

Finance in Public Higher Education in Cambodia



Mak Ngoy, Sok Say, Un Leang with Bunry Rinna, Chheng Sokunthy and Kao Sovansophal

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List of Abbreviations

Accreditation Committee of Cambodia ACC **ASEAN** Association of Southeast Asian Nations

AusAID Australian Agency for International Development

DGHE Directorate General of Higher Education

DHE Department of Higher Education

HEI higher education institution

HEQCIP Higher Education Quality and Capacity Improvement Project

ITC Institute of Technology of Cambodia **MEF** Ministry of Economy and Finance

MOEYS Ministry of Education, Youth and Sport

OECD Organisation for Economic Co-operation and Development

OHEC Office of Higher Education Commission

PAI public administrative institution

PB program-based budgeting

PTPTN National Higher Education Fund Corporation

RUA Royal University of Agriculture **RUFA** Royal University of Fine Arts **RUPP** Royal University of Phnom Penh

science, technology, engineering and mathematics STEM

UHS University of Health Sciences

USAID United States Agency for International Development

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Executive summary

Situational analysis

Cambodian higher education finance, rooted as it is in a historical and political funding model (Hauptman 2007b), is archaic and inappropriate for creating a robust and responsive higher education system. The customary practice of line item budgeting, which allows little room for flexibility and creativity, is also obsolete. Many countries in the region have long moved towards block grants which allow room for institutional financial management, and many have recently incorporated performance-based funding to ensure that the higher education system produces desired outputs and outcomes for national development. In Cambodia, bureaucratic financial management has created many loopholes and obstacles, including slow disbursement of funds, excessive and rigid regulation, and ineffective and efficient use of resources. However, any move towards new funding modalities, including block grants and performance-based funding, needs to be aligned with efforts to improve institutional capacity (human resources and institutional capability), as well as strong post-audit and monitoring systems to ensure compliance and value for money.

Along with the lack of genuine effort to loosen financial control, the institutional financial management system in virtually all public higher education institutions (HEIs) is not robust, transparent or accountable enough for deregulation. Financial management is generally tightly controlled with little transparency and participation from other institutional actors, including faculty. Resource use, allocation and management are inefficient. Capable human resources in accounting, financial management and planning are scarce, and institutional management by permanent committees and improved professionalism of services are a distant dream.

Public funding for higher education has been relatively minimal and therefore cannot have any significant positive impact in higher education quality. Cambodia is one of the countries in the region that invests the least on its higher education. Public funding for large public HEIs in Phnom Penh accounts for some 10-20 percent of their annual expenditure, although the percentage share is much higher for smaller provincial HEIs. All public HEIs rely on tuition fees for institutional survival. Tuition revenues chiefly go towards salary top-ups for institutional administrators, teachers' wages, and new buildings. Institutional investment in research and innovation and capacity development is virtually non-existent. Reliance on tuition fees, absence of serious investment from government and donors, and lack of collaborative research funding from industries and communities have turned public HEIs into private teaching enterprises.

In absolute terms, tuition fees are still relatively cheap, although they vary depending on subjects studied, and HEI. However, relative to GDP per capita, which in 2017 reached USD1,300, the average annual fee of USD300-400 is high. For virtually all public HEIs, tuition fees are the major source of revenue, with fee and non-fee revenues accounting for 80 to 90 percent of institutional expenditure for large Phnom Penh HEIs. Such heavy reliance on private funding is neither stable nor conducive to long-term institutional development and financial security.

Government scholarships (mainly tuition-fee waiver and a meagre living allowance) cover approximately 15 percent of enrolments, and account for about 10 percent of annual student intake at each public HEI. At many HEIs these costs are borne by the institution. Public HEIs,

however, offer a substantial number of other scholarship packages (again mainly tuition fee waivers) in the name of prominent public figures or non-state institutions, though there are no clear institutional mechanisms and procedures to manage these schemes. In some instances, a specific number of these scholarship packages are allocated to specific individuals or institutions, though the HEIs play little or no role in selecting grantees.

In many countries in the region, student loan schemes are an effective means of improving education access and equity. Cambodia does not have a national student loan scheme, and more needs to be done to develop one. Under the World Bank-funded Higher Education Quality and Capacity Improvement Project (HEQCIP), a research study on scholarships, student loans and subsidies was conducted, and several officers from the Ministry of Education, Youth and Sport (MOEYS) went on study visits to see how other countries in the region deal with these issues. A policy on scholarships, loans and subsidies has since been drafted.

Whether higher education is a public or a private good has been hotly debated and contested worldwide. Practically, the answer runs on a continuum from purely public to purely private. With wider equitable access and heavier public expenditure on higher education, governments in the region have pushed their public HEIs to attract more private funding, especially from industries, philanthropic donations, and endowments, with a focus on research and innovation. However, governments have continued to subsidise a significant share of HEIs' operational expenditure. In Cambodia, the general notion is that higher education is very much a private good, reflecting limited public funding for higher education. Funding from donors varies from HEI to HEI depending on their agenda and interests, but in general such funding is minimal and overall revenue generation via research and innovation is limited. Some HEIs engage in consultancy activities; however, at best, consultancies are done and managed by individual academics with the agreement that a certain amount of revenue be given to the HEI should they bid for projects in the name of the institution. Research and innovation commercialisation initiatives are barely developed and just a few patents have been registered (none at a public HEI).

