the most equal opportunity. Pursat and Siem Reap had the lowest HOI of provinces with sufficient observations for computation. That a number of provinces did not have enough observations to obtain the index is unfortunate, for those areas might be disadvantaged in equality of opportunity. The upper secondary NAR is similar, Phnom Penh having the highest equality of opportunity.

Since the D index controls for individual circumstance variables in the calculation of HOI, it is important to report circumstance components that contribute to differences in access. This will enable us to design specific targeting programmes, if necessary, to reduce such inequality. To calculate the D index, access to and/or completion of

certain services (a binary variable assuming the value of 1 if children have access and 0 otherwise) is regressed on a number of circumstance variables: gender of individual, gender of household head, residential location (urban or rural), age and education of household head, household size and per capita consumption. Logistic regression is used. We then estimate the percentage contribution of each independent variable to the overall inequality of opportunity. Table 2.6 presents the results. Area of residence, per capita household consumption and education of household head substantially explain the probability of a child attending school even though the contribution of each variable varies across time and education level. For instance, at lower secondary education in 2011, area of residence explains 19.5 percent of the inequality of opportunity, per capita household consumption 31.6 percent and education of household head 30.3 percent. In the same year, those three factors were significant also for upper secondary education. Where a child was born contributed 36.9 percent. Education of household head seems significant in explaining access of a child to upper secondary education. The decomposition also shows that the gender of a child does not prevent access. This is an optimistic trend. However, the evidence indicates regional disparities at a higher level of education. The results on the contributions for on-time completion rate are similar (Table 2.7).

The contribution of each circumstance variable to overall inequality of opportunity varies across countries. In Indonesia, for instance, per capita household consumption accounted for 69.1 percent of inequality in secondary education compared to 17.2 percent for education of household head and 11.6 percent for area of residence. In the Philippines, per capita household expenditure contributed 90.7 percent, indicating serious disparities in secondary education due to family background. In Bangladesh, gender is the second most important contributor after per capita consumption (76.9 percent) to overall inequality of opportunity, accounting for 20.8 percent (Son 2012: 10). Barros et al. (2009: 87) also present the contribution of each variable to overall inequality for countries in Latin America and the Caribbean. They find that, for example, parents' education contributed 11.7 percent to the D index for the probability of completing sixth grade on time and 8.7 percent for gender. However, in Guatemala, parents' education accounted for 20.6 percent of the overall inequality and gender for 2.2 percent. Gender disparities in completing sixth grade on time were highest, among the countries examined, in Nicaragua, accounting for 11.2 percent.

3.2 Barriers: Demand and supply of education

The results in 3.1 clearly suggest that redistribution initiatives might be considered by the government if existing opportunities are to be made available to all. However, redistributive programmes are controversial and complex because of the trade-off between efficiency and distributive effects. It is sometimes unfair to put all the pressure on the government, for low performance might be attributable to individual efforts to grasp prevailing opportunities, not to the availability of services. Therefore, scientifically understanding which force determines observed unsatisfactory progress is crucial for policy decisions.

3.2.1 Demand side

Although there are low cost and affordable services available, the poor might decide not to use them. The World Bank (2009b) postulates factors that potentially cause households not to invest or to under-invest in children's education; two important ones are misinformation and principal-agent problems.

Misinformation refers to the mistaken belief that the return on sending a child to school is lower than the earning a child could contribute to household income. It is difficult to compare these figures, but one way to do so is proposed by the World Bank (2009b). That is to compare the perception of parents on the return on education and the Mincerian return calculated using household survey data. On return to education, on average, empirical literature shows a positive rate of return to an additional year of schooling. For instance, Ashenfelter and Krueger (1994) showed that wages increased by 12-16 percent if an individual spent an additional year in school. Lynch (1992) postulated that all types of training are associated with higher wages. One of the empirical studies using the 2007 Cambodia Socio-Economic Survey is by Lall (2008). Using ordinary least square and IV regressions to control for age, the author found that overall returns to education were 7 percent for males and 6 percent for females. The returns were highest in urban areas (8-8.6 percent) and lowest in rural areas (3.9-5.8 percent). In addition, returns in private jobs were higher than in public employment for both sexes, but, the gap had declined significantly. This is important information that could be used in awareness-raising campaigns to inform parents about the long-term benefits of keeping children in school. What is lacking, however, is a study on the rate of return to education as perceived by parents. That is beyond the scope of the current study. Nonetheless, some proxy indicators could be used to show the relation. Table 2.11 documents eligible school-aged children's reasons for not attending school. During the observed periods, the contribution to household income was an important issue preventing school attendance. Low living standards were also reported. Nonetheless, questions of data accuracy should be noted here. The estimates are calculated from cross-sectional data; thus, sample selection could affect the consistency of the results.

The existence of large gender differences in children's education is an indication of a principal-agent problem, the situation in which parents decide to invest in certain group of children but not others. The "dissimilarity" index seems to suggest that there is no serious gender discrimination in access to secondary education; typical parents spent as much on girls' education as on boys'. In addition, the ministry has been trying to ensure that its policies are gender balanced and in certain cases are biased in favour of girls and women. In 2012-13, for instance, the net enrolment rate at primary school for girls was 97.0 percent and for boys 96.9 percent (MoEYS 2013). Our results similarly support the conclusion that there is gender parity on net attendance and on-time completion rates for boys and girls in all 12 years of education (Table 2.1).

High opportunity costs and out-of-pocket expenses are issues particularly constraining poor households from keeping children in school. These costs increase with the level of education. One of the challenges to achieving universal primary education is the

high private costs perceived by farmers of keeping their children in schools for 10 years or more (RGC 2011). Table 2.2 presents mean out-of-pocket expenses per enrolled child as a share of daily median consumption. A few observations are in order. First, household expenses of all consumption quintiles and education levels increased during the observed periods. For instance, the poorest 20 percent of the distribution spent about 10.4 percent of the median consumption per day for boys' education and 8.6 percent for girls' in 2011, a 8.3 percentage point rise for boys and 6.7 percentage points for girls from 2007. The share of expenditure in 2011 was 6.4 percent (boys) and 7.4 percent (girls) in primary school and 26.3 percent (boys) and 25.2 percent (girls) in upper secondary school. The increased spending signals both good and bad news. The good news is that the poor also value and are willing to invest in their children's education. The bad news is that they may face trade-offs between an acceptable level of nutrition and good education for their children. The pattern is even more evident when expenses are disaggregated by public and private education (Table 2.3). Households spent more on private than public education, which is expected because Cambodia's children are entitled to 12 years of free education; the expenses reflect indirect costs that are households' responsibilities. The increased expenses on private education were significant during the observed period, increasing to 20.0 percent for the poorest 20 percent in 2011 from none in 2007. The downside of this development might be a decreasing confidence of households in public education.

Other studies also find significant differentials in household expenditure on education per enrolled child and high out-of-pocket expenses in Cambodia. The World Bank (2009a: 61) found that in 2007 the poorest 20 percent spent KHR22,944 (USD6) per annum per enrolled child in primary school, KHR62,836 (USD16) in lower secondary school, and KHR92,238 (USD23) in upper secondary school. The ratios between the middle and the poorest 20 percent were 1.7, 1.5 and 2.5 in primary, lower and upper secondary schools, respectively. The ratios between the richest and poorest 20 percent were 10 in primary, 6 in lower secondary, and 7 in upper secondary. These figures, however, mask quintile differences in expenditure on public and private education. RGC (2009: 58) also acknowledges the need to reduce direct and indirect costs in access to education.

3.2.2 Supply side

A. Policies, plans and reform agenda

Policies, programmes and achievement in education are outlined in the National Development Strategic Plan 2009-13 update (RGC 2009) and the 2014-18 NSDP (RGC 2014). The latter's plan on education has been designed based on the lessons from the previous plan and aims to address remaining and emerging challenges to the three policy pillars: (1) "ensuring equitable access for all to education services"; (2) "enhancing the quality and relevance of learning: all children and youth have a relevant and quality learning experience, enabling them to contribute effectively to the growth of the nation"; (3) "enhancing effective leadership and management of education staff: educational services are provided effectively and flexibly". To achieve these, the MoEYS has its own Education Strategic Plan and other sectoral policies. It has adopted monitoring

indicators, from gross primary and lower secondary enrolment and completion rates to gross enrolment rate and number of upper secondary schools. MoEYS aims to achieve 100 percent net enrolment and completion rates at primary school for both boys and girls by 2017. Achieving high gross, net and completion rates at upper secondary school is still a challenge; the ministry projects a 45.3 percent gross enrolment rate at upper secondary by 2017. The number of upper secondary schools is projected to increase to 668 in 2017 from 433 in 2013. The plan also outlines the intention to increase technical high schools to seven in 2017, enrolling 3000 students.

The Education Strategic Plan (MoEYS 2014b) also emphasises early childhood education as one of the main drivers for school performance at higher levels and outlines initiatives. The programmes also target children in disadvantaged communities. Between 2009 and 2011, 424 early child classrooms were constructed to serve 7462 children aged 3 to 5 years. A preschool teacher training centre was built in Phnom Penh (Hang 2014). The NSDP 2014-18 also intends to expand access to home-based, community and preschool education to at least 80 percent of children.

Other supply side issues include insufficient schools and classrooms, high teacher absenteeism due to low salaries, high pupil-teacher ratios and low quality inspection. The number of schools increased between the 2009-10 and 2012-13 academic years, to 11,370 in 2012-13. Although rural areas are home to more schools (10,037 in 2012/13), the number of rural schools grew by only 12.0 percent compared to 17.0 percent in urban areas (MoEYS 2009, 2010, 2012 & 2013). There was a 48 percent increase in the number of preschools in the same period, indicating the government's focus on early childhood education. The number of lecturing staff rose 5.0 percent—11.0 percent in urban areas and 4.0 percent in rural zones. This confirms the ongoing challenge of moving more teachers to rural and remote areas, given the risks and low incentives. Female teaching staff increased 13.0 percent overall—14.0 percent in rural areas and 10.5 percent in urban areas. Upper secondary female teaching staff accounted for only 3.5 percent of the total lecturing staff or 27.5 percent of all upper secondary staff and the growth rate dropped 5.6 percent between 2012-13 and 2009-10 academic years (MoEYS 2009, 2010, 2012 & 2013).

The primary school pupil-teacher ratio for 2012-13 was 48.5, not significantly changed from 2009-10. The ratio is high compared to that of other countries, for example, China (18.2), Laos (27.2) and Vietnam (19.4) in 2012 (World Bank 2012). The lower ratio for upper secondary, at 21.6 in the same year, reflects a lower enrolment rate rather than increased teaching staff. Teachers in rural areas have more of the burden of many pupils, and classrooms there are more crowded.

B. Budget allocations

Cambodia in 2010 spent 2.6 percent of gross domestic product and 13.1 percent of government expenditure on education. Those figures are lower than in other ASEAN countries. In the same year, Vietnam allocated 6.3 percent of GDP and 20.9 percent of government expenditure. Education expenditure in Laos was comparable to Cambodia's

at 2.8 percent of GDP and 13.2 percent of government spending. Thailand spent 3.8 percent of GDP and 16.1 percent of government expenditure, but the spending increased to 5.8 and 24.0 percent in 2011 (World Bank 2010, 2011). As a percent of government expenditure, spending on education in Cambodia grew 14.0 percent a year during 1995-2012 (authors' calculations using data from ADB 2013), indicating growing attention by the government. The biggest government expenditure categories were general public services and defence. Between 1995 and 2012, expenditure on general public services accounted for, on average, 20.0 percent, growing by 20.0 percent annually. The annual growth rate of expenditure on defence averaged 6.0 percent; its share of total government expenditure was 32.6 percent. Thus, the government could consider reallocating money from these sectors to education.

Cambodia seems to focus more on primary education. In 2010, primary education accounted for 41.8 percent of the total education expenditure, secondary education for 17.6 percent and tertiary education 14.5 percent. The aim is to fast-track a universal nine years of education. However, spending per primary student is still low at 6-7 percent of GDP per capita in 2010 (Lall 2008: 1; World Bank 2010). Recent data on spending per secondary student are not available; however, the World Bank (2001) estimated that the country's expenditure per secondary student in 2001 was 6.1 percent of per capita GDP, comparable to that per primary student.

Figure 2.2 illustrates actual and estimated recurrent funding allocated to selected sectors and ministries during previous planning cycle and 2014-18. It shows that a growing share of the budget will be allocated to social administration—information, public health, education, culture, environment, social affairs, religions, and woman affairs—averaging 40.6 percent per annum of the total government expenditure, while spending on general administrative services is maintained. There is also an indicative commitment to reduce gradually expenditure on defence and national security, to 19.1 percent of the total budget in 2018. The share allocated to the MoEYS gradually increases to 19.6 percent. However, education expenditure will account for 3.0 percent of GDP in 2018 (MoEYS 2014b: 51). The indicative budget allocations are a good sign of growing commitment to shift spending from the armed forces toward social activities and programmes. However, the government also needs to ensure that funds allotted in the budget are consistent with actual disbursement.

C. Conditional cash transfers

School, household and individual interventions have been adopted to increase school enrolments and attendance: de-worming for school-age children, school construction, additional teachers, vouchers for private schooling, provision of school meals, textbooks and materials, bicycles and uniforms, and conditional cash transfers.

Conditional cash transfer (CCT) programmes either conditional on keeping school-age children in schools or going to health centre for regular health check are intended to increase the use of basic services like education and health and to tackle short-term consumption poverty. Success stories include Brazil, Mexico, Colombia, Ecuador,

Honduras and Nicaragua. Transfers range from 30 percent of household consumption in Nicaragua and 20 percent in Mexico to 2-3 percent in Cambodia (World Bank 2009b: 3). The programmes usually target the poor as determined by proxy means tests, particularly geography and household attributes. CCTs aim to raise short- and long-term outcomes of beneficiaries. Short-term outcomes encompass mainly increased use of education and health services and reduced present consumption poverty. Longer term outcomes might include reduced child labour, increased employment and wages and increased human capital accumulation. Most empirical studies (see World Bank 2009b for a more comprehensive review of literature and documentation of CCTs in various countries) on the effects of CCTs show that such programmes have achieved their objectives. In addition, they also reduced consumption poverty of beneficiaries. Ravallion and Wodon (2000) find that enrolment subsidy programmes increase school enrolment and reduce child labour.

Similar programmes in education and health have also been implemented in Cambodia even though they do not have all the characteristics of CCTs. A few are school breakfasts and the distribution of uniforms, bicycles and learning materials. Another initiative is the scholarship programme under the Cambodia Education Sector Support Project, which provides scholarships to poor students to keep them in lower secondary school. One example is from the Japan Fund for Poverty Reduction with support from the Asian Development Bank and UNICEF. The offered scholarships were USD60 for students with the lowest drop-out risk in large schools and USD45 for those with the next lowest risk (Filmer & Schady 2009: 7). Using administrative data plus a survey of selected students who did or did not receive the scholarship, Filmer and Schady (2009) found a significant increase among beneficiaries in enrolment and attendance of 25 percentage points. However, the authors found no evidence that the scholarship increased the ability of beneficiaries in mathematics and vocabulary tests. There was also no statistically significant effect of the programme on other outcomes: knowledge of health practice, future expectations and adolescent mental health. The authors also cautioned about potential selection bias. Other studies found no significant impact of such programmes on consumption poverty of recipient households (World Bank 2009b). However, this is expected because poverty reduction was not the initial objective of the intervention, and the amount given was relatively small.

Experience in Cambodia and countries that have implemented CCTs has created optimism about using the programmes to increase utilisation of basic services and partly to tackle inequality through redistribution. Cambodia's government should consider raising the scale of existing or upcoming programmes because of their limited coverage. Designers of CCTs should consider transfers conditional not only on the use of services but also on other indicators such as good performance in school.

D. Quality of service delivery

Cambodia faces not only high drop-out and relatively low completion rates in secondary education but also a lack of quality among secondary graduates. Lack of quality is also observed in tertiary education. The World Bank (2010) recommends immediate efforts to improve the quality of education to prepare the next generation for the labour market. There also exist regional differences in the quality of general education, ranging from the lowest performing province, Ratanakkiri, to the highest, Phnom Penh (UNDP 2011). Wan and Francisco (2009) argue that inadequate and insufficient services hamper access even when households could afford the services.

Lack of quality in general and higher education reduces the quality of graduates and diminishes confidence in public education. Out-of-pocket expenses for private education increased between 2007 and 2011 for all consumption quintiles (Table 2.5). This trend implies two things. It suggests the growing attention that parents pay to their children's education through increasing investment. On the other hand, increased private education expenses could put more burdens on households, particularly in the poorest 40 percent given their already-stretched situations.

3.2.3 Roles of development partners

Development partners have been financially and technically crucial in promoting and improving education in Cambodia. The limited financial and human resources allocated by the government have been complemented by aid. Between 2001 and 2013, total aid disbursement amounted to USD1.2 billion, averaging USD94.7 million. The growth rate, however, shows significant fluctuations (Figure 2.6). Bilateral and multilateral development organisations funding education-related projects include the EU, US through USAID, France, South Korea, Sweden, UNICEF, UNESCO, World Bank, ADB and JICA.

UNICEF, for instance, focuses more on preschool and basic education, aiming to increase outreach and sustainability of child learning, specifically early childhood education. UNICEF also assists the government in promoting central and local institutional capacities to manage implementation of the Education Strategic Plan. Other development partners assist in other levels of education, mainly tertiary and technical and vocational education training.

The Education Sector Working Group, which is chaired by UNESCO, coordinates among development partners who have intervention programmes in education. Some of its responsibilities are to: (1) share education-related information, (2) organise policy dialogue between development partners and donors, (3) establish joint programmes to avoid overlaps, (4) provide technical support to MoEYS in the implementation of the Strategic Plan and Annual Operational Plan, (5) organise capacity building courses

and coordinate key events on education and (6) lead the discussions on Education for All, teacher training and non-formal education. The group can be a good platform for development partners to achieve harmonisation and effectiveness in aid delivery and to avoid unnecessary duplication.

3.2.4 Institutions: Governance and coordination

Figure 2.5 illustrates the hierarchy of administration and management of general education. There are four levels: central, provincial/municipal, district and school. The MoEYS is responsible for designing policies and strategies, providing guidance, examining budget plans and ensuring education quality.[1] Provincial or municipal officials lead and manage through the Provincial Office of Education. The District Office of Education works closely with schools to ensure that central policies and guidance are implemented and quality is assured. The district office also performs regular school inspections through its District Training and Monitoring Team. One of the major tasks of the schools is to prepare an annual budget (school development plan), which is reviewed by provincial and district offices and submitted to MoEYS for approval. Local communities also play important roles in education matters. The Education Strategic Plans for 2009-2013 and 2014-2018 (MoEYS 2010, 2014b) emphasised the engagement of local players, particularly commune councils, parents and elders, in the planning and execution of activities.

Local School Support Committee members are trusted and respected citizens nominated by the village chief and/or commune chief, agreed upon by the school director and approved by the District Office of Education (World Bank & Asian Foundation 2013: 48). Since 2012, the MoEYS has issued guidelines on members, roles and responsibilities of primary and secondary support committees.

A Primary School Support Committee represents communities in participating, developing and, to a lesser extent, implementing planned activities. Its establishment and functions are given in guideline No. 30 of the MoEYS issued in 2012. The committee consists of 6-12 members according to the size of the school. Positions are honorary chair, advisers, chair, deputy chairs and members. The honorary chair might be elected from local authorities (commune/sangkat chief or councillors, head monk or private donor). Advisers could be the school director, retired education official, elder, community representative or local authority. Duties of the committee include: (1) formulating, implementing and monitoring the school's plan, (2) enrolling children, (3) monitoring students' learning, (4) generating revenue and mobilising funds and (5) preventing irregularities in and outside schools. A Secondary School Support Committee has similar purposes and responsibilities. It might have five members for a small school, seven for medium and nine for large. Positions are chair, vice-chair, accountant, cashier and members. A lower secondary committee is officially recognised by the commune/

1 Refer to Sub-decree 84 on the "Organisation and Functioning of Ministry of Education, Youth and Sport" for a detailed description of tasks and responsibilities of MoEYS and its various departments.

sangkat and upper secondary by the district. Duties and operational arrangements are outlined in Guideline No. 21 issued by the MoEYS in 2012.

There is evidence that the roles and responsibilities of community players have been unclear and largely confusing and overlapping. The World Bank and Asia Foundation (2013) examined institutional arrangements and their impact on local basic services. Some of the findings on education include: (1) voice and participation of local citizens are limited even with the establishment of school support committees, which focus mainly on providing financial support; (2) villagers tend to have less power to demand accountability for the quality of education, implying limited horizontal accountability; (3) parents are not engaged enough in education services because there is no effective forum; and (4) district accountability to MoEYS officials remains weak, particularly because of the lack of effective monitoring mechanisms.

Another issue in education governance is corruption, which is not uncommon in developing countries and has jeopardised the effectiveness and efficiency of services delivery and affected incentives of service providers, particularly teachers. Bribes, high absenteeism among teaching and non-teaching staff, lengthy and complicated bureaucracy and nepotism are some examples of governance and coordination issues. Rajkumar and Swaroop (2008) studied empirically the correlation between governance, public spending and outcomes and found that outcomes are positively associated with good governance. This is because good governance ensures effective and efficient use of public money. Davis (2003) illustrated how corruption affects accountability and quality of service delivery in water and sanitation in south Asia. Some of the corruption the author documented included field officers taking bribes from households before connecting water pipes and officials receiving favours during bidding for government projects. Gupta et al. (1998) analysed the effect of corruption on inequality and poverty. The authors argued that corruption increases inequality and poverty, reduces the progressiveness of tax systems and effectiveness of social spending and, most importantly, constrains the formation of human capital.

High absenteeism among lower and upper secondary teachers reflects the problematic incentive structure and ineffective public human resource management. It is obvious that teachers are demanding decent pay so that they can concentrate on teaching instead of using teaching hours for secondary occupations to compensate for the insufficient public salary. Our results also indicate incentive problems: half of the village chiefs interviewed in 2011 reported that low living standards of teachers are one of the most pressing constraints (Table 2.10).

Coordination in service delivery is also problematic. Lack of systematic coordination in education and other sectors is often cited. Sen (2013) states: "Cambodia's current higher education system is characterised as having many competing governing powers in the State, an anarchical and minimally regulated market environment, and a gradually weakening academic community."

3.2.5 Village attributes

Village characteristics are also important to explain the propensity of children to use certain basic services. Table 2.9 presents the evidence. Half of the surveyed village chiefs reported having one primary school in their community, but the status did not change much during the observed periods. A lack of village secondary schools constrained children's access; children needed to commute to nearby villages or even other communes to attend lower and upper secondary school. The average distance to the nearest upper secondary school in 2011, for instance, was 7.4 km, and the fact that 50 percent of means of transport were bicycles and the long distance partly explain low access. Villages which have lower and upper secondary schools continued to face challenges to quality and effectiveness. They include low living standards of teachers, budget constraints, insufficient teaching materials and low village living standards (Table 2.10).

An initiative to tackle the number of schools is the "SUNTUK Declaration on One Commune, One Lower Secondary School" officially announced by the prime minister in February 2008. During 2012-13, 149 of 1633 communes/*sangkats* (39 *sangkats* in Phnom Penh) did not have secondary schools (MoEYS 2014a). Conditions of some communes/*sangkats* are not suitable for school construction.

4. Results and discussions: Health

4.1 Inequality of opportunity

Coverage and distribution of health indicators—vaccination, antenatal care and delivery in public hospitals—improved between 2007 and 2011 (Table 2.12). Access to vaccination, for instance, was nearly universal, reaching 99 percent coverage in 2011 and almost evenly distributed (D index equals 1 percent). Frequency of pregnant women receiving regular medical check-ups was also high at 92 percent in 2011 and depicted good distribution. Nonetheless, the percentage of women who gave birth in public health centres was relatively low, but improving, at 70 percent. The decomposition results (Table 2.16) show no single circumstance variable dominating the probability of access to vaccination, even though gender of children and education of household head seemed to be relatively significant in 2011. Descriptive statistics also show no significant difference in access to vaccination of children by consumption quintiles, regions or gender. Utilisation of publicly provided vaccination increased across quintiles and region (Tables 2.12 and 2.13).

Area of residence and per capita household consumption were the main contributors to the probability of women seeking antenatal care during pregnancy. For instance, only 79 percent of women residing in rural areas sought antenatal care, compared to 96 percent in Phnom Penh and 94 percent in other urban areas. However, the percentage of women in rural areas receiving antenatal care increased to 90 percent in 2011. Differences were also observed among women in different consumption quintiles. In 2009, only 73 percent of women in the poorest quintile reported seeking the care, compared with

86 percent of women in the middle quintile and 90 and 93 percent of those in the next and richest quintiles. The two figures might not be mutually independent since living standards in rural areas are usually lower than in urban areas. Thus, public policies aimed at increasing the coverage of services to rural areas are as important as raising income (consumption). Area of residence, per capita household consumption and age of household head were the main contributors to the probability of women delivering in public hospitals. Descriptive statistics show that only 34 percent of women in rural areas delivered in public hospitals in 2009, compared to 54 and 65 percent in other urban areas and Phnom Penh. The good news is that the rural figure increased to 65 percent in 2011 (Table 2.14).

Other studies also found that area of residence and per capita household consumption are the main contributors to inequality of opportunity for a number of basic education and health services. Son (2012) decomposed the contribution of circumstance variables explaining the probability of access to sanitation and safe drinking water in several ASEAN countries. The contribution of area of residence ranged from the lowest, 8.5 percent, in the Philippines to the highest, 89 percent, in Sri Lanka, indicating a serious regional disparity in coverage. Per capita household consumption, the second main contributor, ranged from 9.1 percent in Sri Lanka to 89 percent in the Philippines. Area of residence accounted for 79.6 percent of overall inequality in access to sanitation in Indonesia, compared to only 2.5 percent in the Philippines.

4.2 Barriers: Health services demand and supply

Access to vaccination and the use of antenatal care have improved among children and women in different consumption quintiles and regions. Nonetheless, the percentage of women who give birth in public health centres is still relatively low, and there are consumption and regional differences in seeking delivery services. In what follows, we discuss some demand and supply factors that could shed light on delivery in public health facilities. We also discuss factors contributing to the observed low quantity and quality of health services.

4.2.1 Supply side

A. Policies, plans and reform agenda

National health policies are specified in the Rectangular Strategy III, the base document for NSDP 2009-13 and 2014-18. The goal is to build capacity and develop human resources to improve health services. Five policy pillars are (1) improving health services delivery, (2) improving health financing, (3) increasing human resources for the health sector, (4) enhancing health information system and (5) improving health system governance through decentralisation and deconcentration. To achieve these goals, the Ministry of Health developed the Health Strategic Plan 2008-2015 (RGC 2008), which tackles three areas: reproductive, maternal, newborn and child health; communicable diseases; and non-communicable diseases and other health problems.

HSP 2008-2015, a sectoral strategy document, presents progress in improving reproductive, maternal, neonatal and child health, including the utilisation of antenatal

care, birth delivery attended by a doctor or trained midwife and increased immunisation. However, it highlights remaining challenges, particularly the still lower-than-expected use of public child and maternal health services. Inequality of access to the services by region and family background is also highlighted. The strategy to address these issues is based on four strategic documents: the National Strategy for Reproductive and Sexual Health, the Child Survival Strategy, the Five Year Strategic Plan for National Immunisation Programme and the National Nutrition Strategy (RGC 2008: 51). Priority actions and targets for health services in HSP 2008-15 will be implemented in the 2014-18 National Strategic Development Plan. The two core indicators are the percent of births delivered by trained personnel and the percent delivered by trained personnel at health facilities. The target for the former by 2015 is 80 percent from a baseline (2005-08) of 44 percent and for the latter 70 percent from 22 percent (RGC 2008: 54).

One of the factors constraining women from using public health services for delivery is a lack of trust in the capability and ability of health personnel at public facilities. Thus, two points of the reform agenda are to improve human resources and health system governance. The former includes implementing the suggestions of the Midwifery Review and the High-Level Midwifery Taskforce and strengthening technical skills and competencies of health professionals. The latter encompasses the design and implementation of a code of conduct for the health workforce and remuneration.

B. Budget allocations

Overall, expenditure on health averaged 6.0 percent of GDP between 2000 and 2012, which is comparable to that in Japan, South Korea and Vietnam (World Bank 2013). The issue, however, is still the low public recurrent and capital health expenditure from government budgets, external borrowings and grants and social health insurance funds. In 2012, for instance, public health expenditure was 1.3 percent of GDP. In the same year, health expenditure in Japan was 10.1 percent of GDP in 2012 with 8.3 percent came from the public expenditure. Other countries with relatively high public expenditure health included South Korea, China, Malaysia, Thailand and Brunei Darussalam (Figure 2.3). Cambodian health expenditure per capita (current USD) averaged USD34 annually between 2000 and 2012, with an average growth rate of 8.0 percent a year, reaching USD51 in 2012. Overall, Cambodia has the lowest public health expenditure as a share of total health expenditure (higher only than Myanmar, if available Myanmar data are accurate).

Government expenditure on health grew 21.0 percent annually between 1995 and 2012 and is expected to increase further during 2014-18 (authors' calculations using ADB 2013). As a share of total government spending, health expenditure averaged 9.2 percent during the same period. However, the recurrent budget for 2014-18 indicates an average of 14.0 percent per annum. This is a good sign that the government is willing to allocate more funds to public health.

Low public expenditure might largely explain the inadequate supply of health facilities and services. Excluding Myanmar, Cambodia has the lowest number of hospital beds

per 1000 people (0.7). Cambodia also has the lowest number of nurses and midwives and physicians (0.9 and 0.2, respectively). Out-of-pocket expenses as percent of total health expenditure are the second highest. This might present another burden, particularly on the poorest 40 percent of households (See Table 2.17).

Development partners play important roles in resource mobilisation for the Ministry of Health. They are helping under a Sector Wide Management Framework to implement the HSP. The aim is to provide greater ability of the government to manage and implement its strategies. This also presents challenges for the MoH needs to strengthen its capacity to manage financial and human resources. Development partners disbursed around USD1.7 billion between 2001 and 2013, with an average growth rate of 7.1 percent annually (Figure 2.4).

4.2.2 Institutions: Governance and coordination

The management of the health system is divided into central, provincial and district levels. The Ministry of Health, the highest body, is responsible for tasks from policy design to resource mobilisation, to monitoring and evaluation of health targets and outcomes and overall coordination within the system and with other ministries. The provincial tasks consist of linking the MoH with operational districts (ODs), ensuring equitable allocation of resources, implementing policies put forth by the centre and monitoring and evaluating targets and outcomes. ODs, which consist of referral hospitals and health centres, implement health policies and guidelines. ODs are also the centre of attention in efforts to decentralise power to sub-national bodies (RGC 2008).

The World Bank and Asia Foundation (2013) provide a comprehensive examination of the governing structure of the health system, focusing specifically on local players. Apart from central, provincial and district actors, there are commune councils, village health support groups, non-state actors and, of course, end users. A few findings of the study include: (1) there is not much engagement by citizens although there are available mechanisms for them to engage; (2) there is a lack of demand for participation; and (3) "upward accountability" is functioning effectively, whereas "horizontal accountability" is still limited due to unclear roles and responsibilities.

4.2.3 Village characteristics

Table 2.18 illustrates availability of health facilities and services in villages as reported by village chiefs. The calculations were done using pooled and panel data in 2009, 2010 and 2011 to examine possible biases due to sample selection. Variables of interest range from facilities to health personnel (formal and informal). It should be noted that pooled and panel data provide similar estimates. A few observations could be obtained. First, there is a lack of public and private health facilities and centres. Only 17.5 percent of interviewed village chiefs in 2009 reported having private clinics in their villages. However, the percentage increased to 20.3 percent in 2011, implying in an increase in service coverage. Second, the availability of referral, provincial, national and private hospitals is rare, and the situation did not change much during the survey period. This might be the direct effect of low public health expenditure. The good news, however, is

that the number of doctors, nurses and trained midwives increased during the observed period. Third, it is interesting that the role of traditional birth attendants and traditional healers decreased even though the practices are still relatively prevalent.

Table 2.19 presents some of the most important and pressing health services issues (public and private) for the people in villages. Three issues that stand out are inadequate medicines and drugs, the expense of health services and the long distance people need to travel to receive better care. The percentage of village chiefs who reported that health services in their locality are still too expensive dropped from 25.1 percent in 2009 to 18.5 percent 2011, indicating a deduction in health care costs resulting from supplementary programmes. In addition, village chiefs reporting that health services in their villages improved in the last five years increased from 79.2 percent in 2009 to 90.4 percent in 2011 (Table 2.20).

5. Concluding remarks and recommendations

Lack of affordable access to basic education and health, particularly by the poor, is not uncommon in developing countries. Making access inclusive would be popular and is a target the government should aim for. Cambodia has performed relatively well on net attendance and on-time completion rates in primary education, but access to lower and upper secondary schooling remains characterised by limited coverage and uneven distribution between rich and poor and urban and rural areas. On health, coverage and distribution of vaccination and antenatal care are good, but the percentage of women who give birth in public health centres is still low due to limited coverage.

Based on the analysis, the study provides the following recommendations:

- Empirical studies have clearly shown that corruption and nepotism in service delivery negatively affect social spending, jeopardising human capital formation. The recommendation, therefore, is that corruption be seriously dealt with.

- The authors recommend scaling up supplemental programmes similar to conditional cash transfers. This would reduce out-of-pocket expenses of poor households, thus increasing the probability of investing in children's education and basic health services. Scaling-up should focus on increasing the number of beneficiaries and the amount of transfers. Designers need also to consider conditioning the transfers on outcomes (e.g., school performance, nutritional status of children), not only utilisation of basic services. However, CCT-like programmes need strong capacity of implementing institutions and quality monitoring and evaluation mechanism to ensure that they achieve the intended purposes.

- National and sectoral education and health policies seem adequate to tackle the problems at hand. However, the inputs (funds and institutions) need to be provided to deliver effective services and achieve intended outcomes.

- Decentralising of financial and managerial decisions through clearly defined roles and responsibilities of commune/*sangkat* councils and support committees should be fast-tracked. Functional assignments and funds need to be explicit.

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Annex Tables

Table 2.1: Completion on time (%)

	Sixth Grade			Ninth Grade			Twelfth Grade		
	2007	2009	2011	2007	2009	2011	2007	2009	2011
Quintile									
Poorest 20%	20.6	32.8	42.5	44.1	28.5	65.6	0.0	0.0	22.2
Next Poorest 20%	31.1	36.9	50.4	34.9	41.0	39.0	0.0	20.0	25.5
Middle	39.0	45.9	54.2	40.7	45.7	52.5	5.8	15.7	18.2
Next Richest 20%	41.0	49.1	69.8	49.3	52.1	46.0	19.9	17.4	22.3
Richest 20%	75.6	59.5	68.8	75.8	61.2	59.3	32.1	32.6	58.2
Region									
Phnom Penh	69.0	72.0	82.0	69.0	66.0	75.0	34.0	44.0	46.0
Other Urban	33.0	48.0	67.0	55.0	58.0	48.0	26.0	21.0	35.0
Rural	33.0	40.0	49.0	45.0	44.0	47.0	6.0	17.0	24.0
Gender									
Male	32.0	44.0	55.0	52.0	49.0	52.0	11.0	24.0	29.0
Female	39.0	41.0	49.0	49.0	46.0	41.0	27.0	25.0	41.0
Cambodia	36.0	44.0	54.0	50.0	49.0	50.0	18.0	24.0	31.0
Total obs.	448	2986	339	274	805	206	156	467	175

Source: authors' calculations using CSES

Table 2.2: Out-of-pocket expenses on education as share of daily median consumption for last academic year (per enrolled child, %)

	2007		2009		2011	
	Male	Female	Male	Female	Male	Female
Quintile						
Poorest 20%	2.1	1.9	3.7	3.3	10.4	8.6
Next poorest 20%	2.5	2.4	4.3	4.6	11.4	10.9
Middle	3.4	3.1	5.6	7.2	12.8	11.1
Next richest 20%	5.9	5.2	8.3	7.2	19.9	20.5
Richest 20%	10.1	10.3	14.6	15.5	23.2	24.9
School						
Primary (Grades 1-6)	1.6	1.9	3.3	3.5	6.4	7.4
Lower Secondary (Grades 7-9)	5.2	5.7	8.4	9.3	14.5	12.3
Upper Secondary (Grades 10-12)	12.1	13.3	20.1	18.6	26.3	25.2

Note: Daily median consumption by quintiles was used to calculate share of out-of-pocket expenses by quintiles, whereas daily median consumption for Cambodia was used for the share by school levels.
Source: authors' calculations using CSES

Table 2.3: Out-of-pocket expenses on education as share of daily median consumption for last academic year (per enrolled child, %)

	2007		2009		2011	
	Public	Private	Public	Private	Public	Private
Poorest 20%	2.0	0.0	3.5	12.4	9.9	20.0
Next poorest 20%	2.4	6.3	4.1	19.0	10.9	39.4
Middle	3.0	26.2	5.1	37.8	10.1	76.1
Next richest 20%	4.5	37.2	6.4	46.2	16.2	75.3
Richest 20%	6.6	24.7	10.0	39.1	16.8	43.6

Source: authors' calculations using CSES

Table 2.4: Inequality of opportunity in access to education—net attendance rate (%)

	Primary (1-6)			Lower secondary (6-9)			Upper secondary (10-12)		
	2007	2009	2011	2007	2009	2011	2007	2009	2011
Average opportunity	82.0	84.0	85.0	33.0	37.0	35.0	16.0	21.0	25.0
D index	7.0	2.0	1.0	19.0	13.0	15.0	34.0	22.0	26.0
HOI	76.0	82.0	84.0	27.0	32.0	30.0	11.0	17.0	19.0
Total obs.	2390	8264	2119	1433	4061	999	1318	4217	1083

Source: authors' calculations using CSES

Table 2.5: Inequality of opportunity in access to education—completion on time (%)

	Sixth grade		Ninth grade		Twelfth grade	
	2009	2011	2009	2011	2009	2011
Average opportunity	47.0	56.0	50.0	49.0	24.0	32.0
D index	11.0	12.0	9.0	17.0	22.0	22.0
HOI	42.0	49.0	45.0	40.0	19.0	25.0
Total obs.	1218	339	805	206	467	175

Source: authors' calculations using CSES

Table 2.6: Contribution of circumstance variables to inequality of opportunity—net attendance rate (%)

	Lower secondary (6-9)			Upper secondary (10-12)		
	2007	2009	2011	2007	2009	2011
Gender (male/female)	3.3	4.6	5.4	0.7	0.6	2.4
Gender of household head (male/female)	0.4	0.5	2.2	9.7	0.3	3.0
Area of residence (urban/rural)	17.5	31.9	19.5	61.8	65.0	36.9
Household size	7.4	13.9	10.1	4.1	8.7	3.0
Per capita consumption	15.0	39.4	31.6	4.0	18.8	10.1
Education of household head	2.8	5.0	30.3	6.3	4.0	42.9
Age of household head	53.6	4.7	0.8	13.4	2.6	1.8

Source: authors' calculations using CSES

Table 2.7: Contribution of circumstance variables to inequality of opportunity—on-time completion rate (%)

	Sixth grade		Ninth grade		Twelfth grade	
	2009	2011	2009	2011	2009	2011
Gender (male/female)	21.3	6.9	19.8	22.1	2.0	18.8
Gender of household head (male/female)	1.6	0.8	1.1	10.7	0.3	19.3
Area of residence (urban/rural)	20.4	15.1	33.0	18.5	49.3	20.9
Household size	10.8	3.6	5.2	7.0	6.1	8.1
Per capita consumption	16.8	21.6	31.4	4.4	6.1	15.3
Education of household head	18.0	41.9	2.2	30.6	19.3	15.5
Age of household head	11.2	10.1	7.3	6.6	17.1	2.1

Source: authors' calculations using CSES

Table 2.8: Indicative recurrent funding for sectors and ministries (percent of total government budget), 2014-18

	2014e	2015p	2016p	2017p	2018p
Sector					
General Administration	17.5	17.2	16.8	16.4	16.0
Social Administration	38.0	39.4	40.6	41.9	43.3
Defence and Security	21.5	21.2	20.6	20.0	19.4
Economy Administration	8.7	8.8	8.9	9.0	9.1
Miscellaneous	14.3	13.4	13.1	12.7	12.3
Ministry					
Education, Youth and Sport	16.0	16.9	17.8	18.7	19.6
Health	12.8	13.4	13.9	14.5	15.2
National Defence	12.6	12.4	12.1	11.7	11.4
Interior-Security	8.9	8.7	8.5	8.3	8.0

Note: e = estimated; p = projected.
Source: RGC (forthcoming)

Table 2.9: Village attributes

Indicators	2009	2010	2011
Primary school in village (yes, %)	54.9	55.1	54.8
Lower secondary school in village (yes, %)	17.9	20.0	18.3
Upper secondary school in village (yes, %)	7.51	6.7	7.8
Distance to nearest primary school (km)	1.2	1.4	2.0
Average minutes spent to get there	12.8	12.5	14.0
Means of transport (bicycle, %)	50.0	48.4	44.2
Distance to the nearest lower secondary school (km)	3.2	3.1	3.5
Average minutes spent to get there	15.6	17.0	16.1
Means of transport (bicycle, %)	76.1	76.5	74.11
Distance to the nearest upper secondary school (km)	7.9	6.8	7.4
Average minutes spent to get there	17.6	18.6	18.7
Means of transport (bicycle, %)	64.1	58.8	55.6

Note: Respondents are village chiefs. Figures are calculated using panel data of 346 villages in each year and the panel variable is strongly balanced. 2009 data contained 720 villages compared to 355 villages in 2010 and 2011. Thus, 374 villages are excluded from 2009 data and 9 villages from 2010 and 2011. Refer to NIS (2005) for sampling design to select sampled villages in each enumeration area.
Source: authors' calculations using CSES

Table 2.10: Most important problems in education

	2009	2010	2011
Lower secondary school			
Low living standards of teachers	34.4	33.3	52.4
School budget constraint	6.6	15.9	11.1
Not enough supplies (places and desks)	4.9	11.6	9.5
Poor living standards in village	9.8	15.9	11.1
Upper secondary school			
Low living standards of teachers	42.3	40.9	24.0
School budget constraint	11.5	9.1	20.0
Not enough supplies (places and desks)	7.7	13.6	12.0
Poor living standards in village	7.7	9.1	20.0
Adult literacy programmes (yes, %)	1.8	9.0	6.1

Note: Respondents are village chiefs.
Source: authors' calculations using CSES

Table 2.11: Reasons for not attending school (%)

	2009	2010	2011
Don't want to	22.3	14.8	14.4
Did not do well in school	8.2	13.0	9.3
No suitable school available/school is too far	7.3	4.5	2.0
No teacher/supplies	1.6	1.6	0.5
High cost of schooling	0.3	0.1	0.0
Must contribute to household income	19.3	16.5	26.6
Must help with household chores	18.3	10.9	9.1
Too poor	0.0	16.1	14.4
Disability	5.5	1.4	1.8
Long-term illness (over 3 months)	0.0	1.0	1.8
Too young	0.0	18.4	19.0
Other	17.2	1.7	1.1
Total obs.	901	3604	747

Source: authors' calculations using CSES

Table 2.12: Vaccination coverage, 0-23 months (%)

	2007	2009	2011
Quintile			
Poorest 20%	85.5	88.3	96.5
Next Poorest 20%	88.1	93.5	99.6
Middle	88.3	94.2	99.0
Next Richest 20%	93.6	96.5	98.4
Richest 20%	95.1	97.0	100.0
Region			
Phnom Penh	91.0	98.0	100.0
Other Urban	92.0	99.0	98.0
Rural	89.0	91.0	98.0
Gender			
Male	92.0	92.0	98.0
Female	87.0	93.0	99.0

Source: authors' calculations using CSES

Table 2.13: Vaccination coverage, 0-23 months (%)

	2009		2011	
	Public	Private	Public	Private
Poorest 20%	80.6	19.4	92.6	7.4
Next Poorest 20%	84.0	16.0	98.0	2.0
Middle	87.3	12.7	94.2	5.8
Next Richest 20%	90.8	8.2	94.0	6.0
Richest 20%	87.7	12.3	97.8	2.2
Phnom Penh	88.0	12.0	97.9	2.1
Other Urban	94.3	5.7	97.2	2.8
Rural	83.1	16.9	94.3	5.7

Note: No data available for 2007.
Source: authors' calculations using CSES

Table 2.14: Antenatal care and delivery in public hospital (%)

	Antenatal care		Delivery in public hospital	
	2009	2011	2009	2011
Poorest 20%	72.5	84.3	29.2	56.1
Next Poorest 20%	79.8	89.9	38.5	71.5
Middle	86.0	95.2	38.6	71.7
Next Richest 20%	90.3	95.7	46.8	72.1
Richest 20%	92.8	95.6	53.6	70.4
Phnom Penh	95.8	97.7	65.1	75.5
Other Urban	93.5	91.8	54.3	77.0
Rural	79.0	90.2	34.1	64.8

Note: No data available for 2007.
Source: authors' calculations using CSES

Table 2.15: Inequality of opportunity, child and mother health care (%)

	Access to vaccination			Antenatal care		Delivery in public hospital	
	2007	2009	2011	2009	2011	2009	2011
Average opportunity	91.0	94.0	99.0	85.0	92.0	41.0	70.0
D index	3.0	1.0	1.0	3.0	1.0	9.0	2.0
HOI	88.0	93.0	98.0	82.0	91.0	38.0	68.0
Total obs.	17439	12443	16327	23437	16327	23437	16327

Note: No data available on antenatal and delivery in public hospital for 2007.
Source: authors' calculations using CSES

Table 2.16: Contribution of circumstance variables to inequality of opportunity in health indicators (%)

	Access to vaccination			Antenatal care		Delivery in public hospital	
	2007	2009	2011	2009	2011	2009	2011
Gender (male/female)	12.2	4.6	21.7	-	-	-	-
Gender of household head (male/female)	1.5	19.6	15.2	3.3	12.4	1.7	2.6
Area of residence (urban/rural)	15.3	44.2	16.0	40.1	22.5	69.5	52.7
Household size	0.5	2.5	9.0	1.7	21.9	2.3	1.9
Per capita consumption	26.7	13.1	11.5	37.1	32.3	10.7	13.5
Education level of household head	9.5	3.8	25.2	3.3	7.2	5.5	14.2
Age of household head	34.3	12.3	1.3	14.6	3.6	10.3	15.0

Note: No data available on antenatal and delivery in public hospitals for 2007.
Source: authors' calculations using CSES

Table 2.17: Statistics on health services (most recent values)

Country	Hospital beds (per 1000 people)	Nurses and midwives (per 1000 people)	Out-of-pocket health expenditure (% of private expenditure on health)	Out-of-pocket health expenditure (% of total expenditure on health)	Physicians (per 1000 people)	Health expenditure per capita (current USD)
Brunei Darussalam	2.8	7.7	97.8	8.1	1.5	939
Cambodia	0.7	0.9	81.9	61.7	0.2	51
China	3.8	1.9	78.0	34.3	1.9	322
Indonesia	0.9	1.4	75.1	45.3	0.2	108
Japan	13.7	11.5	80.6	14.1	2.3	4752
South Korea	10.3	5.0	79.1	36.1	2.1	1703
Lao PDR	1.5	0.9	78.2	38.2	0.2	40
Malaysia	1.9	3.3	79.0	35.6	1.2	410
Myanmar	0.6	1.0	93.7	71.3	0.6	20
Philippines	1.0	1.0	83.5	52.0	1.2	119
Singapore	2.0	6.4	93.9	58.6	1.9	2426
Thailand	2.1	2.1	55.8	13.1	0.4	215
Vietnam	2.0	1.1	85.0	48.8	1.2	102

Source: authors' preparation using data from World Bank (2013)

Table 2.18: Availability of medical facilities and services in village (yes, %)

	Pooled			Panel (strongly balanced)		
	2009	2010	2011	2009	2010	2011
Private clinic	17.5	17.4	20.3	20.4	18.2	20.7
Dedicated drug stores	21.8	23.1	27.6	24.8	23.9	28.0
Other drug stores	26.8	26.3	30.7	28.3	25.8	29.6
Communal health centre	11.8	11.1	11.0	12.7	11.5	11.2
Referral (or district) hospital	2.5	2.6	3.7	1.9	2.6	3.2
Provincial hospital	1.1	1.7	2.0	1.3	1.6	1.6
National hospital	0.1	0.3	0.0	0.0	0.3	0.0
Private hospital	2.5	2.0	2.3	2.6	2.2	2.2
Doctor	21.8	25.2	29.0	26.8	26.1	30.3
Nurse	38.6	34.5	37.3	40.1	35.0	36.9
Trained midwife	38.0	33.1	38.2	39.8	32.5	38.5
Traditional birth attendant	55.1	43.4	38.6	49.7	42.4	37.3
Traditional healer	56.9	47.1	48.3	54.8	47.8	48.4
Others	29.9	28.4	34.6	31.9	27.8	34.7
Total obs.	10004	4904	4954	4396		
Total villages	716	351	355	314		
Missing value	1	1	0	0	1	0

Source: authors' calculations using CSES

Table 2.19: Most important health problems (public and private) for people in village (%)

	Pooled			Panel (strongly balanced)		
	2009	2010	2011	2009	2010	2011
Lack of beds in hospital, equipment etc	7.3	11.1	8.8	7.8	11.3	8.4
Not enough medicines, drugs	25.1	25.6	31.5	24.9	25.2	31.4
Poor quality of services	7.9	4.6	3.7	6.1	4.6	3.8
No physician or qualified medical assistant	2.5	1.4	1.7	2.0	1.5	1.7
No secondary nurse / midwife available	0.6	1.1	0.9	0.6	1.2	0.9
Health facility is not open 24 hours	3.1	3.4	4.8	3.2	3.5	4.9
Health services are too expensive	25.1	20.2	18.5	27.8	20.0	18.3
Long distance to better quality care	12.5	13.4	16.8	12.4	13.3	16.9
Unsanitary health facilities	0.1	0.6	0.3	-	0.6	0.3
Staff are unhelpful	9.0	9.4	6.3	8.1	9.6	6.4
Staff are not friendly	3.5	6.0	5.4	3.2	6.1	5.5
Other (specify)	3.2	3.1	1.4	4.1	3.2	1.5
Total obs. (villages)	718	352	354	346		
Missing value	6	1	2		2	

Source: authors' calculations using CSES

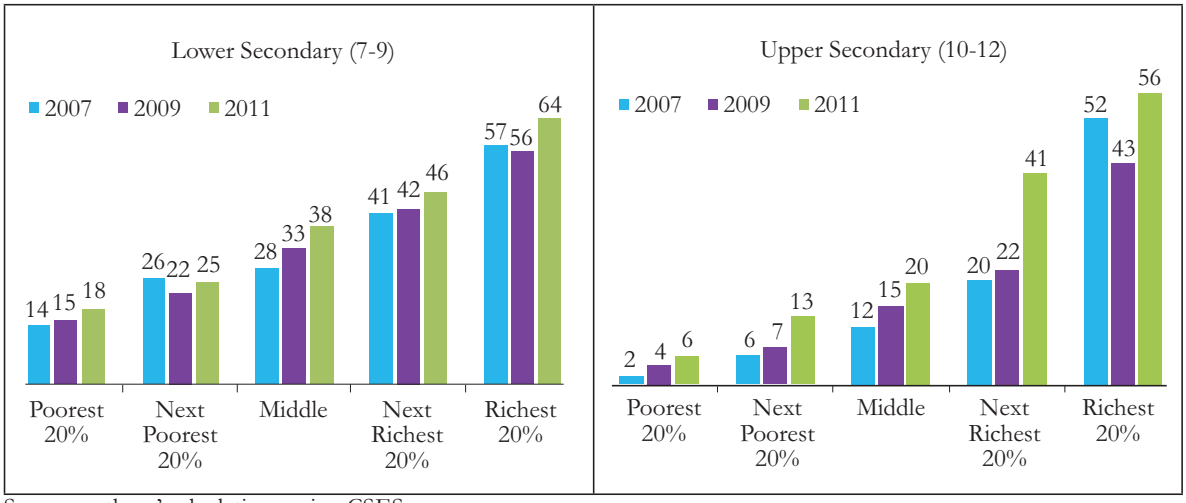
Table 2.20: Existence of other health programmes in village and village chiefs' perception of improvement in health services (%)

	Pooled			Panel (strongly balanced)		
	2009	2010	2011	2009	2010	2011
Immunisation Programme	31.9	23.7	25.7	31.8	23.5	26.0
Maternal and child health/Family planning Programme	77.2	71.8	74.6	73.7	71.6	74.9
Testing for HIV/AIDS	35.9	29.1	25.1	36.4	29.3	24.6
Programme for iodine deficiency or goitre	56.6	53.1	51.8	57.5	52.9	51.6
Perception of improved health services	79.2	87.1	90.4	81.2	86.9	90.7
Total obs. (village)	718	352	354	346		
Missing value	2	8	5	0	8	2

Source: authors' calculations using CSES

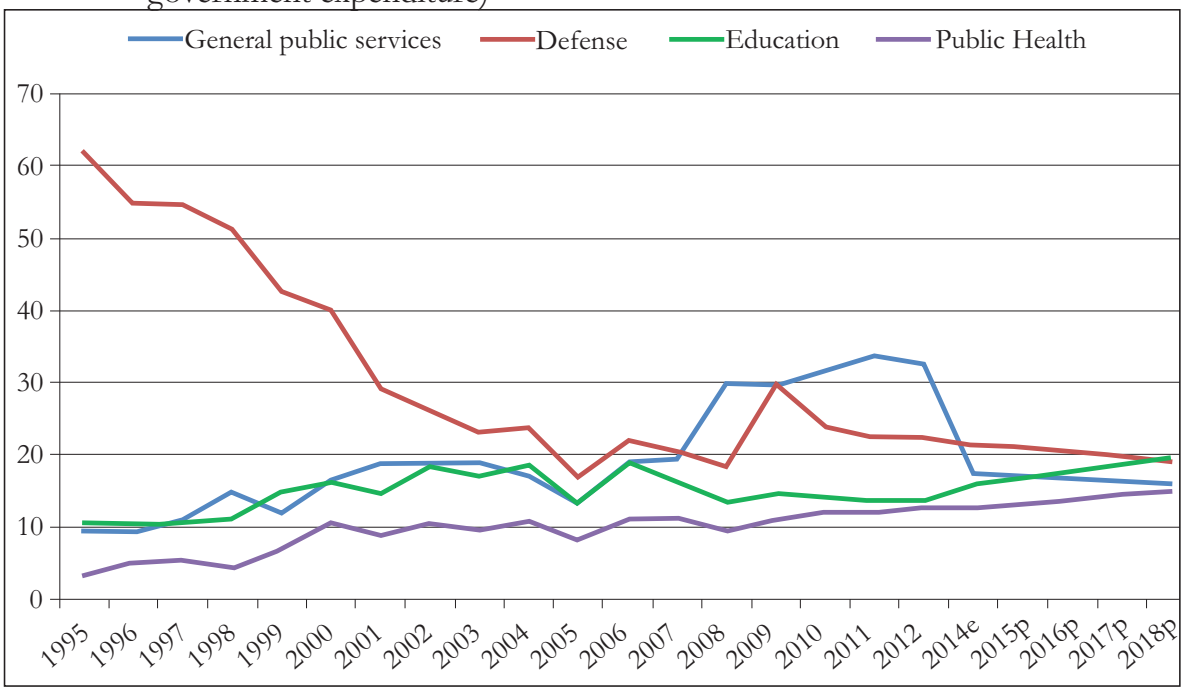
Annex figures

Figure 2.1: Net attendance rate (%)



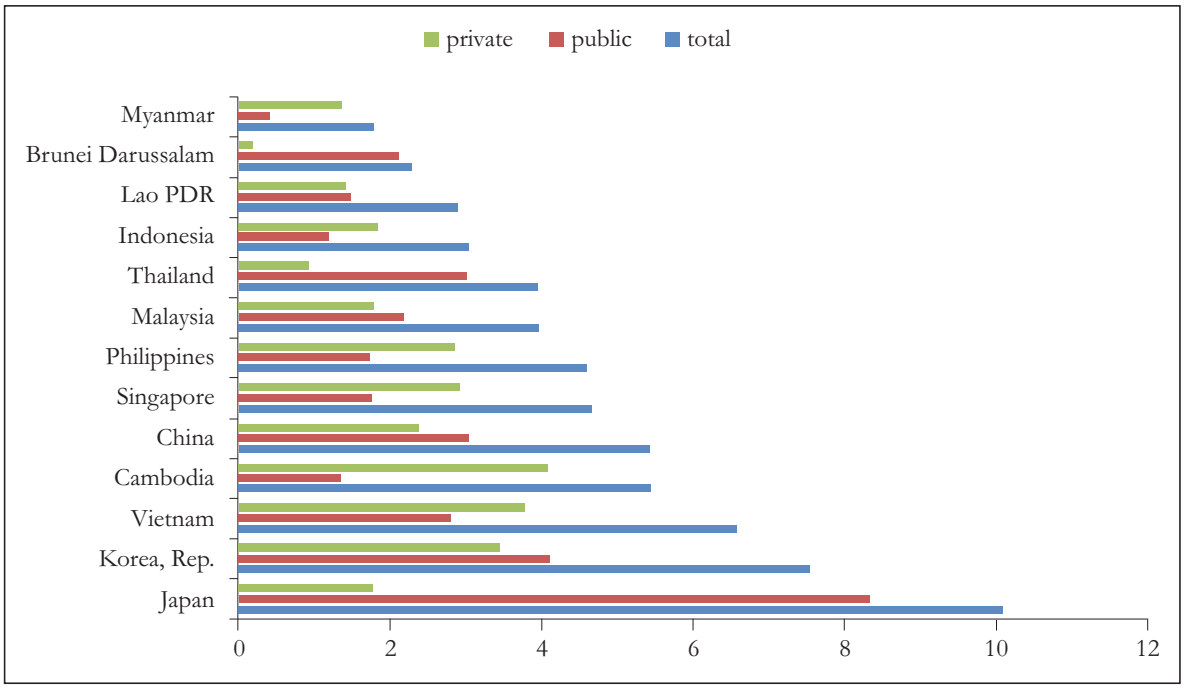
Source: authors' calculations using CSES

Figure 2.2:Expenditure and budget allocated to selected sectors (% share of total government expenditure)



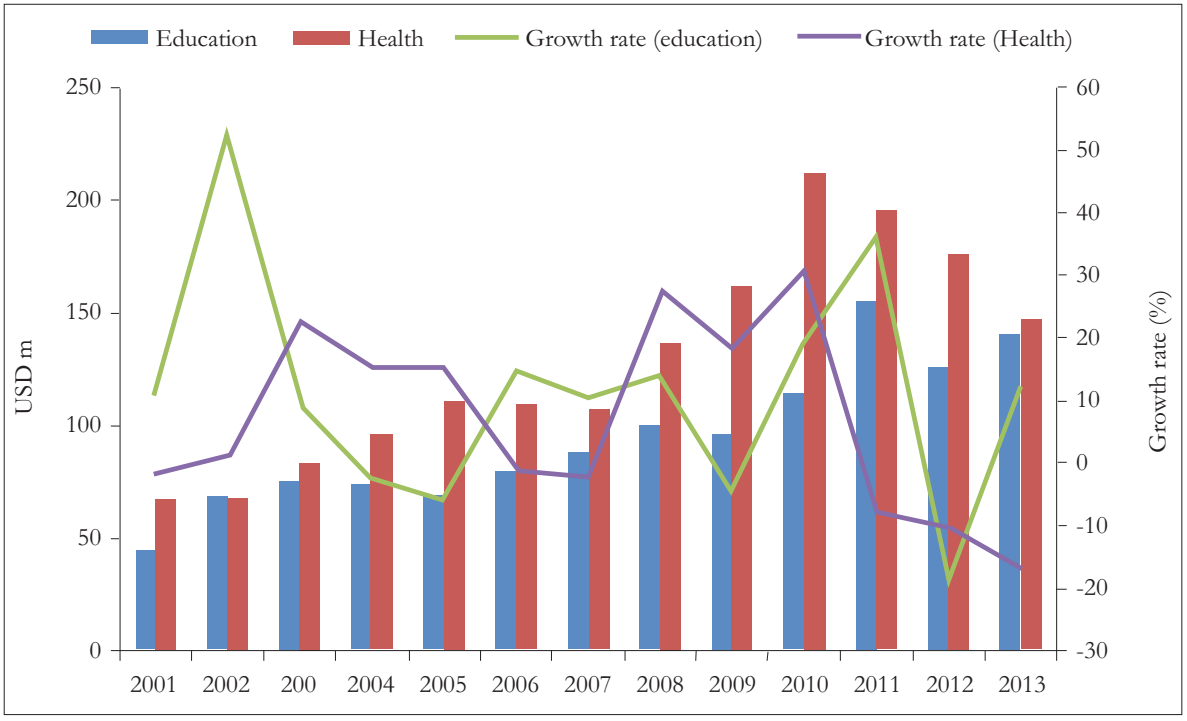
Note: Data between 1995 and 2012 is actual expenditure and that from 2014 to 2018 indicative.
Source: authors' calculations using ADB (2013) and RGC (2014)

Figure 2.3: Health expenditure (% of GDP)



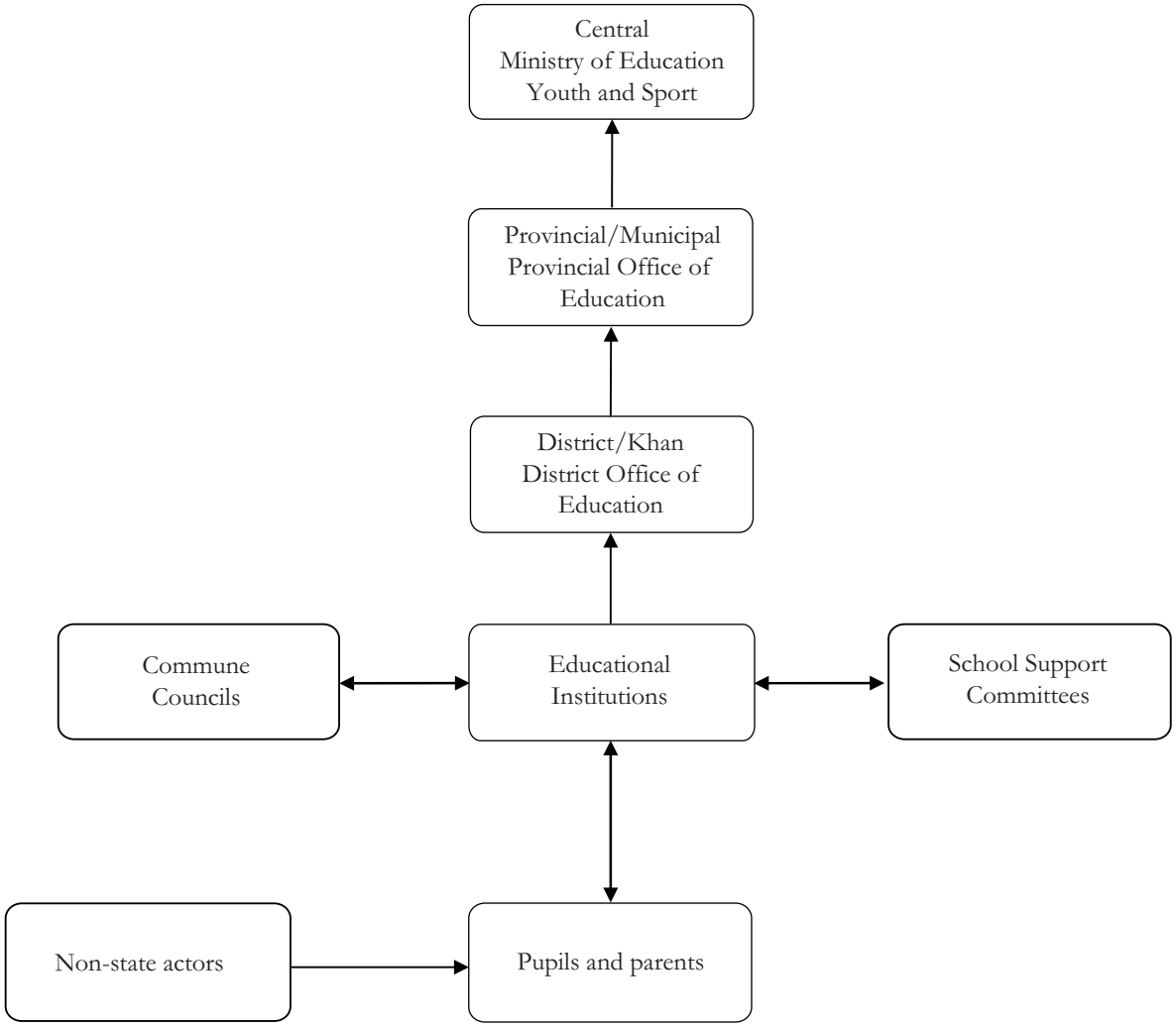
Source: authors using data from World Bank (2013)

Figure 2.4: Aid disbursement for education and health



Source: authors' calculations using data from CRDB (2013)

Figure 2.5: Hierarchy of administration and national and sub-national management of education



Source: authors using information from RGC (2007) and World Bank and Asia Foundation (2013)

Appendix

A two-pronged approach

The study employs both quantitative and qualitative techniques. The former utilises the Human Opportunity Index proposed by Barros et al. (2009). The qualitative technique adopts the Institutional Development Analysis framework, analysing the interaction between national and sub-national government institutions, development partners and concerned individuals and families.

Human opportunity index

HOI summarises into one index the average availability of basic opportunities and their equitable distribution. The first component is readily available through household survey data, whereas the second needs a more detailed calculation. HOI can be written as:

$$HOI = C\,(1 - D) \qquad (1)$$

where C is the basic coverage (access) rate of a service or opportunity and D is a "dissimilarity" index measuring unequal access rates to a given basic opportunity for groups defined by circumstance characteristics. C is calculated by $\sum_{i=1}^{n} w_i p_i$, where $\{i = 1, 2, 3, ..., n\}$, w_i represents the weight of individuals, and P_i is individual-specific access to the designated services or opportunities. The "dissimilarity" index, the underlying component of HOI, ranges from 0 to 1, 0 representing perfectly equal distribution and 1 perfectly unequal distribution. D's index is given by

$$D = \frac{1}{2\bar{p}} \sum_{i=1}^{n} \beta_i |p_i - 2\bar{p}| \qquad (2)$$

where $\bar{p}$ is the average access. Thus, D calculates the weighted average of the distance of individuals' access to services or opportunities from the national average access. The importance of D is that it controls for circumstance variables, emphasising that an individual's access to services or opportunities should not be dependent on ascribed variables such as gender, race, location of residence, parents' occupations, ethnicity, religion or income or consumption. Barros et al. (2009) show that the D index could be interpreted as the percentage of available opportunities that need to be reallocated from the rich to the poor to achieve equal opportunity.

The paper also decomposes the contribution of different circumstances to overall inequality of opportunity using the decomposition method proposed by Hoyos and Narayan (2011). The approach could also be found in Vega et al. (2010) and Son (2012). The logit model of the probability of access to an opportunity is given by

$$ln\,(\hat{y}_\iota) = \sum_{1}^{m} \hat{\beta}_j X_{ij} \qquad (3)$$

Where Xij is a vector of circumstance variables, $\hat{\beta}$j is a vector of coefficient estimates from the logit model using maximum likelihood estimation method. The decomposition of inequality of opportunity can be derived by taking the variance of both sides in equation (1) (see Fields 2002; Son 2012) to obtain

$$\sigma^2 ln\,(\hat{y}_\iota) = \sum_{1}^{m} \hat{\beta}_j cov\left(X_{ij}, ln(\hat{y}_\iota)\right)$$

Thus, the percentage contribution of the j^{th} circumstance variable to the total inequality of opportunity can be written as

$$S_j = \frac{100 \times \hat{\beta}_j cov\left(X_{ij}, ln(\hat{y}_\iota)\right)}{\sigma^2 ln\,(\hat{y}_\iota)} \qquad (4)$$

Institutional analysis and development framework

The Institutional Analysis and Development framework by Ostrom et al. (1994), although being applied in natural resource management, is very applicable to this study. It has also been applied by many researchers (Andersson 2006; Gibson et al. 2005) in a wide range of disciplines, from governance to development economics.

The basic concept is that the actors involve in creating the institutional arrangements that constrain individual behaviour and interactions that affect outcomes. The impacts of institutional arrangements are also subjected to other factors, including socio-economic and political conditions, policies, formal and informal rules and regulations and resources and capacity. Interests of different actors also determine the institutional arrangements and individual interactions that shape the effectiveness of policy. Therefore, understanding individual actors' incentives is crucial. Socio-economic and political factors might have direct and indirect impacts on policy choices, institutional arrangements, capacity and resources, course of action and outcomes. Those factors include economic growth, poverty, political stability and macroeconomic variables. Characteristics such as historical background, tradition, religion and belief are also considered.

Rules and regulations are important elements driving performance and behaviour. Formal and informal rules, including the norms that actors adopt, are analysed. Understanding those norms requires careful observation, which could not be done without collecting primary data. Yet, formal rules could be examined using available secondary information. In some countries, informal rules weigh even more than formal ones due, for instance, to weak institutions or conflicts of interest. Unlike formal rules, norms are difficult to change or need more time. This study should also pose the question whether these norms have a profound effect on actions and outcomes. All of the exogenous factors mentioned have effects on actors' actions. Interactions among actors from different levels of governance then form patterns. Actors select a course of action or a strategy subject to their incentives.

Different layers of actors can be classified by their decision making power. The inner circle consists of core individuals who have direct and influential decisions on issues (e.g., the prime minister and ministers of education and health). Outer circle elite groups are included but are not key decision makers. However, these individuals could have both direct and indirect influences on people in the inner circle through their political and elite connections. Development partners can create both positive and negative externalities although their presence is thought to generate more positive impacts. Different development agendas demanded by development partners, sometimes conflicting, could impose another challenge, further constraining the quality and efficiency of programme intervention. Included population groups are those connected to the dominant coalition by patronage ties or because of their similar political ideology and support to dominant groups. This connection might define their access to education and health services that are intended for the public regardless of political support. This would also create excluded populations who lack such connection and are thereby disadvantaged in access and opportunity.

Chapter 3
Health and Education in the GMS: The Case of Laos

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Executive summary

One means for achieving inclusive growth is the improvement of human capacities, which can be achieved through improving health and education. Laos has been undergoing momentous social and economic transformations since the introduction of market-based reforms in 1986. These changes, coupled with the country's commitment to development, particularly the Millennium Developments Goals (MDGs) and graduation from least developed country status by 2020, have significantly improved health and education. Despite good progress in these two sectors over recent decades, Laos still lags behind other countries of the region in these areas. This paper aims to provide a more comprehensive assessment of inclusiveness of health and education by employing the Human Opportunity Index, and to identify the national policy and institutional changes required to achieve further inclusive development in these areas.

The results of HOI analysis show that coverage of child and maternal health care (antenatal care, deliveries in health facilities, and vaccination) have improved considerably. However, there exists inequality in service distribution; and household wealth level and area of residency contribute significantly to such inequality. For instance, in 2011/12 only 20.92 percent of pregnant women in rural area without road who received at least one antenatal care visit, while as high as 86.80 percent of pregnant women in urban area received such care. Similarly, in 2011/12 the proportion of births delivered in health facilities was only 11.07 percent for poor (lowest wealth index quintile) households, while it was as high as 91.67 percent for rich (highest wealth index quintile) households. The review of policies and institutional framework illustrates that, except for a low government spending on health, health policies are largely comprehensive and relevant in issues covered; and institutional structures and roles and responsibilities are well defined. Health policies also emphasize the objective to ensure access to good services in rural areas and among disadvantage groups. Similar to health sector, results of HOI analysis also sees the inequality of access to education services especially when quality aspect (completion on time) is considered and at the level where education is not free and compulsory (at lower secondary level). Policy and institution analysis of education sector also reveals similar results i.e. education policies are largely comprehensive and relevant in issues covered, including emphasis to make education development more inclusive, and institutional framework is well defined, but with low government spending.

While education and health policies and institutional structures are quite well in place, with the emphasis to make education and health development more inclusive by aiming to ensure access in rural areas, equity gaps remains high. The study has, as a consequence, identified various policy and institutional constraints preventing the full implementation of health and education plans and policies. The key constraints include low and erratic government spending, lack of health and education human resource capacities, and poor coordination among agencies at different levels and development partners. Lack of evidence-based and public consultation process in plan and policy formulation, and lack of timely and result-based monitoring and evaluation system are also identified as main constraints.

1. Introduction

One means for achieving inclusive growth is the improvement of human capacities, which can be achieved through improving health and education. Laos has been undergoing momentous social and economic transformations since the introduction of market-based reforms in 1986. These changes, coupled with the country's commitment to development, particularly the Millennium Developments Goals (MDGs) and graduation from least developed country status by 2020, have significantly improved health and education. Despite good progress in these two sectors over recent decades, Laos still lags behind other countries of the region in these areas (Table 3.1).

Table 3.1: Selected development indicators

	Per Capita GNI (Current USD)	Maternal Mortality (per 100000 live births)	DPT Immunisation Coverage (%)	Infant Mortality (per 100000 live births)	Net Primary Enrolment (%)
Lao PDR	1460	360 (2012)	79.0	54.0	95.9 (2012)
Cambodia	950	206 (2010)	95.0	33.9	98.4 (2012)
China	6560	24.5 (2012)	99.0	12.1	
Indonesia	3580	360 (2012)	64.0	25.8	92.2 (2012)
Myanmar		320 (2005)	85.0	41.1	
Nepal	730	280 (2005)	90.0	33.6	98.5 (2013)
Thailand	5370	12.2 (2005)	99.0	11.4	95.6 (2009)
Vietnam	1730	67	97.0	18.4	98.1 (2012)

Data are for 2013 unless specified otherwise.
Source: World Development Indicators, World Bank

The assessment of inclusiveness of growth carried out under the GMS-DAN Phase 1 similarly suggests that there has been progress in health and education but more needs to be done to ensure inclusiveness. Although the GMS-DAN Phase 1 assessment provides some pictures of the inclusiveness of health and education, the analysis covers only a small number of indicators. To get a clearer picture, it is necessary to deepen the analysis of these two areas. This paper aims to provide a more comprehensive assessment of inclusiveness of health and education by employing the Human Opportunity Index, and to identify the national policy and institutional changes required to achieve further inclusive development in these areas.[1]

1 Key informant interviews were carried out with 10 representatives from the Mother and Child Health Centre, Cabinet of the Ministry of Health, Department of Health Care of the Ministry of Health, Planning and Cooperation Department of the Ministry of Education, Department of Primary and Pre-school Education of the Ministry of Education and UNICEF.

Section 2 looks at access and distribution of health care services and health sector policy and institutional framework. Section 3 does the same for education, with the focus on primary education. Section 4 identifies policy and institutional constraints. Section 5 provides recommendations.

2. Health sector

2.1 Inequality of access to maternal and child health care

In this section, the Human Opportunity Index[2] (HOI) is used to show the coverage and equality of access to maternal and child health care. It is important to understand the meaning of each component of the HOI and how results could be interpreted. The coverage refers to proportion of relevant group of people who have access to particular service. The Dissimilarity Index (D-Index) indicates how services are distributed among subgroup, characterized by their circumstances, of eligible population. The D-Index could be interpreted as the proportion of all opportunities that need to be rearranged to ensure equal access for all; the higher the D-Index, the more unequal the distribution of services is. The HOI combines the two components into one index, which means it takes into account not only the average coverage of services but also how services are distributed; and it could be increased either by raising average coverage of services or by improving distribution across population (decreasing the D-Index). Since the D-Index is estimated based on individuals' circumstances, it is important to see how each circumstance component contributes to inequality of access. The Shapley value method to decompose the D-index into its components is used. The circumstances in the analysis include area of residence (urban vs. rural), household size, household wealth level, gender of household head, and education level of household head.

Table 3.2 shows that access and distribution of maternal health care improved between 2006 and 2011/12. The proportion of pregnant women who received at least one antenatal visit by a health professional improved from 38.44 percent in 2006 to 56.97 percent in 2011/12. This is an impressive achievement over five years. At the same time, the D-Index dropped from 26.49 percent to 21.25 percent. As a result, HOI improved from 28.26 percent to 44.87 percent. Similarly, the proportion of births delivered in health facilities[3] during two years preceding 2006 and two years preceding 2011/12 increased more than double, from 17.34 percent in 2006 to 37.92 percent in 2012. The D-Index dropped significantly from 51.12 percent to 32.05 percent yielding a large increase of HOI

2 Please refer to the Appendix for the construction of the Index.

3 Health facilities include: public and private hospitals, health centres, and public and private clinics. Health professionals are doctors, nurses, midwives, and auxiliary midwives.

from 8.47 percent to 25.77 percent. Decomposition of the D-Index indicates that wealth level of households, estimated by wealth index score, has the largest contribution, more than 45 percent, to inequality of both access to antenatal care and coverage of delivery in health facilities. Other circumstance variables that make significant contribution to inequality are area of residence and education level of household head. For example, area of residence explained more than 18 percent of inequality in access to antenatal care and about 25 percent of inequality of coverage of delivery in health facilities in 2011/12.

Table 3.2: HOI for access to maternal health care

	Received at least one antenatal care visit		Received at least four antenatal care visits*		Delivery in health facility	
	2006 (MICS3)	2012 (LSIS)	2006 (MICS3)	2012 (LSIS)	2006 (MICS3)	2012 (LSIS)
Coverage	38.44	56.97	N/A	37.69	17.34	37.92
Dissimilarity index	26.49	21.25	N/A	33.01	51.12	32.05
Human opportunity index	28.26	44.87	N/A	25.25	8.47	25.77
Total observation	1594	4358	N/A	4358	1594	4358
	Decomposition of the Dissimilarity Index (% explained by each variable)					
Area of residence (Urban Vs. Rural)	23.55	18.04	N/A	20	32.115	24.75
Household size	6.8	9.41	N/A	9.9	4.94	6.42
Wealth index score	45.8	48.68	N/A	46.88	45.64	49.73
Gender of household head	4.65	4.46	N/A	3.03	3.18	2.24
Education level of household head	19.19	19.4	N/A	19.66	14.09	16.85

* WHO recommends a minimum of four antenatal visits.

Source: Authors' calculation using MICS (2006) and LSIS (2011/12) data

Table 3.3 affirms the results of decomposition of the D-Index discussed above. Coverage of antenatal care and delivery in health facilities varies substantially by area of residence and by wealth index quintile. For instance, in 2011/12 rate of access to at least one antenatal was 86.86 percent in urban area, which was more than 34 percentage points higher than that in rural area with road and four times of that in rural area without road. Similarly, in 2011/12 the proportion of births delivered in health facilities was 75.25 percent in urban area, but was only 29.61 percent in rural area with road and 11.83 percent in rural area without road. When look at the coverage of each wealth index quintile group, there are also large differences. In 2011/12 only 25.33 percent of pregnant women in poorest households, households in the first wealth index quintile, received at least antenatal care visit. The access rate increased incrementally by about 20 percentage point for the next two wealth index quintile groups yielding the access rates of 45 percent and 65.55 percent, respectively. The access rate increased to 79.53 percent for forth wealth index quintile households, and as high as 94.51 percent for the richest households. The coverage of births delivered in health facilities by wealth index

quintile also has a similar pattern only 10.73 percent of births from poorest households were delivered in health facilities while 88.62 percent of births of richest households' members in 2011/12 were in health facilities.

Despite there was improvement in both access and distribution of maternal health care between 2006 and 2011/12, the closer examination of how services were distributed suggests that access to services is far from inclusive i.e. poor and rural population still have access rates that are significantly lower than those of better-off and urban population. World Bank (2013) points out that low levels of antenatal care and institutional deliveries are explained not only by physical and financial barriers but also lack of knowledge and awareness of the benefits of contacts with the formal health system.

Table 3.3: Access to maternal health care by area and by wealth index quintile

	Received at least one antenatal care visit (%)		Received at least four antenatal care visits (%)		Delivery in health facility (%)	
	2006	2011/12	2006	2011/12	2006	2011/12
By Area						
Rural without Road	16.94	20.92	-	10.19	1.93	11.83
Rural with Road	37.18	52.51	-	30.33	11.91	29.61
Urban	80.71	86.80	-	72.69	62.97	75.25
By Wealth Index Quintile						
1st - Poorest	18.85	25.33	-	9.53	2.88	10.73
2nd - Second Poorest	26.83	45.01	-	19.49	6.50	21.78
3rd - Middle	35.94	65.55	-	42.33	10.23	37.86
4th - Second Richest	58.71	79.53	-	58.28	27.22	55.81
5th - Richest	91.34	94.51	-	84.50	73.73	88.62

Source: Authors' calculations using MICS3 and LSIS data

Immunization is considered as one of high impact interventions in reducing child deaths and childhood diseases. According to UNICEF and WHO guidelines, a child should receive a BCG vaccination to protect against tuberculosis, three doses of DPT+HepB to protect against diphtheria, pertussis, tetanus and Hepatitis B, three doses of polio vaccine and a measles vaccination. Table 3.4 shows the HOI results for coverage and distribution of at least one vaccination and all WHO/UNICEF recommended vaccinations among children aged 12-23 months regardless of time of vaccination. The coverage rates improved significantly between 2006 and 2012 for both, but the coverage of all recommended vaccinations remained relatively low. The low Dissimilarity indices for coverage of at least one vaccination were low suggests a fairly equal distribution, but the increasing trend implies distribution was worsened over the period. The Dissimilarity indices for coverage of all recommended vaccinations were slightly higher and declined over the same period. Decomposition of D-indices suggests that household size, household wealth level and household head's education were crucial in determining inequality of coverage of vaccinations.

Table 3.4: Human opportunity index for vaccination of children aged 12-23 months

	Received at least one vaccination (any time before the survey) (%)		Received all WHO/UNICEF recommended vaccinations (any time before the survey) (%)	
	2006 (MICS3)	2012 (LSIS)	2006 (MICS3)	2012 (LSIS)
Coverage	66.99	85.98	26.74	46.47
Dissimilarity Index	3.74	4.72	15.22	14.63
Human Opportunity Index	64.47	81.92	22.67	39.68
Total observation	831	2173	831	2173
	Decomposition of the D-Index (% explained by each variable)			
Area of Residence	8.06	8.24	15.37	11.89
Household Size	27.31	17.49	13.67	16.68
Wealth Index Score	26.62	46.46	33.53	42.65
Gender of Individual	1.53	3.78	3.74	2.14
Gender of Household Head	0.75	0.99	4.88	3.1
Education of Household Head	35.74	23.02	28.79	23.53

Source: Authors' calculations using MICS3 and LSIS data

Table 3.5 shows the coverage rates of vaccinations in rural and urban areas and among households in different wealth index quintiles. Interestingly, the proportion of children aged 12-23 months who received at least one vaccination in both 2006 and 2012 increased with the level of urbanization of their residence areas but it did not exhibit a clear pattern with wealth index quintiles. The coverage of all WHO/UNICEF recommended vaccinations, however, increased as the level of urbanization as well as household wealth increased.

Table 3.5: Coverage of vaccination by area and by wealth index quintile

	Received at least one vaccination (any time before the survey) (%)		Received all WHO/UNICEF recommended vaccinations (any time before the survey) (%)	
	2006	2011/12	2006	2011/12
By Area				
Rural without Road	62.58	74.84	23.2	28.47
Rural with Road	67.72	85.7	24.15	44.37
Urban	71.77	90.88	41.11	59.15
By Wealth Index Quintile				
1st - Poorest	61.72	77.24	17.43	29.97
2nd - Second Poorest	58.96	80.44	18.45	37.35
3rd - Middle	78.15	90.57	34.89	50.22
4th - Second Richest	68.29	86.59	31.76	58.17
5th - Richest	75.01	99.05	45.76	69.56

Source: Authors' calculations using MICS3 and LSIS data

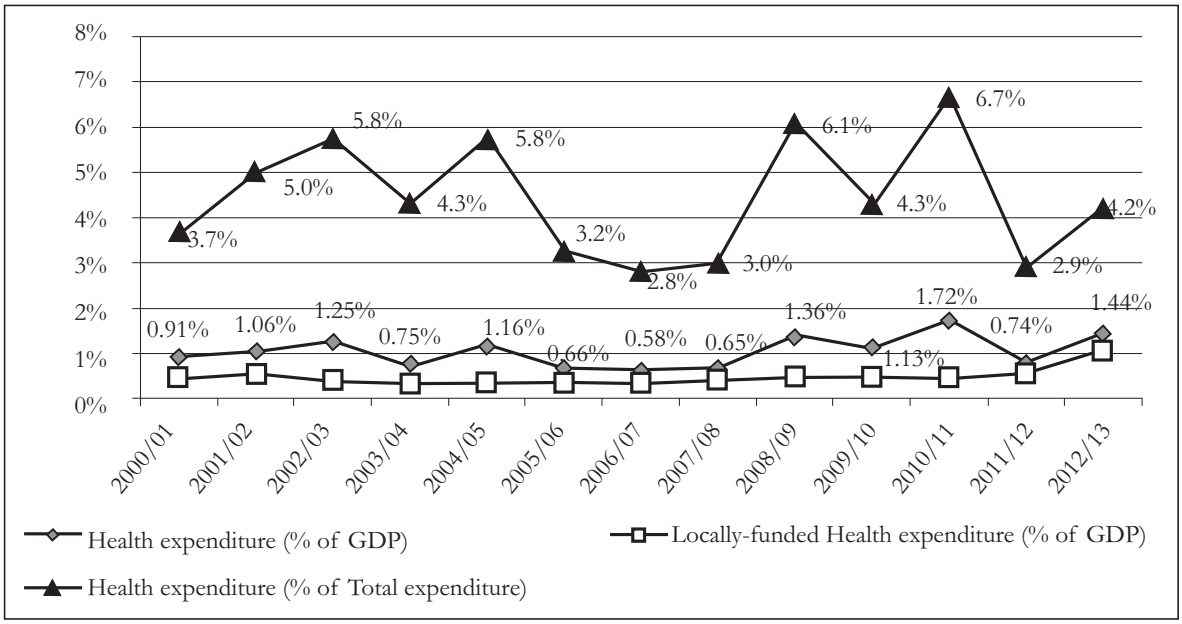
2.2 Health sector policy

Government spending

Figure 3.1 suggests that government spending on health since 2000/01 has been low and unstable as a percent of total government expenditure and of GDP. The total government expenditure on health includes both domestically funded and foreign-funded spending. After subtracting foreign funds, the ratio of domestically funded health expenditure to GDP has been more stable, suggesting that erratic expenditure has been due mainly to fluctuations in external financing. However, domestic financing has been well below 1 percent of GDP, except in 2012/13, when it reached 1.03 percent.

Health spending was significantly devoted to salaries. The increase in salaries was a result of a plan to increase compensation of public employees nationwide, which has been justified to attract workers with required skills and to discourage turning to additional employment to supplement incomes. Moreover, Table 3.6 shows that salaries have been the largest component of government spending on health, which means that more funds are needed to support operational activities while keeping health workers motivated.

Figure 3.1: Government expenditure on health



Source: Official Gazettes, Ministry of Finance

Table 3.6: Health expenditure

Share of Current and Capital Expenditure in Domestically Funded Health Expenditure (%)	2002/03	2007/08	2011/12	2012/13
Current Expenditure	**68.71**	**88.31**	**82.42**	**92.09**
Salary, allowances and compensation	47.47	70.39	52.46	53.86
Non-wage recurrent expenses	21.24	17.92	29.96	38.23
Capital Expenditure	**31.29**	**11.69**	**17.58**	**7.91**
Total	**100.00**	**100.00**	**100.00**	**100.00**

Source: Official Gazettes, Ministry of Finance

Human resources

Health human resources are considered inadequate. In 2010, there were only 1.3 health workers per 1000 people, and there was not yet a cadre of high-level midwives. The number of qualified health workers was 3873, equivalent to 0.69 per 1000 people, significantly below the WHO recommended standard of at least 2.5 per 1000 to ensure MDG achievement (WHO, 2007).

Table 3.7: Health human resources

	Number	Average per 1000 population
Population 2010	6259857	
Medical doctors (high level)	1211	0.19
Medical assistants (middle level)	1449	0.23
Dentists (high level)	228	0.04
Dentists (middle level)	96	0.02
High level nurses	125	0.02
Middle level nurses	1008	0.16
Low level nurses	3835	0.61
High level midwives	0	0
Mid-level midwives	80	0.01
Low level midwives	274	0.04

Source: National Health Statistics Report FY 2009/10, Ministry of Health

Health sector policies

The government, in collaboration with development partners, has formulated a number of policies and strategies which the health sector has implemented to address health development issues.

As a signatory of the Alma Ata Declaration of 1978, Lao PDR developed a comprehensive Primary Health Care Policy in 2000. This policy defines clear approaches, principles, strategies and basic components of primary health care and roles and responsibilities of each level of health services.

In February 2004, the National Growth and Poverty Eradication Strategy (NGPES) was approved by the National Assembly. It is the operational guideline that encapsulates the approach toward graduating the country from the least developed country status by 2020, as set by the Sixth Party Congress in 1996. This strategy is built on the medium-term strategy of fighting poverty through human resource development, rural development and people's participation; this is regarded as part of the overall "growth with equity" framework. The NGPES clearly identifies health sector as one of the four main sectors, along with agriculture, education and infrastructure. Priorities for health sector development include strengthening and improving the quality of grassroots care, particularly in under-served areas, and improving safe drinking water, sanitation systems and nutritional standards.

The government set the national targets and indicators within the framework of the Millennium Development Goals and published its first national MDG report in 2004 to review progress. In addition, the government streamlined the MDGs into its national development plans. The Sixth Five-Year National Socio-Economic Development Plan for 2006-10 is the first five-year plan that incorporates MDG targets and indicators. One of the main focuses of the sixth NSEDP is strengthening positive linkages between economic growth and social development to address social issues. In health, the sixth NSEDP states that the main goals are to (1) develop a nationwide health delivery service that is fair and equal regardless of gender, age, social status, tradition, religion, ethnicity or geographic location; (2) provide basic health services that respond to the people's needs and expectations and that gain their trust and (3) achieve substantial improvement in people's health, especially poor people. Based on sixth NSEDP, which was synchronised with the sixth five-year National Health Sector Development Plan (NHSDP) for 2006-2011, the seventh NHSDP/NSEDP was drafted. The Seventh NHSDP (2011–2015) aims to strengthen the existing health system, with a focus on ensuring access to good quality health services for the poor and for vulnerable populations in remote areas. The Seventh NHSDP also aims to establish health infrastructure, contribute to the country's goal of graduating from LDC status by 2020, and contribute to poverty eradication and the achievement of the five health-related MDGs.

To accelerate progress toward the MDGs and in support of the sixth NHSDP, the following policy and strategic documents have been developed and endorsed:

- National Nutrition Policy (2008)
- National Food Safety Policy (2008)
- Skilled Birth Attendance Development Plan 2008-2015 (2008)
- Strategy for Integrated Package of Maternal, Neonatal and Child Health services 2009-2015 (2009)
- Health Information System Strategic Plan 2009-2015
- Human Resources of Health Strategic Plan 2009-2020

The National Nutrition Policy provides a political framework to reduce malnutrition, especially in vulnerable groups, and to mainstream nutrition in National Socio-economic Development Plans in line with the National Growth and Poverty Eradication Strategy. The policy determines the overall scope, objectives, priority areas, principles and roles and responsibilities within the government.

To overcome remaining health development challenges, particularly those that have impeded progress on the MDGs, the government recently adopted the Health Sector Reform Strategy 2013-2025. The reform has overarching goals of attaining health-related MDGs by 2015 and achieving universal health coverage by 2025. The reform agenda includes ensuring adequate availability of skilled and motivated health workers, increasing domestically sourced government financing for health, improving health management and coordination and bolstering grassroots service delivery. The reform is structured into three phases. Phase 1 (2013-2015) focuses on the health-related MDGs;

Phase 2 (2016-2020) aims to improve accessibility of primary health care and reduce out-of-pocket expenditure; and Phase 3 aims to achieve universal health coverage.

Health policies and strategies, albeit ambitious in some aspects, are comprehensive. They cover not only emerging issues but also long-term health sector development goals. However, the current outcomes imply that policies have not always been fully implemented.

2.3 Institutional arrangements

This section is drawn mainly from key informant interviews at the Ministry of Health, the prime minister's decree on Organisation and Activities of the Ministry of Health, No. 178/LG dated 5 May 2012 and Akkhavong et al. (2014).

Organisation of the health system

There are three administrative levels in the health system: central (Ministry of Health), provincial (provincial health offices) and district (district health offices). There are officially four levels of organisation of service providers: (1) central-level providers managed directly by the Ministry of Health; (2) provincial-level providers managed by provincial health offices; (3) district-level providers managed by the district health offices; and (4) community-level providers or health centre also managed the district health offices. There are a large number of village health volunteers and traditional birth attendants. The organisation of the health system is illustrated in Figure 3.2.

- **Central**

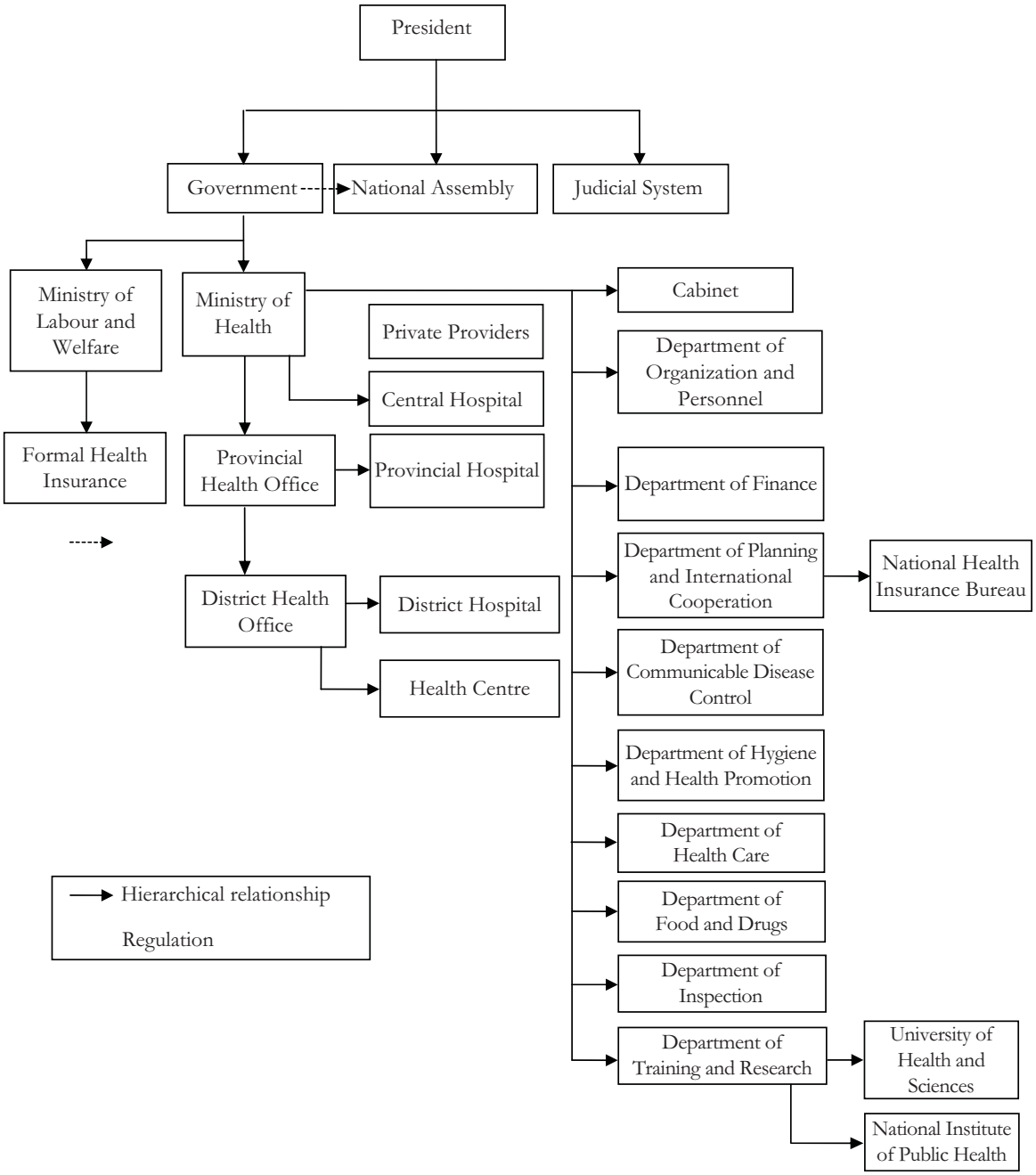
The Ministry of Health acts as national health authority, managing and organising services that include disease prevention and health promotion, curative care and rehabilitation. The MOH also regulates food and drug safety, traditional medicine and supplies of pharmaceutical and medical equipment. It also manages health information, human resources for health, health financing and international health cooperation. Its administrative structure includes nine departments and one cabinet office. Furthermore, the MOH has 40 institutions in three major areas: hospitals; preventive and curative medicine national centres; and medical colleges and universities.

- **Provincial**

A provincial health office is under the jurisdiction of the provincial administrative office, headed by the governor. It advises the governor on health affairs, provides funds for health services, including provincial hospitals and the network of primary health care facilities, and performs tasks that have been authorised by the governor. The provincial administration office supervises the health office's direction, organisational management, payroll and operations. The provincial health office, however, adheres to the MOH for technical direction, guidance, monitoring and inspection.

The provincial hospital service provides second referral services, including emergency care and surgery.

Figure 3.2: Organisation of the health system



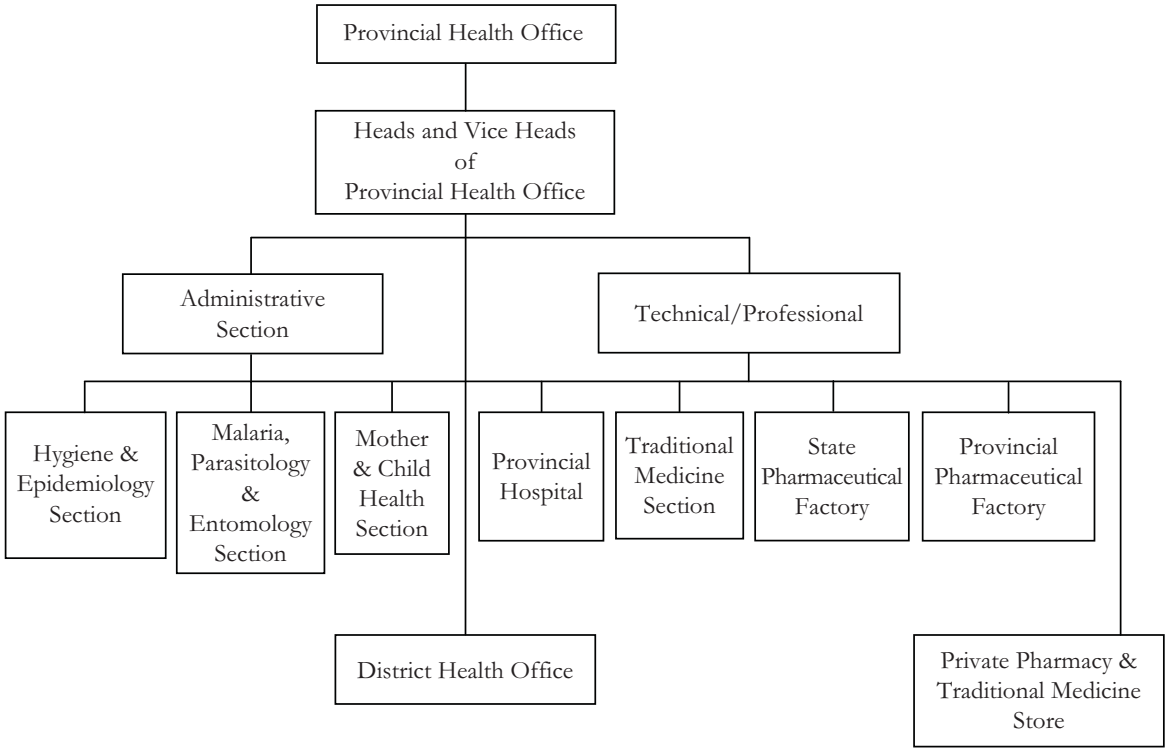
Source: Ministry of Health

- **District**

The district health office supervises district hospitals and health centres. The district health office works under the supervision of the district administration office for direction, organisational management, payroll and operations. However, it works under the supervision of the provincial health office for technical direction, guidance, monitoring and inspection.

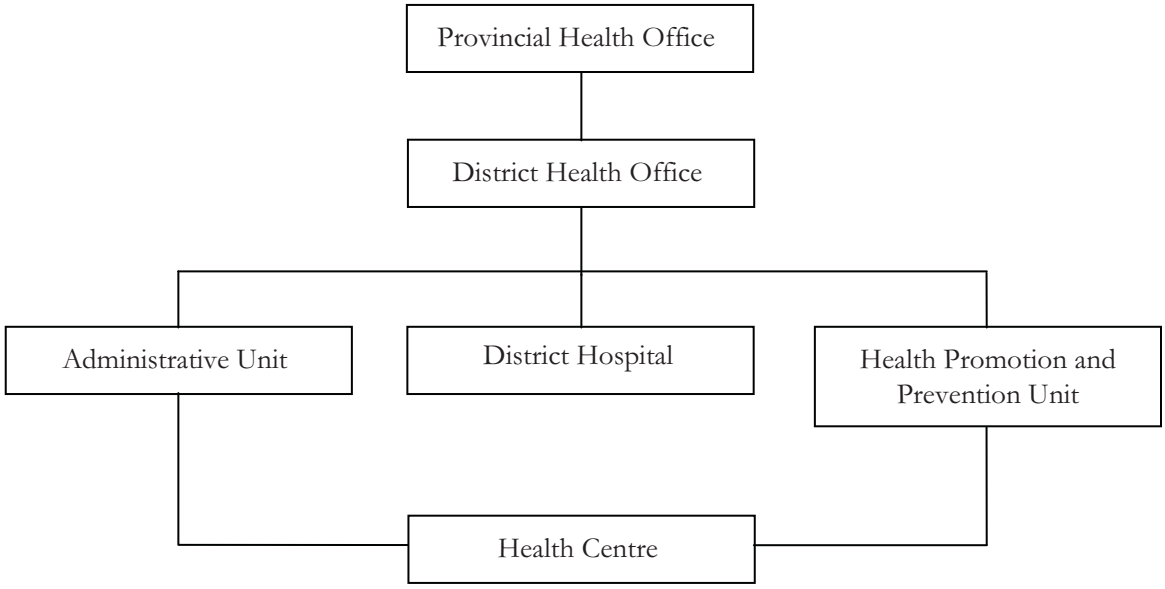
Under the district health office are an administrative unit, district hospital and health promotion and prevention unit (Figure 3.4).

Figure 3.3: Provincial organisational structure



Source: Ministry of Health

Figure 3.4: Organisation of district health administration



Source: Ministry of Health

- **Health centres and village-based health services**

Health centres are the first level of government facilities, providing primary health care services. Their functions include prevention, health promotion and diagnosis and treatment of diseases within their capacity. Under the supervision of the DHO, health centres supervise and monitor village health volunteers and coordinate between villages and the district.

Stakeholders in health system

There are also other stakeholders that play important roles in health system.

- **National assembly**

Under the constitution, the National Assembly is the highest body empowered to approve new laws, amend the constitution and laws and legislate and implement government plans and budgets.

- **Government**

Duties of the government include submitting draft laws, decrees and other legislation to the National Assembly and the president; drafting state plans and budgets and implementing them, following approval by the National Assembly; managing the national economy; and organising and managing foreign relations. Its members include a prime minister, deputy prime ministers and cabinet ministers. The secretariat of the Government Council includes government ministers.

- **Ministries**

The Ministry of Finance is responsible for overall fiscal policy and sectoral allocations of the annual budget.

The Ministry of Planning and Investment is responsible for the public investment framework and for sectoral allocations of the public investment programme or the capital budget.

The Ministry of Home Affairs is responsible for the overall number of civil servants and sectoral allocations of public employee quotas to government agencies, including the annual number of health personnel recruited.

The Ministry of Labour and Social Welfare is responsible for social security schemes for the formal sector.

The Ministry of Defence and the Ministry of Public Security manage and supervise organisation and administration of military and police hospitals, respectively. The budget and administration of these hospitals are provided by their ministries.

- **Private sector**

The public sector delivers most health services through government-owned and operated district, province and central health centres and hospitals. Although the public sector is predominant, private alternatives are expanding. Their ease of access and a continuous increase in people's incomes have led to a growing number of private facilities in urban areas and cross-border use of health services (mainly in Thailand and Vietnam). According to the MOH in 2010, there were 222 clinics (with 647 clinics waiting for approval) and 1993 pharmacies. Most private health facilities are owned by public health staff and offer services after office hours and on weekends. Private health facilities operated by public

health staff are generally small, with only basic equipment to provide basic treatment. However, over the past few years, the number of foreign-owned and foreign-domestic joint venture clinics and medical centres has increased in the capital and big cities; they include Chinese traditional medical clinics and some semi-modern and modern clinics that can provide medium to higher medical treatment.

- **International development partners**

The government is substantially dependent on official development assistance for financing of public investment. International development partners also provide necessary technical inputs for developing policy frameworks as well as supporting operational activities. The main development partners supporting health sector development include United Nation agencies (WHO, UNFPA, UNICEF, WHO, WFP, UNAIDS, FAO) and bilateral and multilateral agencies (World Bank, ADB, JICA, AFD, Lux-Development, KOICA, EU, USAID, AusAid, GIZ).

3. Education sector

3.1 Inequality of access to education

The results of HOI analysis in Table 3.8 suggest that between 2002/03 and 2007/08 there was marginal improvement in access to primary and lower secondary education, while indicator with quality aspect (on-time completion[4]) was worsened. The proportion of students who completed primary school on time increased from 20.11 percent to 20.68 percent, but there was a sharper increase of D-index from 12.11 percent to 18.97 percent over the same period. As a result, the HOI declined from 17.67 percent to 16.76 percent reflecting worsened equity in distribution. Interestingly, factors influenced inequality of distribution changed over the period. In 2002/03 area of residence and education level of household head played significant role causing inequality for all children to complete primary school on time. In 2007/08, however, household size became the most important factor giving rise to inequality, followed by the area of residence.

Primary school Net Attendance Rate[5] improved from 74.82 percent in 2002/03 to 79.93 percent in 2007/08. At the same time D-index dropped from 5.44 percent to 2.51 percent, yielding the increase in HOI from 70.75 percent to 77.92 percent. Since primary education is free and compulsory, the primary school net attendance rates were relatively high and distribution was fairly equal. On the other hand, at the lower secondary, where education is not free and compulsory, net attendance rates lowered dramatically to 28.38 percent in 2002/03 and to 31.57 percent in 2007/08; and dissimilarity indices were higher at 20.28 percent in 2002/03 and at 20.05 percent in 2007/08. For net attendance rates, education level of household head contributed significantly to inequality, followed by area of residence and household size.

4 Primary on-time completion rate is the percentage of children at graduation age who are completing primary school during the survey and children at one year older than a graduation age who completed primary school last year prior to the survey.

5 Primary School Net Attendance Rate is the percentage of children of primary school age who attending primary school during the survey.

Table 3.8: Human opportunity index for access to education

	Primary school on-time completion rate (%)		Primary school net attendance rate (%)		Lower secondary school net attendance rate (%)	
	2002/03	2007/08	2002/03	2007/08	2002/03	2007/08
Coverage	20.11	20.68	74.82	79.93	28.38	31.57
Dissimilarity index	12.11	18.97	5.44	2.51	20.28	20.05
Human opportunity index	17.67	16.76	70.75	77.92	22.63	25.24
Total observation	947	1064	6655	6356	4467	4550
	Decomposition of the dissimilarity index (% explained by each variable)					
Gender of individual	10.43	9.00	3.44	11.95	1.45	0.01
Area of residence	37.97	34.31	15.91	16.17	27.56	26.42
Household size	13.29	37.68	17.8	25.97	12.15	21.13
Per capita consumption	6.7	8.66	26.54	13.99	17.43	16.89
Gender of household head	2.01	0.55	3.6	0.41	1.32	1.88
Education level of household head	29.57	9.77	32.69	31.49	40.08	33.67

Source: Authors' calculation using data from Lao expenditure consumption survey in 2002/03 and 2007/08

Table 3.9 shows that there were equity gaps between rural and urban households and among households with different consumption quintiles. Similar to the results of the HOI analysis above, the equity gaps for primary school net attendance were relatively narrowed.

Table 3.9: Access to education by area of residence and by consumption quintile

	Primary school on-time completion rate (%)		Primary school net attendance rate (%)		Lower secondary school net attendance rate (%)	
	2002/03	2007/08	2002/03	2007/08	2002/03	2007/08
By Area						
Rural	15.69	16.24	67.28	73.85	19.48	23.14
Urban	29.14	31.51	85.06	83.29	44.05	46.46
By Consumption Quintile						
1st - Poorest	9.48	7.35	55.66	66.43	8.53	14.48
2nd - Second Poorest	13.03	18.5	68.41	76.51	16.58	21.4
3rd - Middle	19.06	22.71	75.91	78.98	24.47	28.78
4th - Second Richest	27.03	31.3	81.1	82.64	38.57	41.54
5th - Richest	28.86	24.83	85.88	84.79	44.94	50.59

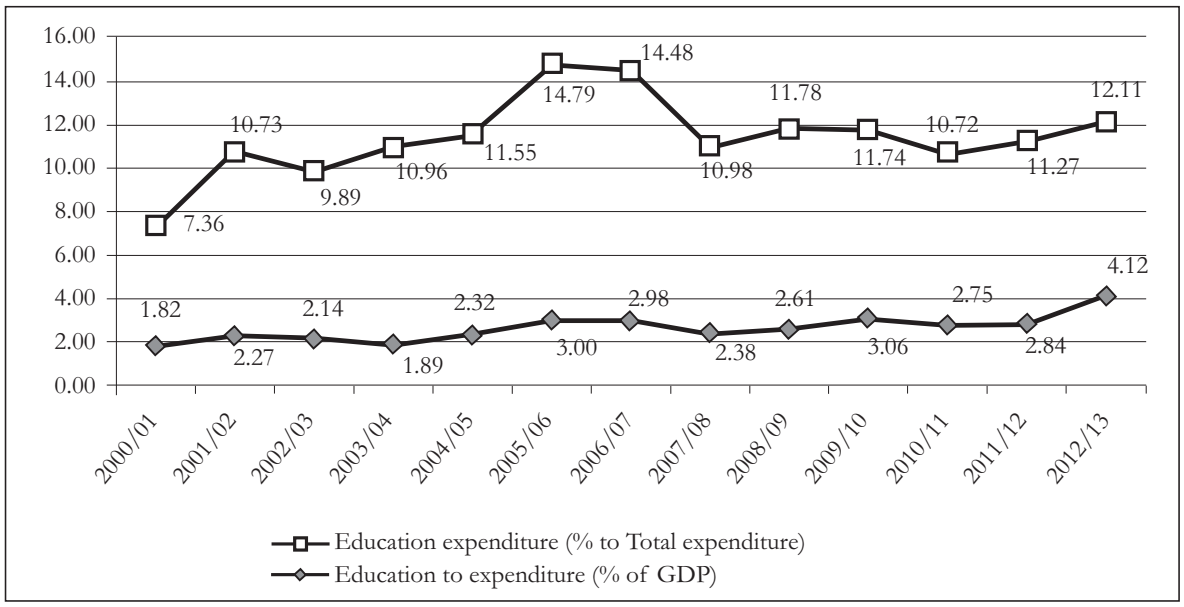
Source: Authors' calculations using data from Lao Expenditure and Consumption Survey in 2002/03 and 2007/08

3.2 Education sector policy

Government budget allocation

Public education expenditure has been rising since 2000, from 1.2 percent of GDP to 4.12 percent in 2012/13, with some fluctuations (Figure 3.5). The share of education in total public expenditure grew from 7 percent in 2000/01 to 14.79 percent in 2006/07, and then dropped to 12.11 percent in 2012/13. The new education law sets the share of public expenditure on education as no less than 18 percent of the total. In practice, however, this has never been achieved.