Expenditure mechanisms vary depending on several factors, including whether funds are public or self-generated revenue and whether the institution is a public administrative institution (PAI) or non-PAI. The management of public funds at both PAI and non-PAI HEIs must adhere to government rules and regulations and is therefore rather rigid and bureaucratic. Disbursement of funds is apparently slow and complaints of red tape exist. At the institutional level, public funds are managed with little meaningful participation or involvement of dependent units, let alone faculty members. The management of private funds is generally dominated by the top institutional administrators, especially the rector/director with broad endorsement from the governing board (if it is functional, that is) and limited participation and engagement from staff. Formal mechanisms and processes for authorisation of authority and functions are non-existent and not supported by any national legal stipulation. Procurement and petty cash management need to follow the rules and regulations passed by the Ministry of Economy and Finance (MEF). Institutional oversight and systems to monitor financial management are generally weak or non-existent. PAI HEIs need to present their budget plans, which cover both self-generated funds and public funds, to the technical supervising ministry for endorsement and the MEF for review and approval. Public HEIs present their annual budget plans, which cover budget funds, to their technical supervising ministries for endorsement and the MEF for approval. Some PAI HEIs do not have a clear budget plan for their self-generated funds and expenditure is therefore ad hoc with any transaction, however small, needing approval from top management.

Policy implications

There has been discussion, especially at the technical level and in dialogue forums, about reforms in institutional financial management to ensure greater transparency, accountability and participation; more efficiency and effectiveness of public and private investment in higher education; and increased government funding to public HEIs to achieve broader national development goals. The establishment of PAI HEIs is an example of the Cambodian government's attempt to devolve authority and improve financial management. However, in practice, talk of systemic and systematic reforms towards good institutional financial management and increased public funding have not been supported by action.

Reforms towards more institutional autonomy and accountability need to go hand in hand with better institutional financial management and significantly more public funding for higher education to widen access and improve research and innovation to assist national development. MOEYS (2017) has developed a national policy on higher education governance and finance which recommends 10 interlocking measures to improve public higher education governance and finance, five of which deal with higher education finance:

- 1. Install reliable financial management systems and strong internal controls at public HEIs
- 2. Increase and improve state funding for the higher education system
- 3. Provide state funds in the form of block grants
- 4. Allow public HEIs to vary their tuition-fees, with fee waivers available from and funded by the state
- 5. Increase state funding of research and innovation, with funds provided on a competitive and categorical basis.

1. Introduction

1.1 Background

Funding to higher education from the Cambodian government has been constantly low, on any count: per student, budget share of MOEYS, GDP per capita, percentage share of GDP, and relative to expenditure in more advanced ASEAN countries. This is understandable given the need to focus on rebuilding the basic education sector, which had been totally destroyed after four years of genocide under the Khmer Rouge regime (1975-79).

Since 1997, the government has improved the opportunities for public HEIs to access private funding, through granting permission to public HEIs to offer fee-paying academic programs and conduct other revenue-generating activities to generate revenues for institutional development. The application of the 1997 Royal Decree on Legal Statute of PAIs (revised in 2015 pending full application) to HEIs, introduced in 1999 to public HEIs, was the first attempt to legalise the practice and improve financial management. To date, 10 public HEIs have transformed themselves into PAI HEIs and mobilised extra funding from development partners. At the institutional level, there is legitimate concern about institutional financial management and performance. Management of revenue from public funds and private sources alike, for instance, is generally known to be centralised with limited transparency and participation from the staff and other stakeholders. Effective and efficient financial management needs to be significantly improved, and as does individual capacity and institutional capability in financial management and planning, to guarantee a strong fiduciary culture and enhance financial health and sustainability. Few public HEIs have demonstrated efforts to diversify their funding sources and mobilise their resources, especially talent, to improve their financial standing and institutional performance. This is, however, not to downplay some ad hoc efforts and initiatives to improve financial management such as the use of computerised accounting systems.

1.2 About the study

1.2.1 Scope of the study

The aim of this study is to explore at both system and institutional levels the current financial management and funding of higher education in Cambodia. It examines financing mechanisms for public HEIs, funding sources, tuition fee issues, scholarships, student loans and subsidies at system level, and sources of funding, revenue generation, especially commercialisation of research and innovation, and expenditure mechanisms at institutional level. Where relevant, the study reflects on practices in Southeast Asia to draw academic and policy implications for enhancing public higher education finance in Cambodia.