Figure 3.5: Education expenditure to GDP and total government expenditure



Sources: Ministry of Finance, Official Gazettes 2000/01- 2012/13

Table 3.10: Current and capital expenditure on education sector

Share of Current and Capital Expenditure on Education Sector (%)	2002/03	2007/08	2011/12*	2012/13*
Current Expenditure	**39.0**	**51.3**	**54.6**	**72.8**
Salary, allowances and compensation	25.3	47.0	42.6	65.5
Non-wage recurrent expenses	13.7	4.3	12.0	7.3
Capital Expenditure	**61.0**	**48.7**	**45.4**	**27.2**
Foreign-funded	46.4	44.3	36.7	24.2
Locally-funded	14.6	4.4	8.6	3.0
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: Ministry of Finance

Table 3.10 shows the components of the total expenditure over the last decade. The two main components are current expenditure and capital expenditure. Main items of current expenditure are spending on salaries and procurement of supplies, while the main capital expenditure is the spending on construction of school buildings. The government has shifted the budget allocation focus from capital to current to meet the large increase in teacher workforce (MOES 2013). The capital expenditure declined from 81 percent in

2002/03 to 48.7 percent in 2007/08 and to 27.2 percent in 2012/13; at the same time, the current expenditure rose from 39 percent to 51.3 percent and to 72.8 percent.

The largest share of education expenditure has been on primary education; spending on secondary education has increased in recent years, from a total of 10.42 percent in 2007/08 to 25.13 percent in 2012/13 (Table 3.11).

Table 3.11: Government expenditure by education level (%)

No	Share of expenditure by education level	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
1	Pre-school	0.99	2.21	3.46	1.70	2.10	3.00
2	Primary school	28.74	21.45	17.21	36.65	36.03	30.99
3	Lower secondary	4.71	7.78	7.18	11.96	13.21	13.03
4	Upper secondary	5.71	8.39	7.46	13.89	14.60	12.10
5	Technical	6.15	2.44	3.62	10.90	7.88	5.47
6	Teaching school	13.68	1.94	1.70	2.61	3.19	2.58
7	University	5.94	6.08	15.80	8.93	8.89	7.17
8	Informal education	0.50	0.31	0.36	1.67	1.40	0.68
9	General admin	33.58	49.42	43.22	11.70	12.21	24.72
10	Sport	-	-	-	-	0.51	0.26
	Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Ministry of Education and Sport

School building and teachers

Table 3.12 records the proportion of villages with primary schools and the pupil-teacher ratio in each province. Nationally, 92.2 percent of all villages have primary schools. Every village in Luangnamtha, Vientiane province, Sekong and Attapeu has a primary school, while more than 85 percent of villages in the remaining provinces have primary schools. Due to better infrastructure and road networks in Vientiane Capital, a primary school is not necessary in each village. The proportion of villages with primary schools in 2012/13 was 13.2 percentage points higher than in 2002/03 and 3.2 percentage points higher than in 2007/08. The availability of primary schools in remote and rural villages encourages school attendance.

On average, there are 19 students per teacher. The largest number of students per teacher is in Vientiane Capital, 38, followed by Oudomxay and Champasack, 23 students. Student-teacher ratios in Luangnamtha, Attapeu, Xiengkhuang, Xayabury and Vientiane are among the lowest.

Legislative framework

Article 19 of the Lao PDR Constitution (1991) states: "The state emphasizes the expansion of education in conjunction with the building of the new generation to be good citizens. The education, cultural and scientific activities are the means to raise the

level of knowledge, patriotism, love of the people's democracy, the spirit of solidarity between ethnic groups, the spirit of independence. The pursuit of compulsory education is important. The state permits private schools that follow the state curriculum. The government and citizens jointly build schools of all levels, to make the education system complete. Put emphasis on the expansion of education in ethnic minority areas."

Table 3.12: Proportion of villages with primary schools and pupil-teacher ratios

No.	Province	2002/03		2007/08		2012/13	
		Proportion of village with a primary school (%)	Pupils per teacher	Proportion of village with a primary school (%)	Pupils per teacher	Proportion of village with a primary school (%)	Pupils per teacher
1	Vientiane Capital	88	19	83	15	69.4	38.8
2	Phongsaly	95	15	96	15	96.7	13.2
3	Luangnamtha	75	18	100	18	100	9.2
4	Oudomxay	78	14	76	21	85.6	23.9
5	Bokeo	56	31	83	15	90	18.6
6	Luangprabang	78	29	88	23	88.7	20.5
7	Houaphanh	88	16	94	19	94.8	18.9
8	Xayabury	94	15	94	12	96.2	14.4
9	Xiengkhuang	88	18	92	17	92.8	13.4
10	Vientiane Province	73	23	87	19	100	14.3
11	Borikhamxay	88	37	74	27	85.3	15.9
12	Khammuan	84	25	82	19	94.6	18.7
13	Savannakhet	75	25	90	20	87.3	21.7
14	Saravane	63	27	89	23	99	22.3
15	Sekong	65	15	94	19	100	17.2
16	Champasack	77	32	92	25	98.5	23.1
17	Attapeu	89	22	100	19	100	11.6
	All Provinces	79	22	89	20	92.2	19

Source: Lao Statistics Bureau, Lao Expenditure and Consumption Survey 2002/03, 2005/06 and 2009/10

With reference to Article 19, the prime minister issued the Decree on Compulsory Primary Education in July 1996. Chapter one specifies that primary education is integrated in general education with a five-year system. It is the basic education that needs to be completed by all citizens. Regardless of race, religion, gender, ethnicity and social and economic status, citizens aged from 6 years upwards must receive primary education thoroughly and equally. All pupils must complete their schooling, without dropping out or leaving school until the age of 14, except for those with physical and mental health problems who cannot continue schooling even if sufficient care is provided. Education services can be provided publicly or privately. However, the content must aim to develop children physically and mentally with high capability, in compliance with the curriculum designed by the Ministry of Education; the government and people will be responsible

for management and services in all public primary schools. The services in schools are free of charge.

The first Education Law, passed in 2000, stipulates that all citizens have the right to education without discrimination. The law categorises education as formal and non-formal. Formal education includes pre-school, primary, secondary, vocational and higher education. The law stresses the responsibility of the government in construction of schools, education institutes and other education-related functions and did not emphasise the role of the private sector. This law specifies that (1) primary education is basic learning for all citizens, with five years of compulsory schooling; (2) primary education is free for all citizens; (3) government collaborate with parents to ensure that children attend primary education when they are 6 years old.

The law was amended in 2006/07 and remains in effect. The amended law re-categorises into four levels: pre-education, general education (primary, lower and upper secondary), vocational and higher education. It also increases the emphasis on the role of the private sector, points out the need to establish schools for disabled people and calls for an increase of government spending on education to at least 18 percent of the total budget.

Plans and strategies on primary education

Since 2000 several education plans and strategies have been formulated for short, medium and long terms. Some selected plans and strategies for primary education are:

1. The education strategic vision was formulated based on a resolution of the Seventh Party Congress (2001), which re-emphasised the long-term national development goal of graduating from the least developed status and poverty eradication by 2020. The policy document contains the education strategic vision from 2001 to 2020, 2010 and five-year education development plans.

   Primary education goals include compulsory primary education in order to achieve a net enrolment rate of 90 percent in 2010, 95 percent in 2015 and 98 percent in 2020; continuing promotion of primary education; expanding school construction and repairing old school buildings; implementing non-formal education in remote areas; and reducing the rural-urban education gap.

2. After careful consultation, the Education for All National Plan of Action (EFA NPA) 2003-2015 was formulated and approved by the government in December 2004. At the broad level, it seeks to achieve equity of access, improved quality and relevance and strengthened education management. It was formulated to meet the Education for All goals for universal basic and primary education, reach disadvantaged people in rural and urban areas, promote community participation in basic education and literacy and improve the relevance and quality of basic education by enhancing learning opportunities for children, youth and adults. The EFA NPA focuses on four priority segments: early childhood care and development, primary education, lower secondary education and non-formal education and skills training.

For primary education, the EFA NPA strives to achieve universal access to and completion of primary education. To achieve this the EFA NPA sets the targets of (1) converting 80 percent of incomplete primary schools to complete schools by 2010;[6] (2) providing primary school access to children from all unserved villages by 2010; (3) reaching an apparent admission rate of 100 percent for both girls and boys by 2010; (4) reaching a gross enrolment rate of 96.8 percent in 2010 and 100 percent in 2015; (5) reaching a net enrolment rate of 90.6 percent in 2010 and 97.8 percent in 2015; (6) reducing the repetition rate in grade 1 to 10 percent for both girls and boys in 2010, and to 3 percent in 2015; (7) reducing the dropout rate in grade 1 to 5 percent for both girls and boys by 2010 and to 2 percent by 2015; (8) reducing the drop-out rate in grade 5 to 1 percent for both girls and boys in 2010; (9) increasing the primary completion rate to 77.4 percent in 2010 and to 88.1 percent in 2015; and (10) maintaining a constant pupil-teacher ratio that does not exceed 31:1.

3. The Eighth Party Congress in March 2008 re-emphasised the long-term national goal of graduating from the list of least developed countries by 2020 and building the human and physical infrastructure for industrialisation and modernisation. To achieve this, the congress affirmed that education is the key for human resource development; thus, reform of the national education system is urgently required to improve educational quality and standards. The National Education System Reform Strategy 2006-2015 reformed the general education curriculum by increasing schooling from 11 years (5+3+3) to 12 (5+4+3).

   Primary education reform includes implementing the five pillars of education—intellectual, physical, artistic, moral and labour ethics—establishing cluster school networks to ensure that children are all enrolled in school; training pupils in basic knowledge and vocational techniques; reforming attitudes, learning approaches and creativity of pupils; continuing to achieve compulsory primary education; training, recruiting and assigning teachers based on the plan; changing learning assessment methodology, in particular for the transition to upper grades and higher education; promoting a desire to learn among girls, ethnic groups and children from the poorest families; and supplying school textbooks.

4. Following the resolution of the Ninth Party Congress, the Seventh National Socio-Economic Development Plan 2011-2015, Education Strategic Vision, the National Education System Reform Strategy 2006-2015 and the Education Sector Development Plan 2011-2015 were formulated. The last continues to focus on three pillars: equitable access, improved quality and relevance and strengthened planning and management.

   The development plan aims to improve primary survival rates to Grade 5 through making incomplete schools complete by expanding multi-grade classrooms; to recruit more ethnic women as teachers; to promote equity of access to primary education nationwide, especially in the 56 educationally disadvantaged districts; to

6 A complete primary school is one that has all five grades.

expand the number of quality primary; and to improve the qualifications of teachers through improved pre-service programmes and more teacher upgrading centres.

Education policies have been, to a great degree, comprehensive, relevant and consistent. However, short-term plans and policies, although they follow the long-term directions, fail to take account of lessons from previous short-term plans. Therefore, many goals and targets have not been met.

3.3 Institutional arrangements

3.3.1 Current national system

Figure 3.6 illustrates the current education system, which divided into non-formal and formal education. Formal education contains general education, vocational/teacher training and higher education:

(1) General education consists of (1) pre-school, which includes nursery schools for children aged 0 to 3 years and kindergartens for children aged 3 to 5 years, (2) primary education, five years for children from 6 to 10, (3) lower secondary school, four years for children aged 11 to 14 years and (4) upper secondary education, three years for children aged 15 to 17 years.

(2) Technical and vocational education admits students after they have completed grade 9 or 12. It admits lower secondary graduates to programmes for preparing skilled workers at upper secondary level (9+3), and programmes for preparing post-secondary technicians (12+2) and (12+3). Another path for lower secondary graduates is three years of vocational education and two years of specialised training for graduation as a technician (9+3+2).

(3) Teacher training institutes operate at national and provincial levels. To become pre-school teachers, students attend a two or three year programme at the end of upper secondary school. To become primary teachers, they must enrol in three years' training on completion of upper secondary school. To become lower secondary teachers, they again must enrol in a three-year programme after upper secondary school. To become upper secondary teachers, they must enrol in the faculty of education at the university.

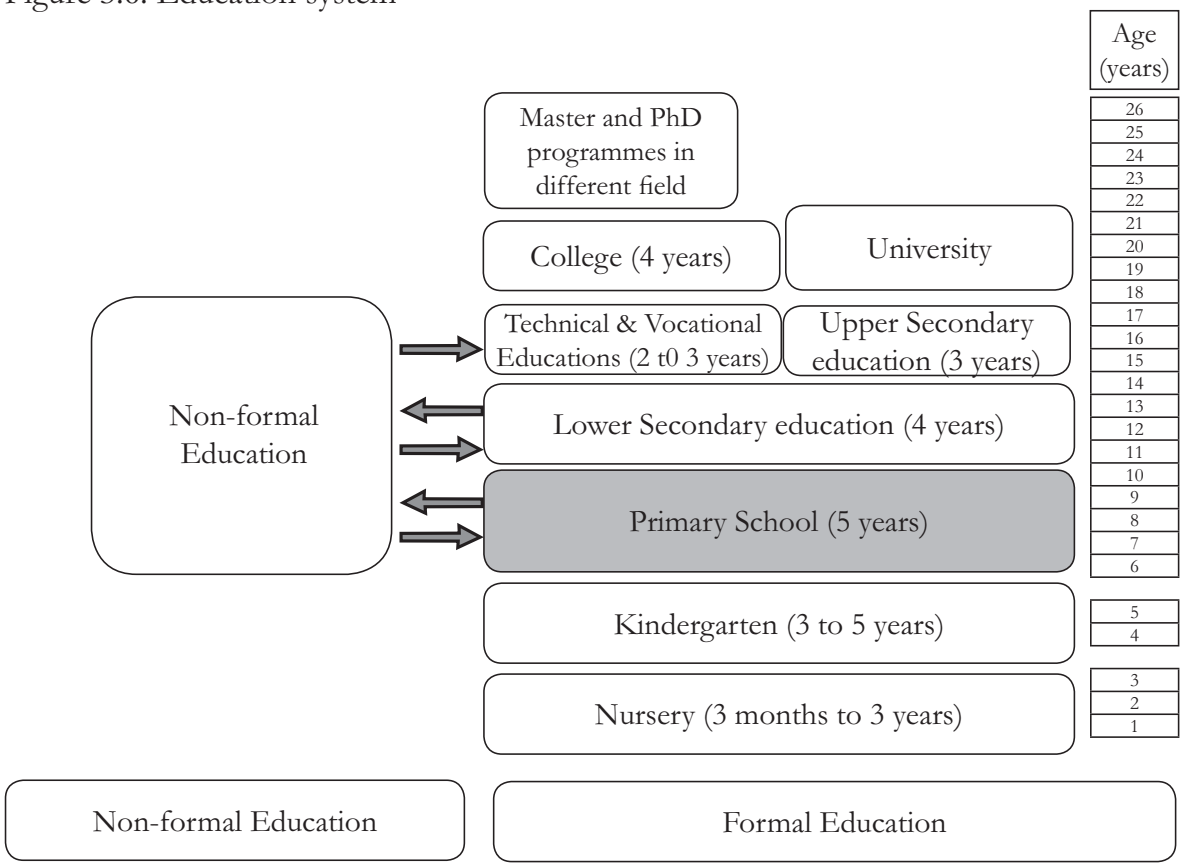
(4) Higher education is divided into university, higher technical school and teacher training college.

Non-formal education provides learning activities to adults. Non-formal education mainly targets three age groups: (1) those between 6 and 14 years who are not attending school; (2) those 15-25 years of age who do not have a vocational education; and (3) those aged 15-40 years who are illiterate or have not completed primary school, or those over 40 who are interested.

3.3.2 Institutional coordination

Institutional coordination is generally divided into vertical and horizontal. Vertical coordination in education includes agencies directly responsible for education at different administrative levels, namely the Ministry of Education and Sport (MOES), provincial Department of Education and Sport (PDES), district office of Education and Sport Bureau (DESB) and schools. Horizontal coordination includes supporting organisations such as the MOH, MPI, MOLW, MOF, and Ministry of Agriculture and Forestry, related departments and province and district offices, villages and development partners.

Figure 3.6: Education system



Source: Ministry of Education and Sport

Vertical coordination

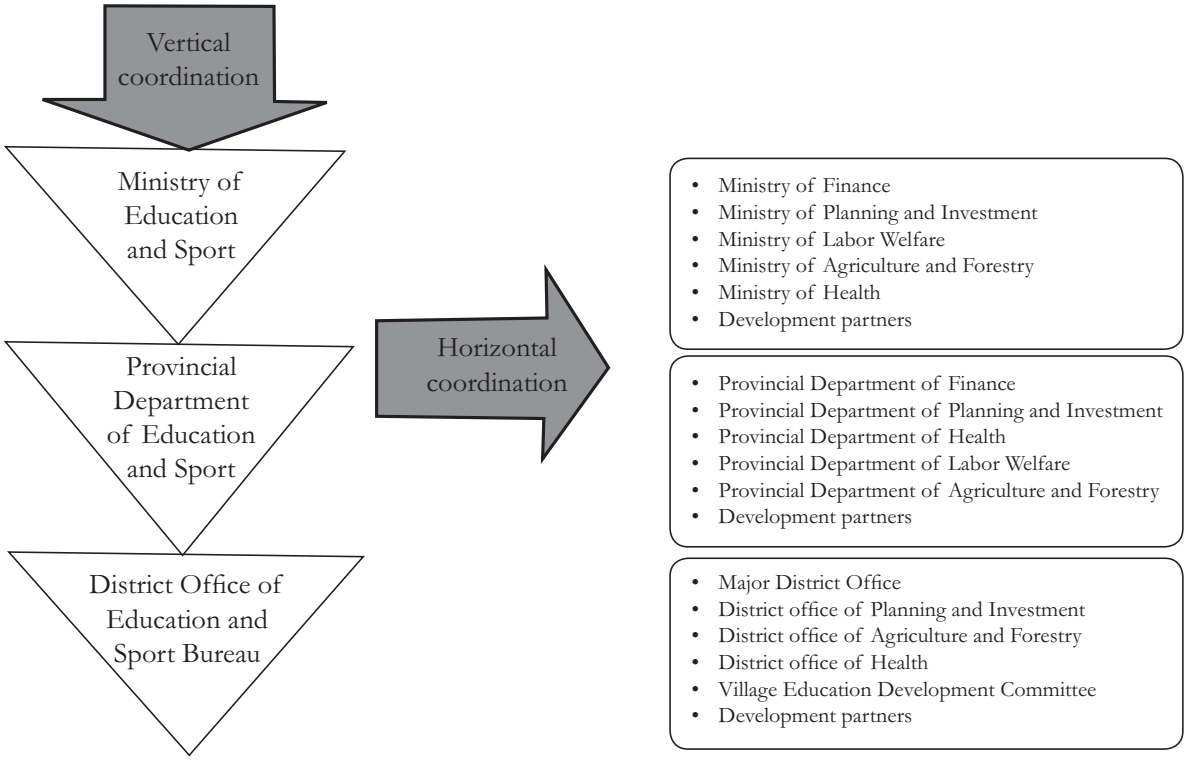
(1) Ministry of Education and Sport

Based on the 2007 Education Law, the functions of the MOES include studying and formulating policy frameworks, strategic plans, action plans and education development project proposals and submitting them to the government; drafting laws and regulations; elaborating and developing curricula, teaching aids and teaching and learning materials for all grades; leading literacy activities; providing teacher training and management; leading, monitoring, encouraging, supervising, inspecting and evaluating educational work.

The MOES is organised into 21 departments. One of its departments, Primary and Pre-school Education, has five divisions (Figure 3.8). This department's main roles are to:

- develop short, medium and long term plans on public and private pre-education, primary and inclusive education;
- create and improve regulations on pre-education, primary and inclusive education;
- supervise and promote teaching and learning in pre-education, primary and inclusive education;
- supervise and monitor implementation of the curriculum in pre-education, primary education and inclusive education;

Figure 3.7: Vertical and horizontal coordination



Source: Research team

- supervise and monitor teaching in pre-education, primary and inclusive education;
- appraise teachers in pre-education, primary and inclusive education;
- monitor and evaluate pre-education, primary and inclusive education;
- provide quality education and nutrition to disadvantaged groups;
- coordinate with other agencies to create and manage education mapping; and
- coordinate with Department of Teacher Education to create teacher improvement plan.

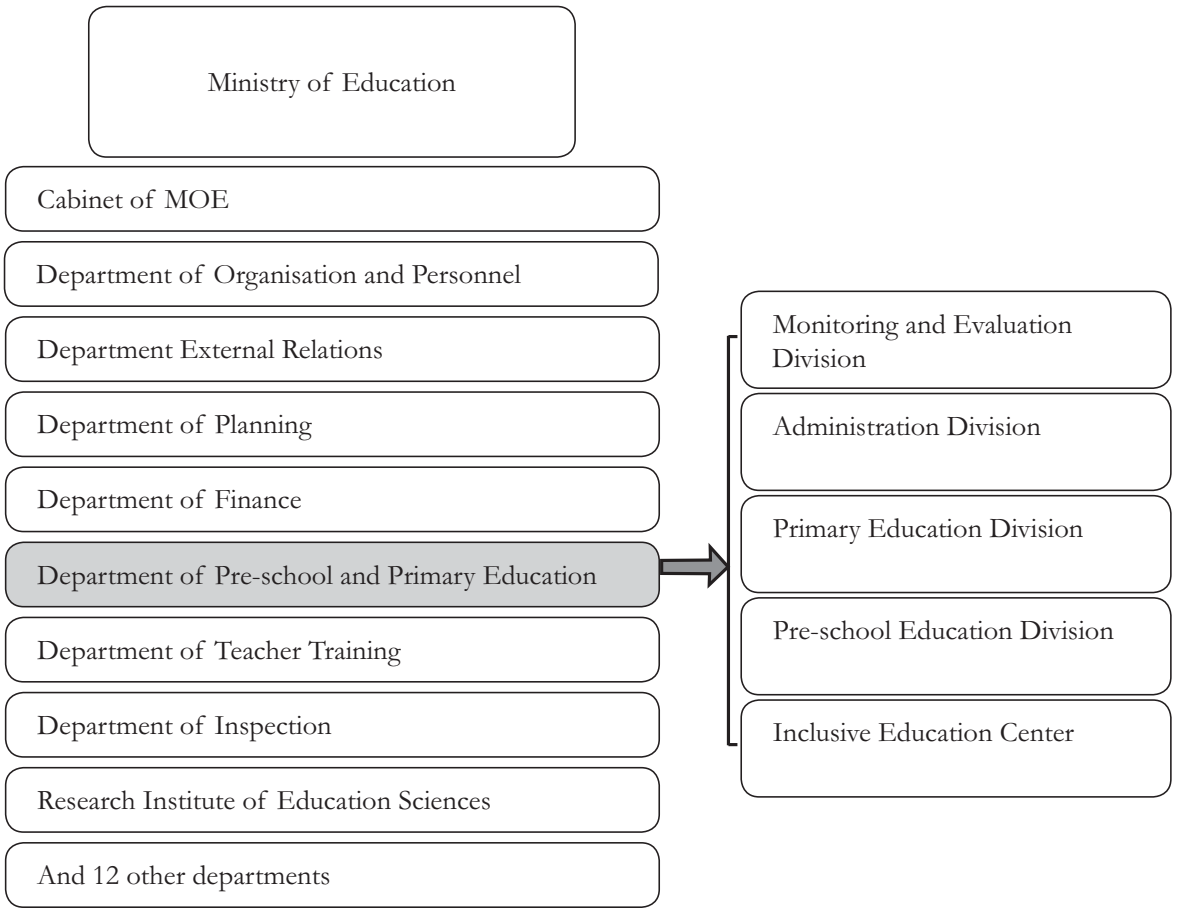
(2) Provincial Department of Education and Sport

A provincial Department of Education and Sport is under the jurisdiction of the provincial government regarding direction, organisation management, payroll and operations; it advises the provincial governor on education affairs. The PDES is also

under the direct control of MOES regarding technical direction, guidance, monitoring and inspection. It has direct responsibility for secondary and vocational institutions in its province. PDES has 10 main divisions in charge of different tasks (Figure 3.9).

The Division of Primary and Pre-school under PDES is responsible for (1) implementing education reform on pre-education and primary education; (2) promoting and managing private and public pre-school and primary education; (3) advising and monitoring curriculum implementation; (4) appraising teachers; (5) advising and monitoring education quality; and (6) evaluating learning and teaching in private and public schools.

Figure 3.8: Structure of Ministry of Education and Department of Primary and Pre-school Education



Source: Research team's summary of information from Ministry of Education and Sport

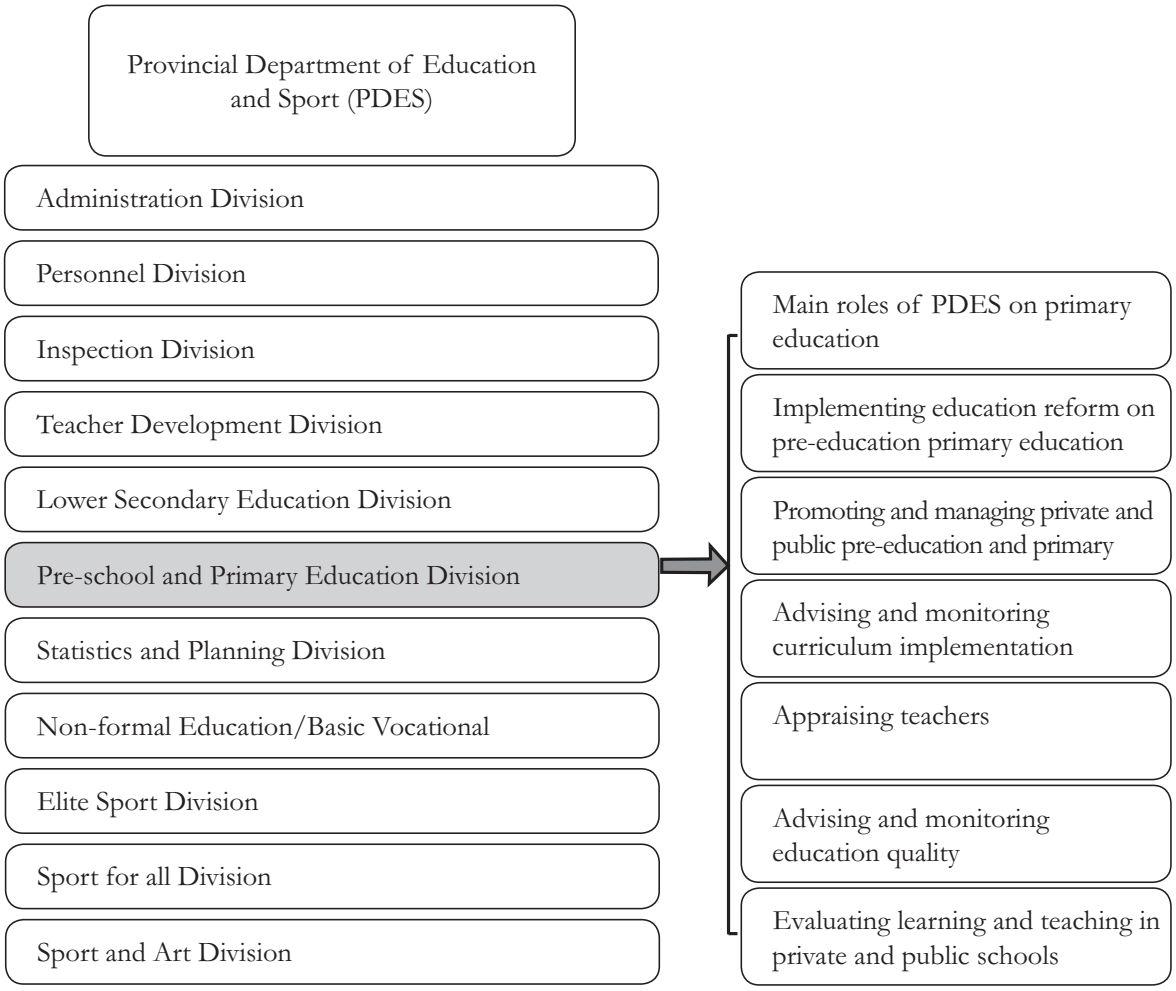
(3) District Office of Education and Sport Bureau

The district office of Education and Sport Bureau is under the district mayor for direction, organisational management, payroll and operations. The DESB also works under the PDES in terms of technical direction, guidance, monitoring and inspection. The DESB implements and manages district primary schools, non-formal education and kindergartens. It has direct responsibility for primary and lower secondary schools in the district. The DESB is structured into eight units (Figure 3.10).

The Basic Education and Pre-education Unit under the DESB is responsible for basic education and pre-education across the district. The main functions of the DESB

include (1) planning expansion of nursery schools, kindergartens, primary and lower secondary schools; (2) managing nurseries, kindergartens, primary and lower secondary schools; (3) advising on and responding to curriculum implementation and evaluation of learning and teaching; (4) planning teacher training and managing the budget for basic and pre-education; (5) monitoring, inspecting, evaluating and reporting to PDES on implementation of DESB; (6) motivating parents to send their children to school; and (7) advising on school construction.

Figure 3.9: Structure of Provincial Department of Education and Sport



Source: Research team's summary of information from Ministry of Education and Sport

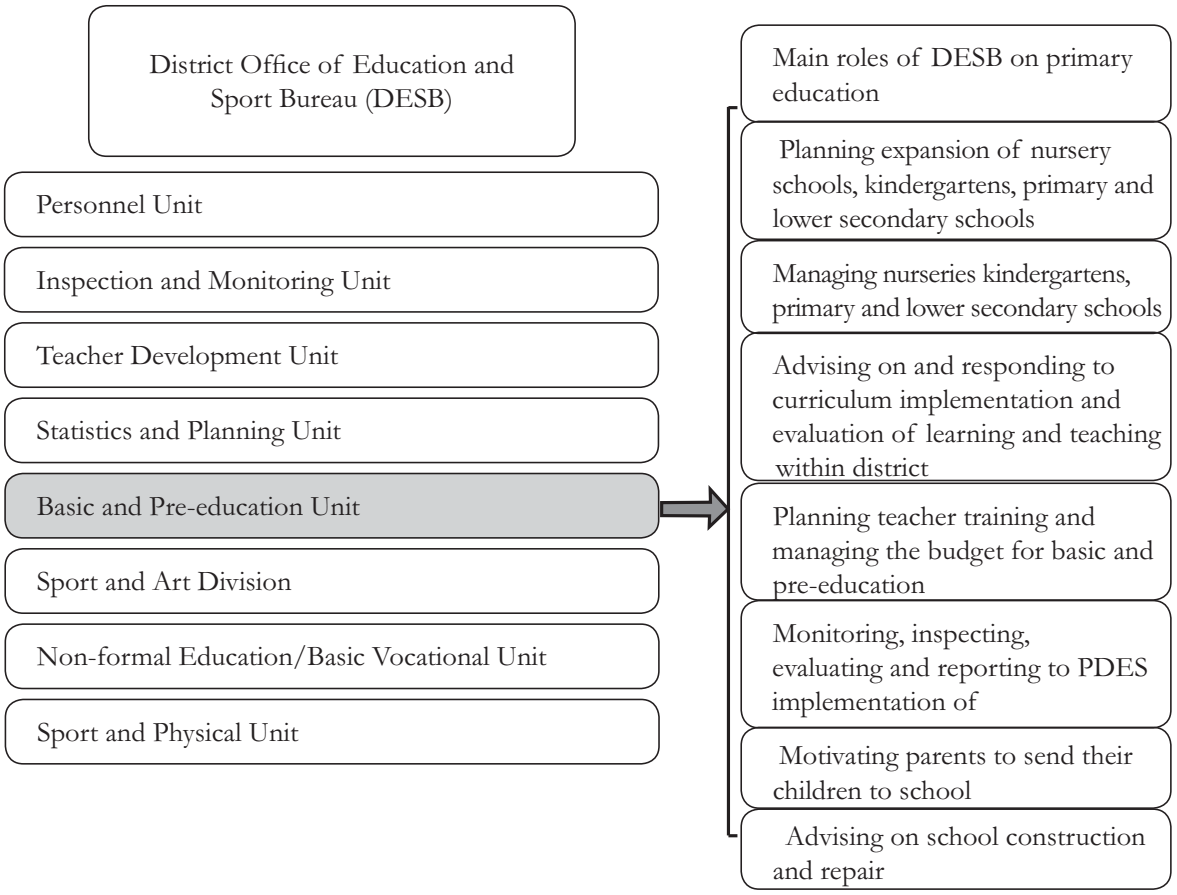
Horizontal coordination

(1) Ministry of Finance

The Ministry of Finance is responsible for overall fiscal policy and sectoral allocations of the annual recurrent budget, while the MPI is responsible for capital budget allocations. The MPI and MOF together with MOES are responsible for supervising and monitoring the flow and use of funding. However, there is a new budget management and monitoring system in education since last fiscal year, which provides education funds including current and capital expenditure to MOES in a lump sum.

Although the national plan and the amount of funds for education have been approved by the National Assembly, in practice there is often a lack of funds due to inconsistency between plans and the actual availability of funds. For example, the education law amended in 2007 calls for allocation of at least 18 percent of total government expenditure, but the actual allocation has been less than 13 percent.

Figure 3.10: Structure of District Education and Sport Bureau



Source: Research team's summary of information from Ministry of Education and Sport

(2) Ministry of Planning and Investment

The MPI formulates long-term, medium-term and short-term socio-economic development plans and is responsible for overall public investment and sectoral allocation of capital funds. Public investment in education is carried out within the framework established by the MPI, and under the responsibility of MOES, Department of Planning and Finance.

(3) Villages

Village authorities significantly contribute to education development, particularly since the first experiment with Village Education Development Committee in 2006. The Village Education Development Committee is the official local body responsible for motivating students to go to school. It includes seven villagers, the village head, a primary school director and one representative of teachers.

The roles of Village Education Development Committees include (1) collecting statistics of households; (2) collecting statistics on children who are of school age, drop-out students, repeating students, students who perform poorly and illiterate adults; (3) considering ways to solve those problems; (4) collecting statistics on teachers who have inadequate teaching standards; (5) developing education based on needs of the village; (6) creating an education fund to support teachers and students by collecting from village donors; (7) supporting children who have never been to school or who dropped out of school; and (8) consulting with villagers and students to improve education in the village.

Although these committees are an important support of village education, they exist in only around 21 percent of all villages due to a lack of funds to train them. A budget allocation for these activities is therefore necessary.

(4) Development partners

Development partners and NGOs significantly support socio-economic development by providing resources and technical assistance. Education receives a large amount of funds from development partners. The main development partners assisting primary education include the Asian Development Bank, JICA, UNESCO, UNICEF, World Bank, Australia, Germany and Luxembourg. Assistance from development partners has contributed particularly through support for construction of school buildings, food programmes, education funding in remote and isolated areas and technical expertise on curricula.

To enhance aid effectiveness, the MOES and development partners have set up a working group to implement education development activities; however, this coordination mechanism remains weak. There is also a lack of monitoring of NGO-supported activities to ensure that projects are in line with national education policies.

4. Policy and institutional constraints

Based on the review of policies, institutional arrangements and key informant interviews, some constraints have been identified. As mentioned above, health and education policies are, to a great extent, largely comprehensive and relevant in issues covered, particularly nationally. They also emphasize the objective to ensure access to quality health and services in poor and remote areas. Moreover, institutional structures and roles and responsibilities are well defined. However, there exist equity gaps in access to health and education services, i.e. poorer and more remote populations still lag behind better-off and urban populations. These unsatisfactory outcomes and goals that are often failed to materialise imply weak implementation. The following are some constraints preventing successful implementation of plans and policies.

Public expenditure on health and education remains low and erratic—over the last decade, below 2 and 3 percent of GDP, respectively. There has been agreement with the government's approval of increased health and education expenditure. However,

in practice this is challenging due to limited funds and the way in which funds are allocated.

Planned programmes and activities are not fully implemented, and there are often differences between proposed budgets and approved budgets. Although plans and policies are comprehensive, not all are implemented, or they are implemented with some delay; one of the main reasons is a lack of funds.

The health and education workforce is lacking in both quantity and quality. The workforces are unevenly distributed among provinces and administrative levels, with a huge competency gap between central and local levels. Many capacity building programmes have been provided, but there is no mechanism to evaluate their effectiveness. Knowledge and skill transfers are weak.

Policies and decision making process has been limitedly evidence-based, and lack of people's participation. Planning and policy formulation do not formally include research. Often, documents are drafted based on consultation among a group of high administrative officials who have limited knowledge of operational issues. In addition, public consultation is limited and often does not include disadvantaged groups. Many development partners have carried out research to identify constraints and issues, but there is a lack of platforms in which to discuss findings and convey messages to policy makers. However, over the past few years development partners have increasingly provided technical support directly to planning, which has made planning more technically and scientifically consistent. The government also has seen the importance of scientifically rigorous studies to support policy formulation, resulting in a state budget for research on development policies.

Regulations and guidelines are lacking to support local implementation of policies and plans. Communication is irregular and sometimes not aligned among centre, province and district, so policy guidance is not reaching the grass roots level, and operational lessons are not being fed back to inform policy choices. Although roles and responsibilities are clear, there is often a lack of local initiatives in implementation. Local actors often require directions and guidelines from higher up.

There is no timely and result-based monitoring and evaluation system for plans and policies. For example, a mid-term review was first introduced only for the Seventh Five-Year Socio-Economic Development Plan, 2010-2015. The lack of monitoring and evaluation has resulted in poor achievement of targets. It also prevents plans and policy in the next cycle from taking into account lessons and issues from previous plans and policies.

Weak coordination among programmes funded by development partners and NGOs has resulted in high transaction cost, fragmentation and inefficiency. It has also made some local service delivery difficult because of different approaches recommended.

Information sharing and communication are weak, impeding a broader and deeper understanding of laws and regulations among the civil service and public and limiting public awareness about importance of health and education and availability of free and subsidized services especially in rural areas.

5. Policy and institutional recommendations

Based on the analysis in part 2 and 3 and above mentioned constraints, following recommendations are proposed:

Maintain high central and local political support for health and education development especially in rural areas and among disadvantaged group. Health and education have been regarded as priority areas on national development agenda, and current policies also emphasize the objective to ensure access to quality health and education services in rural areas and among poor and disadvantaged groups. This political support is essential to maintain good progress in health and education development and narrow equity/inequality gaps.

Increase government funding to health and education, ensure its sustainability, predictability and timeliness, and strengthen financial management. The problem of low and erratic budget allocation needs to be addressed to ensure adequate financial resources are available to implement plans and policy measures and ensure continuity of programmes without heavy reliance on external funding, which is difficult to predict. In addition, **the government also needs to increase finances for health and education outreach activities and procurement of basic vaccines and drugs**.

Continue to enhance capacities of health and education workforce. Attract technical assistance from development partners. However, careful assessment and consultation with agencies is needed in order to effectively fill competency gaps and avoid unnecessary programmes. **Continue to provide incentives for health and education workers to work in rural remote areas.**

Improve national, provincial and local coordination mechanisms. Ensure two-way communication, i.e. including feedback and a platform for policy dialogue. This will ensure that policy directions reach the grass roots and that information from the grass roots is conveyed to policy makers. **Coordination among development partners and agencies is needed to avoid redundancy ensuring that efforts are complementary and synergistic**.

More detailed instructions on implementation of plans and policies need to be made available locally. Encourage local officials to participate in policy dialogues and take initiat**ves on development issues.**

Improve national statistics and information systems and integrate sector-wide statistics into the national system to make comprehensive statistics and information available at one location.

Develop a result-based monitoring and evaluation system. Indicators need to be identified and more quality and timely statistics need to be collected for more evidence-

based policy formulation. **Continue to emphasise the importance of research and development in planning and policy formulation**. Increase participation and ownership of research by the government to increase its relevance and make it less donor-driven.

Raise public awareness on importance of health and education and availability of free or subsidized services.

Appendix: Human opportunity index

Construction of the index

The Human Opportunity Index was developed in 2008 by a consortium of economists from the World Bank, Brazil and Argentina. It is a composite index that combines of two elements: (i) the level of coverage of opportunities, and (ii) the degree to which the opportunities are distributed according to equality of opportunity. The HOI is constructed based on discounting for inequality in opportunity distribution across circumstance groups (D), from the overall coverage (C), so that

$$HOI = C\,(\,1 - D\,)$$

The average coverage, C, is the percentage of individuals who have access to the service or opportunity. It is calculated by

$$C = \sum_{i=1}^{n} w_i\, p_i$$

where $\{i = 1,2,3,\ldots n\}$ and n is a number of observations,
w_i is a sampling weight of individuals, and
p_i represents individual access to the service or opportunity,
which takes a value of 1 if the i^{th} individual has access and 0 otherwise.

The second component of the HOI is the inequality of the opportunity across groups defined by circumstances measured by a D-Index or "Dissimilarity" Index. The D-Index ranges from 0 to 100 percent, and in a situation of perfectly equal distribution of opportunity, D will be zero. The D-Index is given by

$$D = \frac{1}{2C}\sum_{i=1}^{n} w_i\, |\hat{p}_i - C|$$

To obtain the $\hat{p_i}$, first the logistic model on whether individual i has access to a given opportunity or service as a function of his or her circumstances is estimated (circumstances refer to personal, family or community characteristics that are believed should play no role in determining access to opportunities or services). Then, the $\hat{p_i}$ is obtained as the predicted probability of access to the opportunity or service of individuals based on predicted relationship, $\hat{\beta}_k$, and a vector of their circumstances, x_{ki} (k is an index of circumstances).

$$\hat{p_i} = \frac{Exp\left(\hat{\beta_0} + \sum_{k=1}^{m} x_{ki}\hat{\beta_k}\right)}{1 + Exp\left(\hat{\beta_0} + \sum_{k=1}^{m} x_{ki}\hat{\beta_k}\right)}$$

By construction, D-Index measures the weighted average of dissimilarity of access probability of individuals for a given opportunity or service compared to the overall coverage rate. It can be interpreted as the proportion of all opportunities that need to be rearranged to ensure equal access for all (Barros et al., 2008; Barros et al., 2009).

Decomposition of inequality

The D-index represents the total inequality of a given opportunity or service arising from a set of circumstances. To see how much each circumstance contributes to such inequality, this paper uses the Shapley value method to decompose the D-index into its components. According to the Shapley method (Shorrocks 1999, as cited by the World Bank in PowerPoint Slides "Visualize Inequality"), the change in the inequality measure obtained by adding a circumstance depends on the initial set or subset of circumstances to which it is added. The unique contribution of a circumstance is the average value of all changes that occur to the total inequality when the circumstance of interest is added to all possible subsets of pre-existing circumstances. To compute the Shapley composition, first the inequality measure (D-index) is estimated for all possible permutation of the circumstance variables. The impact of adding a circumstance A is given by

$$D_A = \sum_{S \subseteq N/(A)} \frac{|S|!(n - |S| - 1)!}{n!} [D(S \cup \{A\}) - D(S)]$$

where N is the set of all circumstances, which includes n circumstances in total. S is a subset of N that does not contain the circumstance A. $[D(S \cup \{A\})$is the dissimilarity index estimated with the set of circumstances S and the circumstance A. $D(S)$ is the dissimilarity index calculated with the set of circumstances S.

The contribution of circumstance A to the total inequality or dissimilarity index is

$$M_A = \frac{D_A}{D(N)}$$

where $\sum_{i \epsilon N} M_i = 1$

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Chapter 4
Health and Education in the GMS: The Case of Thailand

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1. Introduction

1.1 Background and justification

This study is part of a sub-regional study in Stage II of the GMS-DAN project. In Stage I, individual country assessments of inclusive development suggested that, despite remarkable achievement in spurring growth and poverty reduction in the last two decades, GMS countries' performance in social dimensions, especially health and education, is still not satisfactory. Therefore, including those social areas in development has become a priority. The Stage II research aims to investigate two main social dimensions, health and education, and to discuss the key national policy and institutional changes required to achieve further inclusive development in these areas.

1.2 Objectives

The overall objective of the Thailand country study is to examine the policy and institutional changes required to achieve inclusive development in Thailand. The specific objectives are:

1) to identify and analyse current policies and institutional arrangements that support inclusive development in health and education;
2) to identify key areas for improvement or changes in current national policies and institutional frameworks in order to achieve more inclusive development in health and education.

1.3 Scope and limitations

This study consists of four parts: introduction, education, health and conclusions. The study on education focuses on higher education due to time and resource constraints and the fact that considerable work has been done by the Thailand Development Research Institute (TDRI) on education quality in Thailand in general and that education quality is closely related to inclusive development in education. The study does not attempt to assess the outcomes of higher education. The work is responsible by the Office of National Education Standard and Quality Assurance.

1.4 Research methodology and conceptual framework

The present study applies an adapted institutional analysis and development framework and approach (Andersson 2006; Gibson et al. 2005), as discussed and agreed upon at the DAN-GMS workshop in Vientiane on 15-16 August 2013.

In summary, the methodology consists of four major steps:

1) the examination of higher education inclusiveness or health inclusiveness;
2) identification of exogenous variables, i.e. review of policies and institutional arrangements;
3) identification of key actors and their interests and desired incentives (through review of extant studies and secondary information) and examination of the course of key actors and their interactions within the institutional settings against outcomes; and
4) recommendations of appropriate institutional and policy changes.

2. Inclusive development in higher education: The role of national policy and institutions

2.1 The inclusiveness of higher education

Thailand has experienced periods of inclusive growth, meaning that the poorer population has benefited economically and socially at some point in the country's economic progress. Nevertheless, education is still not inclusive. For example, regional disparities, particularly unequal access to education, health and economic infrastructure, hinder the inclusiveness of growth as knowledge and resources are not transferred to the poorer regions. For several decades, the education system has struggled to keep pace with the country's growth rate and, over the past two decades, education has made enormous progress in quantity but not in quality. Indeed, it has been argued that one critical factor behind the poor quality of Thai education is inequality in access, especially to education of high quality. At university level, inequality remains severe (UNDP 2014: 28).

This study focuses on higher education for a major reason that TDRI has done a good job on education quality, starting with its conference on 15 February 2012 (Poapongsakorn et al. 2012). The conference was based on four comprehensive background papers on the issues.[1]

At the conference, TDRI proposed decentralisation of control of education, including more freedom for institutions to innovate; more involvement by parents; and an incentive system that rewarded or penalised teachers and administrators on the basis of the results achieved by students on standardised tests. Subsequently, on 20 March 2013, TDRI organised a public brainstorming session on fundamental education reform with a view to achieving educational accountability. The session recommended five aspects of a national education reform strategy: educational test reform, curriculum reform, teacher quality reform, reform of educational quality assurance and educational finance reform. All five aspects should be implemented at the same time.

On 18 November 2013, TDRI continued to campaign on the quality of education in its conference on "New Development Model: Towards Quality Growth Based on Productivity Improvement".

In a consistent effort, in April 2014, TDRI collaborated with the World Bank in the organisation of a workshop on "Management of educational resources towards upgrading the overall quality of education". The workshop speakers included the minister of education at the time, Jaturon Chaisang. A concluding remark by the TDRI president observed that the education system lacks four important components: accountability, equality, school autonomy and resources (*Bangkok Post,* 1 May 2014).

1 The conference's main conclusion was that the poor educational quality resulted from a lack of accountability on the part of teachers, school directors and administrators up to the minister of education (UNDP 2014: 22).

This study takes a step from TDRI's studies to analyse the inclusiveness of higher education in Thailand[2] by applying DAN's adapted institutional analysis and development framework and approach. For the purpose of this study, inclusiveness in higher education is defined simply as equal access for all—the poor and the rich, men and women, the young and the old, without discrimination, and at the same level of quality.

The study finds that Thailand's higher education is not inclusive. Throughout its history, it has been far from inclusive. Almost a century ago, when the first university was established, it was part of an elite approach to higher education, to train government officials to serve the country (Krongkaew 2004, cited in Tangkitvanich & Manasboonphempool 2008). Forty years ago, inequality in higher education was brought up at a seminar organised by the Chulalongkorn Lecturer Council on 31 May-1 June 1975. The issue then was unequal access for low income students because there was a low rate of enrolment (Thanapornpun 1975). In 1966 and 1967, the probability of students from agricultural families entering university was 3 in 100,000 (Kerdbibule 1971, cited in Thanapornpun 1975: 9). During the same period, only about 5-6 percent of higher education students were from families whose monthly income was less than THB500 (Kraft n.d., cited in Thanapornpun 1975: 9). A survey of first year students of Thammasat University during 1972-74 revealed that students from low income families (less than THB15,000 /month) accounted for only 11.9 percent, and those with incomes less than THB30,000 /month accounted for 37.3 percent (Thanapornpun 1975: 10).

Since the 1970s, higher education enrolment has expanded steadily and dramatically, particularly over the last 10 years. The total number of tertiary students increased from 78,000 in 1971 to more than 2 million in 2005.[3] The greatest jump in enrolments took place at the beginning of the 1990s. Although access to higher education has grown, serious problems of equity remain. The system faces challenges of access, equity and quality. Despite increases in the number of post-secondary institutions to accommodate growing demand, enrolment rates of lower income students remain very low. At the same time, there is general concern over static or declining quality. The top Thai universities have tended to become less competitive internationally. In scholarly publications, Thailand outstrips some ASEAN neighbours, but has fallen behind Singapore and East Asia (WBG 2010: 33-34). The Japan External Trade Organization also found that Japanese firms in Thailand were more likely than Japanese firms in other ASEAN countries to complain about the difficulties of recruiting regular staff, middle management and engineers. Thai engineers were found to lack practical skills and language ability (UNDP 2014: 23).

In regard to gender inclusiveness, Thailand has experienced a reversal in the gender gap in education, as more females than males are enrolling in higher education for at least two decades, female enrolment has been higher than male. Since this trend is being

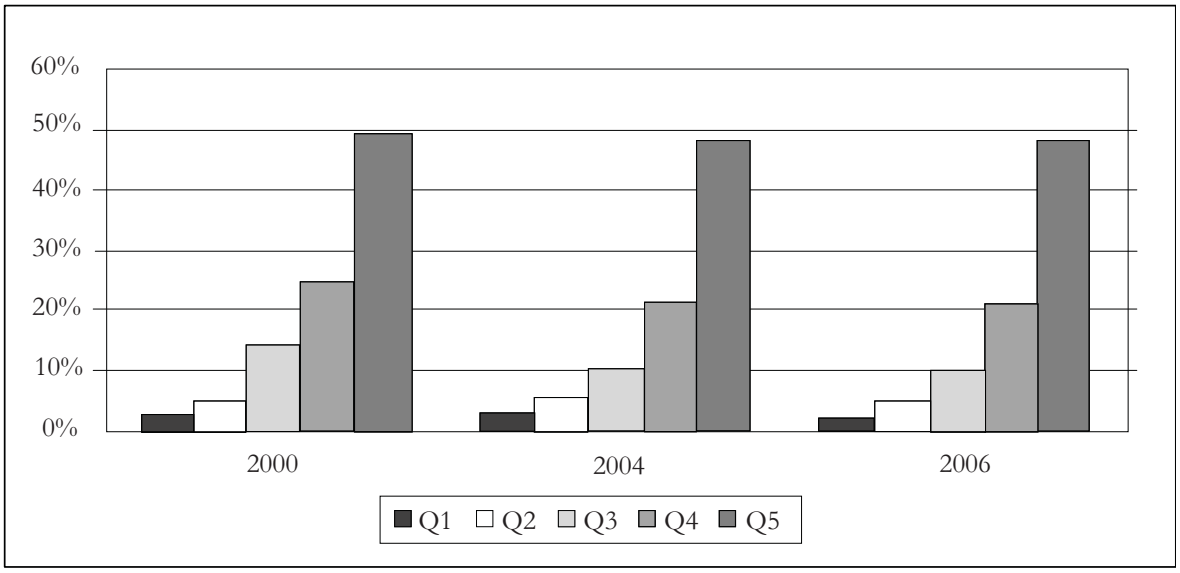
2 TDRI has also done a study on "Strategies for Financing Higher Education: The case of Thailand", by Somkiat Tangkitvanich and Areeya Manasboonphempool (2008).

3 Enrolment in tertiary education in 2012 is 2,820,528. (BICT, Office of Permanent Secretary, 2012). Tertiary education has a broader meaning than higher education; it includes vocational certificate and diploma education—in other words, all post-secondary education.

experienced in many parts of the world, i.e. tertiary education is the level at which female enrolments have increased the most in almost all regions, this issue is not a serious policy question.

Thailand experiences substantial inequalities in access to higher education by household income. As shown in Figure 4.1, almost 50 percent of students from the highest income quintile (Q5) participate in higher education, compared to less than 5 percent of students from the lowest quintile (Q1) (World Bank Group 2010: 37). A similar study by Lathapipat (2012) found that 60 percent of youths from the top income quartile enrol, but only 10 percent of youths from the bottom quartile. Moreover, this gap has widened since the mid-1990s, youths from the top quartile showing the most gains (UNDP 2014: 27). An important implication is that children from well-to-do families will have more chance of landing desirable and high-paying jobs, widening the gap between rich and poor children (Sirinun Kittisuksathit et al. 2013, cited in UNDP 2014: 28).

Figure 4.1: Enrolment in higher education, by income groups



Source: Socio-Economic Survey 2006 in World Bank Group 2010:37

The World Bank Group (2010) also points out substantial differences in higher education participation by region and locality (Table 4.1). Bangkok has the highest rate, followed by the central and southern regions. The participation rate of persons living in municipal areas was more than three times that of people in non-municipal areas. These inequalities were caused by most higher education institutions being located in Bangkok and urban areas; students from the outer regions usually migrate to study.

As pointed out by Kirtikara (2001: 5), problems of equity and access to higher education had been recognised for a decade, and had been partially solved. Nearly half (44 percent) of higher education institutes used to be located in and around Bangkok and close to three quarters (70 percent) of students were from families with good economic background. Quota systems were adopted for admission of upcountry students without going through the common university entrance examination, to alleviate the problem that upcountry students could not compete equally due to their lower quality of school

education. Towards the end of the economic boom (1996), more than 30 new higher education institutes were established throughout the country, using videoconferencing for teaching, creating so-called IT campuses. It was hoped that IT would help solve the perennial problem of shortages of university lecturers and enable provincial students to access quality lecturers.

Table 4.1: Higher education participation rate by region and locality (age 20 and over)

Region	Participation rates (%)		
	2001	2003	2005
Bangkok	25.12	26.15	29.36
Central	11.14	12.32	13.59
North	7.14	8.66	9.56
Northeast	6.19	6.64	6.80
South	9.71	11.29	13.10
Locality			
Municipal	20.58	22.02	24.12
Non-municipal	5.42	6.26	7.11

Source: Labour Force Surveys 2001, 2003, 2005 in (World Bank Group 2010: 39)

2.2 Socio-economic and political factors, policies, and institutional arrangements in higher education

2.2.1 Socio-economic and political factors

2.2.1.1 Economic growth

Thailand has been changing from an agriculture-driven economy to a services and industry-based one. Manufacturing has become a main driving force of growth, with 40 percent of GDP in 2010. In 2010, services contributed 49 percent of GDP. From 1994 to 2013, annual GDP growth averaged 3.8 percent, reaching an all-time high of 19.1 percent in December 2012 and a record low of -13.9 percent in June 1998 (Trading Economics 2014). In 2012, the economy grew 6.5 percent (NESDB 2013a), with an inflation rate of 3.02 percent. In 2013, it was expected to grow 3.8 to 4.3 percent. After seasonal adjustment, however, GDP contracted by 1.7 percent and 0.3 percent in the first and the second quarters of 2013: technically speaking, the economy was then in recession. In the first half 2014, the growth rate was minus (below 0) by 2 percent due to political turmoil. The labour market is unbalanced, with shortages of low-skilled workers but an oversupply of higher education graduates.

2.2.1.2 Population and enrolment in higher education

The population of Thailand in 2013 was 64.62 million (not including 2.13 million non-Thais whose names were not in the household registration at the time of enumeration in 2010). It consisted of 31.44 million males and 33.19 million females (NESDB 2013b).

The population aged 60 and over was 9.5 million or 14.7 percent, indicating that Thailand has become an ageing society. In 2011, the population aged 15 and over had an average education of 8.0 years.

There were 2.21 million students in higher education institutions under the Office of the Higher Education Commission (OHEC) in 2012, compared to 1.91 million in 2005 (Table 4.2). In addition, there were 610,221 higher education students in institutions outside the OHEC in 2012, compared to 602,175 in 2005. Other higher education institutions include those under the ministries of Tourism and Sports, Culture, Public Health, Defence and Transport, Royal Thai Police and Bangkok Metropolitan Administration.

Table 4.2: Higher education enrolment, 2005 and 2012*

Institute	2005				2012			
	Total	Lower than Bachelor	Bachelor	Higher than Bachelor	Total	Lower than Bachelor	Bachelor	Higher than Bachelor
Public institute	1658101	71923	1423609	162569	1947047	23254	1744775	179018
Limited admission	1011716	58558	834087	119071	1103040	7849	1026999	68192
Open university	602582	-	565233	37349	529815	-	474269	55546
Autonomous university	30438	-	24289	6149	298787	-	243507	55280
Community college	13365	13365	-	-	15405	15405	-	-
Private institute	250951	-	234445	16506	263260	-	242952	20308
Total enrolment*	1909052	71923	1658054	179075	2210307	23254	1987727	199326

* Includes only enrolment of OHEC; enrolment in agencies other than OHEC was 602,175 in 2005 and 610,221 in 2012. Thus the overall totals of enrolment in tertiary education were 2,511,227 and 2,820,528 in 2005 and 2012, respectively.

Source: BICT, Office of Permanent Secretary, 2012. Educational Statistics in Brief 2012

2.2.1.3 Poverty and income inequality

Poverty in Thailand has declined continuously over the years. Poverty indicators such as the head count ratio, the poverty gap index and poverty severity index[4] have declined. The period of most success in poverty reduction was 1988-96, when growth rates were highest, an average of approximately 15 percent real GDP growth per year. The changes indicate that the proportion of the poor decreased, and that the poor were also getting closer to the poverty line.

4 The poverty head count ratio is the percentage of the population living on less than $1.25 a day (PPP). In Thailand it is based on poverty lines of ($1.25/day (PPP) and $2/day (PPP)), as well as on the national poverty line, which corresponds to the expenditure needed to acquire basic consumption. The poverty gap index is the mean of the gap between expenditure/income of the poor and the poverty line. The poverty severity index is the squared poverty gap.

However, a decline in the poverty gap index and the headcount index may not indicate that the extremely poor are better off. The severity index has declined greatly, from 4.3 in 1988 to a mere 0.37 in 2010, suggesting that Thailand has been alleviating poverty. Nonetheless, progress has been very slow in recent years, with only a slight annual improvement in all poverty measures.

The stronger definition of inclusive growth focuses not only on opportunities for the poor but also on equal distribution of the benefits of growth. In Thailand's Stage I study, we reviewed the most commonly used indicators of inequality such as the Gini coefficient and Theil indices (all using both income and expenditure data) from 1990 to 2010. It was found that during the 1960s-80s, inequality and poverty generally moved in the opposite direction; poverty was decreasing, but inequality was increasing. However, since the 1990s, while poverty was still decreasing, inequality also seemed to be decreasing despite some temporary fluctuations. This implies that there might be occasions when the income of the poor grew at a faster rate than for the non-poor.

2.2.2 Political factors

Over the past 20 years, Thailand has been through crises including economic crisis (1997), coup in 2006, the sub-prime crisis (2008-09), political crisis (2010), flood crisis (2011) and a political unrest (early 2014) followed by a coup. These crises have continuously challenged economic and social development, including education (UNESCO Bangkok 2014). Political instability means frequent changes of ministers of education and senior officials, frequent change of and inconsistent policies and implementation, including delays of education funding and infrastructure. Thailand had 16 ministers of education in 15 years, resulting in discontinuity in policies and implementation (Chanwit and Sasiwuthiwa 2013: 47). The latest coup also replaced the secretary general of the OHEC with his former deputy (Dr. Kamchon Tatikawee). Political instability also causes economic slowdown, rising unemployment and crime, which slow education progress and decrease the demand for higher education.

In addition, political interference is detrimental to the quality of education.

> "Thai education system was destroyed by the Thaksin government. Instead of aiming at the quality of the country's education, the Thaksin government abused and/or exploited the education system for political votes." (Vicharn Panich 2007, in Chiangkool 2008)

Political factors are envisaged to play an increasing role in higher education because of the coup (National Council for Peace and Order: NCPO). Many reforms, including of education, are seriously under way.

2.2.3 Institutional arrangements

Institutional arrangements are policies, systems and processes that organisations use to legislate, plan and manage their activities efficiently and to coordinate with others in order to fulfil their mandates (UNDP 2013).

2.2.3.1 Education plans and policies

At the end of 1980s, Thailand attempted comprehensive higher education reform for the first time when the Ministry of University Affairs launched the first 15-year Higher Education Plan, covering 1990-2004. In 1997, the year of the Asian financial crisis, the Constitution B.E. 2540 was promulgated, and the first National Education Act (NEA) was enacted in 1999. The NEA is considered the country's master legislation on education and provides a comprehensive vision for reform. But over 1988-1997, higher education reform was largely piecemeal. In 2007, the government comprehensively reviewed higher education performance and laid out a new vision in the Second 15-Year Long Range Plan for Higher Education (2008-22). By 2008, a strong message re-emerged about the need to overhaul higher education to promote higher quality, efficiency and effectiveness (WBG 2010: 27-34).

Figure 4.2 shows the framework of higher education policy, consisting of four key national plans and policies: the 11th National Economic and Social Development Plan (2012-16), the Second 15-Year Long Range Plan on Higher Education (2008-22), the government policy and the Ministry of Education's policy.

The Second 15-Year Long Range Plan on Higher Education[5] is anchored on the principle of institutional autonomy, in order to foster institutions to develop efficient planning and management systems responsive to societal and individual demands and expectations. The directives and measures specified in the plan are now being translated into institutional long-term development plans and yearly action plans. On the other hand, systemic performance will be enhanced through better governance structures, effective financing instruments, well-articulated standards and efficient university networking. This two-pronged approach is a significant innovation in higher education administration. Its ambition is to (a) expand access to a new generation of students and steer them to careers that fulfil their individual goals and national needs, (b) promote excellence in higher education relevant to labour market demands, (c) foster more efficient and more equitable resource allocation and (d) create an institutional environment where higher education institutions are empowered to pursue their vision, within a quality assurance and accreditation framework that sets high standards and holds institutions accountable for results (WBG 2010: 27-34).

The Second 15-Year Plan emphasises the follow quality issues (OHEC 2008a: 3).

1) **Articulation of the university system with basic education and vocational education:** to upgrade the quality of basic and vocational education, especially competency in Thai and English languages, basic sciences and mathematics, in order to supply competent students to higher education.

5 The plan was completed in 2007, during the government of General Surayuth Chulanon and minister of education Wichit Srisa-an, appointed by General Sonthi Boonyaratkalin on 19 September 2006.

2) **Reforming the university education system:** to address weaknesses in quality, limited staff and resources and declining performance of school students.

3) **Good governance and management:** to strengthen university governance by delegating authority to university councils and executives to be more accountable.

4) **Universities and national competitiveness:** to strengthen university research capacity and national competitiveness.

5) **Improvement of university financing system:** to improve the public financing system of universities.

6) **University staff development:** to explore new dimensions such as mentoring in teaching, learning and university management, development of university leadership, research capacity strengthening and rewarding of successful academics.

7) **Networking of universities:** to promote sharing and consolidation of academic programmes and teaching activities in order to build up mutual trust among staff, and to foster investing in common infrastructure.

8) **Higher education plan for southern Thailand:** to mitigate the conflict and violence in southern Thailand through a special higher education plan.

9) **Development of learning infrastructure for university education:** to develop essential learning infrastructures such as humanwares, learningwares and physical infrastructure and curriculum responsive to social and economic demands and proactive towards world changes (OHEC 2008a:3-5)

There is no clear policy statement on inclusive higher education.

The government's policy on higher education delivered to the National Assembly on 23 August 2011 (by Prime Minister Yingluck Shinawatra) touched on inclusiveness. The stated policy was to ensure equal educational opportunities for all groups of the population. To mitigate financial obstacles for students from low-income families, the government would set up an Income Contingent Loan (ICL)[6] and arrange a debt moratorium for students borrowing from another student loan project (Student Loan Fund—SLF) by enrolling them in the ICL (Boonyaratapun et al. 2012: 329).

6 ICL is a replacement of SLF which was initiated by the Chuan Leekpai government in 1995 and started operation in 1996 (www.studentloan.or.th; retrieved5-7-2014) (under the Banharn Silapa-asha government). The Student Loan Fund Act was promulgated in 1998 (under the returning Chaun Leekpai government). The SLF was stopped in 2014 (www.thairath.co.th/content/404776; retrieved 4-7-2014).

Figure 4.2: Thai higher education policy framework

• Investing in raising quality of entire education system • Providing no fewer than 12 years of free basic education • Upgrading teacher training and development • Using ICT to enhance learning efficiency • Developing quality and standards of HEIs	• Articulating higher education system with basic and vocational education • Solving existing problems in higher education • Enhancing HE and country's competitiveness • Investing in staff development • Financing, governance, and management • Networking universities
The 11th national economic and social development plan	**The 2nd 15-year long range plan on higher education**
• Improve the quality of education by undertaking reform of Thailand's knowledge system • Create and ensure equal educational opportunities for all groups of the population • Teacher reform—upgrade the teaching profession to be a truly high-skilled occupation • Design university and vocational education to meet the needs of the labour market • Ensure that the use of information technology for education meets international standards • Promote research and development to enhance national intellectual capital • Enhance the capacity of human resources in order to prepare for liberalisation due to the formation of ASEAN Community	• Education quality development at all levels and all types emphasising student-centred approach • Creation of equal education opportunities for all groups of people • Teacher reform in order to uplift status and profession of teachers to advanced professional • Provision of higher and vocational education and occupational training to accord with labour markets in quantity and quality • Development of ICT applications to equalise education to international level • Increase of competitiveness of human resources to serve liberalisation of ASEAN Community
Government policy (Yingluck government (2011))	**Ministry of Education's policy (Thadathamrongwej (2012))**

Source: Ratananukul 2012

The minister of education's policy in 2012 followed closely the government's policy on "Creation of equal education opportunities for all groups of people". The wording was changed to "increase access to education" by the following minister (Kanvong 2013) and to "increase and distribute the opportunities to good quality education" by the minister, Jaturon Chaisaeng, in 2013, before the coup (Office of Education Policy & Strategies 2013: 3).

The 11th Higher Education Development Plan (2012-16) (HED Plan) was based on the aforementioned policy framework (OHEC 2012: 15; Pinitiratananukul 2012). The plan is under the policy framework of the 11th National Economic and Social Development Plan (2012-16), the Second 15-Year Plan and the Guidelines for the Second Decade of Educational Reform together with related policies, namely the Revised National

Education Development Plan (2009-16), the 8th National Strategic Plan on Research, the first National Policy and Plan on Science, Technology and Innovation (2012-21) and the Government Policy on Education and Technological Development (Figure 4.3). The relationships of these frameworks and the 11th HED Plan are provided in chapter 4 (4.3) of the plan.[7]

The 11th HED Plan adopted the LEGS strategies, namely L = Leader of Change Management for Quality Education (All for Quality Education and Quality Education for All), E = Educator Professionals, G = Graduates with Quality and Social Responsibility and S = Satang[8] Utilisation (OHEC 2012).

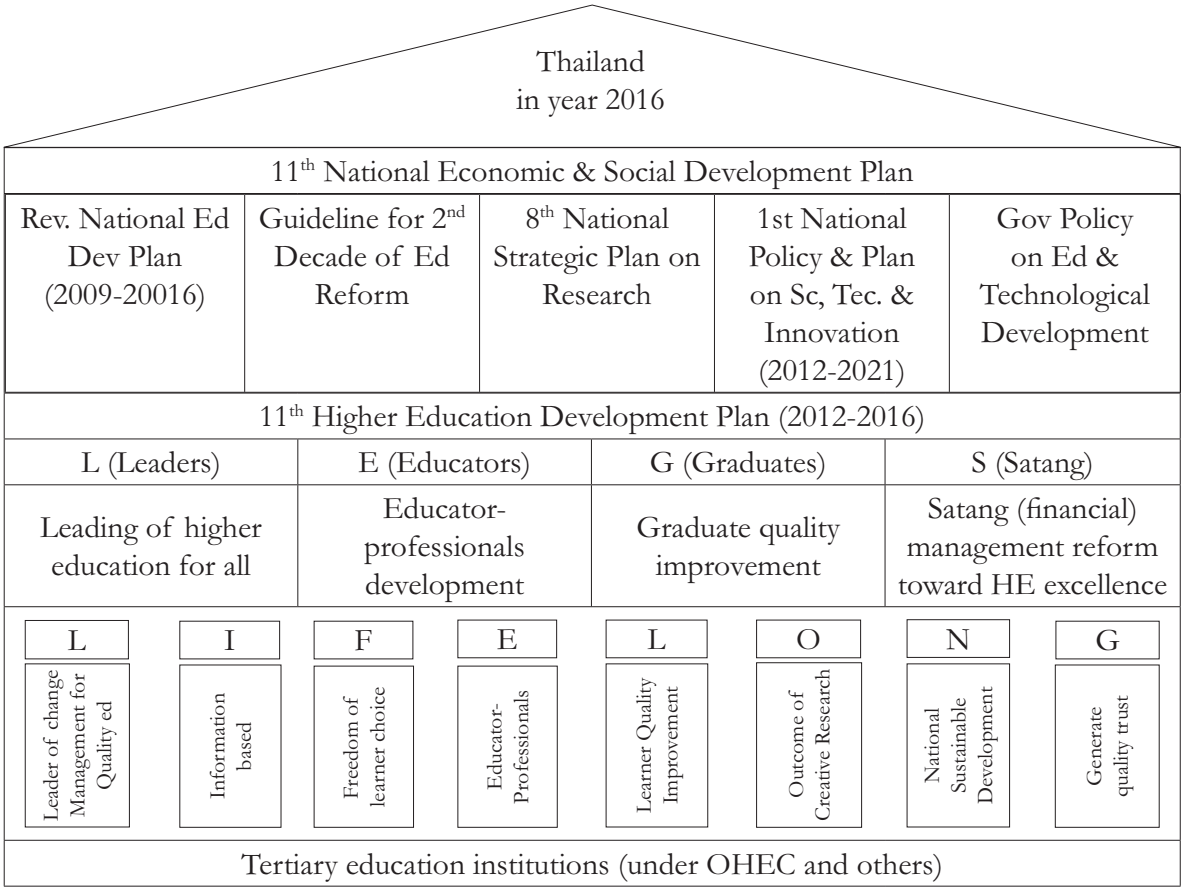
The motto "All for Quality Education and Quality Education for All" should be associated with inclusive higher education. A closer look at its nine strategies, however, finds that they are not quite related to inclusive higher education or equity in access. The nine strategies under this main strategy are (1.1) Defining common values and visions of higher education, (1.2) Managing higher education according to the target of the Second 15-Year Plan, (1.3) Developing a system of capacity assessment and development of higher education and members of the university council, (1.4) Developing a system for closure and consolidation of curriculum, faculties or universities, (1.5) Developing higher education IT infrastructure system, (1.6) Promoting higher education institutes to become world class higher education institutes, (1.7) Enhancing the role of Thai higher education in ASEAN, particularly on higher education manpower mobilisation, (1.8) Creating linkage between higher education institutes and the private sector on teaching, learning and research and (1.9) Developing the structure and roles of OHEC.

The strategy "Graduates with Quality and Social Responsibility" is more likely to have implications for inclusion. The sub-strategy 3.1 aims to develop (or improve) a flexible system of university admission, learning and graduation in response to the needs of every age group. In fact, the HED Plan states that the target is "to have an admission system to higher education institutes that has variety and flexibility in order to expand educational opportunities and promote lifelong learning" (OHEC 2012: 51). This strategy includes no indicator of equal opportunity for students from poor families. However, in practice, the government has promoted accessibility through the Student Loan Fund, Income Contingent Loan and Cyber University (Kanvong 2013).

7 The Second Decade of Educational Reform (SDER) (2009-18) has been formulated and implemented by the ONEC (ONEC 2009:2). SDER aim at three goals: (1) development of educational quality and standards; (2) increase of educational and learning opportunities; and (3) encouragement of participation from all sectors in education administration and establishing the framework for education reform and systematic learning (ibid.: 11-12). SDER was formulated by the NEC after 10 years of the NEA 1999 and the First Decade of Educational Reform (under the Aphisith Vejjajiva government and education minister Chinaworn Boonyakiat).

8 Satang in Thai means money.

Figure 4.3: 11th Thai higher education development plan (2012-2016)



Source: Translated from OHEC 2012

According to OHEC (2008a), Thai higher education is at a crossroad of quantitative and qualitative dilemmas. To tackle these, OHEC has tried to reposition higher education to respond to the emerging needs of society and the economy.

Since 2008, Thai policy has aspired toward quality education. Ultimately, the country aims to become a regional education hub, with the target of increasing foreign students to 100,000 from the current figure of 20,000. The Ministry of Education has initiated a National Research University with an ambitious goal for the country to become a world-class regional academic and education hub. This is a part of the Second 15-Year Plan. The government has given high priority to upgrading universities to international standards of excellence while upholding their academic freedom and social responsibility (OHEC 2008).

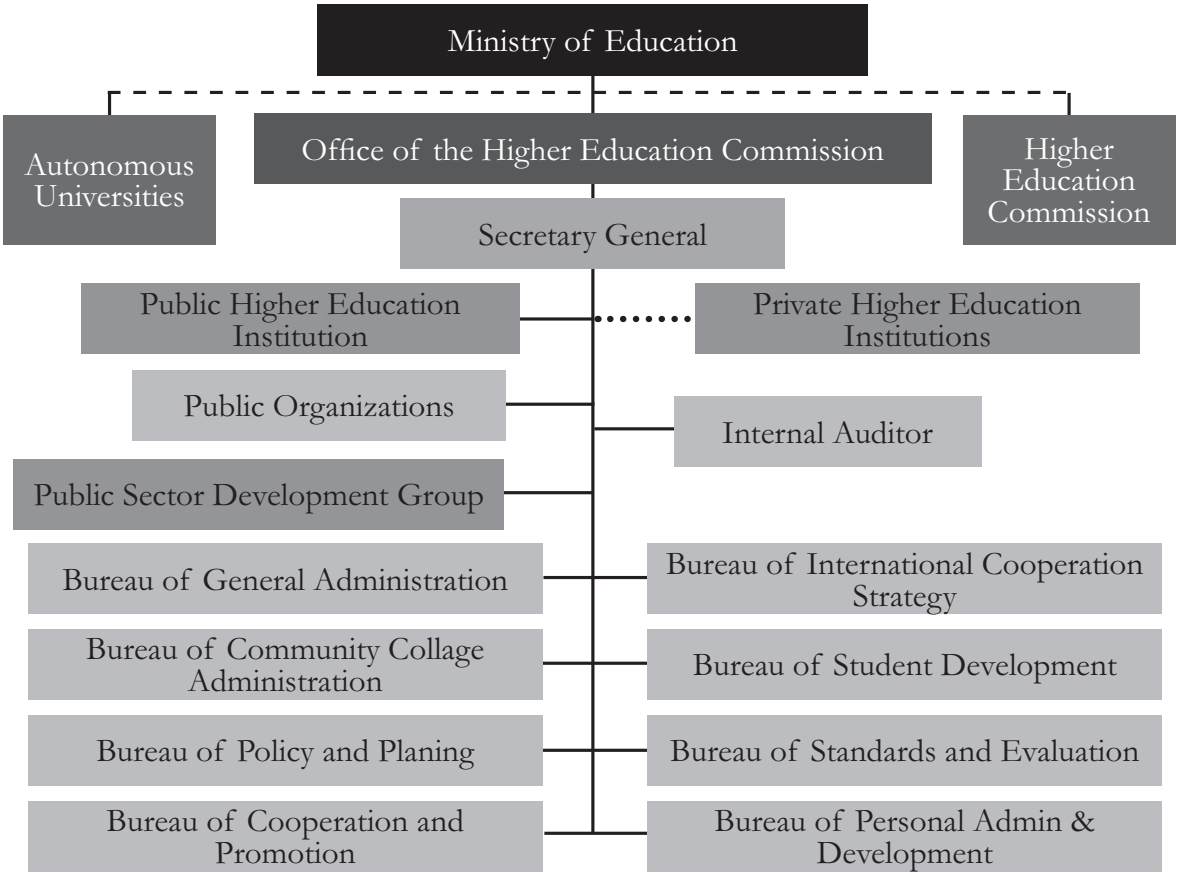
At the same time, the 11th HED Plan gave university councils full autonomy to manage. University governance also requires effective leadership for suitable changes and to motivate university social responsibility. Recently, the MOE has drawn up a plan with a view to preparing for the ASEAN Community. The plan has five key objectives focusing on English language capability and ICT at every level of education (UNDP 2014: 29-30).

2.2.3.2 Higher education institutions

The higher education system in Thailand is complex and has lacked policy cohesion. It is under responsibility of six ministries and the Bangkok Metropolitan Administration. The key body is the Ministry of Education (MOE). Others are the Office of Vocational Education Commission, ministries of Public Health, Defence, Transport, Culture and Science & Technology. (This situation is an improvement from 2001, when there were 11 agencies involved.) As a well-known educator put it, "Thai higher education system is aimless, repetitive, lacking quality and efficiency" (Tongroach 2008).

The organisation of the OHEC is illustrated in Figure 4.4. The OHEC is the Secretariat of the Higher Education Commission, and the autonomous universities are partly under the OHEC.

Figure 4.4: Organisation chart of the Office of Higher Education Commission



Source: (Ratananukul 2012)

The system is composed of 170 post-secondary institutions and two autonomous Buddhist universities (Table 4.3). Public higher education institutions can be classified into: (a) limited admissions universities, (b) open admissions universities, (c) autonomous universities and (d) community colleges. Private institutions consist of two categories: universities and colleges (for details of each type, see World Bank 2010: 20-24).

Table 4.3: Number of institutions under the OHEC, 2008 and 2012

Type of institutions	2008	2012
Public Institutions [a/]	**78**	**79**
Limited admission universities [b/]	63	63
Open admissions	2	2
Autonomous universities [c/]	11	14
Community colleges	**19**	**1(20)** [d/]
Private institutions	**69**	**71**
Universities	40	42
Colleges	29	29
Total	**166**	**170**

a/ Including 2 autonomous Buddhist universities; b/ including Kasetsart, Khonkaen, Thammasart, 40 Rajabhat universities, 3 institutes of technology and 9 universities of technology; c/ for example, Chulalongkorn, Mahidol, Chiangmai, Mongkut's University of Technology Thonburi, Suranaree University of Technology, Walailak University and Mae Fah Luang University; d/ Counted as one juristic person

Source: 2008 from Sae-Lao 2013: 9; 2012 from BICT, Office of Permanent Secretary 2012. Educational Statistics in Brief 2012; th.wikipedia.org/wiki/รายชื่อสถาบันอุดมศึกษาในประเทศไทย

Between 2003 and 2008, 46 new higher education institutions were inaugurated, including 19 community colleges. From 2008 to 2012, only two more institutions were established. Although public and private universities are roughly equivalent in numbers, the public ones enrol about 80 percent of students.

The OHEC is responsible for policies and planning, standards and quality systems, promotion of teaching and learning, promotion of research in higher education, personnel management and development and monitoring and evaluation of institutions. It also oversees a number of public organizations: UNINET, Thailand Cyber University, Chulaporn Research Institution, nine Centres of Excellence and the English Language Development Center. (Ratananukul 2012). The OHEC was formerly the Ministry of University Affairs, which was merged with the MOE and Office of National Education Council (ONEC). The merger has been criticized as inappropriate:

"Higher education, through intellectual asset, is the nation's important instrument for its survival. Thailand higher education's role in this regard, however, is negligible. One reason is the educational reform of merging the Ministry of University Affairs with the Ministry of Education, simply because higher education is merely education and should be in the same ministry, which was a mistake. Higher education and fundamental education have different goals …" (Tongroach, 2008)

Consequently, the MOE consists of five pillars: the office of the permanent secretary of MOE, the office of Basic Education Commission, the OHEC, the office of the Vocational Education Commission and the office of the National Education Council. Each office is headed by a secretary general equal in rank to the permanent secretary. An obvious drawback is the lack of leadership of the permanent secretary and lack of policy integration. Besides, the goal of each office is different.

2.3 Belief, norms and values

Belief, norms and values are also behind the policies and performance of higher education through their effects on demand and supply. A problem is the belief that everyone has to get a degree.

There is a long history behind this belief. Twenty years ago, the participation rate in higher education was as low as 14 percent. In response, Thailand increased the number of higher education institutions to 170 in 2012 (not counting institutions outside OHEC). That has raised the participation rate to nearly 50 percent. The current decrease in the population growth rate has reduced the number of high school graduates from 800,000 per year to fewer than 600,000. Higher education institutions have become oversupplied. Many face the problems of attracting enough students and cost overruns. Consequently, some turn to low-cost and easy fields of study "to make money". This results in an oversupply of graduates in some fields and shortages in difficult areas like science and technology, medicine and engineering.

This situation is understandable for private universities, but there is a similar tendency in public universities. In the end, there is an oversupply of degrees. This creates a belief that a degree is necessary to find a job or for social recognition. Tongroach (2008) called this "artificial demand for higher education". He also noted that Thailand has copied its higher education system from the West, which believes that higher education institutions should be autonomous. This leads to a policy of giving more freedom to institutions. It has resulted in Thai higher education institutions lacking accountability (*ibid.*)[9]

The belief of policy elites also affects the quality of education, particularly quality assurance (QA) (Sae-Lao 2013). Through cross-sectoral borrowing, senior bureaucrats, university executives and representatives from the private sector base quality assurance on their professional experience. This is why a "global education policy" such as QA resonates in Thailand. The acceptance of QA differs depending on the type of institution, official position of each individual and academic discipline. It is evident that university executives are more favourable to QA, while academics criticise it for its abundant paperwork and question the link between quality education and quality assessment.

Personal and professional experiences of policy elites are significant elements of the Thai rationale for QA in higher education. Many of the policy elite, policy entrepreneurs and influential advisers in higher education come from science, applied science and health backgrounds. Many also represent private sector positions. Given that QA is a normal and acceptable practice in science and in business, many examples illustrate how these individuals' belief systems could be transferred to education. Sae-Lao argues that a coalition of education bureaucrats, scientists/medical doctors and the private sector has helped to sustain QA in Thai higher education (p. 22). To the extent that the quality of higher education is related to its inclusiveness, QA and the role of policy elites in this regard are important.

9 Policy borrowing has been the practice of Thai elites for combining modernisation and Thai tradition and values (Sae-Lao 2013: 124).

2.4 Resources and capacity

Thailand allocates about 0.7 percent of GDP to higher education. Between 2009 and 2012, the share of education in the national budget declined from 22.85 percent to 17.59 percent. The higher education share has fluctuated between 17.86 percent and 20.05 percent of the total education budget (Table 4.4).

Government subsidies at public universities amount to 70 percent, while student contributions are less than 30 percent. This is a highly regressive financing system, with a net transfer of benefits to wealthier segments of the population. It has also been noted that the variety of higher education institutions caters to different populations, but in practice individual institutions tend to be weak in explicit organisational goals and institutional structures to accomplish them (Beneviste 2010: 15, 18). The poorest households spend (in higher education) about one-eighth of the expenditure (in higher education) of the richest households. Thailand has been at the forefront of mobilisation of public funds for private higher education. There is a need to reduce the bureaucratic burden on higher education, which is a highly centralised system and highly regulated by the OHEC (Beneviste 2010).

Table 4.4: Budget of higher education institutions under OHEC, 2009-2016 (million baht)

Fiscal year	National budget	Education budget	Higher education (HE) budget	% of HE budget in ed. budget	% of HE budget in national budget	% of education budget in national budget
2009	1835000	419233	74876	17.86	4.08	22.85
2010	1700000	346713	69253	19.97	4.07	20.39
2011	2070000	392454	78679	20.05	3.8	18.96
2012	2380000	418616	82206	19.64	3.45	17.59
2013	2372453	442856	96077	21.69	4.05	18.67
2014	2515743	461957	101932	22.07	4.05	18.36
2015	2659033	481057	107787	22.41	4.05	18.09
2016	2802323	500158	113642	22.72	4.06	17.85

Note: Data for 2009-2012 are actual spending, for 2013-2016 are estimated.
Source: 11th Higher Education Development Plan (2012-2016).

According to the TDRI president, Somkiat Tangkitvanich, the problems with education stem from the inefficient use of resources. The Education Ministry's budget had doubled in the past decade, and the salary of public school teachers with a bachelor's degree had risen from THB15,000 in 2001 to THB24,000-25,000 in 2010, yet students' local and international test results arenas were worsening (Tangkitvanich 2013; Tangkitvanich & Manasboonphempool 2008).

This situation has been known for some time. As noted by Gerald Fry "Too much of the Thai budget is spent on a highly centralized bureaucracy. The Thai Ministry in Bangkok

is significantly larger than Monbusho in Tokyo or China's central education agency, even though it is serving far fewer students. There are over 400 individuals with doctorates working in the Ministry in Bangkok." Fry maintained that bureaucrats continue to be driving policy change in Thailand (Fry 2002: 23 from Sae-Lao 2013: 139).

A policy handle for inclusive higher education is student loans. There are two types: the Student Loan Fund and Income Contingent Loans. SLF was initiated by the Chuan Leekpai government in 1995 and started operation in 1996 (Student Loan Fund Office 2014) under the Banharn Silapa-asha government. The Student Loan Fund Act was promulgated in 1998 (under the returning Chuan Leekpai government). The SLF was criticised for its inefficiency and was stopped in 2014 (*Thairath 4 July 2014*) (For criticism and analyses, see Tangkitvanich & Manasboonphempool 2008, Polsiri et al. 2008 and Chapman & Lounkaew 2008).

Table 4.5 shows the capacity of higher education institutes' staff. About 60 percent have only a bachelor's degree or less. The proportion of the staff with bachelor's degree or less is more alarming in the private institutes, 88 percent. The division of all lecturers between master's and doctoral degrees is 70:30.

Table 4.5: Education of staff in higher education institutions, 2011

Education	No. staff in Public HEIs		No. staff in Private HEIs		Total
	Staff	Teaching staff	Staff	Teaching staff	
Lower than Bachelor	38597	1701	3146	150	43594
Bachelor's	43385	5204	4158	1571	54318
Diploma	73	76	8	5	162
Master's	10179	27108	933	6406	44626
Postgraduate Diploma	88	96	2	-	186
Doctoral	491	15713	46	1483	17733
Grand total	92813	49898	8293	9615	160619

Source: Ratananukul 2012

The Commission on Higher Education is aiming for a ratio of 50:50 between master's and doctoral degrees by the end of the 10th National Economic and Social Development Plan (2007-11). Currently, only 24 percent of the faculty members in public higher education institutions hold doctoral degrees. At private institutions and Rajabhat universities, the figure is only 13 percent and 7 percent, respectively (WBG 2010: Ch.2). A senior educator blames this inferiority on inefficient management and bureaucracy.

> "… the higher education system has suffered from an inefficient management structure. Examples of these are limited management flexibility of the Civil Services under which the public higher education system is. During the economic boom of the late 1980s until the economic collapse of 1997 the country had witnessed brain drain of quality manpower from public universities and the public sectors. Due to bureaucratic difficulties, termination of public organizations, including university faculties and programs offered, are next to be impossible. Non optimum resource utilizations as a result of uncoordinated operation, duplication of works and outmoded programs are encountered." (Kirtikara, 2001: 4)

Fry and Bi (2013) noted that the result of the most recent reform has been clearly mixed. Major structural and legal changes have occurred, but overall system performance remains disappointingly low, despite large expenditures and the presence of much impressive leadership talent. They identify the "Thai educational paradox", the essence of which is the failure to achieve its educational potential. This failure can lead to a lack of inclusiveness in higher education.

2.5 Key actors and their course of action

Key actors include the government (represented by the minister of education), the Ministry of Education, particularly the OHEC; the Office of Public Sector Development Commission (OPDC); higher education institutes, particularly the Council of University Presidents of Thailand (CUPT) and university councils; the Office of National Educational Standards and Quality Assurance (ONESQA); academicians or technocrats in general, research institutes, professionals associations, the private sector, development partners, people who have direct connection to the dominant coalition by patronage ties (including lobbyists, political party members, members of parent-teacher associations) and people who lack such direct connection (excluded groups, e.g. students, parents, teachers) (Chiangkool 2008). Only selected actors are discussed below.

The government's promotion of higher education is not as strong as it should be. The collaborative effort between the private sector and the government for education reform has not been successful. Because of political instability, there have been frequent changes of ministers of education.. The current caretaker government has changed ministers of education 4 times. (Chanwit & Sasiwuthiwat 2013: 47). Consequently, policy is rather piecemeal or short term. The role of the prime minister or the minister of education in policy making is hardly seen. In practice, they only chair national committees on education, mostly inaugurating or presiding over the meeting. On many occasions, a representative is assigned to the job.

Four actors are officially involved in implementing higher education policy: the OHEC, CUPT, ONESQA and OPDC (Sae-Lao 2013: 148-149).

The CUPT is composed of the rectors and presidents of 27 public and autonomous universities. It was founded in 1972 in the context of a broader restructuring of the public as a forum for rectors and presidents to mobilise their ideas for higher education management. Although the CUPT is independent from the state apparatus, it has occasionally received funding from the Ministry of University Affairs (MUA) or the OHEC. Meetings are convened every two months and often publicly disseminated supporting or criticising the government's higher education policies. It was within the CUPT that the national policy discussion about quality assessment began in 1994. During that time, numerous seminars and conferences on quality issues were hosted by the CUPT in conjunction with the MUA. In 1996, the MUA issued a policy statement recommending that all universities introduce QA. Despite various policy talks and recommendations in 1994 and 1996, it was not until the promulgation of the National Education Act of 1999 that implementation of QA was officially mandated (Sae-Lao 2013: 3). The CUPT has also created a QA working group composed of representatives

from all public universities. It meets monthly to discuss the latest trends of QA, critique the indicators and report to the OHEC or ONESQA.

The second organisation is the OHEC, which is responsible for setting the national policy agenda, goals and objectives of higher education. The MUA/OHEC has worked closely with the CUPT on various fronts including QA policy. During the OHEC inception, the working group within the CUPT and the MUA worked closely on QA-related issues. The Bureau of Standards and Evaluation is mandated to come up with IQA (internal quality assurance) indicators and to send peer reviewers to conduct IQA at universities, while the universities are required to submit IQA reports to the bureau every year. Unlike with EQA (external quality assurance), universities are able to select peer review groups, based on lists given by the bureau.

The third organisation is the ONESQA, created by the National Education Act of 1999 to be a public organisation[10] conducting external quality assessment of education once every five years. The creation of the ONESQA illustrates a commitment to quality assessment. According to Sae-Lao (2013: Ch. 2), the global model of quality assessment illustrates the need to establish a mega-organisation solely responsible for these tasks. Nevertheless, her study indicates some doubt whether QA can assure the quality of Thai education. The academic community resisted and challenged this tool both institutionally and individually (*ibid.*: 284).

The fourth organisation is the OPDC, established in October 2003 to monitor and evaluate the performance of the public sector. Policy makers believed that through a rigorous monitoring and evaluation, the OPDC would be able to help other government agencies to become more efficient and effective. The OPDC involves achieving good governance, assuring results-based management and effectiveness and value for the money. The OPDC also provided financial incentives for successful organisations during its early days. Because public universities receive financial support from the state, they are ultimately subject to evaluation by the OPDC.

The responsibilities of universities are teaching, research, providing academic services and preserving and promoting arts and culture (EWC no date. The roles of university councils include policy formulation, quality and standard supervision, regulations and monitoring and evaluation. The only difference between public and other universities is in establishing regulations. Public universities' regulations have be approved by the OHEC board (*ibid.*).

Academicians involved in higher education policy and implementation include those working in higher institutions, research institutes, independent researchers and retired government officials. They may criticise the government, the Ministry of Education or the OHEC through research studies, newspapers article or interviews or social media, or participate or be resource persons in seminars or workshops. A few remarks are notable.

10 (Sae-Lao 2013) uses the terms "mega-organisation", which means an organisation of member organisations.

> "… education reform in the past seven years is only a reform of 'form', not 'substance', of education. … the major barrier of Thai education reform is the mental model of big administrators in the ministry. They do not appreciate or respect or promote the competence of those good teachers who have outstanding success stories. They focus on the implementation of their initiatives." (Panich 2007)

> "Effective higher education system governance must employ non-bureaucratic paradigms/means; OHEC, OPDC, BB (Budget Bureau) are bureaucratic. How can people in bureaucracy give non-bureaucratic governance?" (Panich 2010)

> "Education reform in the past is merely a reform of the form or structure of the education system, not the mind or behaviour of teachers or people in the MOE. The previous reform failed. Thai people flood into graduate schools to obtain MA or PhD degrees, and the society becomes a degree maniac without wisdom. A PhD without wisdom does not know to think or how to analyse. Education reform must turn the society into a learning society and reform the learning process. Teachers must listen to students." (Hongladarom 2008)

Development partners of Thai higher education include the World Bank, ADB and UN agencies such as UNESCO, UNDP and ILO. The World Bank and ADB have been providing development loans and technical assistance to Thailand for some time. Both agencies have spent resources and effort on studies of education and higher education in Thailand. For example, the World Bank has cooperated with the OHEC in research on "Towards a Competitive Higher Education System in a Global Economy" (World Bank 2010). The ADB cooperated with the ONEC in 2002 on a study on "The Evolution of Educational Reform in Thailand" (Fry 2002). ADB technical assistance also includes a study on Capacity Building for University-Industry Linkages in Developing Countries: The Case of the Thai Higher Education Development Project by Daniel Shriller and Peter Brimble (Science Technology & Society January/June 2009 14: 59-92) and "A Decade of Educational Reform in Thailand: Broken Promise or Impossible Dream" by P. Hallinger and M. Lee as part of TA3585-THA in 2011. During the Asian financial crisis, the ADB specifically called for the transformation of public universities into autonomous universities within 10 years, as well as requiring the country to introduce administrative reforms (Sae-Lao 2013: 289-290).

> "Higher education is no exception. More than that, with the suggestion of the Asian Development Bank (ADB) the cabinet decided that all public universities must become autonomous for efficiency of administration." (Sangnapaboworn 2003)

The UN role on Thai higher education can be seen from the United Nations Partnership Framework for Thailand 2012-2016 (UNPAF 2011). This states that the UN will collaborate with the government on education based on the following rationale: education is crucial to meet Thailand's goal to develop a knowledge-based economy, contribute to reduce various disparities and develop human resources. In addition, the rapidly ageing population and the prospect of a shrinking labour force call for a higher level of productivity, which hinges on quality education for all. The UN is well placed to provide technical support and policy advice on appropriate interventions linked to strategic priorities of the government's 11th NESDB Plan, including the development

of human resources to promote a lifelong learning society, and to implement the Second Phase of Education Reform. The UN can also facilitate access to regional and international experience for two-way exchanges on selected areas of education. In support of "developing human resources to promote a lifelong learning society", at least five UN agencies (ILO, UNESCO, UNFPA, UNICEF and WHO) will be supporting individual programmes (*ibid.*: 25).

For example, UNESCO's strategy is aligned mainly with Thailand's national priorities of "developing human resources for a lifelong learning society"; "sustainable management of natural resources and the environment"; "promoting the just society"; "strengthening economic and security cooperation in the region"; and "developing a knowledge-based economy and enabling environment".

After discussions in 2010 with the ministries of Education and Culture, UNESCO Bangkok's priorities in these areas have shifted towards policy advice, knowledge management and technical support to quality assurance and monitoring and evaluation mechanisms. Projects where UNESCO is the "executing agency" have been gradually phased out. UNESCO now regularly participates in United Nations Country Team (UNCT) consultations with NESDB.

UNESCO is strengthening Thailand's global and regional partnership with the "Education For All" movement. UNESCO will support Thailand in being a regional and sub-regional provider of technical assistance in education and gradually also in culture, namely in "underwater cultural heritage".

Policy advice to Thailand will be provided by UNESCO Bangkok and also by expertise available at UNESCO headquarters and in the UNESCO specialised institutes, such as the UNESCO Institute of Statistics in Montreal and the International Institute for Education Planning in Paris.

On 31 March 2014, UNDP launched Thailand's *National Human Development Report 2014: Human Development through the ASEAN Community*. The report highlights key human development achievements, such as universal health coverage, improved access to education, decentralisation and a new impetus for growth. It also highlights the challenges in preparation to become part of the ASEAN Economic Community in 2015.

By and large, development partners play a facilitating role, including capacity building among stakeholders to understand and appreciate the nature of Thai higher education and to perform essential management tasks.

A poll was conducted by Suan Dusit Poll between 20 January and 16 February 2009 of 11,421 parents, teachers, employers, executives and students. Most respondents agreed that the quality of education is decreasing, education is not equal, education services are not inclusive, there is no decentralisation and the quality of teachers is poor. (Chiangkool 2008:8)

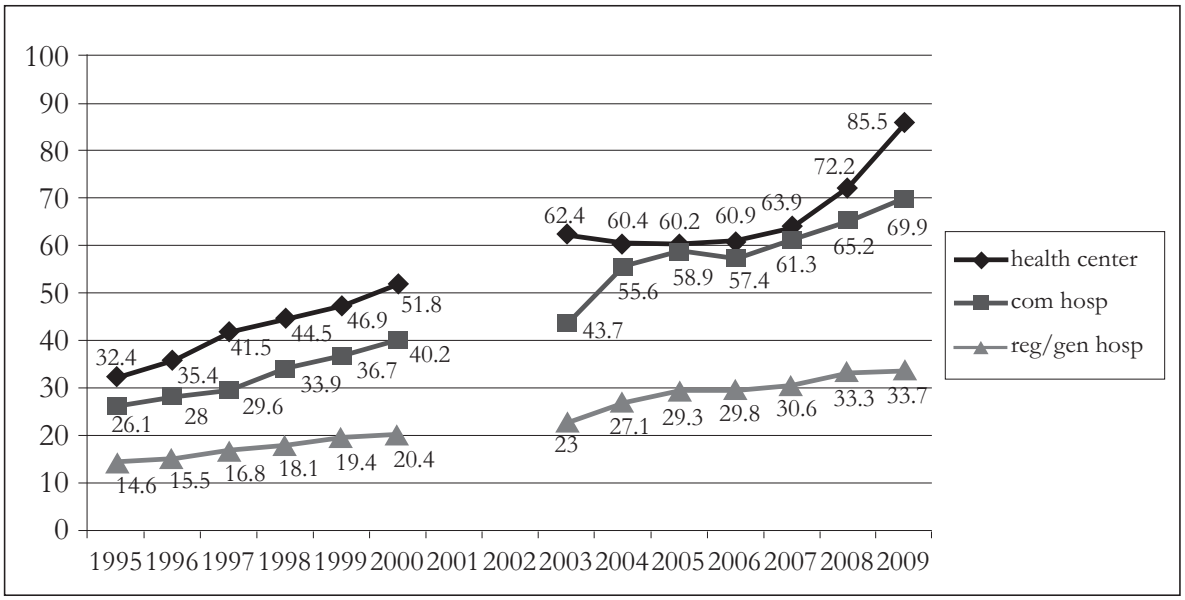
The development of the 11th HED Plan utilised a SWOT analysis of higher education by key actors including executives from all government agencies responsible for education, eminent persons, university administrators, representatives of professional associations, employers, parents, students and university alumni (OHEC 2012: chapter 3). While the SWOT analysis touches on the unsatisfactory quality of higher education, it completely overlooks inclusiveness. "Strength 7" mentions the expansion of opportunity through Cyber University, but this is hardly accessed by students from low-income families.

3. Inclusive development in health care: The role of national policy and institutions

3.1 Health insurance systems

Public health insurance in Thailand can be traced back to the 1970s, when two main publicly subsidised schemes targeting the poor existed, namely the Medical Welfare Scheme (MWS) and the Type B Fee Exemption Scheme. The former provided health insurance to those below the poverty line and disadvantaged people at no charge. Under the Type B Scheme, low-income individuals who were not covered by any other insurance had their fees for medical care waived at the discretion of public health personnel. In addition, the Ministry of Public Health (MOPH) introduced the Health Card Scheme (HCS), a voluntary insurance for the non-poor or those not eligible for the MWS.

Figure 4.5: Outpatient visits, 1995-2009, by type of facility under MOPH (millions)



Source: MOPH (taken from Wibulpolprasert 2010)

By the 1990s, public employees and workers in the private sector were covered under separate schemes. The Civil Servant Medical Benefit Scheme (CSMBS), launched in 1980, has provided comprehensive health insurance for civil servants and their dependents, while the Social Security Scheme (SSS), introduced in 1990, has provided health care to employees in the formal private sector. Although there were several existing insurance programmes, in 2000, approximately 30 percent of the population (18 million people)

were still uninsured. Most of the uninsured were lower socio-economic level workers in the informal sector (HISRO 2012). Table 4.6 describes important characteristics of the three main health insurance schemes.

Table 4.6: Characteristics of health insurance schemes

Scheme	Social Security Scheme	Civil Servant Medical Benefit Scheme	Universal Coverage Scheme
Population coverage 2012	Private sector employees, excluding dependents (7.7% of population**)	Government employees plus dependents (parents, spouse and up to two children aged < 20) (15.8% of population**)	The rest of population not covered by SSS and CSMBS (75.4%**)
Financing sources	Payroll tax financed, tripartite contribution 1.5% of salary, equally by employer, employee and government	General tax	General tax
Benefit package	Comprehensive	Comprehensive: slightly higher than SSS and UCS	Comprehensive: similar to SSS
Payment scheme	Capitation for outpatient and inpatient services	Fee for service, direct disbursement to public providers for outpatients; conventional diagnosis-related group (DRG) for inpatients	Capitation for outpatients and global budget plus DRG for inpatients
Service providers	Registered public and private competing contractors	Free choice of public providers, no registration required	Registered contractor provider, notably within the district health system
Managing agency	Social Security Office, Ministry of Labour	Comptroller General's Department, Ministry of Finance	National Health Security Office
Governing body	Social Security Board	Civil Servant Medical Benefit Board	National Health Security Board and Standard and Quality Control Board
Per-capita expenditure budget year 2013 (baht)	15,000*	2500*	2755.60*

Source *HSRI Forum 2012
**National Health Security Office

To fill the gap left by the schemes described above, in 2001 the government launched pilot projects of the Universal Coverage Scheme (UCS), also known as the 30-Baht Programme (before 2006, there was a co-payment of 30 baht per visit). The UCS superseded the HCS, the MWS and the Type B Exemption and extended coverage to the entire registered population, except for those who were beneficiaries of the CSMBS or SSS. In 2002, then Prime Minister Thaksin Shinawatra decided to implement the UCS in all provinces. After its full implementation, the proportion of insured increased from 70 percent of the population in 2001 to around 92 percent in 2002. Currently, the insured population is around 98-99 percent. Figure 4.5 shows that from 2000-03, outpatient service utilisation at health centres, community hospitals and regional and

general hospitals increased sharply. The number of outpatient visits at health centres increased from 51.8 to 62.5 million; community hospital visits jumped from 40.3 to 43.7 million; regional and general outpatient visits rose from 20.4 to 23 million. In addition to rapidly expanding the coverage to the uninsured population, the UCS also helps reduce households' out-of-pocket payments and prevents catastrophic health expenditures and medical impoverishment (HISRO 2012). However, the UCS has been facing problems such as low quality of care, low access to some services in some remote areas and lack of health care personnel in some hospitals (Hughes & Leethongdee 2007).

3.2 Institutional arrangements of UCS

Before the full implementation of the Universal Coverage Scheme in 2002, the public health care system was highly centralised and bureaucratic. The MOPH owns most of the health care facilities and played an integral role, being responsible for financing the public system, providing health care through its hospitals and other facilities and governing the overall system, including licensing and re-licensing of private hospitals.[11] The financing philosophy before the UCS was so-called supply-side financing, in which larger and more resourced hospitals, usually located in urban areas, got more funding than smaller ones. Supply-side financing is an important cause of a highly skewed distribution of health care resources between rich and poor areas.

The launch of the UCS called for a new institution that significantly changed the role of the MOPH. The National Health Security Act (2002) established the National Health Security Office (NHSO) as an autonomous body to purchase health care under the direction of the National Health Security Board (NHSB) and the Standard and Quality Control Board (SQCB). The NHSB is responsible for health care financing policy i.e. the allocation of funds to different health service items, making decisions on the benefit packages, deciding appropriate payment methods and setting rules and guidelines (HISRO 2012). The NHSB is chaired by the minister of Public Health (a four-year term that can be renewed once) and consists of another 29 members, including seven permanent secretaries (from the ministries of Public Health, Defence, Finance, Commerce, Labour, Education and Interior), representatives from local governments, NGOs, health professionals, private hospitals and experts from fields such as law, finance and social sciences. According to the National Health Security Act (2002), the NHSB is accountable to the cabinet and parliament. The board is required to submit its annual budget to the cabinet for approval, and submit annual performance evaluation reports to the cabinet, parliament, and Senate. The main responsibility of the SQCB is to control the standards and quality of units participating in the UCS, to monitor their health services and to prescribe the measurement of quality and standards. The majority of the SQCB are representatives of health professionals and providers.

The establishment of the NHSO brought about a new health system that separates a health care purchaser from providers (purchaser-provider split). Under the new system, the NHSO allocates funds to hospitals according to the number of members registered

11 The MOPH has a hospital in almost all districts of Thailand.

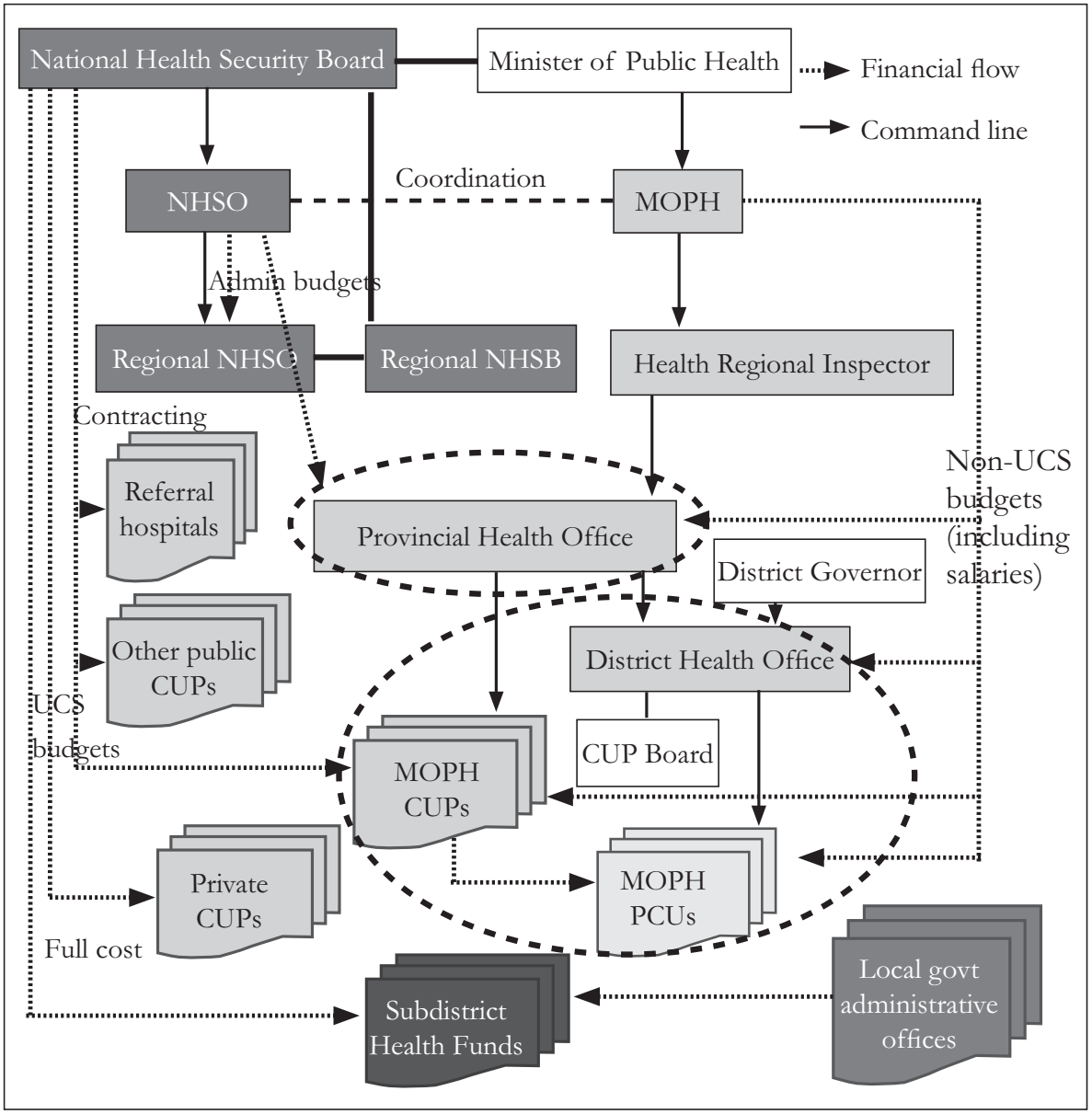
with them ("demand-side financing"). Hospitals in the areas with more population get more funds than hospitals in areas with smaller populations. Under the model, the responsibilities of the NHSO and the MOPH are clear. NHSO is responsible for buying services for people's health needs, while the NOPH stands on the provider side.

Figure 4.6: Health areas

Source: NHSO

The NHSO allocates the capitation-based UCS funds directly to participating hospitals.[12] This means that the MOPH budget and financial power declined tremendously. What remains includes funding for investment, the Food and Drug Administration, the medical science department and disease control and public health services. It is fair to say that the launch of the UCS created a difficult relationship between the NHSO and MOPH. The conflict between the two giants has been perceived as a major factor undermining the UCS.

Figure 4.7: Institutional arrangements of the UCS



Source: HISRO (2012)

The NHSO has 13 regional offices, including Bangkok (Figure 4.6). Governed by the Regional National Health Security Board, each regional branch is responsible for implementing NHSB policies within its designated area. Figure 4.7 shows institutional

12 The UCS capitation budget has continuously increased from THB1201 in 2002 to THB2895 in 2014.

arrangements of the UCS. The regional NHSO cooperates with provincial health offices (PHOs) to implement NHSO strategies in local areas. The complication is that PHOs are under the control of the MOPH, whose permanent secretary has the authority to appoint the provincial chief medical officer). This means that a PHO would often find itself in a difficult situation trying to maintain good relations with two institutions whose interests are not aligned. In practice, the role of a PHO is often conflicting and confusing, both purchasing and providing at the same time. The purchaser-provider split is obscure from the province downward.

The NHSO requires all contracted hospitals to set up primary care units to serve UCS beneficiaries. UCS-eligible individuals are automatically assigned to a local Contracted Unit for Primary Care (CUP), which typically is a community (district) hospital and a network of primary care units or health centres in the area of residence. Patients are required to receive services at their assigned CUP first. Access to other CUPs or provincial hospitals where a patient is not registered requires a referral from the patient's registered CUP, except in emergencies. Participation of public health care units in the UCS scheme is mandatory, while private providers' participation is optional. Overall, the private uptake has been insignificant (around 5-6 percent of the total participating hospitals, while the MOPH accounts for more than 85 percent) (TDRI 2013). The lack of private hospital participation and the fact that there are no private hospitals in most rural areas translates into lack of competition (Thammatucharee & Patcharanarumol in NHSO 2012). In most rural areas, the NHSO has no choice but to purchase health care services from a public hospital that is the sole provider in the area.

3.3 Challenges of UCS

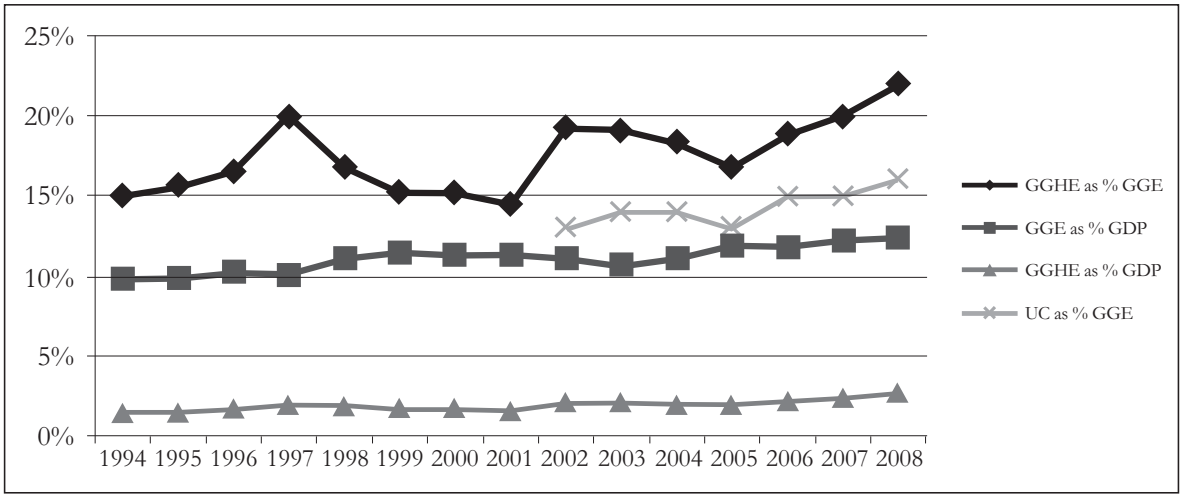
Although the UCS has been very successful in many aspects, there are challenges in order to sustain and improve it. Important challenges are as follows.

3.3.1 Financial sustainability of UCS

Figure 4.8 shows that, since the launch of the UCS, the ratio of general government health expenditure (GGHE) to GDP has been increasing, from 2.1 percent in 2002 to 2.7 percent in 2008. The ratio of GGHE to general government expenditure (GGE) jumped from 14.5 percent in 2001 to 19.3 percent in 2002, then stayed at 18-19 percent for several years before dropping to 16.8 percent in 2005. Since 2005, the ratio of GGHE to GGE has continuously increased, from 18.9 percent in 2006 to 22.0 percent in 2008. UCS expenditure has been a significant part, taking about 16 percent of GGE or approximately 72 percent of GGHE in 2008.

Sakunphanit (in NHSO 2012) forecasts that in 2020 the UCS will remain an important part of GGE. The ratio of UCS expenditure is projected to increase slightly to 16.6 percent in 2020, considered manageable by Sakunphanit because total health expenditure is projected to be 4.8 percent of GDP, meaning that there is room to spend more on health care. If citizens agree that the UCS benefits the society and want to maintain or improve its quality, higher taxes could be collected to support the UCS.

Figure 4.8: General government health expenditure (GGHE)



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GGHE as % GGE	15.0	15.6	16.5	20.0	16.8	15.2	15.2	14.5	19.3	19.1	18.4	16.8	18.9	20.0	22.0
GGE as % GDP	9.8	9.9	10.2	10.1	11.1	11.5	11.3	11.3	11.1	10.7	11.1	11.9	11.8	12.2	12.4
GGHE as % GDP	1.5	1.5	1.7	2.0	1.9	1.7	1.7	1.6	2.1	2.1	2.0	2.0	2.2	2.4	2.7
UC as % GGE									13.0	14.0	14.0	13.0	15.0	15.0	16.0

Source: MOPH 2013

3.3.2 Hospital financial problems

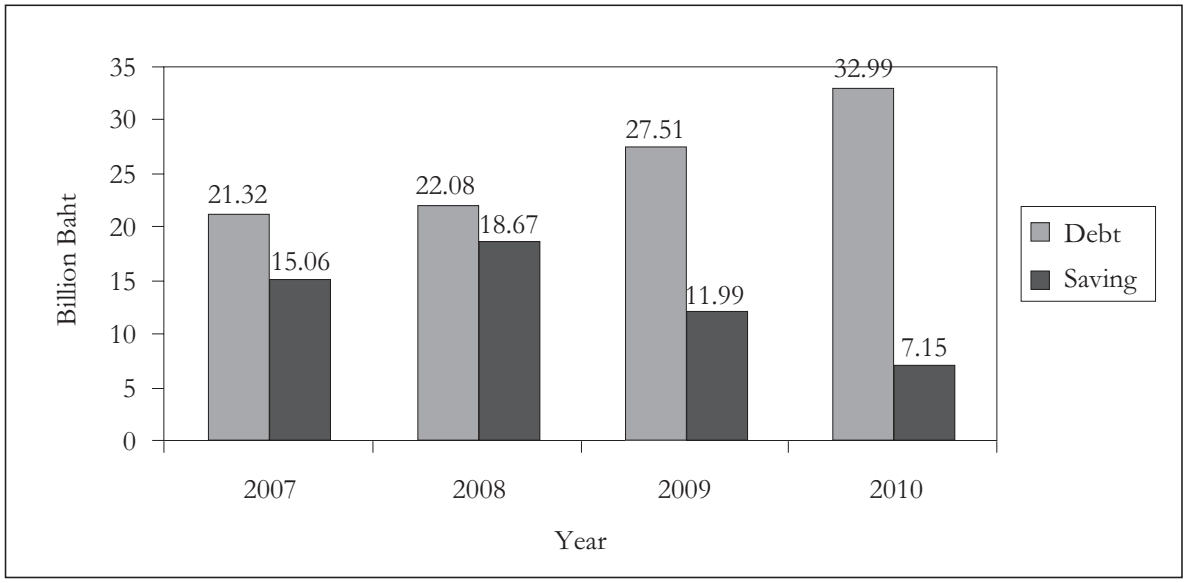
The hospital financial situation is not very promising. Figure 4.9 shows the aggregate debt and savings of MOPH hospitals, making it clear that aggregate savings have continuously decreased, while the aggregate debt has been increasing. As a result, the aggregate savings to debt ratio has decreased from 0.70 in 2007 to 0.22 in 2010. Currently, the MOPH reports that a significant portion of its hospitals face deficit and liquidity problems. More than 20 percent face severe liquidity problems, and more than 60 percent have high expenditure problems (Gachina 2013).

From the MOPH's perspective, financial problems in many hospitals are mainly caused by the salary-inclusive capitation payment (explained below). Moreover, salary-inclusive capitation also inevitably leads to uneven allocation of the UCS capitation budget among hospitals (MOPH 2011, 2013).

According to the National Health Security Act (2002), the UCS budget includes the health workforce salary (salary-inclusive capitation). Therefore, the actual UCS capitation budget is what is left when the salary is deducted. The NHSO's policy regarding salary-inclusive capitation has been unstable. In the 2002 budget year, each province was allowed to deduct the salary of the health workforce at either provincial or district level. This was changed to national deduction in 2003; from 2006, the salary was deducted at the provincial level again. From 2003 to 2006, the MOPH had not transferred financial

power to the NHSO; the MOPH still had the power to modify aspects of the UCS. It is likely that the decision to change to national deduction in 2003 was heavily influenced by the MOPH.

Figure 4.9: Aggregate debt and savings of MOPH hospitals (billion baht)



Source: MOPH

The level at which the salary is deducted has an important implication for the size of the UCS capitation budget received by MOPH hospitals. If the salary is deducted at the CUP level, the CUPs (hospitals) with the most staff will suffer most because less of the capitation budget will be available for health services, while hospitals with the smallest staffs will enjoy a surplus. In this case, variation of the UCS budget allocated to hospitals will depend on the distribution of hospital staff. If the salary is deducted at the provincial level, all hospitals in the province will share the same salary burden, regardless of their actual staff numbers. Therefore, all participating hospitals in the same province receive the UCS capitation budget in relation to their registered population but not the number of staff. Along the same line, if the salary is deducted at the regional level, every hospital in the same region will share the same salary burden. On one hand, hospital salary deduction at the CUP level is fair in that it reflects the true salary costs of hospitals. On the other hand, regional salary deduction generates equal share of salary burden for all hospitals in the same region by transferring funds from hospitals with fewer staff to hospitals with more staff, and thus helps reduce the variation of UCS capitation budget among hospitals.

Table 4.7 illustrates the impact of different salary deduction formats. Regional salary deduction generates a smaller gap between the maximum and the minimum UCS capitation budge than the provincial and hospital counterparts. Table 4.8 shows the maximum and the minimum UCS capitation budget and its associated provinces from 2008-2013. The gap between the maximum and the minimum is generally high, ranging from THB716.14 to THB1657.55.

Table 4.7: UCS capitation budget exclusive of salary by different salary deduction methods

UCS Capitation Budget (Baht/population)	MEAN	MAX	MIN	MAX-MIN
2010 UCS Capitation Budget (salary deducted at the regional level)	1294.94	1504.68	1117.66	387.02
2010 UCS Capitation Budget (salary deducted at the CUP level)	1028.85	1522.17	267.76	1254.41
2010 UCS Capitation Budget (salary deducted at the provincial level)	1304.75	1653.25	869.94	783.61

Source: MOPH

Table 4.8: Average, minimum and maximum of the UCS budget exclusive of salary

Budget year	Average UCS budget of MOPH hospitals (Baht/population)	UCS budget		UCS budget	
		MIN		MAX	
		Baht/ population	Province	Baht/ population	Province
2008	946.14	444.03	Samut Songkhram	1207.17	Nan
2009	958.57	413.47	Samut Songkhram	1231.36	Ubon
					Ratchathani
2010	986.32	430.07	Samut Songkhram	1232.22	Ubon Ratchathani
2011	1007.97	267.76	Singburi	1522.17	Nan
2012	1478.53	560.47	Ranong	2218.02	Saraburi
2013	1610.68	716.01	Ranong	1610.68	Nan

Source: MOPH

The MOPH has strongly supported regional salary deduction, claiming that it will promote more equitable allocations and help alleviate the financial problems of a large number of hospitals (MOPH 2011, 2013). However, the NHSO prefers the current deduction format because it could lead to a more equal distribution of the health workforce.

3.3.3 Unequal distribution of the health workforce

Historically, once a district was designated a municipality, a provincial hospital was established no matter how large or small the population it served. More municipalities were established in the central region, so many central provinces have more than one provincial hospital, implying that health resources are more concentrated there than in other regions (HISRO 2012). The skewed distribution of health care resources can be observed in Table 4.9 and Figure 4.10.

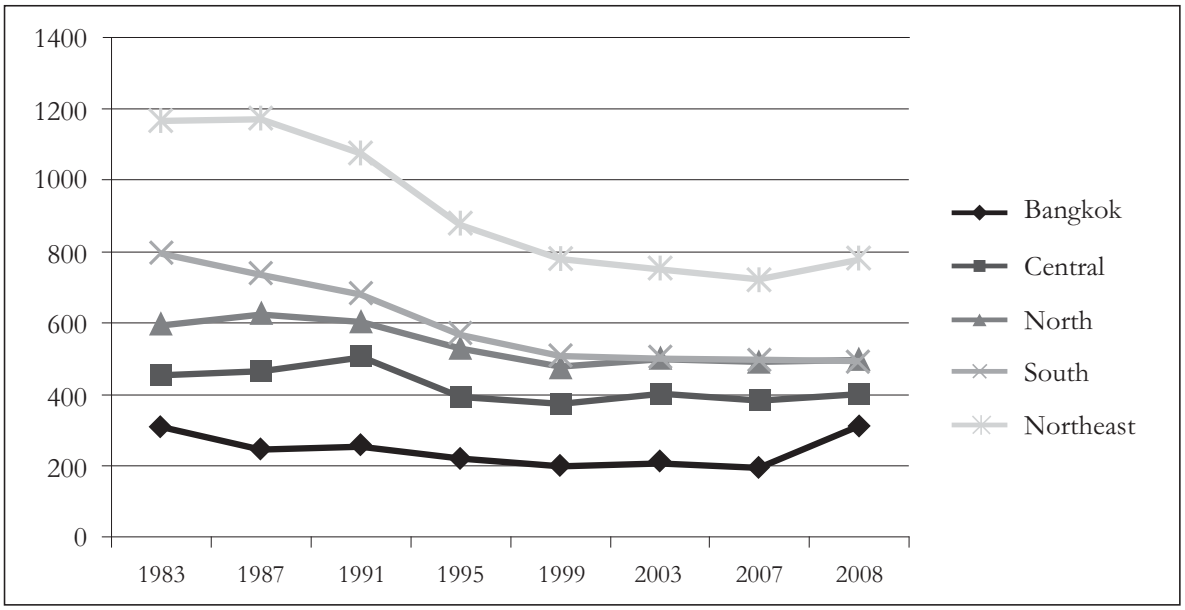
Table 4.9 shows that the north-eastern region has the highest ratio of population to health professionals for all categories of health professionals, much higher than the ratios in other regions and Bangkok. The central region has the lowest ratio of population to doctors, pharmacists and nurses, and the southern region has the lowest ratio of population to dentists.

Table 4.9: Health professionals, by region (2010)

		Doctor		Dentist		Pharmacist		Nurse
	Number	Population/ Doctor	Number	Population/ Dentist	Number	Population/ Pharmacist	Number	Population/ Nurse
Central	5832	2699	1357	11601	2069	7069	35564	443
Northeast	4591	4682	1113	19313	1827	11766	35171	611
North	3848	3059	995	11829	1523	7728	25847	455
South	2809	3138	772	11417	1160	7598	19403	454
Bangkok	9802	628	875	6517	1555	3667	22725	251
All	26162	2428	5112	12427	8134	7810	138710	458

Source: Office of Community Based Health Care Research and Development

Figure 4.10: Population per bed, by region



Source: MOPH 2013

By design, salary-inclusive capitation is a purchasing strategy that should help promote more equal distribution of the health workforce across health facilities. In principle, the payment means financial deficits for hospitals with a large number of staff and a surplus for hospitals with few staff. Therefore, the capitation would encourage reallocation of staff from deficit hospitals to surplus hospitals, as reflected in the statement of an executive of NHSO, "It [salary-inclusive capitation] was based on the assumption that money would follow patients and health workforce would follow money" (HISRO 2012). However, it is evident that such a reallocation has not really happened, and a skewed distribution of staff still exists.

The assessment of UCS (HISRO 2012) states: "[I]n the UCS's first 10 years this [attempt to improve the distribution of staff] was only partially successful, primarily because during this time, the MOPH failed to provide leadership in addressing the problem ..." Other important factors also impeded the attempt to achieve a more equal distribution of staff. First, the government has been promoting Thailand as a medical hub to attract medical tourists. This policy has increased the demand for private hospital care, which in

turn has increased the demand for health staff in the private sector. The huge salary gap between private and public hospitals and the increased workload resulting from the UCS have encouraged the movement of health staff from public to private hospitals. Second, the government has been downsizing the public sector, including the MOPH, making it difficult for the MOPH to hire new permanent health staff. Third, there is a lack of integrated strategies and planning, particularly from the NHSO, MOPH and educational institutions, to produce, attract and retain the health workforce.

3.4 New directions: Decentralisation trend of NHSO and MOPH

Decision-making regarding health care service purchasing has been highly centralised by the NHSB. Once policies are approved by the NHSB, all regional branches have to accept and strictly follow them.[13] Such a centralised decision sometimes cannot appropriately respond to local needs and preferences, and thus could lead to health inequity. In 2012, the NHSO started to devolve some decision-making power to its regional branches. The regional offices have been given power to manage some items of the budget, particularly health promotion and prevention activities. A subcommittee of the Regional Health Security Office has been set up to make purchasing decisions, to administer and manage the budget and to design related rules and regulations. Decentralising has been carried out step by step and will take time to mature. Recently, two health areas were selected as pilot sites to test how decentralisation goes, particularly in health outcomes. A consensus has not been reached among policy makers and academics on the question of which items should be decentralised.

The MOPH and its hospitals have been dealing with financial pressures. In 2010, the aggregate savings of all MOPH hospitals were THB7150 million, while their aggregate debt was THB32,990 million, more than four times the savings (MOPH 2011). The 2014 overall MOPH budget is estimated to be a deficit of more than THB9300 million, and this deficit is likely to continue for years (Gachina 2013). To survive in this financially tough situation, the MOPH recognises a need to improve hospital efficiency.

Under the leadership of health minister Pradit Sintavanarong, there is a movement towards decentralising the MOPH. The MOPH has initiated decentralisation of the administration of service provision to 12 MOPH health areas, which are exactly the same areas as the NHSO health areas. The MOPH regional subcommittee, chaired by the regional health inspector, has been appointed to implement the "service plan policy". The objectives of the service plan include promoting efficient use of resources by sharing them among health facilities and improving the referral system. However, the future of the decentralization is uncertain and fragile as Thailand faces political turmoil.

13 Due to the unique and complex characteristics of Bangkok, and most importantly a large proportion of participating hospitals being private, the Bangkok branch is allowed to engage in many activities not permitted to other branches. For example, Bangkok can design its own purchasing strategies (MOPH 2013).

Another major initiative is health area cooperation between the NHSO and the MOPH to administer and manage parts of the area budget related to health promotion and prevention. In 2013, two health areas were selected as pilots. In each, five representatives from the subcommittee of the Regional Health Security Office and an equal number from the MOPH regional subcommittee will form a negotiating body. One representative from each party will be appointed as a co-chair. A joint secretariat will be set up as a working body. Taking into account the benefits for the people in the area, the body will negotiate over the financing, key performance indicators, the plan and strategies and monitoring and evaluation. When the negotiation concludes, MOUs will be signed. It is too soon to evaluate if the cooperation will better serve health promotion and prevention needs and help improve health outcomes and unclear whether this major step towards cooperation will be implemented permanently, due to the current political uncertainties. Moreover, given different beliefs and interest between the NHSO and the MOPH, it is unlikely that they can cooperate on more important aspects the health care system. Heath care financing is definitely an important topic that both parties will not compromise.

4. Concluding remarks and recommendations

The study found that Thailand's higher education is not inclusive and was not in the past. Although access to higher education has increased over time, serious inequalities remain in access to higher education by household income, regional location and gender.

The institutional analysis utilised the methodological framework agreed among DAN's research teams. The methodology consists of a review of higher education inclusiveness; identification of exogenous variables, i.e. a review of policies and institutional arrangements; identification of key actors and their interests and desired incentives; and examination of the course of key actors and their interactions within institutional settings. It finds that higher education policies are located within four long-term and short-term policies: the 11th National Economic and Social Development Plan, the 2nd 15-year Long Range Plan on Higher Education, government policy and MOE policy. Yet in practice, the system is complex and has lacked policy cohesion, due partly to political instability. Too much of the budget is spent on a highly centralised bureaucracy. The Student Loan Fund, although well intentioned and helping the inclusiveness of higher education, is problematic. Overall, the higher education system has been criticised as aimless, repetitive and lacking quality and efficiency.

Improvement of higher education should begin by putting its inclusiveness on the national agenda. Collaboration should be promoted among the private sector, civil society, NGOs and the government to promote inclusive higher education. The education system makes inefficient use of resources. In addition, this study supports TDRI's recommendations on five aspects of the national education reform strategy, particularly teacher quality, educational quality assurance and educational finance. (Poapongsakorn et al. 2012)

To assure better access and quality of care in the UCS, an institutional change is needed. However, such change will be very difficult given the conflicts of interest and the subtle

relationship between the service provider (MOPH) and the service purchaser (NHSO). Collaboration and understanding is the key to success. A National Health Authority may be needed to provide the necessary policy direction, to design related rules and to regulate, supervise, evaluate and monitor to ensure that the Thai people receive maximum benefit from the UCS. It is also important that all stakeholders take part in the decision making process of the National Health Authority.

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Chapter 5
Health and Education in the GMS: The Case of Vietnam

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1. Introduction

1.1 Overall development context

Over the past two decades, Vietnam's economy has experienced rapid and relatively stable growth. The economy has expanded rapidly. Since 2010, Vietnam has moved from the group of the least developed countries into the middle income group. The country has also experienced a remarkable improvement in several social development indicators. The rapid economic growth and trade liberalisation have created millions of jobs, providing income and lifting millions of people out of poverty. Vietnam is one of the first countries to record large achievements in universal elementary education and now moving towards universal lower secondary education. Likewise, Vietnam's overall health status has improved hugely. There has been a significant progress in reducing mortality rates among children under five from 58 in 1990 to 23 per 1000 by 2012. Maternal deaths has been declined from 233 for every 100,000 live births in 1990 to 64 for every 100,000 live birth in 2012 (MOET, 2012). This remarkable progress has resulted from both the recent rapid economic growth and the strong focus and persistent policy priority of poverty reduction and social development.

However, the degree of reduction varies across geographic and demographic groups. A large proportion of ethnic minorities are unable to escape from poverty and benefit less from economic growth and support policies (DAN 2013). There exist clear disparities in access to education between rural and urban areas and between ethnic majority and minority. More seriously, this gap tends to widen over time (NIN, 2010).

In response to these challenges, during the last two decades Vietnam has determinedly embarked on efforts to change the overall national policy and institutions on social services. However, the need to make those social areas grow more inclusively remains a highly critical issue and requires stronger focus and attention.

1.2 Objectives

This study is aimed at investigating current evolution and changes in national policies and institutional arrangements in education and health to achieve further inclusive development. The specific objectives are to:

1. identify and analyse current national policies and institutional arrangements that support inclusive development in health and education;
2. identify areas for improvement or changes in current national policies and institutional frameworks in order to achieve more inclusive development in health and education.

1.3 Scope and methodology

As a constituent part of the regional research undertaken under the Greater Mekong Sub-region Development Analysis Network (GMS-DAN), Stage II project,[1] this study report

1 For a report on Stage I of this study see: Inclusive Development in the Greater Mekong Sub-region: an Assessment. (Phnom Penh: CDRI) February 2014.

builds on the research outputs from Stage I on the assessment of inclusive development in the Vietnam and is a part of the GMS-DAN programme's broad research theme on inclusive growth and sub-regional integration.

Focus of the study is to investigate the role of policy and the institutional framework for inclusive education and health development in Vietnam during the last decades. The assessment is generally based on the analytical framework designed by the Development Analysis Network 9-II team (Annex 5.1).

1.4 Structure of the study

The remaining sections of the report are structured as follows: Parts 2 and 3 describe policy and institutional frameworks for education and health, respectively. These include the main features of current formulation and implementation of policies and institutional arrangements, providing a basis to assess major limitations and challenges. Part 4 identifies policy and institutional challenges and shortcomings that require improvement or change. Part 5 suggests possible solutions for such problems in order to achieve more inclusive development in health and education.

2. Current policy and institutional arrangements for inclusive education

2.1 Overall education development policy framework

In the past two decades, the government of Vietnam has set out comprehensive national policies that emphasise building a systematic and well-rounded educational system with enhanced knowledge, innovation, equity and applicability. These national policies have been constructed and implemented to reach two strategic goals:

(1) to encourage school enrolment at every educational level;

(2) to improve the quality of education.

This high determination to build a quality and fair educational system is highlighted in a number of policy documents. The highest legal basis for ensuring education services is set by the Education Law (National Assembly, 2005) and its Amendment and Supplement (National Assembly, 2009). The law asserts: "education development is the first and foremost national policy aimed at enhancing people's knowledge, improving human resources and nurturing human talent" (Article 9); "to develop education and to build a learning society is the responsibility of the State and the People"; and "Learning is a right and obligation of every citizen" (Article 12). The law also emphasises that every citizen, regardless of ethnic origin, religion, beliefs, sex, family background, social or economic status, has an *equal right* of access to educational opportunities. The state ensures social equity in education and creates a favourable environment for everyone, including the poor, to access education and develop their capacities and talents (Article 10). Furthermore, the law asserts priority for children of ethnic minorities, for children from families living in areas with extremely difficult socio-economic conditions and for other disadvantaged groups, for them to realise their learning rights and obligations. The amended Education Law stipulates that "preschool education, primary and lower secondary education are *universal* education levels; all citizens within the defined age

group have an obligation to learn in order to obtain the level of universalised education" (Article 11).

These provisions have been translated into sector development strategies and plans such as the Education Development Strategy (EDS) for 2011-20, the Vocational Training Development Strategy for 2011-20, the Human Resources Development Strategy for 2011-20, the Master Plan for University/Colleges Network in 2006-20. The government determination to build an equitable education system by 2020 is highlighted in all of these documents. For example, the SEDS -- the most comprehensive policy document for the nation's development in 2011-20 -- explicitly states that development and improvement of human resources quality are a *strategic breakthrough* and decisive orientations for socio-economic development during the period.

Table 5.1: State expenditures for education and training, 2006-10, (VND billion)

	Items	2006	2007	2008	2009	2010	2006-10
1	GDP (current prices)	973791	1269127	1453911	1898661	2096875	7692365
2	Total state expenditure	297232	367379	407095	531625	587125	2190456
3	Total financial expenditure for education and training:	76331	95502	110000	141117	162425	585435
	• *As % of GDP*	7.8	7.5	7.6	7.4	7.7	7.6
	• *As % of total State budget expenditure*	26	26	27	27	28	27

Source: MOET, 2012

The Education Law also asserts that "investment in education is a development investment. The state shall give priority to investment in education, encourage and protect legal rights and benefits of Vietnamese and foreign organisations and individuals in making investment in the education system", and that "The state budget must hold the key role in total investment resources for education" (Article 13). In practice, despite the policy on "social mobilisation", the state still plays a *key role in financing* education. The state budget for education has kept growing (Table 5.1) and accounts for around 7.6 percent of GDP, for around 26 percent of the total state budget expenditure and for approximately 74 percent of the total annual expenditure for education and training, during 2006-10. The ultimate goal of these policies is to ensure universal access to education, to encourage school enrolment at every level, to improve the quality of education and to target the poor and disadvantaged groups at the same time.

2.2 Policies and programmes supporting inclusive education

While education policies are many and interrelated, a stronger focus is made here to two overarching policy sets that have recently shaped the main policy arrangements for inclusive education, namely *socialisation* and *poverty reduction* policies.

2.2.1 Socialisation policy and inclusive education

Originally envisaged as a strategy for social mobilisation, socialisation is understood as a set of policies and rules designed to promote the provision and financing of essential services in ways that facilitate additional flows of resources into the services. The main

idea is to call for the participation of service users and private investors in the provision of public services, particularly those that must not necessarily be provided by the state, as well as to ease burdens on state finance, to diversify service provision and payment and ultimately to improve overall availability, quality and accessibility to the services. *For education*, policy makers expected that opening education to market forces would improve both quality of and access to education. By allowing private providers to deliver more popular and lucrative education services, the state can focus more on regulation, ensuring social equity and financing less profitable but essential services that the private sector does not want to provide.

The most comprehensive and recent official statement on socialisation can be found in the Resolution No.5 (GOVN, 2005), which defines it in terms of two goals:

- to "bring into full play" all available intellectual and material resources so as to permit "all tiers of society" to nurture education and training; and
- to create enabling conditions for all members of society, especially the poor and socially targeted groups, to benefit equally from the high progress achieved in these essential services.

Table 5.2: Expenditure for education & training via socialization channels, 2006-10 (VND billion)

	Items	**2006**	**2007**	**2008**	**2009**	**2010**	**2006-10**
I	**Total expenditure for education and training**	76331	95502	110000	141117	162425	585435
II	**Expenditure through socialisation sources**	21533	25700	28581	34852	45000	155666
	As % of total expenditure for education & training	28	27	26	25	28	27
	Of which:						
1	Tuition fee	14623	17753	19433	24342	32915	109076
	As % of total expenditure for education and training	19	19	18	17	20	19
2	**Expenditure by individuals and organisations of civil society**	6910	7947	9138	10509	12086	46509
	As % of total expenditure for education and training	9.1	8.3	8.3	7.4	7.4	8.0

Source: MOET 2012

As revealed by the Ministry of Education and Training (MOET, 2012), socialisation has produced certain progress and benefits. The large flow of resources into services is the most striking. By fostering formal and informal channels, socialisation has facilitated

massive flows of financial, land, material and labour resources into essential services, from both individuals and enterprises or organisations. Socialisation policies facilitate the transition of semi-public schools in accordance with Decree 43 (GOVN, 2006) and encourage their autonomy. Service delivery units are not only to maintain their educational functions, but also to undertake investments to improve the range and quality of services.

Further, socialisation has facilitated diversification in education provision and the emergence of competition among service providers. Nowadays, non-state modes of education, such as people-founded schools and private and even foreign-invested schools play an increasingly important role, especially in preschool and technical-professional secondary education.

Table 5.3: Number of non-state education establishments, 2005-10 (% in parentheses)

	Type of school	2005	2006	2007	2008	2009	2010
1	Preschool education	5970 (54.2)	6049 (52.6)	5942 (51.1)	5999 (49.2)	5322 (43.1)	4574 (35.4)
2	Secondary general education	747 (2.7)	756 (2.7)	779 (2.8)	695 (2.3)	606 (2.1)	565 (2.0)
3	Technical and professional secondary education	55 (19.4)	64 (23.8)	72 (26.2)	73 (26.7)	75 (26.6)	91 (31.4)
4	Higher education and training	34 (13.3)	47 (15.8)	64 (18.5)	74 (20.1)	76 (20.2)	80 (20.5)

Source: MOET 2012

After the adoption of Resolution No.5, the non-state education sector at all levels increased rapidly in numbers of both establishments and students, especially in urban and economically more developed areas. In the school year 2010/11, some 1,263,450 children aged from 3 months to 5 years were taught in non-state kindergartens and preschool units. At the same time, the 91 non-state technical and professional secondary schools enrolled 186,913 students (27.2 percent of the total).

The socialisation policy has helped generate income for teachers and revenue for schools, permitting new investments in human resources and infrastructure that would be impossible with exclusive reliance on the state budget. However, challenges remain. Some of them will be elaborated in detail in Part 4.

2.2.2 Poverty reduction programs vs. inclusive education policies

Alongside socialisation, multiple education support policies have recently been integrated into socio-economic development, poverty reduction and ethnic minority support programmes and projects.[2] Currently, education improvement receives support through

2 UNDP-funded study notes that by 2008, 41 poverty reduction projects, programmes and policies, with either direct poverty reduction focus or strong poverty reduction impact, were initiated in the country (UNDP and Parliamentary Committee, 2009)

14 projects and sub-components of ongoing socio-economic development programs (See Annex 5.1 for a list of major education support policies). A majority of these projects operate outside mainstream education programmes and in addition to the "Education for All" project. Their main aims are:

- To ensure universal primary and lower secondary education;
- To reduce educational gaps between ethnic majority and minority groups by bringing to the poor in rural and remote mountainous areas additional resources, and
- To enhance quality of education in geographically remote and ethnic minority areas.

In practice, Vietnam has brought forward a considerable number of projects aimed at bringing poor and ethnic students to education through support with fees and subsidies as well as supplying financial support for transport and boarding, either by direct financial support or through building boarding accommodation nearby to schools. The support may also be provided through the direct supply of school stationery and textbooks or cash provision to households having children in kindergartens, primary schools or school boarders. This type of conditional social transfer is being widely applied to promote and maintain school attendance. Support to construction of school facilities in geographically difficult locations has also contributed to substantial increases in school enrolments, especially lower and upper secondary. Some ongoing national policies and programmes during 2010-15 supported providing facilities for schools in remote mountainous areas and raising teachers' qualifications. Other policies have paid more attention to capacity strengthening of schools in distant locations through improving pedagogical skills, developing suitable teaching syllabuses and building accommodation for teachers.

According to MOET, despite being complex and sometimes overlapping, the policies of the poverty reduction and social protection programmes have largely contributed in focusing on essential education services for the poorest and most disadvantaged. The network of preschool and general education institutions continues to expand; coverage is extended to the most remote communes and villages. This ultimately facilitates increased access and helps to narrow the regional gap. The policies on education support for ethnic minority groups have directly contributed to universalising primary and lower secondary education in many localities. These policies also created favourable conditions for school enrolment and affordability of professional and higher education for poor. Effective implementation of policy on development and upgrading of physical infrastructure has helped schools meet the target of educational standardisation. The number of schools reaching the national standards grows at 4 percent annually. The system of boarding and semi-boarding schools, long-distance learning and continuing learning has been improved.

2.3 National institutional arrangements for education

2.3.1 National education system

The national education system consists of formal education and continuing education. Formal education includes four levels:

- *Early childhood* (preschool) education includes nurseries and kindergartens, which involve children from 3 months to 6 years old. Institutions include: (1) "crèches" for children from 3 months to 3 years; (2) kindergarten schools and classes for children from 3 to 6 years; and (3) young sprout schools, combining crèches and kindergartens, for children from 3 to 6 years.
- *General education* includes: (1) primary education, conducted in five years of schooling, from the first to the fifth grades; commonly, children begin the first grade at six years old; (2) lower secondary education in four years, from the sixth to the ninth grades; pupils must complete primary education at the age of 11 to enter the sixth grade of lower secondary school; and (3) upper secondary education in three years of schooling, from the 10th to 12th grades. Pupils entering the 10th grade at age 15 must have the lower secondary education diploma,
- *Professional education* includes: (1) professional secondary education, which is three to four years of study for learners with lower secondary diplomas and from one to two years for those with upper secondary diplomas; and (2) vocational training, which is less than one year for a preliminary vocational programme and from one to three years for vocational upper secondary and college programmes.
- *Higher education* includes colleges, undergraduate universities and postgraduate education (master and doctoral degrees). College education is conducted within two to three years of study for persons with upper secondary diplomas or professional secondary diplomas; and from two and a half to four years for persons with professional secondary diplomas in the same discipline; from one and a half years of study for persons with college diplomas in the same discipline. Master's education is one to two years of study for persons with university degrees. Doctoral education is conducted over four years for persons with university degrees and from two to three years for persons with master's degrees.

Continuing education is provided to in-service to enable people to continue learning while working or for those who want to be engaged in lifelong learning to improve their knowledge, quality of life or employability. Continuing education is provided as (1) in-service learning, (2) distance learning and (3) guided self-learning. Institutions for continuing education include province, municipal and district centres for continuing education; and commune, ward and township community learning centres. Continuing education is also provided at general, professional and higher education institutions and through mass media. Schools in the national educational system are organised in the following forms: (i) public (or state-owned) schools, established and financially supported by the state in recurrent expenditure and infrastructure investment; (ii) people-founded schools, established and financially supported by local communities in operational costs and infrastructure investment; (iii) private schools, established and covered financially

for infrastructure and operating costs by organisations of civil society, the private sector or individuals.

Apart from the schools in the national system, a number of other schools have been established by ministries and agencies, political organisations, socio-political organisations (such as Women's Union, Youth Union) and armed forces. These educational institutions are created to educate and train civil servants, military officers or defence workers. Another type is special schools, which include boarding and semi-boarding general schools for ethnic minorities; specialised schools and schools for gifted and talented students; schools and classes for disabled and handicapped people.

2.3.2 Administrative hierarchy in education

According to the Law on Organization of Government (National Assembly, 2001), the central government is the highest administrative body, responsible for overall state management of the economy and enforcing of laws. The Ministry of Education and Training is a constituent part of the government, accountable for unitary state management of education. Other education and training-related ministries and government agencies (e.g. Ministry of Labour, War Invalids and Social Affairs—MOLISA) also perform this function in accordance with their specific mandate. They are obliged to coordinate with MOET to ensure unitary state management.

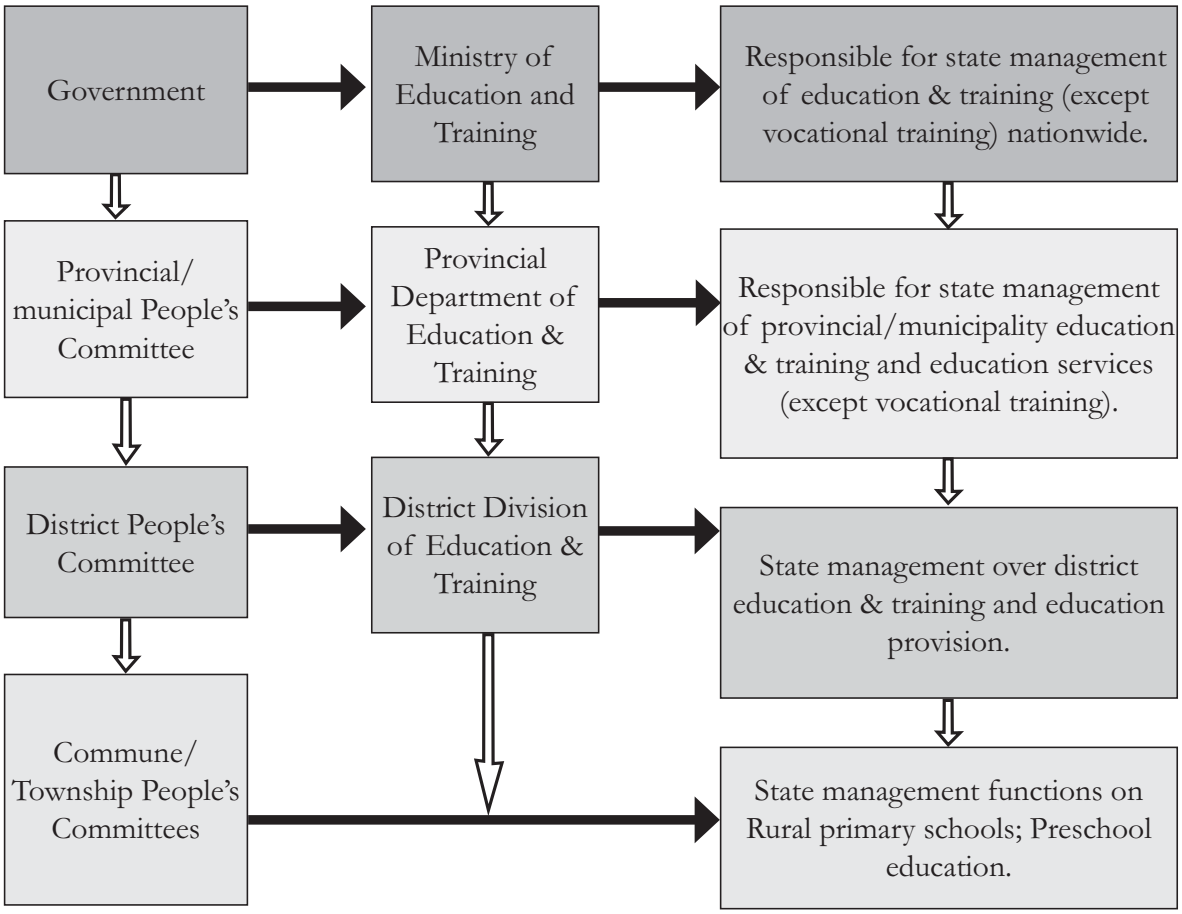
Provincial, district and commune people's committees manage education according to the government's delegation and are responsible for ensuring financial conditions, educational infrastructure, teachers and teaching equipment for public institutions under their management, meeting the demands of expansion, improvement of educational quality and efficiency in their localities. The committees' mandate on education is carried out through a Department of Education and Training (DOET). DOET's direct responsibility is to assist the provincial and municipal people's committees to manage provincial education and training (except vocational training).

Similarly, the district Division of Education and Training is the local government agency accountable to district people's committees (DPCs). Its mandate is to assist management functions on education and training within the district. The division is subject to technical and professional direction, guidance and examination by the provincial DOET.[3]

Currently, 14.6 percent of universities and colleges are under management of MOET, 34.2 percent are under other ministries, 33.9 percent are under provincial and municipal governments, and 17.3 percent are under control of the non-state sector.

3 According to Joint Circular No.21/2004/BGD & BNV dated 23rd July 2004 by the Ministry of Education and Training – Ministry of Home Affairs on guiding functions, duties, obligations and organization structure of specialized agencies assisting the People's Committees in performing state administration on education and training at local level.

Figure 5.1: Vietnam's educational administration hierarchy



Source: Study team, based on Joint Circular No. 21/2004/BGD&BNV, 23 July 2004

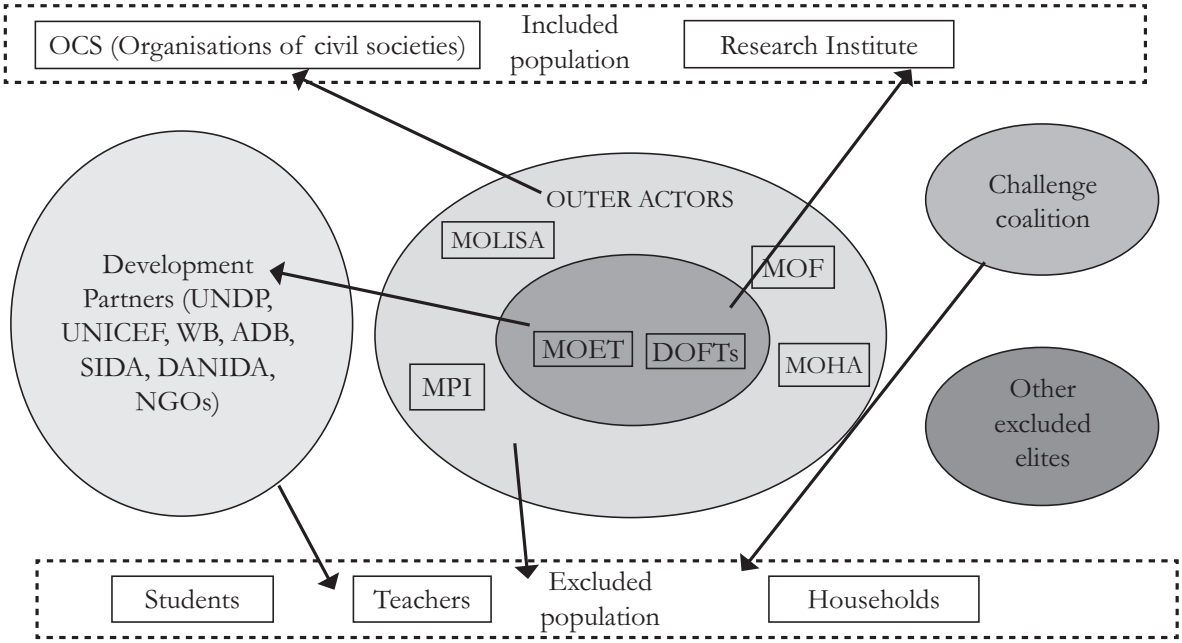
2.3.3 Actors and their interactions

Formulation, implementation, monitoring and evaluation of education policies involve a large number of actors, ranging from central and local governments, educational organisations and education service suppliers, to households, teachers, students and their parents. These actors have uneven functions and influence on education policy in different ways. Their relationships can be seen in Figure 5.2.

2.3.3.1 Inner circle actors

The inner circle education actors are core institutions or individuals who have direct and influential impact on decisions. Government plays a key role not only in education policy and decision making but also in service delivery. Thus, core educational actors come from central and local governments. Their roles, functions and mandates are identified in Education Law, Law on Vocational Training and Law on Government Organisation and specified in Resolution No.115/2019/ ND-CP.

Figure 5.2: Actors in education



MOHA = Ministry of Home Affairs. MPI = Ministry of Planning and Investment.
Source: Study team

Minister of Education and Training

The MOET is assigned by the central government to unitary state management of education in general, which includes: guidance on the implementation of strategy, plans and policies on educational development; implementation of legislation on education, school charters and regulations pertaining to other educational institutions; setting objectives, programmes and contents of education; teacher standards; standards of infrastructure and equipment of schools; compilation, publication and distribution of textbooks, teaching manuals and materials, regulations on examinations and award of degrees, diplomas and certificates; educational quality assurance and accreditation; mobilisation, management and utilisation of education resources; inspection and supervision of law compliance; final decisions on establishment of colleges; direct administration of some national universities and colleges. With these functions and mandate, MOET plays a strongly influential, if not decisive, role in educational policies and programmes.

Provincial People's Committees and DOETs

Provincial, district and commune people's committees (through the DOETs) are in charge of education activities within their localities. They hold responsibilities for: formulating educational development strategy, plans, programmes, projects and policies for submission to the people's council; providing direction and guidance on implementation of approved master plans, plans, programs, projects and policies; supervising implementation of educational legal and regulatory documents; issuing local policies to develop education; enhancing the quality of kindergartens, general schools and vocational training institutions that are the responsibility of local governments; monitoring the quality of colleges, universities and vocational schools; guiding and

implementing universal education, carrying out literacy programmes and fostering lifetime learning; managing local institutions; etc.

2.3.3.2 Outer circle actors

Outer circle elites are included but not key decision makers. However, they can have both direct and indirect influence on the inner circle through their political and elite connections and vested interests in the education sector.

Ministry of Labour, War Invalids and Social Affairs (MOLISA) is responsible for state management of vocational training. The minister has the right to make the final decision on setting up and operation of vocational training institutions. Vocational schools from elementary to higher secondary are under direct administration of the minister. MOLISA is in charge of the decision on opening new courses in professional and vocational schools administered by other ministries or by enterprises. MOLISA is mandated to coordinate with MOET in formulating specific regulations on vocational training, deciding on postgraduate certificates and degrees in special fields and creation of training frameworks for professional vocational schools.

Ministry of Planning and Investment (MPI) and its subsidiaries, in close coordination with MOET, have a leading role in formulating educational strategy, sector development master plans, sector development five-year and annual plans and ensuring that these are effectively integrated into national socio-economic development strategies, and five-year and annual socio-economic development plans and national human resources development strategy. MPI is mandated to prepare a national synthesis report on budget estimates for education and training development. MPI and its local subsidiaries are responsible for incorporating the plans for investment in construction of schools, sport and athletic, cultural and other education facilities into the process of socio-economic development planning, so that these items can be included into national long-term, medium-term and annual socio-economic development plans. More importantly, MPI is the governmental body who is assigned with the responsibility for taking a lead in the process of formulation and implementation of long-term plans such as national human resources development strategy and master plan for human resources development.

Ministry of Finance (MOF) and its subsidiaries take a leading role (in close coordination with MOET) in providing technical guidance to MOET and provincial authorities on state budget estimates, allocation and utilisation for education and training. The ministry takes an active part in managing, directing and inspecting the use of the state budget and other revenues for education, carrying out socialisation policy in education and mobilising other resources to promote education. MOF takes a leading role in identifying priorities for allocation of funds for education, and in ensuring that the proportion of the state budget for education increases more rapidly than the total budget. In close co-ordination with MOET and heads of state management agencies for vocational training, MOF sets out tuition and admission fees for public educational institutions under the administration of central authorities. Another responsibility is to ensure that state funds for education are allocated on the principles of transparency and democratic

centralism, and soundly reflect the state priority for universal education and educational development in disadvantaged and difficult areas.

Ministry of Home Affairs (MOHA) is in charge of setting the regular number of personnel in education and of workforce allocation within MOET and its subsidiary institutions, including limits of regular staff, in accordance with the total number of personnel decided by the prime minister. MOHA is also responsible for coordination with MOET and other ministries to build favourable policies for teachers, educational staff and officials, and to implement them effectively. MOHA and its subsidiaries also take part in administrative procedures for selection and approval of boards of management in public educational institutions; formulation and implementation of regulations on ranking of educational institutions; deciding on establishment, merger, separation, division and dissolution of vocational schools administered by ministries or schools controlled by enterprises that are partly owned by the government.

2.3.3.3 Development partners

Acknowledging the vital link between inclusive education and international and regional cooperation, during recent decades, the government has made a great effort to strengthen formal and informal international partnership.

Close cooperative relations have been established between the GOVN and many international and regional development partners. Multilateral institutions like the United Nations, World Bank and Asian Development Bank are long-time and highly acknowledged development partners. They interact not only with education policy-making institutions and individuals, but also with educational services recipients through various support programmes and projects. Their efforts have been widely recognised as highly effective in facilitating educational policy discussion and debate (UNDP 2005). Some bilateral partners such as SIDA and DANIDA (Swedish and Danish International Development Agencies) have facilitated enhanced inclusiveness through either direct participation or indirect support of policy and legislation. Their emphasis on marginalised groups or more disadvantaged areas have helped them to benefit more from the government's education support programmes.

In addition, a large number of international and domestic non-profit organisations, non-government organisations (NGOs), charities and volunteers have become close partners of the government in that they initiate and implement projects to support both schools and households in dealing with daily problems in education.

2.3.3.4 Included population

A large number of groups have close "connections to the dominant coalition by patronage ties"[4]. These include socio-political organisations, professional associations, Union of Culture and Art Association, the Red Cross, other non-government organisations and education-related academic research institutes.

4 Ostrom et al., 1994

Participation of civil society organisations in policy and decision making has recently increased. This can be seen not only in educational services delivery but also in policy implementation, policy formulation, monitoring and evaluation. Having wide social and professional knowledge, many of these organisations play the role of think tanks in educational policy formulation, budget and resource allocation, monitoring and educational performance assessment. Findings from their research have in many cases been taken into account or integrated into government decisions or policies. Due to the greater activity of these groups, social inclusion issues are better captured in education planning and budgeting. Less advantaged groups such as women, poor people and ethnic minorities tend to be better represented in government and public service agencies, even in decision making. The greater representation of such groups implies that problems of their education may receive more attention.

Moreover, recent improvement of the legal and policy framework to enhance socialisation of education services has resulted in increased numbers of non-state educational and training establishments, from preschool to higher education. Educational quality has increased as a result of dismantling the state "monopoly" of delivery. A number of schools of higher education have been established by Vietnam Union of Science and Technical Association or with its direct support, for instance, Dong Do University (by Vietnam Association of Physicists), Phuong Dong University (by Hanoi Union of Science and Technology), School of Economic Management and Business (by Vietnam Association of Economists) and people-founded general schools. Thanks to accelerated implementation of the socialisation policy, civil society organisations have become more and more active in delivering education services. Hundreds of classes on accounting, foreign languages and IT have been opened under the patronage of these organisations (Thang Van Phuc et al. 2002).

2.3.3.5 Excluded population

The direct recipients of educational policy and institutional arrangements, namely teachers, students and their families, are generally excluded from policy making and planning. There is very little systematic contribution from these three groups, a very small number of mechanisms for ensuring a "bottom-up" approach to planning and no tools for facilitating this. Public participation in education planning and budgeting is insufficient, especially at the grass roots. The Education Law mentions neither "right" nor "duty" for teachers or students to participate in policy and decision making, even in sensitive areas such as tuition and funding. During the last decade, the number of private schools and other educational establishments has steadily increased. However, their participation in policy making is very modest, if not non-existent.

3. Current policy and institutional arrangements for inclusive health care

3.1 Overall health policy framework

Vietnam has implemented numerous direct and indirect policies to support health sector development. For 2011-20, the party Eleventh Congress reaffirmed, "Development of the health sector is one of the most important factors to ensure effective implementation of social progress and equity in this phase of our country's development" (CPV 2010). This political course was then elaborated in Resolution No.46, where it was specified that Vietnam should strive to continue development of the heath sector towards:

- reaching social equity
- improving the quality of health services and
- meeting the increased needs for health care services.

These most politically important goals were then translated into health legislation, including the Law on Care and Protection of People's Health, Law on Social Health Care Insurance, Pharmacy Law, Law on Medical Examination and Treatment and *Law on* Prevention of Communicable Diseases. Provisions of these laws are reflected in long and medium term health sector strategic and planning documents, which shape the regulatory and institutional framework for health services over different periods.[5] The Socio-economic Development Strategy for 2011-2020 clearly determined that development of a strong health sector, and substantial improvement of quality of health care should be one of the most important orientations for socio-economic development in the coming period. This document also specified a number of policies targeted to improve protection and promotion of health (See Annex 5.2 for more details). Based on those political orientations, the Ministry of Health formulates its sector development plans and policies.

Specific policies have been formulated for each health sub-sector or type of health activity. For example, the government has introduced diverse policies and programmes on children's health, amending the Law on the Protection, Care and Education for Children and the Health Insurance Law. Multiple national programmes for protecting children and promoting every child's nutrition and immunisation have been implemented for 2010-15. These programmes, including home-based immunisation,[6] have obtained remarkable success in promoting public health: eliminating polio, reducing maternal and neonatal tetanus and controlling measles. On reproductive health and population planning, the government has enacted wide-ranging policies, strategies and programmes aimed at sustaining replacement-level fertility, ensuring women's rights to maternal health care, promoting availability and quality of reproductive health services and strengthening

5 These include the National Population Strategy for 2011-2015; National Strategy on Care and Protection of People's Health in 2011-2020; Master Plan for Vietnam Health Care System Development until 2010 and Vision towards 2020; National Target Programme on Health Care, Population and Family Planning in 2006-2010.

6 UNICEF Vietnam (2010). "The children in Vietnam." Retrieved 01/03, 2012, from http://www.unicef.org/vietnam/children.html.

human resources and management in reproductive health. The Master Plan on Safe Motherhood, implemented since 2003, has addressed the high rates of maternal and neonatal mortality. Likewise, the government has set the goal of eliminating malaria in 40 provinces and cities by 2020 and in the whole country by 2030. In response to the spread of HIV, the HIV policy is mainstreamed into national development policies and strategies.

The government has striven to maintain the perspective for *health financing* of "increase state investment while promoting social mobilisation for health care activities". Since 2011, new cost norms in health fund allocation have been applied in both investment and recurrent expenditure.[7] According to the policy, the state budget invests in health through approved national target programmes and supports investments for provincial and district specialised hospital and health facilities.

Total public expenditure for health as share of GDP has gradually increased from 5.2 percent in 2000 to 7.2 percent in 2010. The government expenditure on health as a share of total health expenditure counts for 38.7 percent. Annual health expenditure per capita has increased rapidly, from USD21 in 2000 to USD 82 (in PPP) in 2010 (Table 5.4). The Law on Health Insurance (2008) lays out a "road map" for expansion of coverage to achieve universal health insurance. Implementation of the road map contributed to increasing insurance coverage to 60 percent of the population in 2010. Spending from the health insurance fund as a share of total health spending rose from 13 percent in 2006 to more than 18 percent in 2009. The goal set out in the SEDP for 2011-15 is that, by 2015, about 80 percent of the population will be covered. Universal health insurance coverage is a strategic goal for 2011-20.

Table 5.4: Health expenditures, 2010

Indicators	
Health expenditure as share of GDP	7.2 percent
Government expenditure on health as share of total public expenditure	8 percent
Government expenditure on health as a share of GDP	3 percent
Government expenditure on health as share of total health expenditure	38.7
Government expenditure on health, per capita	US31/US82PPP
* Estimated budget for health as share of budget (2012)	6.3 percent

Source: WHO National Health Accounts, 2010, * Ministry of Finance

Vietnam's health strategy aims to combine public, household and insurance payments in a way that ensures access to quality health services for all. Expansions in private medical practice, beginning 1986, and the deregulation of the pharmaceuticals industry, have given private services a much greater role, particularly in primary services and pharmaceuticals.

7 By Decision No. 60/2010/QD-TTg by the prime minister on principles, criteria and cost norms for allocation of development investment capital from the state budget for 2011-15.

Evidently, policy formulation, selection and implementation have greatly improved during the last decades, responding to changing socio-economic conditions, health care developments and disease patterns. Many of these policies have been developed and promulgated with the explicit aim of achieving an equitable and efficient health care system.

3.2 National policy supporting increased inclusiveness in health

3.2.1 Socialisation

Similarly to education, since the 1990s, socialisation has figured prominently in the development of the health sector. The policy aims to facilitate the flow of resources into health services, promote diversification of services delivery and facilitate expansion of the scale and scope of the health system and its systems of provision and payment.

Allowing user fees in hospitals was a first important step toward formalising non-state payments. Subsequently, hospitals have depended on fees and private payments alongside state funds. Up to the late 1980s, hospitals could not charge fees and had little managerial autonomy, having to abide by centrally determined staffing norms, bed norms and norm-based budgets. Basic salaries were fixed, and hospitals were not permitted to borrow. In 1989, Inter-ministerial Circular 14 permitted hospitals to collect user fees to cover part of the cost of services. Hospitals are also permitted to provide health services on contracts that permit full cost recovery. In 1995 the government introduced a fee schedule, listing per-item and per-diem charges for a range of services, to which hospitals had to adhere. The introduction of user fees also entailed significant changes in incentives. After 1989, hospitals were permitted to earn and retain surpluses, with certain restrictions.

Decree No-10 (GOVN, 2002) conferred upon hospitals greater discretion over organisation and management of services, finances and human resources. It also provided the right to borrow and invest in equipment and infrastructure. Decree 43 (GOVN, 2006) increased these rights, giving hospital directors a formal autonomy in hiring and firing, and expanding the right to mobilise capital from private organisations and individuals. Decrees 10 and 43 clarified rules governing user fee revenues in relation to staff incomes by stipulating that hospitals could reallocate only revenues net of recurrent expenditures, requiring 25 percent of these net revenues to be used for facility upgrades, and requiring that a portion of funds should be set aside to stabilise incomes in case of future revenue declines, to provide emergency support and to reward individual performance. More recently, Decree 85 (85/2012/NĐ-CP) addressing public hospitals specifically, prescribes much more detailed norms governing operations.

A number of analyses of socialisation indicate that autonomisation is transforming hospital management and financial functions, though in complex ways and with uncertain implications for the quality and accessibility of care (London, 2013). Becoming "autonomous", hospitals - particularly larger urban ones - are using expanded decision rights to reorganise services and mobilise investments to enhance revenues and service quality.

3.2.2 Current pro-poor health policies

Numerous health policies over the last decades have directly and indirectly supported poor and disadvantaged people. These policies are reported to be improving the material and spiritual conditions for these groups and regions.

Priority in state allocations to disadvantaged areas, grass roots and preventive medicine

The State budget health expenditure is predominantly used to implement the state's policy priorities. Specifically, a clear priority is provided to disadvantaged areas and population groups. It was clearly stipulated that at least 30 percent of the state health budget should be allocated to preventive medicine[8], and that the budget norms for mountainous and ethnic minority remote areas should be in 1.8 times higher, and the norms for extremely difficult areas and islands 1.85 times higher, than in urban and more developed areas.[9] Salary incentives are applied to attract health specialists and workers to remote regions.[10] According to these incentives, health workers and specialists in these areas can receive a supplement of up to 70 percent of their total salary. They can also receive other support, such as subsidies for capacity building, skill upgrading and travel costs.

Prioritised allocation of state funds to support target groups

In 2002, a health care fund was established for the poor in all provinces using national funds.[11] This has allowed an extension of health insurance cards to more than 15 million people, accounting for 43.4 percent of the total card holders in 2008. Decree No.36/2005/ND-CP dated in 2005 entitles all children under 6 years old to free health care at state-run facilities. Currently, this is implemented through provision of free health care cards to the children, with direct reimbursement to the facilities for services used. The insurance premium increased from 3 percent to 4.5 percent of salary/wage/pension/stipend or minimum salary.[12] The state budget subsidised at least 50 percent of the premium for near poor households, and a minimum of 30 percent for school students and farmer households of below-average living standards. Fully subsidised insurance covers 25 million people (48.6 percent of the total insured holders), and 30 percent subsidised insurance covers 10.5 million.

Health support policies implemented via poverty reduction

Support mechanisms to improve access to health services have been implemented through different components of national poverty reduction programmes and projects, ranging from construction of district and commune clinics and hospitals to health insurance cards for the poor (Annex 5.3). In 2011 alone, MOH implemented three national target programmes with 17 specific projects supporting preventive medicine. As for education, these types of support are in addition to the mainstream health system, to address the

8 Resolution No.18/2008/QH12 of the National Assembly.

9 Decision No.60/2010/QD-TTg by the Prime Minister on "principles, criteria and cost norms for allocation of development investment capital during 2011-2015"

10 As stipulated in the Decree No-64/2009/ND-CP by GoVN.

11 Decision No-39/2003/QD-TTg by the Prime Minister.

12 Decree No-62/2009/ND-CP guiding implementation of the Law on Health Insurance, on 1 January 2010.

imbalance in access. The policies clearly reflect government determination to prioritise funds to disadvantaged people, grass-roots health care and preventive medicine.

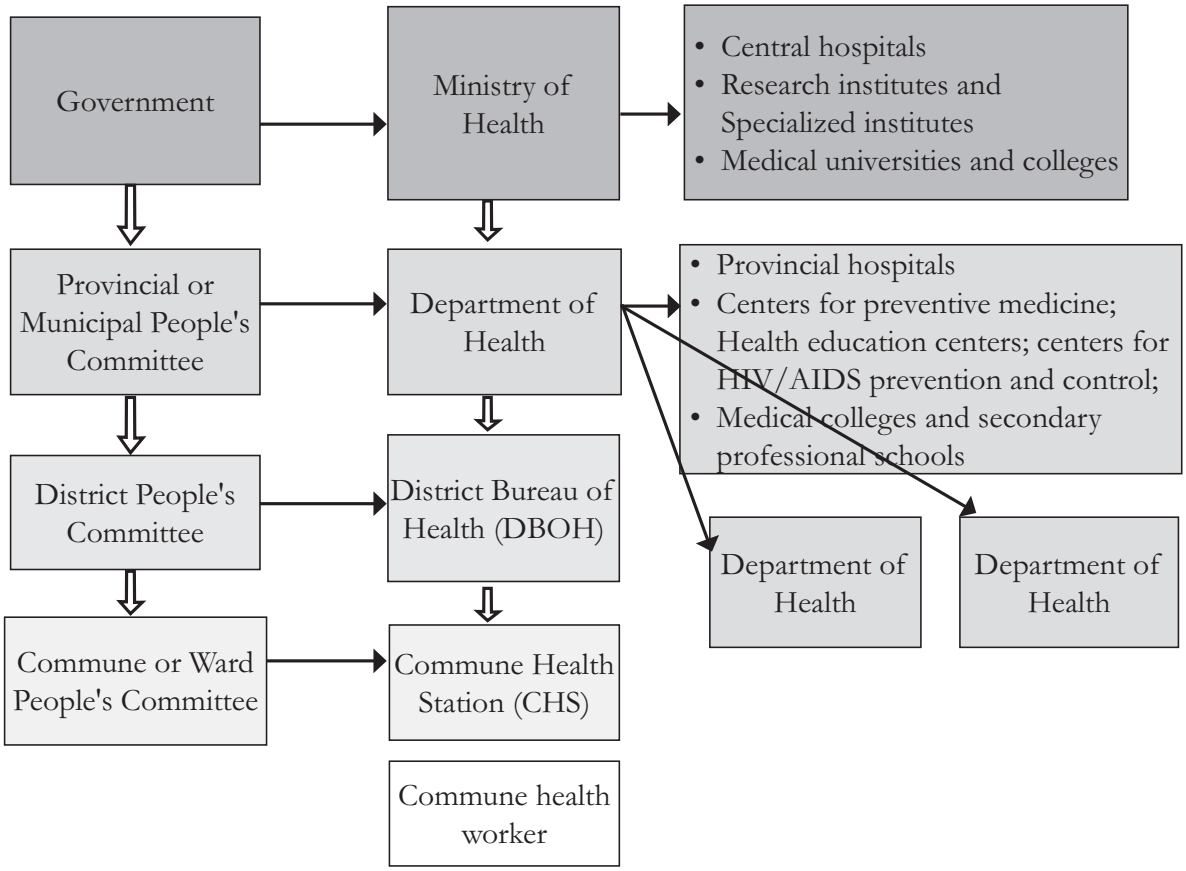
3.3 National institutional arrangements for health

3.3.1 Health sector administration structure

The administration of the health system consists of four levels—central (national), provincial, district and commune that parallel the state administration (Figure 5.3). *At central level,* MOH carries out state management of health care, protection and promotion. The structure of health care management has been continuously adjusted. Currently, the MOH's administrative apparatus includes the ministry office, departments and inspectorate. MOH has 20 departments and authorities[13] and 70 subordinate institutions divided into three major fields: hospitals; preventive medicine and professional institutes; and medical universities and colleges. *In provinces and centrally run cities*, the Department of Health (DOH) is a professional agency accountable to the provincial people's committee and is responsible for providing technical and policy advice on state health management within the locality. At the same time, DOH is accountable to MOH for health-related technical directions, guidance, monitoring and inspection. *The district* health bureau (DOHB) is a professional agency established by and accountable to the district people's committee. The bureau is responsible for management of health care, protection and promotion and performs designated tasks as authorised by the DPC and the provincial DOH. DOHB holds stewardship of district hospitals (including general clinics) and district centres for preventive medicine. *Commune or ward* health stations are the primary point of contact in the government health care system. They are designated to provide primary health services, carry out early detection of epidemics, provide first care, first medical aid delivery and treatment of communicable diseases, to implement birth control and family planning, to practise preventive hygiene and sanitation.

13 The departments are: (1) communication, competition and awards; (2) mothers' and children's health; (3) health care equipment and works; (4) health insurance; (5) planning and finance; (6) organisation and personnel; (7) international cooperation; (8) legislation; (9) office of the ministry; (10) ministerial inspection; (11) infection control; (12) HIV/AIDS; (13) food hygiene and sanitation; (14) health environment management agency; (15) science, technology and education; (16) management diagnosis and treatment (17) traditional medical and pharmacy; (18) pharmacy management; (19) information technology; (20) general office of population and family planning.

Figure 5.3: Health administration hierarchy



Source: MOH & HPG 2011

3.3.2 Actors and their interactions

Similarly to education, the formulation, implementation, monitoring and evaluation of health policies involves a very large number of actors, ranging from government to suppliers, staff, patients and their families. These actors have uneven influence on decision and policy making.

3.3.2.1 Inner circle actors

Actors of inner circle in health sector come from MOH, provincial people's committees and DOH.

Ministry of Health manages its branches or sectors nationwide and public services within these.[14] The MOH tasks and powers are specified as follows: The MOH management all health services. MOH's mandate also includes a wide spectrum of policy and decision making responsibilities, ranging from submission to the government health-related draft laws, five-year and annual health development strategies, master plans and plans and

14 The MOH mandate is regulated by government Decree No. 36/2012/ND-CP, 18 April 2012, regulating functions, responsibilities, systems and mechanisms for accountability and organisational structures of ministries and ministry-level agencies, and by Decree No. 63/2012/ND-CP, 31 August 2012 regulating the functions, responsibilities, accountability and organisational structure of MOH

important national projects, making recommendations on mechanisms and policies on health services, to elaboration of budget estimates, distribution, management, and finalising its annual budget; management of the state properties assigned to the ministry.

*Provincial Departments of Health (DOHs***)** assist provincial people's committees to management the health sector. Domains include preventive medicine, medical treatment and rehabilitation, and traditional medicine, medicine for prevention of disease, cosmetics affecting human health, food safety and hygiene and health equipment. DOHs in provinces and centrally run cities directly manage provincial/municipal health facilities, district preventive health centres, district general hospitals (including medical clinics) and non-profit health units like medical secondary schools, medical labs and experimental centres. District divisions of health and commune health centres report to the district people's committees administratively, but are accountable to provincial DOHs for technical and professional affairs.

3.3.2.2 Outer circle actors

Ministry of Finance has the powers and duties of presiding over and cooperating with MOH and provincial people's committees in establishing allocations, regimes and criteria of expenditure for health; supervises accounting regime, final accounts and procedure of financial and budgetary reporting and disclosure; presiding over and cooperating with MOH and provincial people's committees in drafting the state budget estimates and devising plans for allocation of the central budget; organising implementation of the state budget; uniformly managing the collection of health sector taxes, fees, charges and foreign aid; organising state budget spending. MOF is also mandated to conduct financial and budgetary inspections to ensure that state funds for health are allocated on the basis of transparency and democratic centralism, and reflect the state's priorities for universal health care and care development in disadvantaged and difficult areas.

Ministry of Planning and Investment takes a leading role in health sector development strategy, health sector development master plans, the sector development five-year and annual plans and ensuring that these plans and strategies are integrated into national socio-economic long-term strategies, five-year and annual socio-economic development plans and national human resources development strategy. MPI is mandated to make a national synthesis report on budget estimates for health sector development for submission to the prime minister. MPI and its local subsidiaries are responsible for incorporating investment plans for construction of hospitals, clinics, and other health facilities into socio-economic development planning. Another mandate of MPI is to evaluate the efficiency of investment capital for health sector construction projects.

Ministry of Home Affairs is responsible for promulgating joint circulars generally guiding the functions, tasks, powers and organisational structures of health departments in provinces and centrally run cities and district/town health bureaus. MOHA provides guidance to MOH in drawing up lists of working positions and rank-based structures of civil servants and professional title-based structures of health public employees for determining annual civil servant payroll plans of the ministry and the numbers

of employees working in its non-business public units. MOHA is also mandated to promulgate the professional standards of civil servants in the MOH, criteria for professional titles and personnel structure as well as criteria for leadership and management titles of the DOHs in provinces and centrally run cities.

3.3.2.3 Development partners

In the process of reforming of the health sector, Vietnam has attached great importance to consultation and learning best practices through UNDP and WHO. Policy consultation and recommendations by WHO regarding critical issues such as health services delivery, policy on population and reproductive health and human resources for health are highly appreciated by GOVN. Recent assistance from UNDP has been reported to contribute greatly towards achieving the Millennium Development Goals such as reduction of child mortality (MDG4), improvement of maternal health (MDG5) and control of HIV/AIDS (MDG6).

The collaboration of Health Partnership Groups through a number of joint annual meetings and the National Aid Efficiency Forum plays an increasingly important role for policy makers. The country recently becomes an active member of Health Working Group within the APEC. Partnership activities have been initiated between Vietnam and other members of ASEAN, the Asia-Europe Meeting, Cambodia-Laos-Myanmar and Vietnam and Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy. Recent health support projects providing financial and technical support include: an Austrian USD17 million project supporting Hue Hospital (in 2012), a GAVI project on provision of vaccines to children under 5 (with a total budget of USD47 million) and a JICA-supported project on development of regional and provincial hospitals (USD104 million). The World Bank and European Commission have supported pilot projects on alternative methods of capitation (e.g. HEMA[15] and KICH[16] projects) and output-based payment. Similarly, UNFPA has supported the government in formulating policies and strategies as well as in collecting and analysing population data to identify emerging demographic trends. Since 2007, a Joint Annual Health Review has been carried out by MOH and Health Partnership Groups, with participation of domestic and international experts and policy advisers. These studies provide a comprehensive picture of the health sector, on health policy formulation and implementation, on identification of policy priorities and suggestion of sound policy measures.

The total international assistance for health continues to rise. In 2010, total ODA supplied was about VND3500 billion, equivalent to about 8 percent of the state budget for health. The MOH today manages 55 ODA programmes and projects, including 40 grants, 10 loans and five mixed projects, with total funding of VND20,309 billion. The health sector also receives technical and financial support from 126 international NGOs (MOH & HPG 2011).

15 HEMA is EU project providing health care support to the poor in the Vietnam Northern mountainous areas and Central Highlands

16 KICH is a project supporting improvement of community health.

A number of domestic research institutes such as Health Development Strategy and Policy Institute, Hanoi School of Public Health, Hanoi Medical University, have long been very close development partners of the government. They often bring new and progressive ideas into policy and decision making. The Health Development Strategy and Policy Institute has been directly involved in impact and performance assessment of "autonomy" in health financing, studies assessing and analysing "overcrowded hospitals" and underutilisation of health capacity, regulatory impact assessment of the Law on Medical Examination and Treatment and the Law on Food Sanitation and Safety.

MOH has recognised that these numerous inputs of partners have been most important in determining health issue priorities for the poor, children under six, ethnic minorities and disadvantaged people.

3.3.2.4 Included population

Large changes have been made to encourage participation of civil society organisations and the private sector in health care services. Through the Law on People's Health Protection and Law on Social Insurance, the government has created an enabling environment for extension of health services supply. As a result, today, together with the private sector, many civil society organisations provide health services. Most of these operate under the "umbrella" of the Vietnam National Front.

The Vietnam Red Cross is one the most active health actors, closely attached with communal health care and social aid. Its activities have recently been extended to the establishment of "classes of compassion", blood donation and vocational training classes for orphaned children. The Association for Assistance to Poor Patients in Ho Chi Minh City is a typical example of a pioneer in transmission of public services by non-government organisations. The association not only supports the government in direct provision of health services (e.g. the association now administers a 500-bed public hospital in HCM) but also helps in mobilising resources for health sector development. Members often provide free-of-charge medical examinations to people in disadvantaged areas or provide free lunches to poor patients in hospitals.

Many other civil society organisations—such as Vietnam Women's Union, Youth Union, Vietnam General Association of Labour, War Veterans Union, professional associations and other NGOs—are "included population" in health sector policy making. The Women's Union and Youth Union are the strongest activists in combating HIV/AIDS. Due to their efforts, HIV/AIDS prevention and abatement have been changed from a "sensitive social problem" to an issue that receives active attention from the government and the public. Social work with disabled and handicapped people has been improved visibly during the last decade as a result of the efforts of these mass organisations. Today, many members of disadvantaged groups can enjoy free-of-charge medical treatment or other medical support. With assistance from the Youth Union, some of them take part in sports, athletics or other public activities.

Institutions such as medical research institutes, universities, hospitals and clinics also act as think tanks in health policy and decision making. With their professional knowledge,

very often these actors carefully advise policy makers in formulating health care resources allocation or before approval of policy. More and more, serious analysis of social issues or local situations is included in health policy making and implementation.

3.3.2.5 Excluded population

Although being direct recipients of health policy and institutional arrangements, very often households, patients, private health services providers, people in general, especially poor people and people from disadvantaged area, are excluded from health policy and decision making. The Law on Promulgation of Legal Documents stipulates, "Individuals participate with comments on draft legislation and regulations", and "in the development of legislation, leading government agencies are responsible for creating enabling conditions to facilitate participations of all stakeholders". However, very little has been done to fulfil these stipulations. Tools for drawing feedback on health policy are either out of date or inaccessible for most poor people (e.g. posting on MOH website). Thus, the feedback obtained by organisers is often very scant. Similarly to education, there is no regular and effective mechanism for ensuring bottom-up health sector planning, and no effective tools are available to receive feedback and comments from the general population and the poor.

4. Major constraints and challenges

4.1 Limitations in policy framework for inclusive education

4.1.1 Limitations on education equity

Rigorous education policies and strategies have resulted in increasing education opportunities for all and for disadvantaged groups. Yet there exist clear disparities in access between rural and urban areas and between the ethnic majority and ethnic minorities. Remote and highland regions, where most ethnic minorities reside, experience remarkably lower enrolment rates for secondary education.

Slow progress for ethnic minorities

It is widely recognised that the ethnic minorities are much better off now than they were a decade ago, thanks to support from the government and development partners. Nevertheless, the gap in education between the Kinh majority and ethnic minorities seems to widen over time. Table 5.5 demonstrates a huge disparity in some educational indicators. In 2010, around 16.4 percentage point difference in literacy rate for population aged 10 and older; and school attendance rate for children aged 6 to 14 was 5.1 percentage points higher for the Kinh than the ethnic minorities.

Literacy rate for female ethnic minorities is even lower at 78.5 percent in 2012. Some mountainous provinces, where most of ethnic minority reside, are experiencing especially low literacy rate in 2012, e.g. Lai Chau (69.3 percent), Dien Bien (73.5 percent), Ha Giang (76 percent) and Son La (77.2 percent)[17].

17 GSO, VHLSS 2012

Table 5.5: Education by ethnicity, 2010 (%)

	Kinh and Hoa ethnicity	Ethnic minorities
Literacy rate for population aged 10 and older	96.2	79.8
School attendance rate for children aged 6-14	95.0	89.8

Source: GSO, VHLSS 2010

Inequality in education between income groups

Data on the general rate of schooling decomposed into income groups show obvious gap between the rich and the poor groups. This gap becomes increasingly larger at higher education levels, especially in upper secondary schools (Table 5.6).

Table 5.6: Schooling, by education level and income groups, 2010, (%)

	Primary	Lower secondary	Upper secondary
National total	**100**	**94.1**	**71.9**
Income Groups:			
Groups 1 (poorest)	100	86.7	53.1
Group 2	100	93.1	68.5
Group 3	100	97.6	74.1
Group 4	100	99.7	82.2
Group 5 (richest)	100	99.1	90.1

Sources: ILSSA, 2012.

4.1.2 Perverse impact of socialisation policy on inequality

A number of recent studies indicate that the socialisation policy in education has generated a range of mixed and even perverse effects. Although significant, the achievements associated with socialisation were unable to bring about the expected "fundamental change" in the modality, organisation, governance and financing of the education system. Many of the targets set out by Resolution No.5 for general education, training and vocational training were not met (MOET 2012). Visible limitations and challenges remain in the most difficult regions (such as the north-west and highlands), where socialisation of vocational training and development of non-state schools is hardly translated into practice. Also, socialisation practices have commoditized and commercialised education, often in ways that appear to undermine the achievement of national policy goals. Informal socialisation in education has taken the form of a widespread "shadow" system of extracurricular study and teaching, which tends to become a "normalised" feature, despite the efforts of the government to address it. Formal and informal fees and charges associated with socialisation have made education more costly. Vietnamese households spend much more on basic education services than households in other East Asian countries, and in recent years private spending has increased for all segments of the population including the poor (UNDP 2011). More seriously, socialisation has been reported to be contributing to the development of a tiered system of services. Improvements in quality have been enjoyed mostly by high-

income users and may contribute to erosion in the quality of truly public services. New financial arrangements within public schools are creating class divisions and stigma, with children sorted into different classes on the basis of their parents' ability or willingness to pay.

Obviously, certain elements and aims of socialisation are desirable and ought to be further promoted. But there is also a large range of unaccountable socialisation practices that are generating adverse outcomes. Some elements of socialisation appear to marginalise public interests and are counterproductive to enhancing equality and inclusion in education.

4.1.3 Constraints on reaching educational equality via poverty reduction programmes

As mentioned, educational interventions have been implemented in almost all of the poverty reduction programmes. However, implementation of these programmes or their components has revealed constraints. First, these components have very similar characteristics and approaches, leading to the concern that there may be considerable overlap and even undesirable "competition" amongst the different interventions. Secondly, a number of unexpected bottlenecks, inefficiencies and risk areas are found during their execution. Box 5.1 provides an example of some of the constraints facing practical execution of one of these programs-- the D.112 sub-programme.[18]

Box 5.1: Main constraints on implementation of the D.112 programme

The programme was an important component of P.135, which was designed to support poor and disadvantaged boarding school children living in extremely difficult communes in mountainous and ethnic minority areas. The ultimate purpose of D.112 was to increase enrolment and attendance of these children, especially those in the most remote areas.

While the direct cash transfer of the programme was generally acknowledged as a good instrument in providing the beneficiaries with an opportunity to make a choice, some issues were found related to financial aspects. These issues include poor compliance with regulations in budget preparation, delay in fund allocations, a high threat fund leakage and failure of timely and adequate delivery of resources to end recipients. Other inefficiencies were inadequate equity, reflected in the failure to reach eligible students, ineffective use of the support fund and lack of accountability and transparency.

Source: MPI-UNICEF 2012

The system of benefits under many of these programmes is complex and not always effective in reaching those most in need (CEMA 2013).

18 D.112 launched "Policies to support services, to improve and increase people's living standards and to provide legal aid for legal awareness raising", which was promulgated by Decision No. 112/2007/QĐ-TTg dated 20 July 2007.

4.2 Limitations and challenges in health policy framework

4.2.1 Challenges from existing service disparity

Disparities in reduction of child mortality

Despite a substantial decrease in child mortality and improvement in child nutrition, disparities still exist among ethnicities, regions and income groups. This gap tends to widen over time. Neonatal mortality has declined but still accounts for approximately 70 percent of infant deaths. While the reduction in the number of underweight children is impressive, the prevalence of stunting remains high at nearly 30 percent for general stunting and 10.5 percent for severe stunting. 19 increasing gender differences are noticeable, as all malnutrition indicators suggest a more disadvantaged situation for girls.

The biggest gap in maternal health and child mortality is seen between rural and urban areas. Table 5.7 shows that mortality rates in rural areas are twice as high as in urban areas.

Table 5.7: Rural and urban child mortality

	Urban areas	Rural areas
Under-1 mortality rate/1000 live births	8.9	18.3
Under-5 mortality rate/1000 live births	13.4	27.6

Source: GSO, VHLSS 2010, 2012.

Geographic discrepancy in access to health care

A huge discrepancy in access to health care among geographic regions also reflects unequal progress. Northern midland and mountainous areas, the central highlands and Mekong River delta are below the national average, while the Red River delta's and Southeast's health care indicators are far above. Access to health facilities and quality of health care also show notable inequalities. Under-1 and under-5 mortality rates in the northern midland and mountainous areas and central highlands are higher than the national average (Table 5.8).

19 National Institute of Nutrition (2010). Summary Report: General Nutrition Survey 2009-2010.

Table 5.8: Health care by geographic region

	Red river delta	Northern midlands and mountainous areas	North central and central coastal areas	Central highlands	South-east	Mekong river delta
Pregnant women receiving antenatal care at least 3 times (%)	94.2	75.4	86.4	81.3	89.1	86.3
Under-1 mortality rate/1000 live births	12.3	23.5	17.1	24.6	9.2	12.0
Under-5 mortality rate/1000 live births	18.4	35.7	25.8	40.2	13.7	18.0

Source: GSO, VHLSS 2012

Disparities between ethnic and income groups in maternal health status

Women residing in poor households or ethnic minorities are far more disadvantaged in every maternal health indicator. With regard to maternal mortality rate, the Northern Midlands and Mountains, the Central Highlands (where most of the ethnic minority resides) have the highest rate of maternal mortality. The gap between the mountainous and river delta regions has been narrowed but remained large at approximately 2.5 times by 2009. Also, MMR vastly varies between most difficult/poorest districts and the national average. MMR are 2 times higher in 225 difficult districts (104 per 100,000 live births) and 5 times higher in 62 poorest districts (157 per 100,000 live births). The MMR among ethnic minorities (such as H'Mong, Thai, Ba Na, Tay, Dao and Nung) is approximately 4 times higher than the Kinh majority group (MOH, 2010).

Disparity is also obviously seen among ethnicity, income groups concerning indicator on births attended by skilled health personnel. Women of the poorest quintile and minority groups are less likely to give births with the assistance of trained health workers. Only 63 percent of the ethnic minority women have their deliveries attended by skilled staffs in comparison with 98 percent of their majority counterpart (UNICEF, 2011).

Limitations in primary health, preventive medicine and national target programme

Vietnam faces a number of challenges in preventing the outbreak of newly emerging diseases, especially in rural and disadvantaged areas. There are inadequate numbers of professional staff, with insufficient skills and working experience, weak control of disease in districts and communes, low awareness of disease prevention and control measures among the population; grassroots authorities have contributed to this situation.

Limitations in achieving universal health insurance coverage

According to JAHR 2011, the goal of universal health insurance coverage by 2014 faces a big challenge. The responsibility of different local authorities for implementation of the policy is not clearly identified. A glaring lack of an effective mechanism for enforcement of the policy is also acknowledged. As a result, insurance coverage for the near-poor population is very low (13.1 percent). The number for employees in non-state

enterprises is around 53.4 percent. In 2011, more than 30 million people in Vietnam didn't have health insurance.

Support to assist the near poor to participate in health insurance is reported to be insufficient. There is still a high co-payment. Compliance with compulsory participation remains low, especially among private and informal sector workers. State support for the near poor and other target groups to purchase health insurance has been underutilised.

4.2.2 Perverse impact of socialisation on inclusive health care

While socialisation has channelled massive resources into the health system, its contributions to health sector goals are mixed. One of the most widely noted problems associated with the flows of resources into the system are informal and corrupt payments and practices that have developed over the last two decades. Analysts have noted that health sector corruption is widespread to the point that it is regarded as "institutionalised". In the public sector, medical corruption presents manifold problems. Not only does it violate patients' rights but it also can drastically increase the expense and reduce the efficacy of treatment. Medical corruption is hardly unique to Vietnam, but there are respects in which it has resulted from institutional conditions related to socialisation (London 2013). Also, socialisation is reported to be contributing strongly to the development of tiered health services provision. While socialisation was intended to stabilise services and expand their coverage, it has evidently contributed to the development of a more stratified system of provision against the poor and the more disadvantaged population.

4.2.3 Limited financial resources for health care

Despite annual increases, Government health spending still accounts for a low share of total health spending. In fact, although SEDS for 2011-2020 determined that health should reach 10 percent of the total state budget, recent macroeconomic difficulties have led to tightening of the state budget and thus to reduction of public spending on health. Allocation of state funds to preventive medicine, grassroots health care in mountainous remote and isolated areas remains far lower than planned. At the same time, due to the lack of the guidelines for allocating state funds based on performance and output indicators, allocations to hospitals remain on a per bed basis, with a regressive subsidy regime.

The current socio-economic and regulatory environment has been reported to be not yet appropriate for implementation of autonomy in state health facilities. Therefore, implementation according to Decree No.43 in preventive medicine units and other establishments has not brought about the desired effect. Out-of-pocket spending on health remains very high. This explains why the proportion of households facing catastrophic health spending has not fallen. Fee for service remains the primary mechanism for health service provider payments and becomes a main cause of medical ethics abuse. The policy objective of controlling health care costs, gradually reducing the share of out-of-pocket spending, is yet be reached.

4.3 Major limitations and challenges in institutional education and health systems

4.3.1 Insufficient public representation in the policy planning and budgeting

Public representation has not been sufficiently captured in education and health planning and budgeting. First, less advantaged groups tend to be under-represented in local government and public service agencies—they may sometimes be numerous, but rarely in decision making. The lack of representation of particular groups implies that their specific problems may not be getting the attention they deserve. Second, regulatory and policy making guidelines do not include specific requirements or considerations that promote social inclusion. For example, policies do not set targets for the participation of more disadvantaged or ethnic minorities employed in government institutions, nor do they provide guidelines for how social information should be included in budgeting and socio-economic planning. The latest and most important resolution No. 29-NQ/TW entitled "Comprehensive and Fundamental Reform of Education and Training", promulgated at the eighth plenum of the 11th Central Committee, provided nine sets of "tasks and solutions" for improving educational services. None of the proposed "solutions" mentioned ways to narrow the gaps between different socio-economic and ethnic groups or between regions in access to education and training.

4.3.2 Poor participation by non-state actors

Policy making, both strategic and annual, has remained very much a "top-down" affair in both sectors. There appears to be little systematic input from citizens or from lower levels of local government: communes have little voice in district planning, districts have little voice in provincial planning. A bottom-up approach to education and health policy making is rarely applied. Very few tools are available to facilitate policy consultation or to promote advice from experts or professionals within or outside the MOH or MOET on critical issues.

Similarly, there is very little evidence of tools to facilitate the involvement of poor or marginalised groups in planning, and not many special efforts appear to be made to ensure their participation. Lack of regulations on strengthening coordination and information sharing, and on obligations of government agencies in updating and reporting to the public, causes severely low accountability.

4.3.3 Lack of an effective mechanisms for cross-sector coordination and cooperation

Although MOET is the main agency with responsibility for state management of education, other ministries, sectors and localities are assigned similar tasks. Weak cooperation between ministries, sectors and local governments has made it difficult for MOET. Specifically, the cooperation between MOET, MOHA (the agency responsible for personnel management), MOF and MPI is weak, leading to a low performance on educational targets and goals. At the same time, the involvement of too many agencies in managing education has resulted in the spreading of resources: many ministries and local governments want to open their own universities, colleges or professional secondary

schools. This ends in severe functional overlap between educational institutions and poor investment efficiency.

Ensuring consistency and continuity of health care, creating a close link between agencies responsible for health sector planning, development, policy approval and implementation, remains a big challenge. According to MOH, preventive medicine units are fragmented and ineffective due to lack of collaboration between primary health care, public health, education and communications. This in turn causes difficulty in securing consistent policy and effective financial, human and other resources allocation (MOH & HPG 2011). The role of the health sector in issues such as traffic safety and environment pollution remains limited. Lack of complete evidence of harm to people's health and insufficient efforts create difficulty in advocating for other sectors to intervene to reduce risks and prevent illness and injuries. Poor coordination from government agencies hinders the sector from enhancing people's knowledge of disease risk factors. More attention and care should be paid to public awareness of how to change lifestyles and living habits to reduce risks.

4.3.4 Severe constraints on state management

Despite the improved political mindset and discourse on the role, function and responsibility of the state and administration in managing and supplying education and health services, the practical implementation still confronts severe problems. Service delivery and service management often overlap. There is no clear division between non-profit and for-profit public services. An increasing trend of "commercialisation" of basic medical services has been captured within public medical centres under the camouflaged name "voluntary health services" and "requested services".

Insufficient attention has been paid to the study and elaboration of institutional mechanisms necessary for the "socialisation" of public services. If available, those institutions are inefficient, resulting in big differences between policy and its practical implementation.

There is glaring evidence of state failure in oversight, monitoring and evaluation of education and health care delivery, especially locally. Both MOH and MOET appear to have no effective process for collecting and assessing the needs of communities. Collection of feedback or assessment of citizen and community satisfaction with public services is mostly done through formal meetings with voters and proceedings of elected bodies and government agencies.

4.3.5 Low efficiency in utilisation of budget resources

State expenditure for education in Vietnam is recognised as relatively high. However, it still has not met well the demands from the education sector. One reason for this is inefficient use of state funds. Until now, that problem has not been reviewed appropriately. MOET argued that it could not control education expenditure.

Despite several reforms, there is still no clear definition of subsidy for higher education. The state subsidy still has "equalisation" characteristics, particularly in higher education.

This causes a visible rise in overspending in university education. Most education budget estimates are made on the input basics rather than on real demand or expected outcomes. For universal education, the estimate is based upon the number of people under 18 years old. For higher education, the estimate is attached to the number of students and lecturers.

Furthermore, with the current financing method, end users are not able to use education services whenever and wherever they need, but this is critically needed to ensure a choice to service users and to increase the pressure on education and health services units to provide services of higher quality.

5. Policy recommendations

To ensure socially inclusive education and health policy implementation, a number of enhancements need to be undertaken.

5.1 Strengthening institutional arrangements for inclusive education and health

5.1.1 Overcoming the constraints in state management

Improving capacity for the state's support planning and implementation

In formulation of education or health support programmes, efforts should be made to increase precision of targeting, focus and timeliness: certain important standards should be seriously considered, such as the precision of beneficiary targeting; the timeliness and volume of support; and the focus on social outcomes. Programmes should accurately identify beneficiaries and seek equity in coverage.

Support project selection criteria should include more pro-poor elements. Higher priority should be given to projects that have stronger social inclusiveness and poverty reduction dimensions. A new section on poverty and social impact should be added to the criteria, requiring that the following considerations be taken into account in selection and appraisal of proposed projects:

- Enhancing opportunity: increase not only local people's income, but also their access to education and/or health services.
- Strengthening people's capacity to participate in decision making and legislation debate, or to overcome social exclusion and discrimination.
- Improving governance of projects, increasing their transparency, accountability and financial predictability.
- Representatives from institutions that have specific functions of dealing with social and poverty issues such as MOLISA, Vietnam Women's Union, civil society organisations and local communities should be included in the selection board for public support programmes.

Enhancing M&E of social outcomes and impacts of poverty reduction programme/projects

Weak M&E is one of the problems in public support programmes and projects. Local and central government authorities reveal that unequal impacts of public support projects

may not be sufficiently considered because they are mostly "second generation" effects rather than initial impacts. In order to raise awareness about their unequal impacts, solid supervision, monitoring and evaluation are necessary.

More importantly, poverty reduction effects are unlikely to be equal for different groups or at different localities. The poor, elderly, women, children, ethnic minorities and people in remote and disadvantaged areas are more vulnerable to social inequality. M&E for poverty reduction projects should ensure that, while their main objectives are realised, implementation does not make any single group or area worse off.

While conventional systems monitor and evaluate the progress, results and impact of projects as a whole, the social inequality-focused M&E proposed here aims at these aspects and is not a replacement but an addition to conventional M&E.

Improvement of provincial education and health planning and budgeting

Often, provincial education and health departments retain significant influence over their sectors. This influence is legitimate, and is likely to translate into sector-specific policy orientations for lower departments, and some control over the use of funds. It is therefore important to promote sound sector policies and orientations by increasing the extent to which they emerge from a consultative process, thus increasing the likelihood of them being in line with what local people consider important. Stronger support should be provided in order to achieve the following results:

- Increasing the extent to which provincial DOET and/or DOH consult with intended beneficiaries of their services. In education, for example, this might involve some kind of annual consultative forum, bringing DOET officials together with representatives of schools, private sector firms, students and their parents, teachers and school managers. Meetings might involve departmental presentations on draft annual plans, so as to get feedback from users and ground-truth orientations. Such meetings would enable education users to raise issues of concern to them. Assisting sector departments in getting feedback from their clients would enable them to develop better policies and address inclusive issues.
- Strengthening the "policy capacities" of departments by providing them with support in the analysis of information and enabling them to examine local problems in more rigorous and sensitive ways. In education this might, for example, lead to a greater sensitivity to higher "fall-off" rates for girls between lower secondary and upper secondary schools, or to the particular importance of pre-primary schools to women who are household heads. Assisting provincial departments in strengthening their policy functions might lead to more responsive planning and budgeting

Strengthening capacity to supervise services quality

- Poor supervision of public and private public service providers leads to many providers rarely bearing responsibility for the outcomes of their services, even when the outcomes are extremely poor. The problem points to an urgent need for a sound legal framework for more effective supervision, monitoring and evaluation. The focus

should be on clarifying not only the degree to which service providers comply with rules, regulations and standards, but also the quality, timing and price of services.

- Professional management agencies should formulate and enforce standards and norms for examining and supervising public service provision. The evaluation must be conducted objectively, openly and transparently. Tools to collect service users' feedback should be applied as soon as possible.
- International experience shows that evaluation of public service is not necessarily conducted by state institutions. The state is in charge only of making sure that service providers work as promised. Evaluation and checking should be assigned to domestic or international professional organisations.

Change in role of the state

It is necessary to separate two roles of the state, both as a regulator and as services provider. As regulator, the state should play a good role of "market orientation", which implies creating an enabling legal framework and favourable policy environment for interaction between various providers of health care and education service. In these aspects, the main tasks of the state should include:

- promulgation of policies and mechanisms that regulate standards, norms and service quality; effective supervision and examination of implementation;
- ensuring competition between service delivery organisations that can assist in lowering costs;
- stimulating social innovation to develop new and better ways of solving education and health care problems where the main benefit is to the community, rather than financial returns only.

As the service provider, the state should strive to:

- ensure full provision of basic services to meet demand; a strong focus should be on services that the private sector cannot or does not want to provide;
- ensure sufficient assistance to poor and marginalised people.

Strengthening local capacity for more socially effective public support

The capacity of local governments should be strengthened, possibly by further training for current staff, and by ensuring that they have adequate professional qualifications, good command of legal knowledge and compliance with laws and regulations. Provincial and district DOET, DOH, DOF and DPI should be the first targets for building capacity. Given their important role in connecting the funds to potential service providers and users, it is highly recommended to pay more attention to strengthening their capacity, including financial management skills, as well as incentives to reward good work.

5.1.2 Improved participation of non - state actors

Participation of non-state actors, including civil society organisations, grass-roots communities and the private sector, in project formulation and implementation of support programs and projects should be enhanced. To achieve this, willingness to engage with several stakeholders, especially non-state actors and local communities, is needed.

Public participation in education and health planning and budgeting can be achieved through institutionalisation of participation and consultation, as well as by ensuring consultation of various organisations (e.g. unions of teachers, parents' societies) and citizens. In doing this, the regulations of the Ordinance on Grassroots Democracy[20] should be taken into account. This is important because the ordinance explicitly speaks to "public affairs that should be disclosed to people's knowledge; issues that are subject to people's direct discussion and decision; issues about which people can discuss and make comments for the authorities' decision; issues about which people can contribute with comments before authorities make decisions; and the rights of people in carrying out 'supervision functions"'.

A clear guidance on implementation of the Ordinance on Grassroots Democracy should be provided to all stakeholders and actors, especially the non- state ones, to ensure that it is widespread implemented at all administrative levels. Ensure that non-state actors is given adequate information about the education and health policy, plan targets, financial resources attached to development projects and programs in their localities. Particularly, the Grassroots Democracy regulations should be strictly followed in education and health investment planning and formulation. Proposals for investment projects should include a section describing how the proposal was prepared and how beneficiaries and potentially affected people were consulted.

Involvement of more than one stakeholder is only part of story, however. Also important is willingness to seek for a number of more pragmatic solutions, such as flexible models of public – private partnership that attract additional resources and expertise and that take account of local context. Moreover, even within Vietnam, many examples exist of synergy between government and donors acting together to formulate and implement policy. The aligned effort can help the country not only benefiting from other actors' support, but also reaching consensus between the government and other stakeholders on key policy priority and on how to effectively allocate resources.

In implementation of the participatory mechanisms, higher attention must be given to more vulnerable groups such as elderly, women, disable and ethnic minority members. This is critical to ensure that all stakeholders can have their priority and voice properly and timely heard.

20 The Ordinance No.34/2007/PL-UBTVQH11, by Standing Committee of the National Assembly, 2007.

5.1.3 Increased effective coordination and cooperation

Attaining inequality in the two essential social services often requires a close and effective coordination between state agencies, between the State and other stakeholders. *Mutual support and information sharing* must be the first important mechanisms to ensure rapid and successful implementation the Government policies.

Among the government agencies, having education and health policy implemented correctly should be considered as a task that important not only for the MOET or MOH. Instead, it must be a duty shared of many of related government units. Therefore, coordination (both vertical and horizontal) between these state agencies (e.g. the socio-economic planning, statistical, state management agencies) must be strengthened or even institutionalized. Very often, participation does not come voluntarily or automaticaly, it should be fostered or mobilized. Practical experience shows that in decision of critical education and health issues, key officials from related ministries and agencies should be called on to give their own ideas and opinions. Thus, thematic conferences and/or seminars with well prepared presentations or speeches are good tools for productive participation. Availability of financial resources, which can be used immediately when necessary, has been proved being highly usefull.

Among coordination activities, information sharing plays a very important role because it is a key to improve the service quality, and promote effective management. The education and health planning and budgeting process is conducted in variety of programs and projects with the support from either Government, international donors or even private sector. Therefore, information sharing and dissemination of good practices would be a good way to replicate positive experience and practices.

Close and effective coordination is the best mechanism to promote spill-over effects of existing education and health programs/projects beyond border of the project or program.

5.1.4 Effective allocation and utilisation of resources

Improved budget allocation for education and health support

The State Budget Law (2002) and its supporting regulations have left major discretion for line ministries and local authorities to identify the best ways of implementing poverty targeted public expenditures. It is well known that a more pro-poor public spending strategy is one of the most important prerequisites to enhance the equity of public resource allocation. Thus, it is highly recommended that authorities deepen understanding of the gaps and challenges in dealing with poverty and inequality, and establish a transparent and easy public budget administration system for more inclusive allocation of the funds. Following are several suggestions:

- To ensure sufficient resources at various levels to ensure that budget support from central and provincial governments is balanced to districts and frontline service suppliers. Projects having stronger potential impact on social inequality should be

given special attention and priority. The amounts requested by these projects should be met 100 percent by the support budget.

- To promote transparency in the education and health support programme at each implementation stage. Clear information about project selection needs to be provided to all concerned, including the potential beneficiaries.

For public assistance to be inclusive and sustainable, its impact needs to be well perceived by both the authorities and households of support recipients. For example, a large number of citizens in state-supported areas should see the support as a major contribution to their income, health services or educational opportunities of their children. This should start with the announcement to potential beneficiaries of the fund's availability and its procedures for selection and its timeline for proposal submission. Budget allocations and norms should be published, especially at the frontline for service providers and users.

Change in the mode of state financing

The state should be determined to give up the full and "equalised" subsidy regime, and the practice of making estimates based on inputs. It should focus resources on several key areas as well as solutions to reduce inequality in access to essential services. The state should also be impartial between economic development and human development, giving priority to social services and social security, meanwhile subsidising social welfare providers such as schools and hospitals based on their operational performance.

Improving capacity of mobilisation and effective utilisation of various resource

Implementation of inclusive education and health development goals requires an availability of a large sum of resources, which is always a challenge for such a poor country as Vietnam. Therefore, the capacity of mobilizing capital and other inputs from different sources is one of perquisites to attain the goals.

While the state budget remains a main financial source for the purpose of socially inclusive policy implementation, other channels (such as domestic private sector, international donor community, individuals and households, etc.) of financing should be actively and effectively exploited. The policy on socialization has been widely applied to mobilize idle funds from firms, individuals and organizations to invest in the essential services. Though influence of this policy implementation has been not yet thoroughly studied, a number of anecdotal evidence has shown that the policy facilitates an increased coverage of both health and education services, particularly at kindergarten and university levels. It is thus highly recommended that measures should be established to stimulate innovations in implementation of socialization policy to develop new and better ways of solving social inequality problem, where the main benefit is to community rather than financial returns.

5.2 Improvement of the policy framework

5.2.1 Improvement of policy framework for inclusive health care

As politically set out by the government, the first priority in health is reduction of disparities and inequality, improved reproductive and women's health and control of non-communicable diseases. The development objectives include narrowing the gap in health status between populations groups; improvement of maternal health care services; expansion of access to and promotion of the quality of reproductive health; and control of HIV/AIDS and other diseases (SEDS 2011-2020).

Improvement of maternal health

To sustain the low maternal mortality rate and improve maternal health in disadvantaged regions, both central and local authorities should strengthen the skills of providers of maternal and newborn care, including community-based birth attendants, midwives and medical staff in public and private care units. Health care promotion should be developed in close collaboration with mass organisations. More attention should be paid to enhancing community-based referral systems for complicated treatments.

Awareness-raising and communication campaigns and medical counselling can change attitudes towards reproductive health care. More reproductive health care promotion programmes should be made available to adolescents, especially those residing in the disadvantaged and ethnic minority areas, so that they can openly discuss health issues with their partners and professional health staff, as well as to adopt modern contraceptives to avoid sexually transmitted diseases and unwanted pregnancy.

More health care services for children

Incorporating immunisation with other health interventions, as happens in many other health systems around the world, should be considered.

Nutritional programmes should address micronutrient deficiency among young children through approaches such as awareness-raising campaigns for mothers and caregivers. Nutritional programmes dealing with child stunting should target mothers from disadvantaged backgrounds and poor education. Attention should be paid to dealing with the shortage of trained nutritionists in disadvantaged areas, which has created growing inequality in child malnutrition.

Reforming health financing

Public spending still accounts for a low share of total health spending. Measures for increased public spending are needed, first through enhancing the state budget and increasing health insurance coverage. A regulation should be promulgated soon to allow elimination of the per-bed allocation to hospitals. More state subsidies should be provided to hospitals at lower administration levels (district, commune) rather than to those at the centre.

Policy should be changed to resolve the problem of medical service over-charging via over-prescription of pharmaceuticals and diagnostic services. Towards this, a pilot

application of the health service provider payment should soon be a serious policy consideration.

5.2.2 Improvement of policy framework for inclusive education

Narrowing the gap between ethnic groups

Given the evolution of the significant gap in education between the ethnic groups, unless bold and radical steps are taken, inequality could largely be an ethnic minority specific phenomenon.

The first step to this direction could be an establishment of a comprehensive framework to support education development for ethnic minorities. As highlighted in Section 2, Vietnam has a large number of policies and programs specifically designed to assist education development of ethnic minority. The existing policies and programs, however, exhibit substantial overlaps in design and implementation, leading to undesirable "competition" between stakeholders. In the context of the inadequate coordination among the key players (i.e. MOET, MOLISA, other line ministries, and donors), the current plethora of policies and programs to support education enhancement sometime becomes a "noodle bowl". As a consequence, the scarce resources of the country are often stretched over the large number of programs/policies. The policy response suggested, therefore, is to establish a comprehensive and integrated policy framework to directly support improved education of poor ethnic minorities in the coming years.

Another step could be an extension of the support to remote, mountainous and most difficult areas, and to the precisely specified ethnic minority groups. While previous and current policies have addressed these areas, there should be a more specific set of policies to address each dimension and select the appropriate target group for support.

More systematic provision of technical support to inclusive education development

More systematic provision of technical support to education is highly suggested. As indicated earlier, very often, technical assistance under education development programs has been delivered in an unsystematic (or even ad hoc) manner from a variety of consultants, either individual or institutional. This allows the programs to take advantage of the knowledge and experience of advisors at required times but reduces the efficiency of technical assistance because advisors have different levels of knowledge on the programs, work quality, different stakeholder views and context. Therefore a more systematic approach to the provision of technical assistance should be considered (especially by the donors) when mobilizing technical support for future policies to support poor and ethnic minority groups.

Promotion of non-profit sector

Promoting non-profit sector development should be carried out through activities to facilitate skills development and governance capacities, education planning, and education performance measurement and evaluation.

Partnerships between not-for-profits and government should be strongly facilitated including those arrangements, where not-for-profits are delivering government-funded education services.

Concluding remarks

Over more than two decades of socio-economic reforms, Vietnam has made important progress in improving social and economic development. Living standards for millions of poor households have been significantly improved, even in remote rural and mountainous areas. Access to essential public services such as health and education has increased. Child and maternal health has improved, prevention and control of epidemics has been carried out more effectively. Inclusive goals are integrated into every development strategic policy and programme.

However, benefits received by different ethnic groups are still unequal. Inequality in income and living standards persists between geographic regions. While efficient in extending coverage of both educational and health services, the socialisation policy did not bring the expected greater affordability and accessibility. Policy measures of poverty reduction programmes appear cost inefficient (although they have improved access to and affordability of services).

The government has made tremendous efforts to improve policy and institutional frameworks to stabilise the macro-economy and to ensure living standards, especially for households in remote areas short of public infrastructure and basic services. However, Vietnam needs more effort and commitment to improve development strategy and programmes, better focusing on social progress. To build a "justice, democratic and civilised society", equality and social inclusion, effective management and community participation, high-quality health services at reasonable cost and new development models for education and training should be the first priorities for government agencies, civil society organisations and the Vietnamese people as a whole.

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Annexes

Annex 5.1: Selected education support policies implemented via poverty reduction projects during last decade

Types of support	Brief description	Source programmes/ projects
1. Support to poor and ethnic minority students	• Beneficiaries: Students from poor households • Mechanisms: Tuition fee exemption or reduction; direct provision of textbooks and notebooks; food support.	NTP–PR, by Decision No. 20 QD20/2007/QD-TTg.
--	• Beneficiaries: Students from poor households • Mechanisms: Cheap loan for food (not more than VND800,000 per household per month)	NTP–PR, by Decision No. 20 QD20/2007/QD-TTg.
--	• Beneficiaries: Ethnic minority children in kindergartens and boarding schools; • Mechanisms: Support for food, textbooks, notebooks, with fixed amount of VND140,000/month/school student and VND70,000/month/child in kindergarten; Support to parents from poor households (VND 1 mil/a time/ Hhd)	Decision No. 112/2007/ QD-TTg, Circular No. 06/2007/TT-UBDT
--	• Beneficiaries: Students from poor households; • Mechanisms: Scholarship equivalent to 80% of minimum salary	Circular No. 43/2007/ TTLT- BTC-BGDDT (2/5/2007): component on "Support to poor student"
--	• Beneficiaries: kindergarten/primary/ secondary school children from nearly poor households; or children from households living in remote areas who are orphaned/ disabled. • Mechanisms: 50% tuition fee reduction; subsidy of VND70,000/month for children from poor households.	Government Decree No. 49/2010/ND-CP
2. Direct support to teacher and educational staff	• Beneficiaries: Teachers in remote areas. • Mechanisms: Housing.	Resolution 30a, Circular 109/109/TTLB-BTC-BGDDT
	• Beneficiaries: Teachers in the most disadvantaged areas. • Mechanisms: 5 litres of drinking water/ month/teacher; travel cost support	Circular 06/2007/TTLT-BGDDT-BNV-BTC (27/3/2007)

3. Infrastructure development	• Beneficiaries: P135 communes. • Mechanisms: New school construction, concreting schools facilities, new equipment.	P135 –II, Infrastructure component
--	• Beneficiaries: Poor coastal communes. • Mechanisms: New school construction, concretisation of schools facilities, new equipment.	NTP-PR, component "infrastructure in poor coastal communes"
--	• Beneficiaries: 62 poor districts. • Mechanisms: New construction or upgrading of classrooms; people-supported boarding schools/classes.	Resolution 30a; Circular 109/TTLT-BTC-BGD-DT: infrastructure component
--	• Beneficiaries: 6 regions • Mechanisms: New construction or upgrading of classrooms; people-supported boarding schools/classes.	Regional Socio-economic development Programmes: infrastructure component
--	• Beneficiaries: All schools in the country. • Mechanisms: Construction of district and commune schools, classrooms.	NTP "Education for all" – Component "Concretingof schools"
4.Support to ethnic minorities in the most disadvantaged areas	• Beneficiaries: Ethnic minority students graduated from upper secondary schools located in the most disadvantaged areas. • Mechanisms: direct support with textbooks and notebooks; scholarship up to 80% of minimum salary; direct nomination to university (with exemption from exam).	Decree 134/2006/ND-CP Nomination of ethnic minority students to universities (CT-GDCMN)
5. Illiteracy elimination; promotion of universal education	• Beneficiaries: Illiterate and lower secondary education undergraduates. • Mechanisms: informal sources on basic education	NTP "Education for all", component of "Continued Education"

Source: Study team

Annex 5.2: Health in socio-economic development strategy for 2011-20

Development of a strong system of medical services, improvement of quality of health care

Focus on developing vigorously the health care system and raising the quality of medical services. The state should continue increasing investments while stepping up socialisation efforts in order to develop rapidly the health care system; consolidate grass-roots health care networks. Enhance the capacity of commune health stations, complete the building of district hospitals, and upgrade provincial and national (central) hospitals. Build high-standard specialised hospitals in Hanoi, Ho Chi Minh City and other regions. Build a number of medical examination and treatment establishments with regional standards. Encourage all economic sectors to build high-quality specialised medical facilities. Tackle soon the overloads in major hospitals. Renovate operational mechanisms of public medical establishments along the line of autonomy, openness and transparency. Ensure delivery of equitable, efficient and quality health services. Standardise the quality of health services and hospitals toward gradually reaching regional and international standards. Renovate and improve synchronously and appropriately policies related to health insurance, medical examination and treatment and fees for health care and hospital services; work out a road map toward universal health insurance. Implement properly medical examination and treatment policies related to policy targeted groups, the poor and children; provide health care for the elderly. Intensify the training of the pool of health workers and improve their professional qualifications, medical ethics and sense of responsibility. Strive to ensure doctors for all rural communes and urban wards by 2020. Develop vigorously preventive health care, and ensure no occurrence of major epidemics. Continue controlling, restraining and reducing significantly HIV transmission. Reduce child malnutrition rates; raise the quality and efficiency of food hygiene and safety. Develop rapidly pharmaceutical and medical equipment industries. Develop strongly traditional medicine in combination with modern medicine.

Develop and implement a national strategy for raising the physical health and stature of the Vietnamese. Push up the development of mass physical exercise and sport as well as high-performance sport. Carry out properly population and family planning policies, maintain reasonable replacement fertility rates and appropriate balance in sex ratio, and raise population quality. Speed up socialisation in health care, population and family planning, and physical exercise and sport.

Source: CPV, 2010.

Annex 5.3: Health support policies implemented via poverty reduction programmes

Type of support	Brief description	Source programmes/ projects
1. Construction of health centres and hospitals	**Beneficiaries:** the 62 poor districts **Mechanism**: construction of district hospitals, preventive health centres, health care centres	Resolution 30a, component on infrastructure development
--	**Beneficiaries:** the 62 poor districts **Mechanism:** health care centres	P-135-II, components on infrastructure
2. Support to health care for the poor	**Beneficiaries:** poor people **Mechanism**: Provision of health care Card to the poor	NTP-PR, component "Health care for the poor"
3. Improved rural sanitation	**Beneficiaries:** the 62 poor districts **Mechanism**: support to latrine construction, building breeding facilities; sanitation facilities in schools and kindergartens; installing water and solid waste disposal facilities in rural handicraft villages	NTP-RWSS, component on rural water sanitation
4. Support to family planning	**Beneficiaries:** families **Mechanism:** family planning campaign; direct delivery of family planning services in poor districts	National Target Programme on Population, component "population Planning"

Source: The Study team.

Chapter 6
Health and Education in the GMS: The Case of Yunnan Province, China

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Executive summary

Recent years have witnessed the significant improvement on the inclusive development of education and health in Yunnan provinces. While there has been extensive discussion regarding the problems such as the development gaps between the rural and urban areas, regional differences and insufficient public budget on education and health, very little attentions have been given to the inclusive growth of the education and health in Yunnan from the perspective of the role of policy and institutions. This report is a first attempt to fill this gap.

Focusing on the inclusiveness of the resources allocation, the main contribution of this report is the identification of actors who involve in the policy formulation and institution setting within the resources allocation of the education and health areas. Those actors include government at different levels, schools and hospitals, development partners etc. By applying the methodology of the Institution Analysis and Development (Ostrom, 1994), the exogenous variables which have the direct and indirect impact on the policy choices and institutional arrangements have been identified. They include economic and political environment, policies and programmes related to the resources allocations, institutions and organizations who involved in the resources allocations, public media, natural disasters as well as the unexpected public health events. An actor mapping has been development based on the degree of the involvement of those actors in the policy formulation and implementation.

In addition, three main paths to making and implementing education and health resource policies have been identified: top-down, bottom-up and parallel coordination. Empirical study such as questionnaire distribution has been made to investigate the opinions of the students, teachers and patients who are the recipients and beneficiaries of education and health policies and official and non-official projects but there are few channels for them to express their complaints and few chances for direct interaction.

Although the education and health resources allocation in the rural areas is give the first priority for the policies choices, problems are identified such as the insufficient basic education facilities in the poor areas, outdated basic health facilities, brain drain problems in the rural schools and medical institutions, poor coordination among the related institutions etc. Constructive recommendations are given for (a) fund increasing for construction of basic infrastructure and equipment in rural education and heath, and the cooperation between the schools/medical institutions and the private sectors/non-profit organisations are encouraged; (b) enforcement of the broader system of the teachers/doctors exchange and shift system to correct the resources flow from the rural area to the urban area, (c) unified management to strengthen communication and collaboration between different departments and divisions and (d) Policies favoured the development of the western Yunnan should be given the long-term priority.

摘要

近年来云南省教育卫生发展迅速，各项增长指标改善明显。虽然一直以来大家都在关注教育卫生方面的城乡差别、区域差异和教育卫生经费紧缺等问题，很少有研究从政策与制度的角度分析云南省教育卫生的包容性增长问题。本研究报告试图填补这一空白。

本研究报告以资源配置的包容性为研究重点，深入分析了教育卫生政策/项目制定及相关执行机构设置过程中所涉及到的各方参与者。这些参与者包括各级政府、学校和医院、发展伙伴等。运用制度与发展分析方法 (Ostrom，1994)， 全面分析了与政策选择和制度安排有直接和间接影响的外部因素，包括经济因素、政治因素、各项教育卫生资源配置的政策和项目、教育卫生资源配置涉及的各级政府机构和组织，大众媒体、自然灾害或重大公共卫生事件等。同时，根据上述参与者与政策制定和实施的参与程度，对各方参与者和政策制定的关系进行了梳理。

此外，教育卫生资源配置政策制定和实施主要有三种途径：自上而下、自下而上和平行协调 。分析表明，学生、教师和患者是教育卫生政策和项目的接受者和受益者，但是他们缺乏直接沟通和表达诉求的渠道。为此，本研究以问卷调查的方式开展实证研究，深入了解他们对教育卫生资源配置的看法，以发现实际存在问题。

研究表明，尽管农村地区的教育卫生资源配置一直以来都是政策制定的重点，目前仍然存在贫困地区基础教育设备匮乏、基础医疗设置陈旧、农村学校和医疗机构人才流失严重、相关政府机构沟通协调不足等问题。鉴于此，我们提出以下对策建议：（a） 鼓励学校/医疗机构与私人部门/非政府机构的合作，多渠道加强对农村地区教育与卫生的资金投入；（b） 推广实施教师/医生的交换和轮岗制度，纠正教育卫生资源从农村地区向城市地区流入；(c) 实施统一管理，加强相关部门之间的沟通与合作; (d)政策制定方面应对云南西部地区给予长期的政策倾斜和支持。

1. Introduction

The purpose of the research reported here is to evaluate the role of policy and institutional changes in achieving inclusive development of health and education in Yunnan province, a part of the Greater Mekong Sub-region. With economic development, education and health care in Yunnan have made significant progress. However, regional gaps remain in the level of educational and medical development, and urban and rural citizens have different access to public education and health care.

This report seeks solutions from the perspectives of policy and institutional analysis. First, the current inclusiveness of education and health in China, especially in Yunnan province, is analyzed. Because of constraints on time and data availability, this report focuses on the allocation of education and health care. Educational resources are composed of teaching and auxiliary buildings, computers, books, teaching facilities and equipment, information technology and digital resources and teacher quantity and quality (Yunnan Department of Education 2011). Health resources are medical institutions, hospital beds and health professionals (Yunnan Department of Health 2010). Additionally, the institutional analysis and development framework focuses on these above mentioned resources items.

An empirical study was conducted to identify obstacles and difficulties in resources allocation. For education, 200 questionnaires were distributed to teachers and students of the primary and middle school in Guangnan county, Wenshan prefecture, Yunnan province, which is one of the 73 national poverty counties. For health care, a multiple-stage stratified cluster random sampling method was adopted, and a permanent population of 18 years and above was randomly investigated. Samples of 18,000 people from 128 administrative villages/residents committees, 32 townships eight counties of six prefectures and cities were surveyed; 16,594 samples were examined, 12,689 of which were valid. Additionally, a survey was conducted using the Questionnaire of the Medical and Health Care Service Utilisation of Adults in China formulated by the National Health and Family Planning Commission[1] (NHFPC).

Second, the exogenous variables were identified that have direct or indirect impact on policy choices, institutional arrangements, capacity and resources, courses of action and outcomes. In this part, policies and programmes related to resource allocation were selected. In order to find appropriate actors involved in the process who understand the patterns during formulation and implementation of policies and programmes, in-depth interviews were conducted by the research team.

Third, the actors were identified and three models of the patterns among the different actors were demonstrated. Top-down, bottom-up and parallel coordination were described, and some important projects in education and health were selected to demonstrate the interaction pattern of the actors.

1 National Health and Family Planning Commission is the new name of the Ministry of Health after combining two institutions in 2013. The other institution is the National Population and Family Planning Commission.

Finally, problems are identified and key areas for improvement or changes in current national policies and institutional frameworks are proposed in order to achieve more inclusive development in education and health.

2. The role of policy and institutions in achieving inclusive development in education

2.1 Current situation of inclusive growth in education in China

With the continuous improvement and development of China's socialist market economy and political system in recent years, education is facing a new development phase. On one hand, China has made enormous progress in eliminating illiteracy and rationally allocating educational resources since the reform and open-door policy. In 2011, the average education reached 7.5 years, 6.8 times that of the initial period of reform and open door. The illiteracy rate dropped from 15.14 percent in 1999 to 4.08 percent in 2011—only one-fourth of the world average. In 1990, the enrolment rate of school-age children reached 97.8 percent. Continuous education reform had raised that figure to 99.8 percent in 2011. The enrolment rate of middle high school has more than tripled, from 27.3 percent in 1990 to 86.5 percent in 2011 (China Statistic Yearbook, 2012).

On the other hand, problems constantly emerge. They have affected the equality of education and hindered the improvement of education quality. The major problems are: (1) Urban and rural education do not enjoy equality, and there is an irrational allocation of resources. The imbalance of educational resources is mainly embodied in the construction of schools. The resources in rural schools lag far behind those in urban schools. (2) There is an obvious imbalance of compulsory education resources in rural and poor regions. Basic schooling conditions in central and western regions are poorer than in eastern regions. Also, the overall investment in rural education is still much lower than in urban areas. The disparity of educational expenditure between eastern regions and central and western regions is gradually growing greater (Jiang & Luo, 2012). (3) Overall educational funding is still low. China's investment in education is much lower than that of developed countries or even some developing countries. As a result, inclusive education growth still has a long way to go.

2.2 Statistical analysis of inclusive education growth in Yunnan province

2.2.1 Education budgets in Yunnan

At present, education funding comes primarily from three sources: the central government, local government and families and enterprises. The central government accounts for about 70 percent. The annual increase of central expenditure on Yunnan's education has exceeded 20 percent since 2006 indicating that the central government has attached great importance to education in the less developed west. In 2012, the share of Yunnan's fiscal expenditure on education of its GDP reached 6.55 percent (China Statistic Yearbook, 2013), which is higher than the average for China of 4 percent.

In 2012, the share of expenditure on education in the overall provincial fiscal expenditure is 18.89 percent, 4.08 percent higher than in 1999 (China Statistic Yearbook, 2013). The proportion of Yunnan's fiscal expenditure on education generally ranks in the medium position among the 31 provinces and municipalities directly under the central government. The data show that Yunnan has attached great importance to education even though it has a less developed economy.

2.2.2 Gross enrolment rate

The gross enrolment rate is the percentage of corresponding school-age population who enrol in a grade in a school term. This reflects the educational scale and opportunity, serving as an important index of the development of education. Because of the availability of the data, we intend to illustrate the regional differences of gross enrolment using the rate in junior and senior middle schools during 2004-12. The gross enrolment rate of junior middle schools in the prefectures of central Yunnan reached over 100 percent. In contrast, the enrolment rate of Pu'er in southern Yunnan and Diqing and Nujiang in western Yunnan is comparatively low. The region with the lowest gross enrolment was eastern Yunnan, especially Zhaotong.

The overall enrolment rate of senior middle schools is quite low. In 2012, it was 71.2 percent, 12.8 percent lower than the national average (Yunnan Department of Education, 2013). The regional differences within Yunnan are even greater. The gross enrolment rate in central Yunnan is the highest, especially in Kunming, Qujing and Yuxi. Except for central Yunnan, the enrolment rate of all senior middle schools in other prefectures is lower than the average rate. Eastern Yunnan is still the worst region.

2.2.3 Educational resource allocation disparity

2.2.3.1 Theil index

To study the allocation of educational resources of the basic education, the Theil index was used to analyse the degree of inequality. Generally speaking, the degree of inequality distribution of the non-informational teaching equipment and facilities significantly narrows but the distribution of the informational teaching equipment and facilities needed further improvement (Refer to Appendix Table A6.1).

By analysing the index differences between regions[2], we found that the disparity in eastern Yunnan had the highest contribution rate to the unequal distribution of the basic educational resources before 2012. The relatively backward economy of eastern Yunnan resulted in relatively poor education resources in this area. However, in 2012, the disparities in central Yunnan and between regions were key in the unequal distribution of information technology investment. This is because Yunnan is located on the south-west border, and many prefectures and cities are located in mountainous areas. Thus, underdeveloped transportation makes it difficult to escape poverty. As a result, there

2 Yunnan is divided into four parts, namely central (Kunming, Qujing, Chuxiong, Yuxi), western (Dali, Nujiang, Baoshan, Dehong, Lijiang, Lincang, Diqing), southern (Pu'er, Xishuangbanna) and eastern (Honghe, Wenshan, Zhaotong).

is great disparity in educational resource investment. Lastly, it can be seen that eastern Yunnan is also the region that has the highest contribution to the Theil index from the number of full-time teachers. Central and western Yunnan have a rising contribution, but the between-region difference is gradually narrowing (Refer to Appendix Table A6.2).

2.2.3.2 Urban-rural differences in educational resources

(1) Allocation of teaching equipment and facilities

During 2004-2012, the number of computers, books and teaching equipment and facilities in primary, junior and senior middle schools was increasing, but there is still a tremendous difference in teaching equipment and facilities between urban and rural regions. For instance, the number of primary school students per computer in 2004 was 21.8 in urban regions and 171.5 in rural regions. Even though the gap narrowed every year, there was still a difference in 2012: the rural figure was 28.2 and the urban figure 13 (Yunnan Department of Education, 2013).

A similar situation exists in the allocation of informational teaching equipment and facilities. In 2010, digital resources per student in rural regions were greater than in urban regions. However, in 2012, the digital resources of junior middle schools in urban regions were 38.98 percent more than in rural regions.

(2) Number of full-time teachers

The number of full-time teachers in primary, junior and senior middle schools rose during 1998-2012, and the ratio of students to teachers gradually declined. In 2012, the ratio of students to teachers in primary, junior and senior middle schools were 18:1, 16.2:1 and 15.6:1 respectively (Yunnan Department of Education,2013), which were still higher than the China average of 17:1, 15:1 and 13.5:1. A high ratio of students to teachers means that teachers have a heavier load; it is hard for them to take care of every student. If teachers are responsible for more students, it is difficult to improve teaching quality and will harm teachers' physical and psychological health. Even though the number of basic education teachers in Yunnan is increasing, there is no decrease of the ratio of students to teachers due to the increasing number of students. The expansion of the teaching force, especially in primary and junior middle schools, is crucial to ensure education quality.

2.2.4 Empirical evidence

The above analysis shows a tremendous difference in educational resources between urban and rural regions in Yunnan and a lack of resources in rural regions. An empirical analysis was made by distributing questionnaires in Guangnan county, Wenshan prefecture, Yunnan province, which is one of 73 national poverty counties. In 2012, its annual GDP per capita was CNY7968, which is 65 percent lower than that of Yunnan. As an agricultural county, its population is 796,100. The county has 457 schools and kindergartens, 61 teaching points, 9406 teachers and staff and 147,633 students. The enrolment rate of school-age children is 99.60 percent, of junior middle school students 100.94 percent and senior middle school students 50.88 percent. The average education is only 6.9 years.

In-depth questions were asked about the allocation of six educational resources: teaching and auxiliary building areas, books, computers, teaching equipment and facilities, education informatisation and teachers. The study collected 240 questionnaires, of which 191 are valid, from 58 primary school teachers, 64 primary school students, 23 middle school teachers and 46 middle school students. It concluded:

(1) There are insufficient rooms for teaching and auxiliary purposes to satisfy all needs of students and teachers: 41.4 percent of primary teachers and 52.2 percent of high school teachers reported an insufficient number of classrooms. Boarders accounted for the vast majority of students in 22 primary and junior middle schools. However, some 32.4 percent of boarding pupils do not have their own beds, and 44 percent of pupils are not satisfied with school accommodation. Their main complaints are a crowded dormitory, insufficient canteens and washrooms, poor access to clean drinking water, lack of places for outdoor activities, no or limited access to electricity in the dormitory. Similar situation can be found in the junior middle high schools.

(2) Problems such as insufficient books, limited book types and delayed replenishment of books exist generally in the surveyed schools. 57.1 percent of primary school students went to the library once a week and 14.3 percent never went. Reasons include a lack of the reference books needed for studies and limited book types. The situation of junior middle schools is similar to that of primary schools. In addition, it took two or more years to add new books. Books mainly came from donations from social organisations or channels such as the programme "Reconstruction of Poorly Constructed Schools of Compulsory Education". Poverty is the main factor, as most schools don't have enough funds to purchase books.

(3) The same problems were found in teaching instruments and equipment. Nearly half of laboratories are insufficiently equipped. Updating teaching instruments and laboratory equipment usually takes five years or longer. The situation of junior middle schools is slightly better but still fails to meet the demands of teaching. Problems include insufficient experimental equipment for physics, chemistry and biology, and insufficient computers, projectors and teaching equipment for music, physical education and painting

(4) All primary and junior middle schools have access to a broadband network, but only 31.8 percent of students use it often due to a limited number of computers connected with the internet, slow connection speeds and little knowledge of how to surf the internet. In addition, 33.3 percent of junior middle school teachers have never used digital teaching resources; 76.6 percent of primary pupils and 67.4 percent of junior middle school students have never heard of the online learning space that is under construction by "Three Accesses and Two Platforms[3]", which indicates that the project has not been implemented effectively in Guangnan county.

3 "Three Accesses" refers to "every school has access to broadband internet, every class has access to high-quality resources and everyone has access to internet study space. "Two Platforms" refers to the construction of the public service platform of educational resources and the public service platform of educational management.

(5) Too few teachers and great turnover of teachers were also found in surveyed schools. The problem of insufficient number of teachers is prevalent in each subject of primary schools. The outflow of teachers in most of primary schools and junior middle schools is more than the number of newly recruited teachers every year. Furthermore, most teachers left after having worked for less than five years. The main reasons for the resignation of the teachers are low salary, difficulties in personal professional development and poor working environment. These data indicate that the highest priority should be given to keeping teachers, especially excellent teachers in the poverty county of Guangnan.

2.3 Identification of exogenous variables

2.3.1 Economic factors

In 2012, national GDP reached CNY51,894.21 billion, and national fiscal spending on education accounted for 4 percent of it. Yunnan's GDP has grown from CNY213.831 billion in 2001 to CNY1030.947 billion in 2012. The annual rate of increase is 10.6 percent. GDP per capita rose from CNY5015 in 2001 to CNY22,195 in 2012 (Yunnan Statistic Yearbook, 2013). The annual rate of increase is 15.3 percent, which is still lower than the national average. The province's GDP per capita ranked seventh from the bottom in China for each year from 2008 to 2012. In comparison with developed eastern provinces, Yunnan's educational resources are inadequate, and basic school conditions are poor. However, in recent years Yunnan's fiscal expenditure on education has ranked in the medium position despite the lower ranking of GDP and GDP per capita. This indicates local government emphasis on education.

2.3.2 Political factors

In China, education policies are usually set according to the topics of important party conferences or important speeches of leaders. The strategy of "giving priority to educational development and constructing a powerful country in human resources" was made at the 17th Party Congress. After that, the SC formulated *The Outline of National Medium and Long-term Education Reform and Development (2010-2012),* which contains a general plan for educational resource allocation. Under the umbrella design, various key projects are gradually implemented. For basic education facilities and equipment, "Reconstructing Disadvantaged Schools in Rural Areas" was put forward after the 17th Congress; after the 18th congress, "Promoting Balanced Development of Compulsory Education" was proposed. At the end of 2013, Premier Li Keqiang convened an executive meeting of the SC and made an important speech. On 30 December, after the speech, "On Comprehensive Improvement of Basic School Conditions of Schools Inadequate for Compulsory Education in Poverty-stricken Areas" was formulated. In education information technology, the MOE put forward the *Ten-year Development Plan for Education Informatisation* (2011-20) after the "Two Sessions" in 2012; Liu Yandong, vice premier of the SC, made an important speech in September 2012 at the National Education Conference. After that, the action project named "Three Accesses and Two Platforms" was initiated. In response, the "Three- year Action Plan for Basic Education Informatisation" was formulated in Yunnan.

2.3.3 Related policies and programmes

Every 10 years, the government outlines a plan of national education reform and development. In every congress of the Communist Party, there are seminars on education and arrangement of the future policy implementation. The central leaders also give important speeches in the educational conference held every year. According to the spirit of these meetings and the main ideas of the leaders, the MOE and related departments unite in formulating policies. Policies and projects related to the educational resources allocation can be found in Table A6.3 and Table A6.4 in the appendix.

2.3.4 Institutional arrangements

The SC is the central government and the highest national administration. It is responsible for the work of all ministries and various local administrations. The MOE is the most important administration for education. Directly under it are 32 institutions and social organisations and 75 universities and colleges. In Yunnan there are 10 institutions subordinate to the YNEB to administer universities and colleges. Similarly, education departments are under the administration of municipalities, counties and districts. They have institutions directly under their administration including municipal broadcasting and TV colleges and municipal audiovisual education centres (AEC). Town and township governments, however, do not have education administration, and mayors are directly responsible for education.

The specific administrative hierarchy is shown in Figure A6.1 in the appendix.

2.3.5 Mass media

There are two ways for mass media to influence the formulation and execution of policies. Through reporting and propagating newly formulated educational policies or projects, the mass media enable the public to understand these policies and projects and attract more NGOs and volunteers to take part so as to facilitate smooth implementation. Second, through reporting problems, mass media enable relevant departments and the public to recognise problems and push forward a policy or project to deal with them. Through sifting, filtering and focusing on news about certain topics, the mass media promote and create pressure for policies.

For instance, through electing Li Guilin and Lu Jianfen, two rural teachers, as two of "Ten People Moving China 2009[4]", the mass media began to focus on the rugged teaching environment in western China and in remote and backward mountainous regions. They report strongly on the lack of educational resources and funding in rural middle and primary schools in central and western regions and call for all of society to make efforts to improve the environment of these regions. To some extent, the 2010 formulation of "Reconstructing Disadvantaged Schools in Rural Areas" by the MOE was influenced by the mass media. Since the formulation of this policy, the mass media have reported and interpreted it extensively, enhancing the public's recognition and understanding.

4 Award of People Moving China" is an annual event organized by CCTV focusing on Chinese people. Ten people and one group who have outstanding contributions in social development, fairness and righteousness are elevated each time.

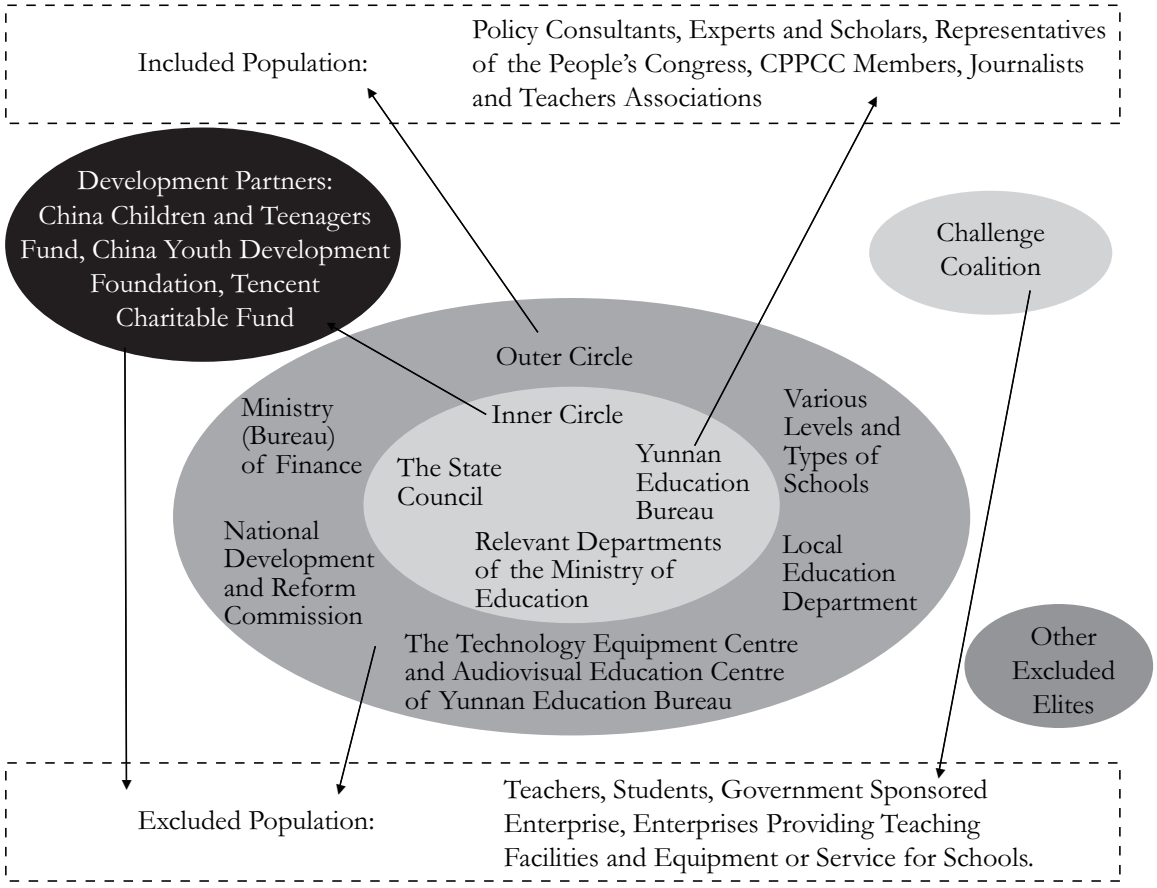
2.3.6 Natural disasters

Natural disasters such as earthquakes, mud flows and landslides lead to deaths in schools and the destruction of resources such as buildings, teaching facilities and equipment. Therefore, they also influence the formulation and implementation of policies related to educational resources. The most representative incident is the earthquake in Wenchuan in Sichuan province in 2008. It caused severe casualties and huge property losses. Many middle and primary school students died, and schools suffered great losses. In order to protect teachers and students, the National Development and Reform Commission and MOE initiated the Middle and Primary School Building Safety Project in 2009.

2.4 Actor mapping

Allocating educational resources involves many actors, from central to local, community groups and individuals (Ostrom et al. 1994). The relationship of different actors is mapped in Figure 6.1.

Figure 6.1: Actors involved in education



Note: CPPCC = Chinese People's Political Consultative Conference.
Source: Research team adapted from Ostrom et al. (1994)

2.4.1 Inner circle actors

Educational policy making involves many complex administrative and legislative institutions. In general, there are two organising systems, the central government and local governments.

2.4.1.1 Central government

Many ministries under the SC participate in formulating and implementing educational policies. The MOE, however, is the primary organ responsible for education. It is responsible for principles and policies, development and drafting of laws and regulations, participation in raising funds and supervision of educational fund appropriation and use.

The minister and vice ministers of education have a decisive role in policies and projects. They make important speeches at the annual MOE conference, setting the annual education work. Their speeches can directly decide education policies. For example, Chen Xiaoya, vice-minister of education, proposed promoting the balanced development of compulsory education and put forward relevant suggestions and requirements at the 2010 MOE Conference, which had a decisive influence on the formulation of "Promoting the Balanced Development of Compulsory Education".

In allocating educational resources, the major institutions are listed in Table 6.1.

Table 6.1: MOE departments related to educational resource allocation

	Department	Responsibilities
MOE	Policy and regulation	Conducting policy research about important issues of national educational resource allocation, and drafting relevant laws and regulations
	Development and planning	Participating in drafting construction standards for various levels and types of schools
	Comprehensive reform	Planning, promotion and implementation of work related to the "Ten-year Development Plan for Education Informatisation", and studying the opinions and suggestions from policy investigation and research
	I of basic education	Working with other departments to strengthen rural compulsory educational resources, to put forward measures to promote the balanced development of compulsory education and to make school standards for compulsory education
	II of basic education	Directing education informatisation in primary and middle schools and allocating libraries and experimental equipment
	Science and technology	Directing work related to education informatisation
	Finance	Budgeting for projects related to educational resource allocation, fund-raising and appropriation, and participating in utilising international finance organisations to provide loans for China's education
	Teacher work	Planning and guiding the teaching force, construction of schools, formulating policies, laws and regulations related to teacher education and teacher management and providing macro guidance for teacher education and teacher management

Source: MOE

2.4.1.2 Local government

The provincial Education Bureau is in charge of provincial education. The influence of the bureau is quite limited in comparison to the MOE. Its divisions involved in educational resource policy allocation are listed in Table 6.2.

Table 6.2: YNEB divisions related to educational resource allocation

	Division	Responsibilities
YNEB	Basic education	Macro-management of basic education, providing macro-guidance for provincial basic education, promoting nine-year compulsory education and overseeing middle and primary school audiovisual education, books, teaching facilities and equipment
	Finance and infrastructure	Fund-raising, drafting appropriation principles and policies; overall arrangements for budgets and international and domestic loans, donations and aid
	Tertiary education	Drafting basic equipment standards of teaching facilities and equipment, and managing modern distance education
	Political science	Investigating and researching issues related to provincial resource allocation, and drafting relevant laws and regulations
	Development and planning	Managing provincial infrastructure projects and investment in educational infrastructure
	Normal	Guiding training and development work of middle and primary school teachers

Source: YNEB

2.4.2 Outer circle actors

2.4.2.1 Ministry (Bureau) of finance and NDRC

As parallel administrations, the MOF and NDRC also participate in formulating and implementing education policies. In formulating educational resource policy, the MOF, NDRC and MOE form a team, meeting continually and communicating and negotiating with each other before issuing a document. In implementing a policy, the MOF and NDRC will come to a consensus before appropriating special education funding. Together with the MOE, they are responsible for supervising the flow and use of funding.

2.4.2.2 Technology education centre (TEC) and AEC of YNEB

The TEC and AEC are not responsible for formulating specific policies. Rather, they purchase and allocate educational resources according to the policies and standards as formulated. The TEC allocates books, teaching facilities, equipment and computers to middle and primary schools. The AEC allocates multimedia teaching equipment to middle and primary schools and provides the access technology support. During allocation, relevant personnel conduct in-depth research, provide feedback to policy-making departments and give suggestions and advice for future policies according to the problems arising from their work.

2.4.2.3 Local education departments

Prefecture and city education departments research important issues, put forward opinions and suggestions, implement education policies and projects of central and local governments and serve as a bridge between provincial education bureaus and various levels and types of schools in prefectures and counties, thus exerting direct influence on policy and implementation.

Table 6.3: Divisions related to resource allocation in prefecture and city education departments

	Division	Responsibilities
Education Departments in Prefectures and Cities	Regulations and planning	Research on important issues of city resource allocation, and drafting local regulations, government rules and norms
	Infrastructure and equipment	Guiding campus planning, infrastructure, school building safety and teaching equipment allocation, and examination and application of education system infrastructure and teaching equipment projects in city departments
	Primary education	Drafting policies and measures for the balanced development of compulsory education, and carrying out projects related to educational resource allocation
	Finance and accounting	Drafting school construction standards and fund-raising and educational appropriation policies, managing local educational funding and special educational reserve funds, and work related to educational loans, donations and aid provided by international financial organisations
	Teacher training	Overall planning and guidance of continuing education of middle and primary school teachers, formulating training and development measures and organising enforcement; training of middle and primary school headmasters and professional teacher training

Source: Prefecture and City Education Departments

2.4.2.4 Levels and types of schools

Schools are divided into public and private. In addition, there are privately run training schools, such as English training schools and science coaching schools. However, the schools directly connected with educational resource allocation are those stipulated in the Teachers' Law[5]. They educate in a planned and systematic way and serve as executives of various policies and projects.

2.4.3 Development partners

Partners in education policies include non-government organisations, non-profit organisations, specialised organisations, volunteer groups and charities. They interact with education policy makers and recipients in various forms and try to influence the execution of education policy. Even though they don't participate directly in making policies and regulations, they create policy pressures through non-government projects and cooperative projects with governments. The focus of development partners is the excluded population. They initiate and organise projects to improve the teaching conditions of excluded people to help them become an included population and enjoy the benefits of policies.

The best known partners in education are the China Children and Teenagers Fund and China Youth Development Foundation. Their "Spring Bud Project" and "Hope Project" have promoted the equality of educational resources and balanced allocation through

5 The 40th Article of the Teachers' Law stipulates: "Various levels and types of schools refers to schools carrying out preschool education, common primary education, common secondary education, vocational education, common tertiary education, special education and adult education".

constructing school buildings for poor children in mountainous regions, providing teaching facilities and equipment, training teachers and helping more than 100,000 girls and drop-outs to go back to school. Some commercial organisations have also initiated projects to improve educational resource allocation. For instance, the Tencent charitable fund helps to construct primary schools in Yunnan and Guizhou and invests in infrastructure such as school buildings.

Although these development partners are beneficial, some organisations or enterprises use the name of charity to promote an image and products for their own profit in local schools. Therefore, policy makers and relevant departments may regulate them.

2.4.4 Included population

The included population have connections to the dominant coalition by patronage ties. They share similar political ideology with, and support, the dominant groups. This group includes policy consultants, experts and scholars, representatives of the People's Congress, Chinese People's Political Consultative Conference members, journalists and teacher associations.

Because of their professional knowledge, policy consultants play a role in formulating educational resource allocation and give advice on policies.

Experts and scholars research educational resource allocation. Some of the conclusions and their interviews will draw the attention of decision-making departments and be incorporated into new policies. They also fill the role of policy consultants.

National People's Congress and Chinese People's Political Consultative Conference are held at the beginning of every year, at which representatives present proposals about how to support the government's political idea of improving educational resource allocation.

Journalists interpret and vigorously publicise policy projects related to educational resource allocation.

The China Young Teachers' Association and teacher associations in different places are important supporters and promoters of educational resource policies. Leaders of the associations use their influence to support various policies and play a role in educational resource projects to improve allocation.

2.4.5 Excluded population

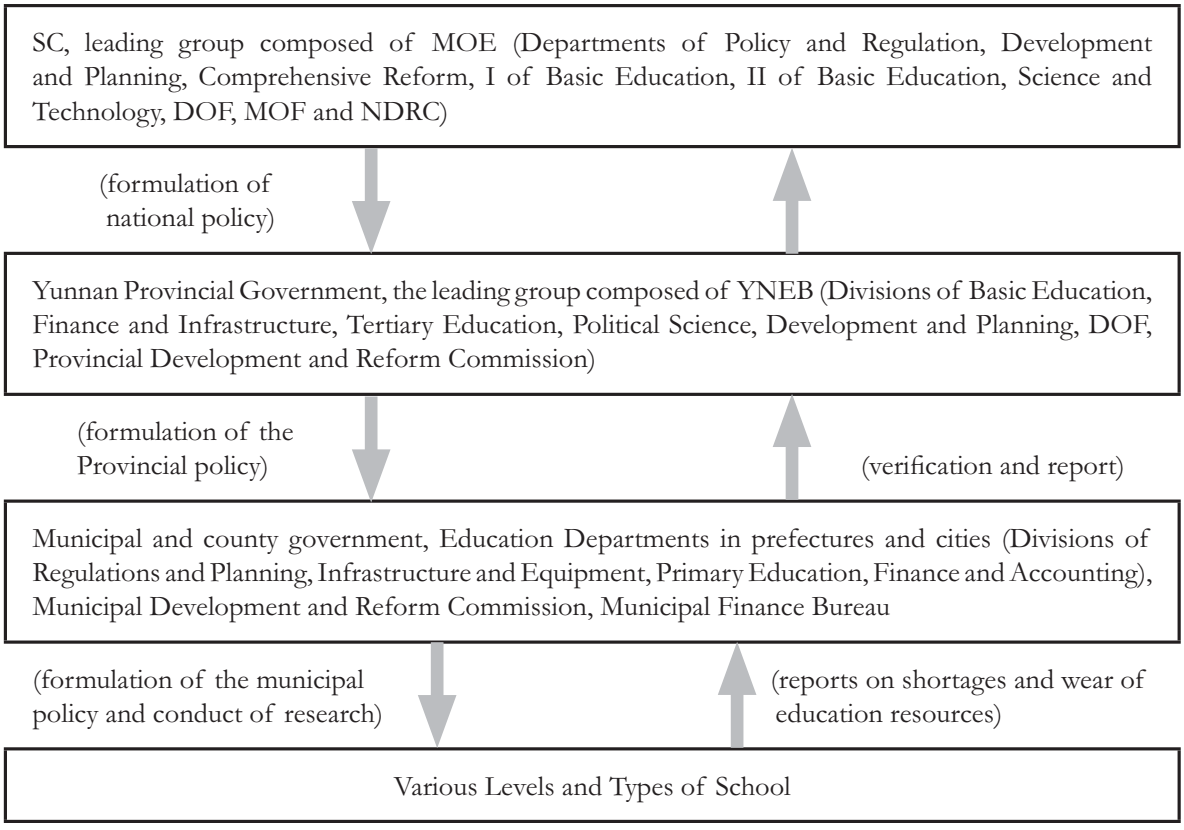
Teachers and students are direct participants in education activities. They are the recipients and beneficiaries of education policies and official and non-official projects. But there are few channels for these teachers and students to express their complaints and few chances for direct interaction. It is difficult for them to exert policy pressure, and they are thus known as the passive recipients of education policies (Hou and Zhang, 2013).

In addition, enterprises provide teaching facilities and school equipment or services during educational resource allocation. They bid under the guidance of relevant departments and in accordance with policies. Successful bidders provide products and services for schools and are also passive recipients of education policies.

2.5 Action patterns

There are three main paths to making and implementing education resource policies: top-down, bottom-up and parallel coordination. The central government and departments have the lead role. After the design of the top policy, the new policies are distributed and implemented step-by-step to reach every school; at the same time, all schools report shortages and deterioration of resources to the local Education Bureau, which then reports to the provincial Education Department. During policy making, if parallel institutions are involved, and some works have common parts, communication and coordination are needed. The interactions are shown in Figure 6.2.

Figure 6.2: Pattern of policy implementation



Source: Research Team

In 2010, according to the strategy of "Giving priority to education development in order to construct a country with abundant human resources", which was adopted by the 17th Congress of the CPC, the SC formulated "The Outline of National Medium and Long-term Education Reform and Development (2010-2020). This proposed a brief policy: "giving priority to development, educating people as foundation, reform and innovation, promoting fairness, improving education quality" and three priorities: "giving priority to education development within the development of economy and society, giving priority to education investment in the fiscal fund, giving priority to meeting the needs

of education and development of human resources in public resources"; in addition, the Outline required education expenditure to make up 4 percent of total fiscal expenditure. Under this top policy, jointly with related departments the MOE formulated different policies to promote balanced education development. In education resources, the policy focuses on the reconstructing disadvantaged schools in rural areas.

2.5.1 Reconstructing disadvantaged schools in rural areas

The MOE, NDRC and MOF have jointly launched a four-year programme of "Reconstructing Disadvantaged Schools in Rural Areas". New policies and guiding ideology are announced each year. After Premier Li Keqiang's speech in December 2013, ideas on improving basic conditions for compulsory education in poor areas were published.

2.5.1.1 Top-down

A project for overall improvement of basic conditions for compulsory education in poor areas will be deployed by the national government, arranged by provincial governments and implemented by county government. Policies jointly developed by the MOE, NDRC and MOF according to the spirit of the central government will be issued to provincial governments. Provincial government leading groups will issue guidelines that suit their local situations to subordinate city and county governments, which are responsible, along with related departments, for implementation.

2.5.1.2 Bottom-up

Every year, when special funds are allocated, schools at every level estimate budgets for teaching facilities, then report to their local Education Bureau on their deficiencies. After verifying, the Education Bureaus report to their local Education Department. The department promptly organises personnel to investigate at the schools. When problems or errors are discovered, these personnel report to the department, which responds with solutions.

2.5.1.3 Parallel coordination

The MOE, NDRC and MOF coordinate so as promptly to follow the implementation and to offer guidelines. Local departments should also take responsibility and strengthen coordination to ensure that everything is properly carried out. According to the programme for reconstruction of poorly constructed schools, the local Education Department is to set up leading groups. For example, when a remote multimedia teaching equipment programme is carried out, leading groups should inspect and supervise implementation.

The Yunnan provincial government fully implemented the document promulgated by the central government and carried out "Reconstructing Disadvantaged Schools in Rural Areas" in an orderly fashion. The project was put into effect jointly by the Yunnan Department of Education, the provincial Development and Reform Commission and the Finance Department of Yunnan.

At the beginning of every year, the MOE reminds junior departments to carry out strict general investigations, and the junior education offices utilise the collected data to provide the necessary supplies on the principle of "Supply what we're lacking; protect our fundamental needs". In addition, the relevant departments go to the grass roots to make routine checks about twice a month. Simultaneously, the government organises bidding conferences, and the winning contractors are solely responsible for constructing the school's equipment. For any damage that might occur, schools can only demand changes and refunds from their own contractors.

2.6 Problem identification

2.6.1 Incomplete basic facilities in rural education

First, the improvement of basic equipment in rural education is still the primary task in Yunnan. After the first and second rounds of the school safety project in 2001 and 2009, great achievements have been made in eliminating dangerous buildings. However, every year new dangerous buildings appear due to such reasons as housing ageing and geological disasters. Therefore, the focus of current school safety project is on newly discovered dangerous buildings.

Second, great gaps exist between urban and rural regions. In some economically underdeveloped rural regions and mountainous regions in Yunnan, students' homes are far from the school and they can only board in schools. However, due to the lack of school funds, boarding students are not given their own beds, and bathrooms, canteens and washrooms are not well equipped. Many schools fail to equip playgrounds and sports facilities. A common problem for rural schools and teaching points, especially in national poverty counties, is the lack of books and teaching and experimental equipment and facilities. The number of books per student, the teaching and laboratory equipment and facilities per student differ greatly between urban and rural regions.

2.6.2 Sluggish improvement of education informatisation

Generally speaking, the construction of "Three Accesses and Two Platforms" in education informatisation in Yunnan is sluggish. By the end of 2012, the proportion of broadband network access in rural middle and primary schools was only 17 percent, while the percentage of "access to quality resources in every classroom" was only 14 percent. There are great regional differences in education informatisation. The differences between eastern Yunnan and other regions are especially obvious. Since the central government provides only 70 percent of the total funding for education informatisation and local governments have to provide 30 percent. Within the 30 percent of local governments, 30 percent comes from the provincial governments, and 70 percent from prefectural governments. This requires prefectural governments to use various ways to obtain educational fund themselves. As a result, prefectures with poor finance fail to support most of their schools' informatisation. The funds for the schools with fewer students are even smaller, and they cannot afford informatisation. Moreover, because of the rapid updating of information technology and digital resources, the construction of digital educational resources in some schools lagged behind even though they had the

necessary hardware. This greatly limits the use of information technology in education and teaching.

2.6.3 Serious outflow of rural teachers

Yunnan has relatively backward economic conditions and transportation. The situation is worse in rural prefectures due to the harsh geography and the underdevelopment of economy and transportation. These lead to low incomes of rural teachers and extra burdens in transportation and living expenses. These factors affect teachers' devotion to their work and lead to an outflow (Zhou Shiwu, Wang Ling, 2010). The outflow of young teachers is especially serious, and they are the most unstable group in the teaching force. One reason for this is that young teachers often have great ambitions and expectations. However, when they enter school, they often feel a great gap between their ideals and reality. The sense of loss when they fail to achieve their goals often results in resignations. They will try to work in cities or schools with better conditions. At present, national and provincial governments have both formulated policies to encourage young teachers to work in rural schools, and teacher exchange systems have been established. However, national laws and regulations related to exchange have yet to be formulated.

2.6.4 Poor communication and collaboration of policy-enforcing departments and institutes

Policies for improving educational resource allocation and the implementation of projects involve the participation of various departments of different levels. As mentioned, top-down, bottom-up and parallel routes of work exist. There are problems of communication and collaboration among personnel in every level and department. The problems are embodied in two aspects. First, there is a lack of focus in management, and statistical difficulties arise. For instance, the Installation Centre and AEC of YNEB are both responsible for the allocation of computers. Because of the lack of unified management, they each have access to the number of computers they installed, without knowing the total number. This leads to inaccurate data collecting and difficulties in the registration of fixed assets, which in turn cause inconvenience in future inspections.

Second, different departments have communication problems in enforcing provincial policies and projects. The most outstanding problems involve funding. Because the funds are from the provincial Development and Reform Commission and Yunnan Finance Bureau instead of from the central government, YNEB does not have decision-making powers, and this may lead to difficulties in applying for funds.

2.7 Countermeasures and suggestions

2.7.1 Increase the fund for construction of basic infrastructure and equipment in rural education

(1) Increasing funding and providing more funds to purchase experimental teaching instruments and facilities in rural schools. For village schools and teaching points with fewer than 100 students, funding should be provided according to the 100-student standard. The funds should be provided in the full amount on time and

should never be embezzled, so as to ensure that every school has the necessary teaching and auxiliary equipment.

(2) Enhancing the follow-up checks and providing the support for the facilities purchasing. Follow-up checks should be conducted in every school and teaching point in order to find inadequacies and malfunctions of teaching equipment and facilities so that furnishing and maintenance can be carried out. Quotations from different suppliers and product quality should be carefully evaluated in order to provide rural schools with price competitive products of high quality.

(3) Funding should be increased for boarding schools in rural areas so that dormitories, canteens, washrooms and playgrounds can be constructed.

(4) Financial departments should allocate educational funding in different regions rationally. It is suggested to favour eastern Yunnan and strive to narrow the distance between it and other regions.

(5) More participation of the development partners, civil society and private sectors. The mass media should promote the further participation of the civil society and private sectors for more donations of the books, computers and equipments in the rural schools.

2.7.2 Accelerate informatisation and improve teachers' competence in information technology

The construction of information infrastructure in rural schools and competence in information technology should be improved continuously. First, continue the construction of broadband networks so that rural schools and teaching points have access soon. Second, make sure every school and teaching point is equipped with broadcasting facilities for digital resources. This is especially important in schools where there is only one teacher. At least a computer and a TV should be provided to ensure students can access teaching resources and learn all the required courses; every school should have an information technology course. Third, teachers should receive training on the use of information technology so as to make good use of quality digital resources. Last, such basic information as teachers, students and school assets should be included in the information management system.

2.7.3 Strive to improve teaching force in rural basic education

First, the teacher exchange and shift system must be enforced. Second, graduates should be encouraged to teach in rural schools. Students who volunteer to work in rural schools or schools inadequate for compulsory education should be given rewards and expenses to settle down. Third, rural teachers' income and welfare should be improved. Increased income, better insurance plans, improved welfare and subsidies can promote teachers' enthusiasm. Rural teachers should be provided with housing, and their children's schooling should also be covered so as to relieve teachers' worries. Last, the national training offered to middle and primary school teachers should be relevant and effective, whereas provincial teacher training should be tilted toward teachers and headmasters of rural compulsory education. Every teacher should be given training or increased training hours in order to improve the teaching level.

2.7.4 Strengthen communication and collaboration between departments

First, YNEB should strengthen communication and collaboration between different departments and divisions. Unified management should be consolidated to make respective responsibilities clear and to avoid repetition of work or low work efficiency due to unclear divisions. Government bureaus at different levels should supervise and inspect. Second, when enforcing policies and projects, government and bureaus of different levels should be strict in order to avoid corruption and deceit. Inspection should be strengthened and personnel should be dispatched to supervise the enforcement of policies at irregular intervals so as to find and deal with problems.

2.7.5 Use various ways to obtain educational funds

Both the construction and updating of the educational infrastructure and equipment and education informatisation involve huge funds. A shortage of funds is the major difficulty facing Yunnan. Therefore, the financial departments at different levels should continue to increase funding for education. If financial funds from government cannot satisfy the demand, various local governments should encourage schools to find funds for themselves and formulate favourable policies to facilitate financing. Cooperation with non-profit organisations and enterprises should be strengthened so as to cultivate mutual trust. The funds and equipment donated by them are supplements for the equipment and facilities in rural schools and teaching points. However, non-profit organisations and enterprises should be supervised so as to prevent them from selling their products in the name of donation.

3. The roles of policy and institutions in the inclusive growth of health care

3.1 Current situation

3.1.1 Inclusive growth

Since China's reform and open-door policy began, citizens' health has greatly improved. In 2010, average life expectancy reached 74.8 years. Compared with other developing countries, China's maternal and child health is at or above average in many aspects. In 2011, China's maternal mortality, neonatal mortality and under-five child mortality rates were 0.26‰, 7.8‰ and 15.6‰ respectively, showing decreases of 73 percent, 62 percent and 45.4 percent compared to 1990(He, 2011). Also, the basic health insurance programme now covers more than 95 percent of China's population, thus covering a greater number of people than any other in the world. The investment in medical care grows each year. The total expenditure on health care per capita increased from CNY65.37 in 1990 to CNY1801.22 in 2011, an average annual growth rate of 18 percent (Statistic Yearbook, 2012).

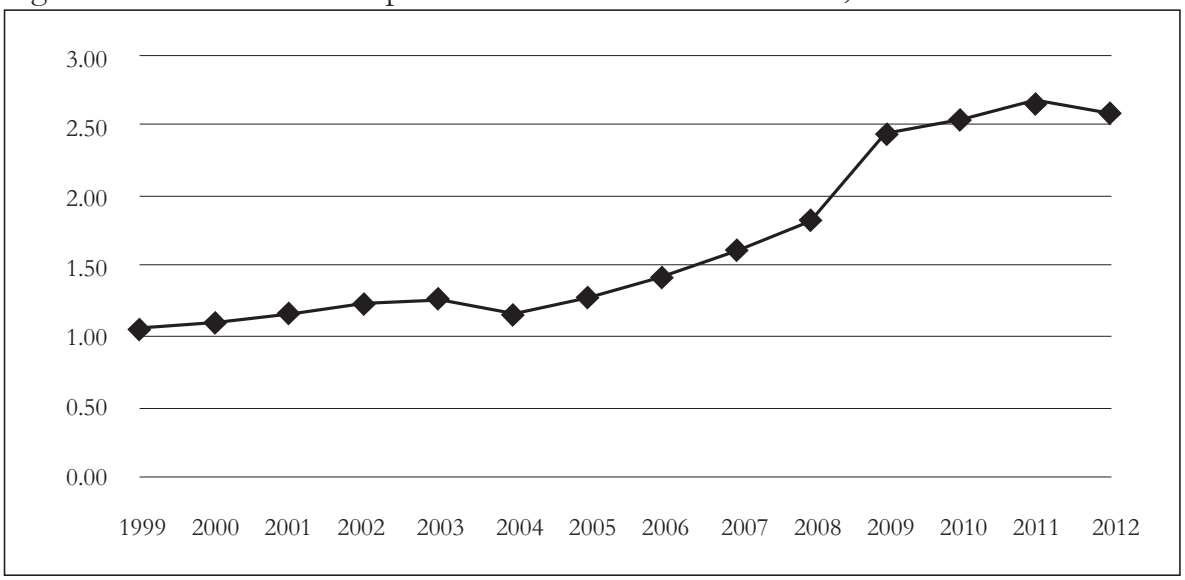
However, problems still exist, the greatest being the disparity between urban and rural regions. Basic medical service in rural regions is poorer than in cities in availability, actual access and maternal and child health. Some major health indices in western China, such as life expectancy, maternal mortality and under-five child mortality, lag behind eastern and central China. In 2010, the average life expectancy in eastern China surpassed 76 and

even reached 80 in some cities, similar to that in developed countries. In contrast, life expectancy in the economically disadvantaged provinces of western China was around 65. In the same year, maternal mortality in eastern, central and western China was 17.8, 29.1 and 45.1 respectively for every 100,000 people. The maternal mortality rate in western China was 2.5 times that of eastern China. The mortality rates of children under five in eastern, central and western China were 9.7‰, 14.8‰ and 21.1‰; western China's rate was 2.2 times that of eastern China (Wang, 2011).

3.1.2 Budget allocations

Generally speaking, total expenditure on health care should not be less than 5 percent of a country's GDP, which is the basic standard of the WHO (Xu, 2010). However, the total expenditure on health of Yunnan province in 2011 was only accounted for just 2.66 percent of its GDP; total expenditure on health care in relation to China's GDP in the corresponding period averaged 5.2 percent. This is lower than the 6.2 percent of GDP spent in low-income countries in 2010, to say nothing of the 8.1 percent in high-income countries. All these figures indicate that the total expenditure on health of Yunnan is low. Per capita expenditure on health also lags far behind the national average. In 2011, this amount was CNY1467.66, which was not only lower than the national average (CNY1806.95), but also lower than the western region (CNY1740.39). In the western area, only Guizhou spent less (CNY1200.91). This suggests that more money should be invested in Yunnan's public health services to improve health service performance.

Figure 6.3: Yunnan's total expenditure on health as % of GDP, 1999-2012

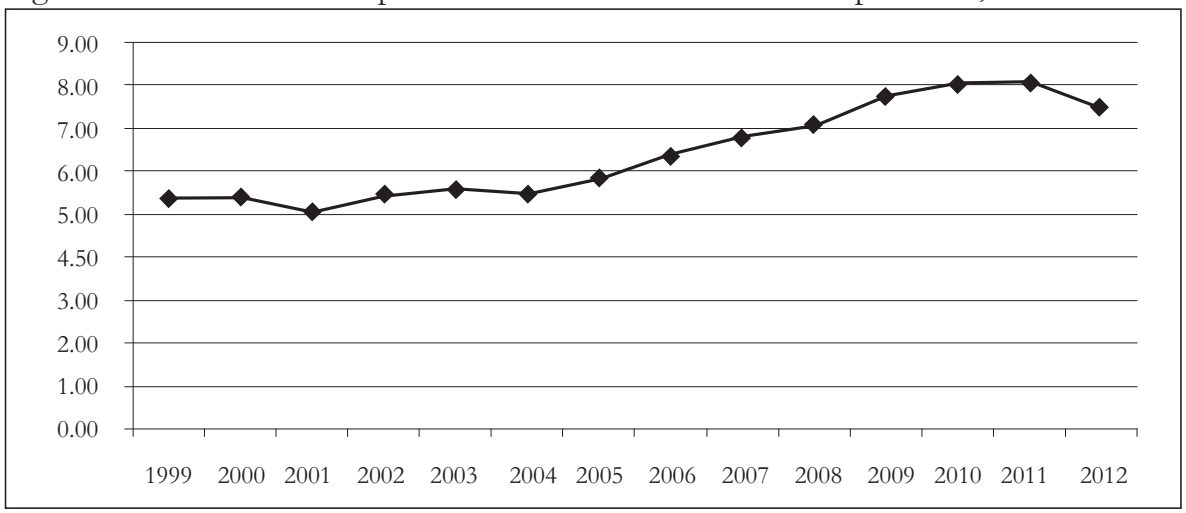


Source: China Statistical Yearbook

Public health expenditure is a part of overall fiscal expenditure, whose amount depends on the size of local revenues. Due to regional differences in economic development, revenues of provinces and cities vary widely and ultimately affect public health expenditure (Wang, 2011). An analysis of fiscal expenditure on health in Yunnan from 1999 to 2012 produces the graph in Figure 6.4, which shows that government expenditure on health was between 5 and 8 percent of total fiscal expenditure. We can see that government

investment in public health has been increasing steadily, reaching its highest level in 2011 before falling back in 2012. This percentage lagged far behind the government's investment in education, which was 15-17 percent.

Figure 6.4: Yunnan's total expenditure on health as % of fiscal expenditure, 1999-2012



Source: China Statistical Yearbook

Since Yunnan is located in the west of China and its economic development is relatively slow, its expenditure on health care cannot approach the expenditure of the developed coastal provinces. The bulk of Yunnan's fiscal expenditure is used on infrastructure, transportation and education; therefore, the expenditure on health care is insufficient. Besides, compared with education, expenditure on health was not prioritised in Yunnan. This basically reflects the close connection between economy and health care: that is, reducing the economic gap between regions will in turn reduce the gaps in health spending. Medical and health spending in Yunnan has always been amongst the five lowest of the 31 provinces in China. Between 2003 and 2006, the proportion of Yunnan's total expenditure on medical and health care ranked it last but one, and it dropped to the bottom in 2009.

3.1.3 Statistical analysis of growth of inclusive health care in Yunnan

3.1.3.1 Overall disparities in health of Yunnan residents

The drastic disparities between urban and rural regions and the regional imbalance in residents' health are not the only problems. Regional disparities in residents' health within Yunnan should not be overlooked. In 2012, neonatal mortality in Diqing and Lincang in western Yunnan exceeded 14‰, while in Kunming, Yuxi and Chuxiong in central Yunnan, it is no more than 8‰. The three prefectures with a maternal mortality rate of over 70‰ are all located in western Yunnan, whereas the rates in central and eastern Yunnan are both lower than 35‰. The under-five child mortality rate is also higher in western Yunnan than in the other two regions.

3.1.3.2 Disparity in medical resource allocations

Equality in medical resources is a fundamental premise for the equality of people and effective medical services (Liu, 2006). For a long time, the government's spending on medical services concentrated on economically developed regions. This long-term systemic tendency leads to many problems, including great disparities of medical resources in different regions of Yunnan, a serious shortage of medical supplies in remote regions, difficulties in satisfying residents' medical needs and serious regional inequality in basic medical services.

To examine disparities, the Theil index is used to analyse the regional index differences (see Table A6.5-A6.6 in appendix). From the results, we see, firstly, the within-region inequality in central Yunnan is the primary factor contributing to the inequality of medical institutions in Yunnan, and the between-region inequality is the main factor contributing to the overall inequality of beds in Yunnan. Secondly, the disparity of medical resources in central Yunnan is the largest, and eastern Yunnan ranks second. The two regions have much bigger disparities than western and southern Yunnan.

3.1.4 Health service demand and utilisation

To understand residents' demands on outpatient health services and their utilisation, we conducted a statistical analysis of prevalence, the level of medical institutions, categories, health care expenditure and medical insurance coverage. The main purpose is to provide some reference for decision making in allocating health resources reasonably and increasing the utilisation of health care services.

The multiple-stage stratified cluster random sampling method was adopted, and a permanent population of 18 years old and above was randomly investigated. Samples of 14000 people from 128 administrative villages and residents' committees, 32 townships or streets, eight counties of six prefectures and cities of Yunnan were surveyed. Of 11594 samples examined, 9689 were valid. Additionally, a survey was conducted using the Questionnaire of Medical and Health Care Service Utilisation of Adults in China formulated by the NHFPC. The research includes age, gender, nationality, occupation, education, health insurance and the utilisation status of the medical service. The summary statistics can be seen in Appendix Table A6.7.

From Table 6.4, we see, though the proportion of the sick who don't go to a doctor decreased when the illness was aggravated, the situation instils little optimism. Not going to a doctor is possibly correlated with the low incomes of residents, unfair income distribution, unreasonable allocation of health resources and the incomplete medical security system.

The distribution of medical institutions that treated patients shows that, the more serious a sickness is, the less chance a patient will go to township hospitals, village clinics and community health service stations. Patients were inclined to go to the county hospital or the city or municipal district hospital, especially for more serious diseases, with two-fifths of respondents choosing the remote first-class general hospitals rather than the ordinary hospitals near at hand. All this indicates that many respondents were

not satisfied with the grass-roots, including township, medical institutions. The bulk of medical institutions in Yunnan still cannot meet basic medical needs, and the grass-roots medical service capacity and technical level should be improved.

Table 6.4: Use of medical services categorised by severity of illness or injury (%)

Seriousness	City hospital /provincial hospital	Workers' hospital	Maternal and child health hospital	County hospital	Township hospital/ CHSC	Private clinic	Village clinic/ community health stations	Seek no medical service
Not severe	17.48	0.54	1.75	8.3	21.67	11.04	18.01	21.21
Somewhat severe	25.65	1.53	0.89	12.12	15.63	9.44	16.42	18.32
Quite severe	40.77	2.15	0.86	10.63	12.45	4.36	13.9	14.88

Note: CHSC = Community Health Service Centre.

3.2 Identification of exogenous variables

3.2.1 Economic factors

With Yunnan's great strides in economic development, health has also benefited. Disparity in economic development determines the levels of health service supply. Since there is great economic disparity between the east and west, there is great disparity in medical resources (He, 2011). It is obvious that hospitals in the east are large and well equipped while hospitals in the west are their poor relations. Central and western China obviously needs more medical resources. However, mere reliance on market forces can hardly achieve the equitable distribution of health resources. The main requirement is a combination of the government's allocation plan and adjustment of the market economy. Balanced long-term planning is important for optimisation of medical resource allocation in Yunnan.

3.2.2 Political factors

The medical service has always been an important political concern. At the 17th Congress of the CPC, it was proposed to establish a medical insurance system. According to the guidance of the congress and in order to enable every citizen to access basic medical services and to improve people's overall health, the SC put forward "Opinion on Deepening Reform of the Medical and Health System" in March 2009, which pointed out the importance of "consolidating regional health planning". The key to regional health planning includes making full optimal use of health resources and improving their efficiency. It also proposed five key issues of health system reform. Under the guidance of this document, all provinces have formulated policies to promote multiple types of medical institutions to improve the allocation of resources. In addition, policies have also been put forward concerning the distribution of health professionals, especially those in central and western China, as well as in rural regions.

3.2.3 Policies and programmes

In order to promote equality of health resources, central and local governments have developed policies on the establishment of medical institutions and the recruitment of health professionals (see appendix Table A6.7). Meanwhile, some special programmes have been carried out (see appendix Table A6.8).

3.2.4 Institutional arrangements

The policy of health resource distribution is similarly subject to the influence of the medical institutional framework. From the structure diagram (Figure A6.2 in Appendix). It can be seen that the MOH is subordinate to the SC and is one of its component departments. Corresponding health management institutions are established at every level from central to local governments. Health management is subject to upper institutions and local government. There are 15 departments in MOH, responsible for different functions and directly responsible for the institutions under them.

3.2.5 Public media

Policies to allocate medical resources are also subject to the influence of the mass media. They contribute to the solution of medical problems through defining and reiterating topics of significance and values.

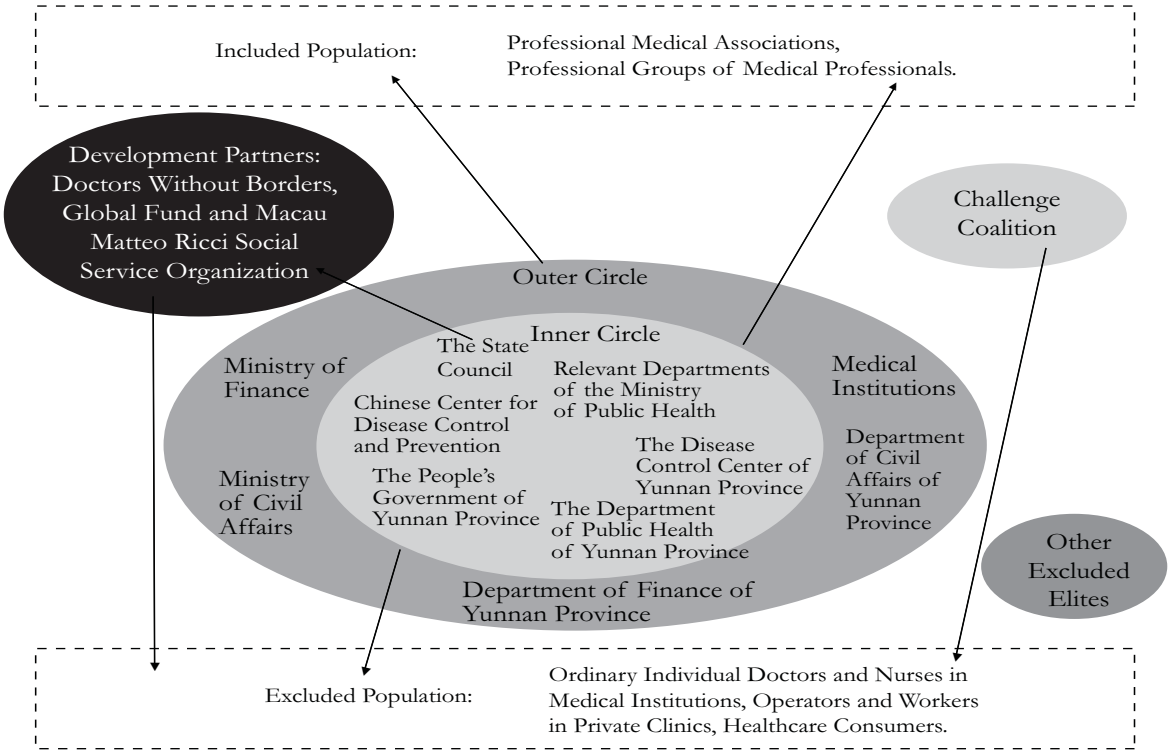
3.2.6 Unexpected public health events

Finally, unexpected public health events can also influence the content of medical resource policies. The most influential incident was SARS in 2004, which prompted the SC to establish a mechanism for public health emergencies and enact "Provisions of Public Health Emergencies". The H1N1 influenza epidemic in 2009 and H7N9 bird flu epidemic in 2013 also had obvious influences on medical resource policies.

3.3 Facilitator mapping

Through the analysis of exogenous variables, we learn that formulating a health policy relates to many departments, organisations and individuals. The relationship between health sector actors is shown in Figure 6.5.

Figure 6.5: Health sector actors



Source: Research team adapted from Ostrom et al. (1994)

3.3.1 Inner facilitators

The inner circle consists of individuals who have direct and strong influence on policy formulation. Departments and officials from the central and local governments are the inner circle.

3.3.1.1 Central government

The central government mainly includes the SC, the NHFPC and the Chinese Centre for Disease Control. Their main functions are the formulation and launching of policy on health care resources, according to planning put forward by national leaders. The concern and focus of the president of the country, premiers and ministers of the NHFPC are quite influential on policies.

3.3.1.2 Local

Provincial agencies implement the policies adopted by national agencies. They include: the People's Government of Yunnan, the Department of Public Health and the Disease Control Centre. Their main functions are implementing national public health policies and formulating, supervising and administering local policies in agreement with national policies.

Table 6.5: Inner circle actors in central government

Agencies	Departments	Responsibilities
SC	General office	Helping leaders of the SC to draft or review documents made in the name of the SC or General Office. Helping the leaders of the SC to deal with emergencies and major accidents
NHFPC	Planning and Information Department	Planning mid-term and long-term public health and family planning; planning, coordinating and optimising national public health and family planning resources
	Finance Department	Managing and auditing budgets, actual accounts, finance and assets of related offices and agencies; formulating related rules on the procurement of medicines and medical equipment
	Law Department	Formulating policies and standards of public health and family planning; organising the drafting of related laws, regulations, rules and drafts; reviewing and inspecting the legitimacy of standards and documents
	System Reform Department	Studying and launching fundamental principles, policies and measures to deepen system reforms of medicine and public health
	Public Health Emergency Office	Formulating policies, systems, planning and measures of emergency public health; implementing control and response measures of acute epidemic diseases
	Disease Prevention and Control Bureau	Formulating and organising national major diseases prevention planning; national immunisation planning and measures to deal with disastrous public health problems
	Medical Administration Bureau	Formulating and implementing related policies, regulations and standards of medical institutions and health care agencies
	Grass-roots Public Health Department	Formulating and implementing policies, planning and rules of rural health care and community health care
Chinese Centre for Disease Control and Prevention		Implementing national disease control and prevention and administering and serving public health technology

Source: NHFPC and Yunnan Department of Health

Table 6.6: Inner circle actors in local government

Agencies	Department	Responsibilities
People's Government of Yunnan Province	General Office	Undertaking instructions of the SC; drafting documents to execute instructions from the SC; drafting provincial government reports and requests to the SC
Yunnan Department of Health	Planning and Finance Division	Mid-term and long-term public health planning; promoting regional public health planning; planning and coordinating public health resources; administering allocation of large medical equipment
	Policy and Law Division	Drafting local public health laws, regulations and governmental rules; organising formulation of local public health policies and standards
	Public Health Emergency Office	Formulating plans, systems, contingency plans and measures of emergency public health response and rescue; directing prefectures or cities to deal with prevention, control and rescue of public health and other emergencies
	Disease Prevention and Control Bureau	Formulating and organising major disease prevention planning; immunisation planning and measures to deal with disastrous public health problems; perfecting major disease prevention and control systems
	Rural Public Health Division	Administering rural basic health care and new rural cooperative health care; planning and directing rural health care systems and managing rural physicians
	Medical Administration Division	Formulating policies, regulations and standards of medical institutions and medical professionals' practice and services
	Medical Service Supervision Division	Supervising the services of medical institutions; establishing quality assessment and supervision systems; establishing and perfecting supervision of public hospitals; promoting management reform of public hospitals
Disease Control Centre of Yunnan		Disease prevention and control; dealing with emergency public health incidents; reports of epidemic diseases; management of health information; monitoring, countering, testing and assessing health-damaging factors; health education and health promotion; studies and directions on technology management and application

Source: NHFPC and Yunnan Department of Health

3.3.2 Outer circle facilitators

3.3.2.1 MOF, Ministry of Civil Affairs, Department of Finance and Department of Civil Affairs

Central agencies such as the MOF and Ministry of Civil Affairs have a two-way influence on health care resources. The main responsibilities of the MOF include: formulation and implementation of the principles, policies and related rules of national finance and taxation; guiding national finance work; managing national basic appropriation; supervising economic, trade, administrative and public expenditures covered by national finance. The main responsibilities of the Ministry of Civil Affairs include: formulating the basic principles, policies, rules, regulations and laws of civil

affairs; organising and coordinating disaster relief work; organising international disaster reduction cooperation; managing and allocating disaster relief from the central government and supervising its use.

The Finance Department of Yunnan is under the leadership of the MOF; its responsibilities in health care resources allocation include: implementing the tasks from the MOF and managing social welfare, employment and medical expenditure with other agencies; implementing local health care policies with cooperation from local agencies and under the leadership of the provincial government.

3.3.2.2 Medical institutions

Medical institutions include all institutions that undertake disease diagnosis and treatment. Hospitals and clinics are the main forms. Sanatoriums, outpatient departments, clinics and health centres are also medical institutions in China. Medical institutions are the direct providers of medical and health care services. Though they do not participate in the formulation of policies, they have direct or indirect influence on them.

3.3.3 Included population

3.3.3.1 Professional medical associations

The leaders of many professional medical associations are very influential on health care resources policies. The Chinese Medical Association is one of them; it is made up of 71 associations, including the Physicians Association, the Paediatric Association and the Cardiovascular Association.

3.3.3.2 Groups of medical professionals

Individual doctors and nurses have little influence on health care policies. However, their representatives, the main leaders of the Chinese Doctors' Association and the Chinese Nurses' Association, have some influence on the formulation of policies concerning medical professionals.

3.3.4 Excluded population

The excluded population mainly includes: ordinary individual doctors and nurses in medical institutions, and operators and workers in private clinics. They have little connection to the core policy makers on health policies. Therefore, they have hardly any influence on policies and are passive receivers of policies and implementations. Health care consumers also lack influence on formulating policies.

3.3.5 Development partners

For the population not covered or insufficiently covered by existing health care resources or policies, the WHO, some private organisations and NGOs can provide some economic and technical assistance. To some extent, such assistance may increase medical institutions' concerns, which in turn can promote the formulation and implementation of related

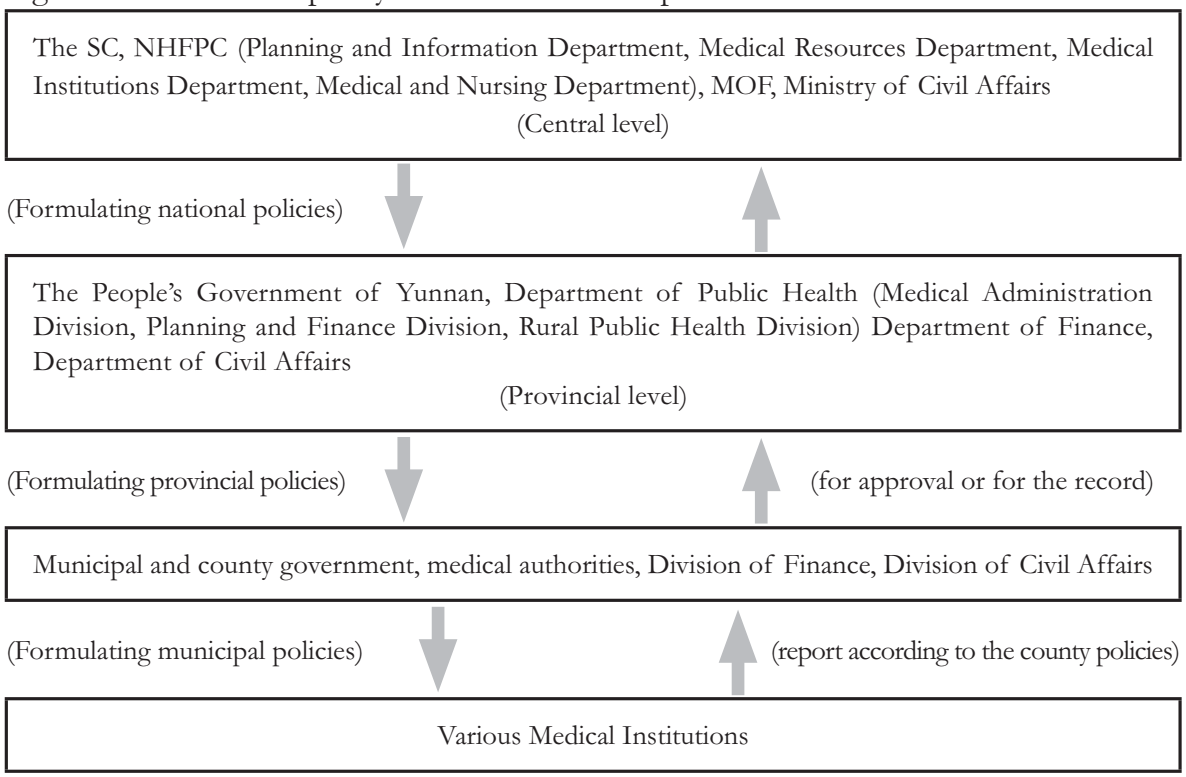
policies. The main development partners of health care in Yunnan include Doctors without Borders, Global Fund and Macau Matteo Ricci Social Service Organisation.

3.4 Action patterns

3.4.1 Interactive policy process on the allocation of medical institutions and staff

According to the new national five-year plan, policies on health resources will be greatly adjusted every five years. In the formulation and implementation of health resource policy, there are three main forms of interaction: top-down, bottom-up and parallel interactive. The interactive process is shown in Figure 6.6.

Figure 6.6: Interactive policy formulation and implementation



Source: Research team

We will focus on the configuration of medical institutions and the allocation of medical and health staff, which are closely related. With the help of system analysis, we will examine the allocation of medical institutions and medical staff in Yunnan.

3.4.2.1 Allocation of medical institutions

(1) Top-down model: In 2010, the central government launched policies to deepen medical and health system reform and aspects involving health resources allocation: speed up the reform of public hospitals; improve the patients referral system; build contractual service relations between community doctors and residents; strengthen integration of regional public health service resources; encourage private medical institutions; give priority to support of non-profit medical institutions; allow doctors to practise in more than one institution; allow private medical institutions

to take part in fixed-point medical insurance. At the same time, the SC and NHFPC issued "national medical and health institutions management regulations" to the provinces. On this basis, and according to the reality of its situation, the sixth meeting of the 12th standing committee of the Yunnan Province People's Conference adopted "administrative regulations of medical institutions in Yunnan". The Medical Administration of the Health Department issued regulations to the next level of medical and health management organisations. District and county planning is carried out and then reaches the village or township for implementation. Funds mainly come from governments, with multi-channel financing of medical institutions at all levels.

(2) Bottom-up model: County medical administration agencies examine the situation and medical demand, and verify medical institutions to be established. Community health service stations and health clinics can be set up with approval of county medical administrations. For medium-sized medical institutions of fewer than 500 beds, applications have to be verified by the prefecture medical administration departments and reported to the provincial Health Department for archiving. Establishment applications for medical institutions with more than 500 beds have to be reported to the provincial Health Department for examination and approval.

(3) Parallel interaction pattern: When the SC and NHFPC formulated "National medical and health institutions management regulations", they also negotiated with the MOF for funding. For the "Management regulations of medical institutions in Yunnan", the provincial Health Department was in close contact with parallel institutions. The Policy and Law Division and the Medical Administration Division discussed with the Policy Research Office on health policies and standards and policies, regulations and standards of medical institutions. The Planning and Finance Division discussed with the Finance Department on the planning and coordination of health resource allocation. Finally, the Medical Service Supervision Division and the Quality Control Department took the responsibility of supervising medical service quality and establishing quality evaluation and supervision. At the prefecture level, local governments and departments of health coordinate with local finance, civil affairs, taxation, finance, quality control and fire departments.

3.4.2.2 Allocation of medical staff

"The implementation opinions of the General Office of the People's Government of Yunnan Province on further strengthening rural doctor teams" can be used as an example to study allocation of medical staff.

(1) Top-down model: In 2010 the SC and NHFPC issued "Guiding opinions of the General Office of the SC on further strengthening the construction of teams of rural doctors". To implement this guidance, the provincial government established and improved the rural-doctors system. In recognition of the local characteristics of Yunnan, on 26 September 2011, "the implementation opinions of the General Office of the People's Government of Yunnan Province on further strengthening

the formation of rural doctors" was issued. The government stipulated that each administrative village had to establish at least one village clinic, and each village clinic had to employ at least one rural doctor. In principle, one rural doctor had to be employed per 1000 people. For village clinics with two or more rural doctors, at least one woman village doctor and one village doctor who has a combined knowledge of Chinese and western medicine had to be provided. The instructions were also distributed to all finance departments, and government departments had to inform village committees for implementation.

(2) Bottom-up model: According to requirements, the lowest rural health clinics summarised gaps in medical resources and reported to the higher departments; then each medical management department reported to higher level departments. In addition to gaps in medical staffing, an assessment of existing medical professionals' competence had to be reported too. The provincial government not only increased the number of grass-roots health workers, but also implemented the "urban and rural hospitals counterpart support project". Through "free training, counterpart cooperation, resident standardisation training for practitioners in towns and townships, recruitment and on-the-job training", more talents and technologies were attracted, which will improve the capacity of grass-roots medical institutions.

(3) Parallel interactive model: Provincial, city and county medical and health administration departments coordinate with corresponding financial departments to arrange special subsidy funds for rural doctors for undertaking public health services.

3.5 Identification of problems

In recent years, Yunnan's medical service has made great progress; its health care policies and resources allocation have constantly improved. But because of the complexity of medical resources allocation, there are still some problems.

3.5.1 Imbalance in health resources distribution

There is a gap in resources between urban and rural areas as well as between different regions. Large hospitals, advanced medical equipment and technology and senior health workers are concentrated in urban areas, while remote poverty-stricken areas are short of health resources and there is still a long way to go before reaching the goal to "build a county hospital in each county" proposed by the SC. The shortage of talents is the biggest problem for the development of primary health care institutions. There are still many physicians without licences in some hospitals and health clinics in towns and townships.

3.5.2 Serious 'brain drain' from primary health care institutions

Because of a bad working environment, low wages, position problems, academic title problems and social welfare problems that cannot be solved, a serious "brain drain" is widespread in primary health care institutions. According to the head of a health centre,

in five years, dozens of doctors have left his hospital. Some experienced medical workers went to provincial hospitals and public hospitals with good wages and other benefits.

3.5.3 Lack of resources in primary health care institutions

In recent years, governments at all levels have increased inputs to primary urban and rural health care and improved basic conditions. Problems such as substandard medical buildings, outdated basic health facilities and high debt are still common (Huang, 2011). Clinics and basic medical equipment are still serious problems. There are no examination beds, ultraviolet radiators or high-pressure sterilising installations in some clinics, and some mix operational rooms with living rooms, which does not meet the requirement of "separating diagnostic room, treatment room, drug store, observation room".

3.5.4 Uneven quality of health workers

In recent years, increasing investment from the central and other governments has been funnelled to medical and health care in Yunnan, and the infrastructure of township hospitals has been improved to varying extents. Nevertheless, the quality of medical staff has not improved significantly (He, 2011). Presently, township hospitals have continuing problems in four facets: 1) weak teams of professional and technical talents, low levels of education and titles and an unreasonable structure; 2) low levels of diagnosis and treatment and poor service ability; 3) limited income for medical institutes, mainly relying on the income from drug sales; and 4) the poor welfare of medical personnel because of little or no financial aid. These factors lead patients to go to distant hospitals in big cities where they need to wait for a long time rather than to nearby hospitals, with a subsequent increase in the cost of medical treatment and a burden on the operation of bigger hospitals.

3.6 Countermeasures and suggestions

The health care service is a public welfare undertaking, so governments at all levels have a responsibility to safeguard citizens' access to basic health services and improve the current situation of difficulties and high expenses.

3.6.1 Optimise the health investment structure and set up appropriate health service agencies

The government should ensure that investment is used in the most deprived areas, and funding should be appropriately weighted towards the rural masses, the urban poor and grass-roots health service agencies and, to a certain extent, used to correct the excessive flow of health resources from rural areas to urban areas; rigid constraints on regional health planning and the establishment of hospitals should be strengthened; the growth of medical resources in the central cities should be checked; the expansion of large medical and health care institutions should be controlled; and the standards, size and range of equipment should be strictly controlled. In principle, for those public hospitals whose beds number around four per 1000 of permanent population, there should not be expanded. Priority should be given to supporting development in frontier and ethnic areas, populated counties and areas which are lacking in medical resources; each county,

city and district should nurture one or two county hospitals (hospitals of Chinese medicine); and efforts should be made to construct comprehensive city and county hospitals in remote and poverty-stricken ethnic areas. Apart from allocating medical resources directly, the government should supervise the overall use of health resources to reduce waste and improve efficiency (Yan, 2011).

On the understanding that the national investment in health care is seriously insufficient, hospitals need to diversify their financing, using employee stock ownership, bank loans, financing arrangements, leasing and business cooperation among provincial technical schools to solve the problem.

3.6.2 Enhance the grass-roots health care team

It is necessary to speed the training of badly needed people, such as doctors and nurses in public hospitals. With the help of the "Free Oriented Training Project of Medical Students in the Central and Western Areas", efforts should be made to partner with higher learning institutes in providing oriented joint training and to increase the recruitment of highly educated personnel so as to gradually increase the proportion of public health workers and nursing personnel (Cui, 2009).

Second, government investment in standardised training of health workers should be increased; a programme of talent development should be set up; and the social security system should be improved. Problems concerning the status, licence registration, technical title evaluation and social security of trainees should be resolved so as to make resident doctors worry-free. Third, the personnel system should be reformed from fixed employment to contract employment. Employment under contract should be implemented across the board so as to motivate and spur the creativity of all types of personnel. Efforts should be made to fix work posts and define personnel quotas and encourage trained health personnel to flow between public and non-public medical institutions at the same time. Fourth, a coordinated assistance system of city hospitals to rural medical work should be implemented, and developed regions should strengthen their support to poverty-stricken and ethnic areas in developing health care programmes. A long-term programme of coordinated assistance and cooperation between big city hospitals and county hospitals should be established, with the former providing assistance in clinical services, personnel training, technical guidance and equipment support. Last but not least, the retirement of intermediate and senior grade doctors, and of intermediate and senior grade doctors in general hospitals, could be postponed, and these doctors could be selected to work in health units at the grass roots; meanwhile, a reward system could be set up to encourage health workers to provide grass-roots services.

3.6.3 Strengthen infrastructure and improve conditions

According to the principle of "unified planning, stepped implementation, reallocated resources, and motivation for advance", some medical institutions that are poor in operation and management should be shut, merged, transformed or relocated. The infrastructure of grass-roots medical institutions should be improved, and basic medical

equipment should be allocated systematically; the investment priority of all governments needs to be rural hospitals and community health institutions run by governments; central and provincial governments should help the construction of grass-roots health care institutions and the purchase of basic medical equipment for substandard medical and health care institutions, and eliminate dangerous establishments. Priority should be given to strengthening the construction of township and county hospitals; places which have started construction, as well as the upgrading of the equipment in county, township and village medical organisations, should be completed according to plan.

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Appendix I

List of interviewees

Agencies	Department	Name	Position
YNEB	Department of Policy and Regulation	Mr Zhan	Deputy Director
	TEC	Mr Yin	Deputy Director
	Provincial Research Institute of Education Science	Mr Yang	Deputy Director
Department of Public Health of Yunnan Province	Disease Prevention and Control Bureau	Mr Zhang	Deputy Supervisor
	Planning and Finance Division	Ms Xie	Deputy Director
	Medical Administration Division	Ms Zhou	Deputy Director

Appendix II

Questionnaire on the fairness of educational resources allocation (students)

Dear student,

Thank you very much for your participation in the investigation and for offering your valuable opinions. This questionnaire is anonymous, and all the data are processed by computer. Your support is highly appreciated and we feel very honoured. Thank you!

1. Is your classroom crowded?

A. Crowded B. Neutral C. Not crowded

2. Are you a boarding student? (If you choose B, please go to Question 7)

A. Yes B. No

3. If you are a boarding student, do you have your own bed?

A. Yes B. No

4. Are you happy with the boarding conditions?

A. Yes B. Neutral C. No

5. If you are unhappy with boarding conditions, which aspect do you feel unhappy about?

A. Accommodation is crowded B. Canteen

C. The number of washrooms is not enough D. No clean water resources

E. There is no electricity in the dormitory or the electricity hours are very limited

F. The lack of outdoor activity places G. Other_____

6. Is there a library in your school (If you choose B, please go to Question 10)

A. Yes B. No

7. How often do you go to the school library?

A. Never B. Once every week C. Twice every week

D. Three times a week E Over three times a week

8. If you have never been to the library or rarely go to the library, what is the reason?

A. There are too few books B. There are too few varieties of books

C. There are too few extracurricular books D. There are too few reference books

E. Other_____

9. Are you satisfied with the current curriculum in your school?

A. Yes B. Neutral C. No

10. If you are not satisfied, please specify what aspect you feel dissatisfied about.

A. One teacher teaches several or all courses B. The curriculum is not well arranged

C. Teachers' level is low D. There are few varieties of courses

E. Other_____

11. Are there any computer classes in your school?

A. Yes B. No

12. Does your school have access to a broadband network?

A. Yes B. No

13. Have you ever used the broadband network of your school?

A. Never B. Seldom C. Often: _____hours every week

14. What is the reason you don't use the broadband network in your school?

A. The speed is too slow B. There are too few computers that can access network

C. I don't know how to use the network D. Other _____

15. Has your school installed multimedia distance teaching equipment?

A. I've never heard about it B. I've heard about it but our school has not installed it yet

C. Yes

16. Is multimedia distance teaching equipment used in class?

A. Never B. Seldom C. Often: about _____ hours every week

17. Has your school started construction of its network learning space?

A. I don't know what the network learning space is

B. I have heard about it, but there is not any in my school

C. Yes, the construction work has started

18. Are there specialised teachers for every course? (If you choose A, please go to Question 23)

A. Yes B. No

19. If there are no specialised teachers for every course, what is the maximum number of courses that every teacher has?

A. Two B. Three C. Four D. Five E. More than five

20. How many teachers have been changed in this term?

A. Never B. One C. Two D. Three E. More than three

21.What is the reason that the teachers have been changed?

A. Teaching need B. Teachers resigning

C. Teachers going for training D. Other _____

Personal Information:

Name of School_____ Sex_____ Age_____

Nationality_____ Grade_____

Thank you again for your participation!

Questionnaire on the fairness of educational resources allocation (for teachers)

Dear teacher,

Thank you very much for your participation in the investigation and offering your valuable opinions. This questionnaire is anonymous, and all the data are processed by computer. Your support is highly appreciated and we feel very honoured. Thank you!

Is the number of classrooms adequate in relation to the number of students?

A. Yes B. Basically satisfactory C No.

2. Are there boarding students (Please go to Question 6 if you choose B)

A. Yes B. No

3. If there are boarding students, do they have their own beds?

A. Yes B. No

4. Has your school constructed living facilities like dormitories, canteens and washrooms that can satisfy students' need?

A. Yes B. No

5. If students' basic living conditions are inadequate, what do you think is the major aspect of the inadequacy?

A The number of dormitories B. The number of canteens

C. The number of washrooms D. Lack of clean water

E. Living areas without or with limited hours of electricity

F. Outdoor activity place G. All of them

8. How often are the books updated?

A. Never B. Every term C. Every year

D. Every two years E. Over two years

9. What are the sources of the books in your school?

A. Purchase of the school B. Donations from social organisations

C. Donations from enterprises D. Other _____

10. What is the percentage of the books donated by social organisations and enterprises in the total books of your school library?

A. 0 B. Less than 15% C. 15%-30% D. 30%-45%

E. Above 45% F. Other _____

11. How many classes in one grade have one set of experimental equipment?

A. Four B. Six C. eight D. twelve E. Above twelve

12. If teaching facilities and experimental equipment do not meet teaching needs, please specify in which aspect

A. Ordinary teaching facilities

B. Experimental equipment in physics, chemistry and biology

C. teaching facilities in music, physical education and painting

D. computers and projectors

13. Does your school have access to broadband network?

A. Yes B. No

14. Has your school installed the receiving and broadcasting equipment of digital educational resources? (Please go to Question 26 if you choose B)

A. Yes B. No

15. How often does your school maintain the receiving and broadcasting equipment of digital educational resources?

A. Every month B. Every half year C. Every year

D. More than a year E. Never after the installation

16. Does your school share high-quality educational resources with other schools?

A. Yes B. No

17. How many hours does a teacher in your school utilise digital teaching resources every week?

A. 0 B. 7 hours C. 14 hours D. 21 hours E. More than 21 hours

18. Does every teacher and student have a real-name network learning space? (Please go to Question 30 if you choose B)

A. Yes B. No

19. If yes, do teachers and students receive any training before using network learning space?

A. Yes B. No

20. Are there any information technology courses?

A. Yes B. No

21. What is the average income of the teachers in your school?

A. Lower than CNY800 B. CNY800-1200 C. CNY1200-1600

D. CNY1600-2000 E. Over CNY2000

22. Does your school have enough teachers?

A. Yes B. No

23. If there are not enough teachers, please specify what teachers are not enough?

A. Chinese teachers B. Math teachers C. English teachers

D. Teachers in physics, chemistry and biology

E. teachers in music, physical education and painting

F. Teachers in psychological health

24. What is the teachers' mobility in your school?

A. Inflow > Outflow B. Outflow > Inflow

25. What is the reason for teachers' inflow?

A. Income B. Job hopping C. Volunteer teachers D. Other _____

26. What is the reason for teachers' outflow?

A. Income B. Inability to give full play to talents

C. Personal professional development and family reasons

D. Working environment E. Training and further study

F. Other _____

27. What is the average number of years that the teachers who resign from their teaching positions have worked in your school?

A. Less than two years B. 2-5 years C. 5-10 years

D. 10-20 years E. More than 20 years

Personal Information:

Name of your school:_____ Sex:_____ Age:_____
Nationality:_____

Section:_____ Number of working years:_____
Position:_____

Professional title:_____ Monthly salary:_____

Thank you for your participation!

Appendix III

Questionnaire on medical and health care service utilisation of adults in China (NHFPC)

I. Background demographics

1. Date of birth: ____year ____month ____day

2. Age (years):_____

3. Sex: Male Female

4. What is your marital status?
   1 never married
   2 married
   3 divorced
   4 widowed
   5 separated
   9 unknown

5. How many years of formal education have you completed in a regular school?

6. Are you presently working?
   0 no
   1 yes

II. Medical insurance

7. Do you have medical insurance?
   0 no
   1 yes

8. Which of the following types of medical insurance do you have?

(0)	Commercial medical insurance	0 no	1 yes	9 unknown
(1)	Government (free) medical insurance	0 no	1 yes	9 unknown
(2)	Urban employee basic medical insurance	0 no	1 yes	9 unknown
(3)	Urban resident basic medical insurance	0 no	1 yes	9 unknown
(4)	Rural newly cooperative basic medical insurance	0 no	1 yes	9 unknown
(9)	Other (specify: _____)	0 no	1 yes	9 unknown

III. Use of health care and medical services

9. During the past 4 weeks, have you been sick or injured? Have you suffered from a chronic or acute disease?

0 no
1 yes
9 unknown

10. How severe was the illness or injury?

1 not severe
2 somewhat severe
3 quite severe

11. What did you do when you felt ill?

1 self-care
2 saw the local health worker
3 saw a doctor (clinic, hospital)
4 did not pay any attention
9 unknown

12. Did you seek care from a formal medical provider during the past 4 weeks?

0 no
1 yes

13. Where did you see a doctor?

01	village clinic	09	city maternal and child hospital
02	private clinic	10	city hospital
03	work unit clinic	11	workers' hospital
04	other clinic	12	other hospital
05	town family planning service	14	at home
06	town hospital	15	other (specify: _____)
07	county maternal and child hospital	- 9	unknown
08	county hospital		

14. Was it an outpatient or inpatient visit?

0 outpatient
1 inpatient

15. How many days during the past 4 weeks were you or have you been hospitalised?

16. How much did this treatment cost or has this treatment cost so far (including all registration fees, medicines, treatment fees, bed fees etc.)? (CNY)

17. What percentage of these costs was paid by insurance or may be paid by insurance? (%)

18. How much money was spent or has been spent on treating your illness or injury in addition to the costs mentioned above? (CNY)

Appendix IV

Tables and figures

Table A6.1: Theil index of Yunnan basic education

Year	Teaching and Auxiliary Building Area	Number of Computers	Number of Books	Total Value of Teaching Equipment	Total Amount of Digital Resources	Investment in Information-isation	Number of Full-time Teachers
2006	0.0170	0.1789	0.0520	0.1622	0.6594	-	0.0144
2008	0.0144	0.0962	0.0309	0.1389	0.2918	-	0.0107
2010	0.0092	0.0646	0.0215	0.0929	0.3245	0.1537	0.0081
2012	0.0150	0.0711	0.0180	0.0986	0.2482	0.0944	0.0057

Source: Yunnan Department of Education

Table A6.2: Contribution of between-region Theil index and within-region Theil index to the total Theil index

Resources	Year	Contribution Rate of Central-Yunnan Within-region Theil Index (%)	Contribution Rate of Western-Yunnan Within-region Theil Index (%)	Contribution Rate of Southern-Yunnan Within-region Theil Index (%)	Contribution Rate of Eastern-Yunnan Within-region Theil Index (%)	Contribution Rate of Between-region Theil Index (%)
Teaching and Auxiliary Building Area	2006	9.39	3.85	0.02	55.34	31.40
	2008	10.89	3.11	0.23	56.06	29.71
	2010	7.04	3.15	0.72	42.42	46.68
	2012	4.67	40.76	0.00	25.65	28.92
Number of Computers	2006	19.02	8.02	0.01	52.13	20.82
	2008	33.47	2.52	0.00	48.15	15.86
	2010	23.23	4.76	0.02	44.06	27.92
	2012	37.42	3.46	0.60	27.70	30.82
Number of Books	2006	25.43	3.45	1.09	50.47	19.56
	2008	24.76	6.05	2.08	41.91	25.21
	2010	14.18	0.90	0.22	34.13	50.56
	2012	12.08	1.56	1.03	26.52	58.82
Total Value of Teaching Equipment and Facilities	2006	24.32	4.12	0.18	36.60	34.78
	2008	31.98	1.45	0.08	39.73	26.76
	2010	30.11	2.50	0.87	45.21	21.32
	2012	40.06	2.99	0.42	17.69	38.84
Total Amount of Digital Resources	2006	13.14	16.76	0.00	44.61	25.49
	2008	24.83	60.99	3.87	8.56	1.74
	2010	6.67	18.65	5.59	44.44	24.66
	2012	8.48	23.65	0.93	55.73	11.21
Investment in Information-alisation	2006	-	-	-	-	-
	2008	-	-	-	-	-
	2010	26.61	2.11	1.67	43.22	26.40
	2012	35.95	11.35	3.13	13.63	35.92
Number of Full-time Teachers	2006	13.29	5.59	0.66	44.12	36.33
	2008	16.73	7.16	0.78	40.83	34.51
	2010	19.69	10.88	0.63	50.70	18.10
	2012	24.63	17.46	1.54	42.49	13.89

Source: Yunnan Department of Education

Table A6.3: Policies related to allocation of education resources

Category	Year	Policy	Initiating unit	Content
Teaching and Auxiliary Buildings	2008	Renovation of Rural Junior Middle School Buildings in Central and Western China	National Development and Reform Commission (NDRC) Ministry of Education (MOE)	Promoting renovation of school buildings in rural junior schools in central and western regions, strengthening the construction of living facilities for poor rural junior middle school students, improving boarding conditions and improving retention rates and boarding rates in rural junior middle schools
Books, Teaching Facilities and Equipment	2010	Reconstructing Disadvantaged Schools in Rural Areas	Ministry of Finance (MOF) MOE	Lasting for four years, providing books, teaching and experimental facilities and equipment, musical instruments, sport and art equipment for rural schools that provide compulsory education according to basic national standards, and expanding boarding facilities for rural schools in labour export provinces and extremely poverty-stricken areas
	2012	Promoting Balanced Development of Compulsory Education	SC	The central government increases funding for compulsory education in central and western regions, continues the "Reconstructing Disadvantaged Schools in Rural Areas" programme and school building renovation for rural junior middle schools in central and western regions; provincial governments are responsible for providing books, teaching and experimental facilities and equipment, musical instruments, sport and art equipment for rural middle and primary schools and improving living facilities such as dormitories and canteens for rural compulsory education schools
Education Informatisation Technology	2012	Promoting Education Informatisation	MOE	Finishing the "Full Coverage of Digital Educational Resources at all Teaching Points" project; application of high-quality digital educational resources should cover over 50% of compulsory education schools; completing the first-stage construction of national digital educational resource centre and public service platform
	2012	Ten-year Development Plan for Education Informatisation	MOE	Developing an education informatisation system suitable for the development goal of national education modernisation, basically achieving full coverage of broadband network in all areas and all kinds of schools, with education informatisation approaching international advanced level in general.
	2012	Three- year Action Plan for Basic Education Informatisation	Yunnan Education Bureau (YNEB)	Emphasising "the full coverage of digital resources at teaching points" and the construction of "Three Accesses and Two Platforms" from 2013 to 2015
Teachers	2012	Promotion of Balanced Development of Compulsory Education	SC	Allocate educational resources equitably, adopt all effective measures, attract excellent graduates and volunteers to teach in rural schools or weak schools and practise the exchange system of headmasters and teachers within counties
	2013	Improvement of Disadvantaged Schools' Conditions for Compulsory Education in Poverty-stricken Areas	SC	Improve the quality of the teaching force, perfect the supplementation mechanism of rural teachers, improve the percentage of middle school and primary school teachers in towns going to teach in rural schools and strive to improve the living conditions of rural teachers.

Sources: MOE, Yunnan Department of Education

Table A6.4: Projects related to educational resource allocation

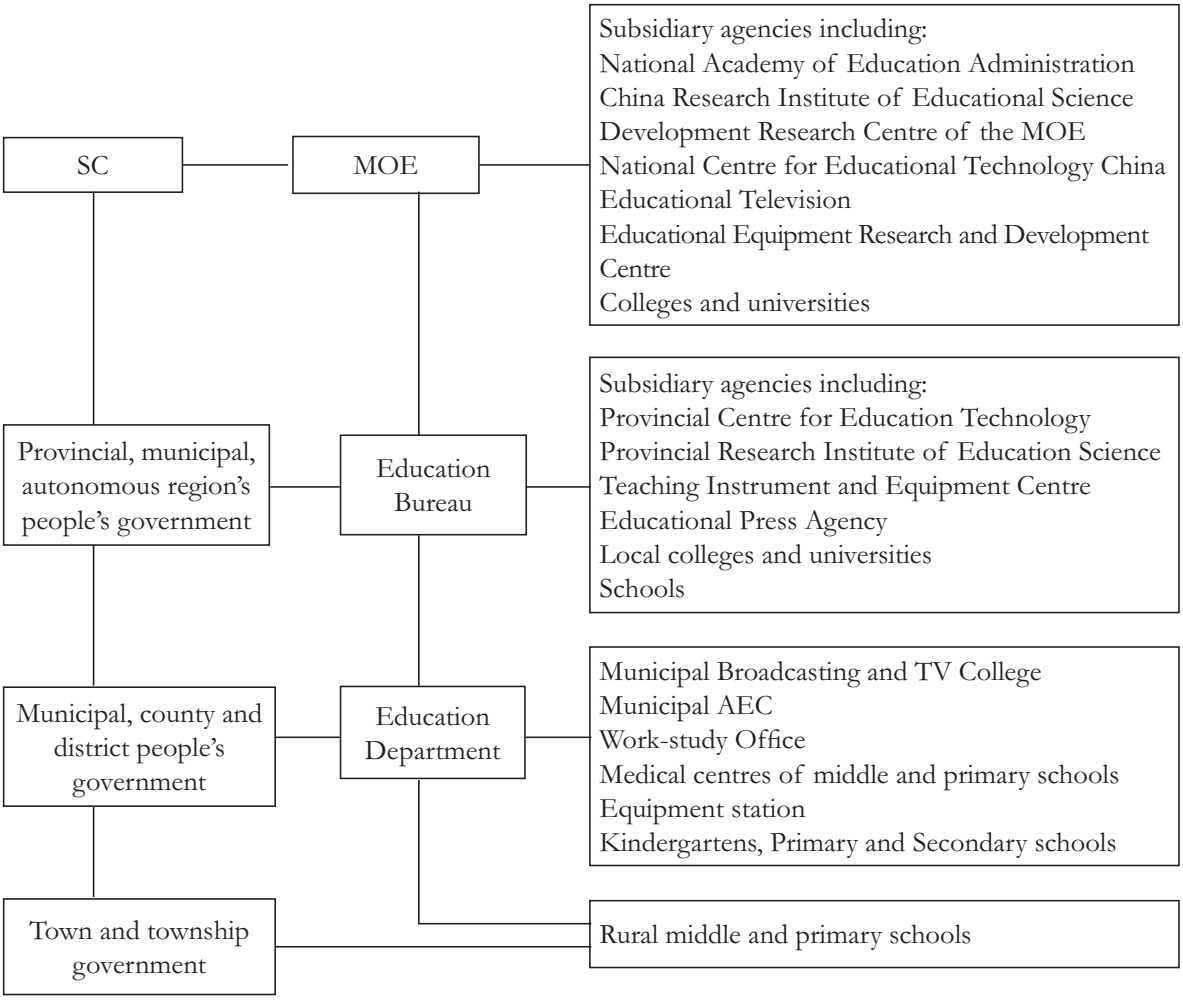
Category	Year	Project	Initiating Unit	Content
Teaching and Auxiliary Buildings	2001	Renovation of Dangerous Buildings in Middle and Primary Schools	SC MOE	The central government provides special funding for the renovation of dangerous buildings in middle and primary schools
	2009	School Building Safety Project for Middle and Primary Schools	SC MOE	Increasing anti-earthquake level of all school buildings geologically disaster-prone areas that have hidden safety problems or moving schools to avoid danger, improving comprehensive disaster prevention capability; other regions focus on the reconstruction of D-level dangerous buildings, renovate and consolidate C-level[6] dangerous school buildings and get rid of hidden safety problems
	2013	Standardisation Project of Compulsory Education Schools	YNEB	With a county as the basic unit, planning, integrating and implementing special construction projects, such as safety projects of middle and primary school buildings, the "Reconstructing Disadvantaged Schools in Rural Areas" programme and renovation projects of rural junior middle school buildings in central and western regions, making the average school area per student in compulsory education schools, construction areas for school buildings and green areas meet the provincial standard
Books, Teaching Facilities and Equipment	2012	Renovation Plan for High School	MOF MOE	The central government provides CNY2 billion to support the renovation and expansion of high school buildings in concentrated extremely poverty-stricken areas in central and western China, to construct and equip affiliated facilities such as libraries, teaching facilities and equipment and sports fields
Education Informatisation Technology	2003	Modern Distant Learning Project for Rural Middle and Primary Schools	SC NDRC MOE	Providing disc-playing teaching systems in rural primary schools, establishing satellite teaching receiving stations in primary schools and setting up computer labs in rural junior middle schools
	2012	Construction and Promotion of Education Informatisation Competence	SC MOE	Standardisation and construction of middle, primary and vocational schools, constructing digital campuses in universities and colleges, and the innovation and trial reform of education informatisation

6 *Principles for the Identifications Techniques of Dangerous Buildings in Rural Areas (Trial)* formulated by Ministry Of Housing and Urban-rural Development divides the buildings into four levels: Level-A indicates the building structure being safe. Level-B refers that the building conditions meets only the basic living requirement. Level-C represents partial building is in danger and Level-D means that the whole building is in danger.

	2012	Construction of Basic Competence of Education Informatisation	SC MOE	Deploying an education informatisation network in advance, constructing satellite broadband network for national education and cloud-based platforms for national education, and opening supporting platforms for university information
	2012	Construction of Sustainable Developmental Competence of Education Informatisation	SC MOE	Improving educational technology competence, spreading applied education informatisation standards, constructing technological support for education informatisation and strategic research system, cultivating a backup force for education informatisation and promoting the fast and sustainable development of education informatisation
	2012	Construction and Sharing of High-quality Digital Educational Resources	SC MOE	Finishing the construction of educational resources and public service system centred on network resources by 2015, constructing the public service platform of national digital educational resources and various high-quality digital educational resources, establishing a co-constructing and sharing mechanism of digital educational resources
	2013	Full Coverage of Digital Educational Resources at Teaching Points	YNEB	By September 2013, installing receiving and broadcasting equipment for digital educational resources for 4078 teaching sites, dispatching high-quality digital educational resources, achieving best results for national stipulated courses with a county as the basic teaching unit
Teachers	2010	Talents Support Plan for Remote Regions, Ethnic Regions and the Old Revolutionary Bases	Central Government, SC	Introduce 100,000 excellent teachers, doctors, scientific and technical personnel, social workers and cultural workers to work or offer services in remote regions, ethnic regions and the old revolutionary bases.
	2013	Construction of Teaching Forces in Compulsory Education	YNEB	Practise unified teaching headcount standard between urban and rural areas, strengthen the exchange of teachers, practise teaching exchange and shift mechanism between urban and rural schools and increase rural teachers' incomes

Source: MOE, Yunnan Department of Education

Figure A6.1: China's education administration



Source: Research team

Table A6.5: Total Theil index and distribution of three medical resources in Yunnan, 2008-12

Resource	Year	Total Theil Index	Regional Theil Index	Central Yunnan Theil Index	Western Yunnan Theil Index	Southern Yunnan Theil Index	Eastern Yunnan Theil Index
Medical Institutions	2008	0.1575	0.0508	0.0669	0.0062	0.0040	0.0296
	2010	0.0289	0.0116	0.0124	0.0005	0.0000	0.0043
	2012	0.0299	0.0121	0.0130	0.0006	0.0005	0.0037
Hospital Beds	2008	0.0677	0.0269	0.0157	0.0062	0.0052	0.0138
	2010	0.0545	0.0226	0.0361	0.0057	0.0007	0.0116
	2012	0.0401	0.0175	0.0107	0.0031	0.0018	0.0070
Health Professionals	2008	0.0947	0.0377	0.0333	0.0064	0.0026	0.0147
	2010	0.0884	0.0343	0.0361	0.0057	0.0007	0.0116
	2012	0.0887	0.0324	0.0381	0.0051	0.0023	0.0107

Source: Yunnan Department of Health

Table A6.6: Contribution of between-region and within-region Theil index in total Theil index (%)

Resource	Year	Between-group Theil Index Contribution	Central Yunnan Theil Index Contribution	Western Yunnan Theil Index Contribution	Southern Yunnan Theil Index Contribution	Eastern Yunnan Theil Index Contribution
Medical Institutions	2008	32.23	42.45	3.96	2.56	18.79
	2010	40.26	43.05	1.65	0.00	15.04
	2012	40.41	43.63	1.97	1.54	12.45
Beds	2008	39.72	23.11	9.20	7.60	20.36
	2010	41.38	27.79	7.20	4.85	18.79
	2012	43.66	26.73	7.62	4.59	17.40
Health Professionals	2008	39.83	35.14	6.80	2.70	15.53
	2010	38.77	40.82	6.49	0.85	13.07
	2012	36.58	42.99	5.80	2.59	12.04

Source: Yunnan Department of Health

Table A6.7: Policies related to health resource allocation

Year	Policy	Issuing Units	Content/Aims
2010	On Encouraging Social Capitals to Enter into Medical Service to Accelerate the Development of Private Hospitals	General Office of Yunnan Provincial People's Government (GOYPPG)	Supporting and accelerating development of private hospitals, encouraging private capital to invest in establishing various medical institutions, encouraging health professionals in public hospitals to lead or establish private hospitals
2011	Guidance on Further Strengthening the Construction of Rural Doctor Teams	General Office of the SC	In principle, a health care room is established in every administrative village. Every thousand people should have access to one rural doctor. Administrative villages that have scattered residents may have more. Every health room must have at least one rural doctor.
2011	On Further Strengthening the Construction of Rural Doctor Teams	GOYPPG	Further clarifying rural doctors' responsibilities, improving medical houses and equipment and realising the full coverage of health rooms and rural doctors in every village
2012	On the Trial Reform of County Public Hospitals	General Office of the SC	Strengthening the competence of human capital, technology and key medical specialties, comprehensively planning development of county medical and health systems, increasing the attendance rate in the county to around 90%, finishing the standardisation of county hospitals and strengthening nurses
2013	Guidance on the Integrated Management of County Rural Medical Services in Yunnan	Yunnan Provincial Health Bureau (YNPHB)	Planning medical resources in counties reasonably, confirming the number of beds in all-level medical institutions, providing health professionals and other professionals fit for their function, task and scale, improving basic medical service
2013	Reform and Implementation Plan of Deepening Medical and Health System in Yunnan during the Twelfth Five-year Plan	GOYPPG	Adjusting and improving regional health resource allocation, giving priority to frontier ethnic poverty-stricken areas, counties with large populations and regions lacking health resources and increasing prefecture and city comprehensive hospitals in remote ethnic poverty-stricken areas.
2013	Guidance on the Set-up Plan of Medical Institutions in Yunnan	YNPHB	Stipulating the prevention and handling of medical malpractices, making it clear that medical institutions should support individual doctors and technological teams to go to grass-roots medical institutions and various social medical institutions to carry out work.

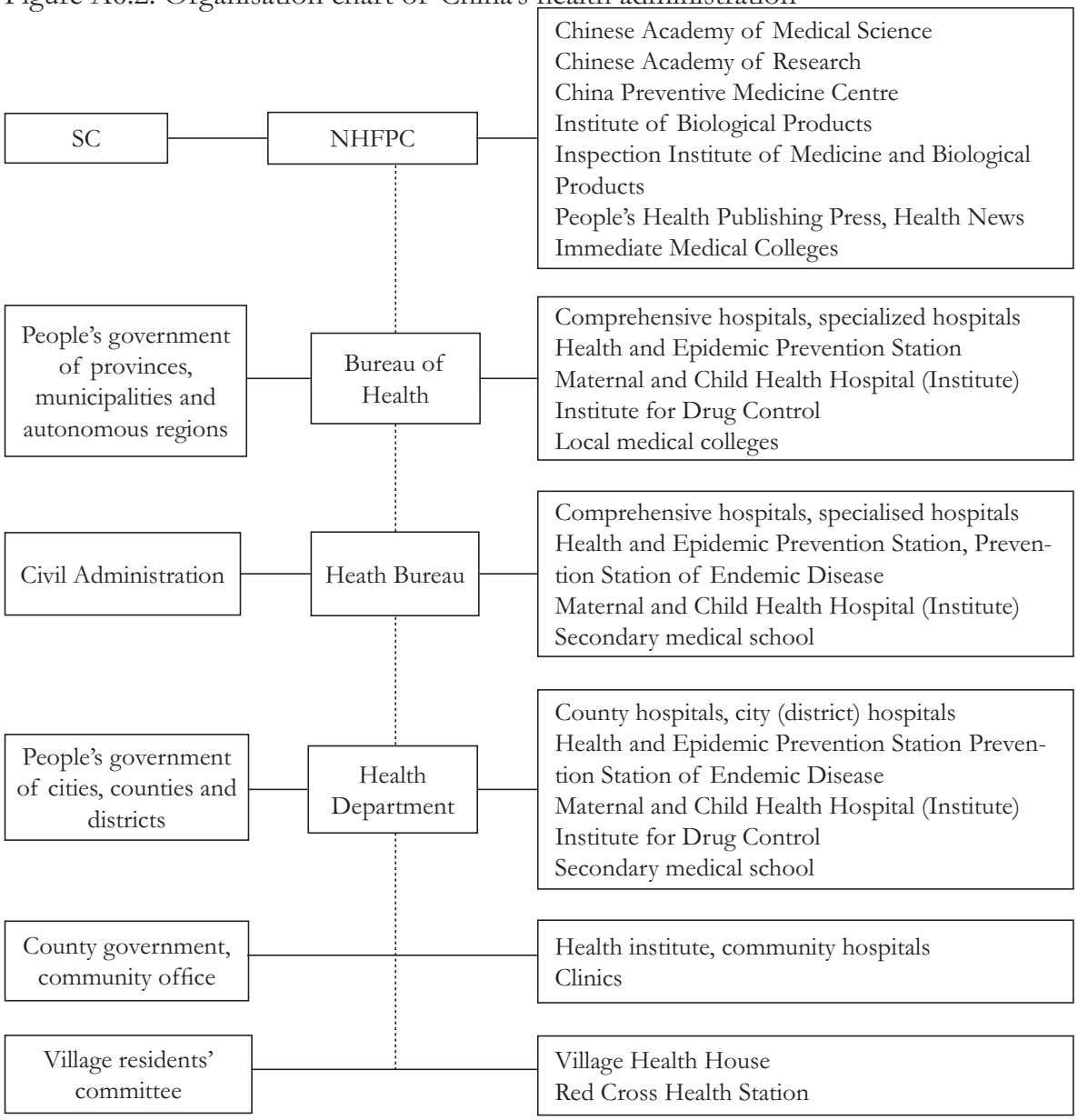
Source: NHFPC and YNPHB

Table A6.8: Projects related to allocation of health resources

Year	Projects	Issuing Units	Content
2005	Red Cross Angel Programme	Chinese Red Cross Foundation	Improving medical conditions in poverty-stricken areas, training rural doctor, and giving relief to poor children and peasants suffering from serious diseases
2005	Ten Thousand Doctors Supporting Health in Rural Regions	MOH, MOF and Pharmaceutical Administration	Selecting more than 10,000 doctors to provide medical services and training in county hospitals and health institutions in villages and towns. The project is being tried out in national poverty alleviation and development focus counties and health institutions in some villages and townships in Gansu. Then it is to be gradually expanded to central and western China and poverty-stricken areas in eastern China
2008	Health Professionals Training, "Going to the West"	GOYPPG	Training management and physicians at county hospitals in 23 provinces or autonomous regions) in central and western China in 10 years, to train 10,000 health professionals qualified to work in county hospitals and to improve overall medical service at county hospitals in central and western China
2010	Free training of medical students who will work in rural regions after graduation	Health institutions in villages and townships in central and western China	For three consecutive years since 2010, free-of-charge training for medical students has been carried out in medical colleges. The aim is to train comprehensive health professionals for medical institutions at, or lower than, village and township

Source: MOH and YNPHB

Figure A6.2: Organisation chart of China's health administration



Source: Research team

List of GMS DAN publications

GMSDAN 1: *Impact of the Asian Financial Crisis On the Southeast Asian Transitional Economies* (1999)

GMSDAN 2: *Labour Markets in Transitional Economies in Southeast Asia and Thailand: A Study in Four Countries* (2001)

GMSDAN 3: *Off-farm and Non-farm Employment in Southeast Asian Transitional Economies and Thailand*
(2003)

GMSDAN 4: *The Cross Border Economies of Cambodia, Laos, Thailand and Vietnam*
(2005)

GMSDAN 5: *Pro-Poor Tourism in the Greater Mekong SubRegion* (2007)

GMSDAN 6: *Cost and Benefits of Cross-Country Labour Migration in the GMS*
(2012)

GMSDAN 7: *Agricultural Trade in the Greater Mekong SubRegion*
(2012)

GMSDAN 8: *Assessing China's Impact on Poverty Reduction In the Greater Mekong Subregion* (2013)

GMSDAN 9a: *Inclusive Development in the Greater Mekong Subregion: An Assessment* (2014)

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