1.2.2 Method

This research study draws on extensive analysis of an array of existing documents both published and unpublished. It relies significantly on academic research and development literature on higher education in Cambodia and the wider region, policy documents and reports, legal documents, project documents (analytical and advisory work, evaluations), formal and informal research papers.

Publications on higher education finance in Asia, let alone in Cambodia, by Asian scholars are scant, with many in the form of collaborations with Western scholars. Albeit useful and informative, these studies fall short in that they do not fully grasp or pay enough attention to different local contexts. Also, the nature of the research and the sensitivity of the issues under scrutiny can hamper evaluations and bias study findings. This study, however, is complemented by information drawn from the authors' extensive discussions and interactions (formal and informal) with diverse stakeholders over the course of their professional work. Throughout their careers, they have investigated and debated the issues facing higher education in Cambodia in numerous venues with diverse stakeholders, from lecturers and support officers to senior politicians and policymakers.

1.2.3 Significance of the study

This research study is significant on many counts. It is one of the first published papers dealing with higher education finance in Cambodia. The research reveals many key issues for finance that affect not only higher education quality but also its role in national development. A first of its kind, this study attempts to review practices and outcomes of higher education finance in selected ASEAN countries and compare those with the situation in Cambodia, with a view to drawing lessons learned to inform Cambodian higher education policy. Finally, the findings have positive policy implications for higher education development in Cambodia and will certainly contribute significantly to academic debates on higher education finance.

1.2.4 Structure of the study

The rest of this paper is divided into four sections. The literature review in Section 2 presents an overview of the conceptual discussions on higher education finance, as well as the experiences of selected ASEAN countries. Section 3 describes some key publications on Cambodian higher education finance. Section 4 examines Cambodian public higher education finance against the conceptual framework as well as regional experiences in detail. Section 5 concludes and draws some policy implications for higher education development.

2. Literature review

In less developed and newly industrialised countries, that public funding is essential to improving the quality of education to boost participation and attract private research and development funding is well acknowledged (Hauptman 2007a; Rajah and Govindaraju 2009; Schiller and Liefner 2007; Rantz and Tangchuang 2005). The following explores some of the conceptual frameworks and regional finance practices in public higher education. We start by examining higher education finance. We then present experiences from selected countries in the ASEAN region, with a focus on three areas of higher education system financing – public higher education funding, revenue diversification and new funding modalities, and student loans. The final section examines the issue of institutional financial management.

2.1 Some conceptual considerations

2.1.1 Financing higher education

Even with good governance mechanisms in place, without adequate funding and sound financial management, it is certain that HEIs cannot mobilise talent to improve quality. Funding to higher education is crucially important for the growth of the subsector. Experiences from world-class universities and prominent regional HEIs show that HEIs need financial resources and proper institutional financial management to make the best use of their resources, to provide quality services and to be an engine for creativity and innovation (Salmi 2009a; Hauptman 2007a; Schiller and Liefner 2007). Two key debates in higher education finance are whether higher education is a public or a private good, and how HEIs can attract more and alternative funding.

The debate as to whether higher education is a public or a private good is important as this determines how governments fund HEIs. That governments provide limited full funding (e.g. via scholarships and subsidies) for few places at HEIs and that HEIs have a high intake of fee-paying students suggest that higher education is more of a private good. However, many governments perceive higher education as both a private and public good, which is reflected in the public funding of HEIs and numerous subsidy schemes, including student loans. A related discussion on government subsidy is whether such support should be demand or supply driven (Tangkitvanich and Manasboonphempool 2011).

With the expansion of higher education, governments have been unable to fully fund HEIs; hence HEIs are encouraged or forced to seek alternative funding sources. While governments remain a critical source of funds, funding reforms revolve around government budget cuts, performance-based and competitive funding, and diversified funding profiles (Schiller and Liefner 2007, 543). Besides tuition fees, HEIs are encouraged to build other revenue streams, including philanthropy, foundations, auxiliary services, healthcare, entrepreneurial activities, and corporate sponsorship for research and innovation (Hauptman 2007a, 92-96). Among private funding sources, the most important are university-industry linkages, or corporate sponsorship.

2.2 Experiences from the region

"Region" in this report refers specifically to the ASEAN region, with a focus on Thailand, Indonesia, Vietnam and Malaysia. These countries have undertaken significant higher education reforms in the past few decades and certain nuances merit attention, especially the implications for higher education governance and finance in Cambodia.

2.2.1 Finance at the system level

2.2.1.1 Public higher education financing

Higher education is costly. In relatively developed countries, investment in higher education is often three times higher than that in general education. A tough policy issue in many developing countries, therefore, is the fiscal capacity of government to adequately support higher education. As Table 1 shows, average education expenditure in developing countries is a fraction of what OECD (developed) countries spend. Another regional trend is government commitment to grant HEIs greater institutional autonomy, especially in financial management and revenue generation. This is a sticky issue across the ASEAN region given the fiscal imperative of governments to ensure that investments provide value for money and that the money they invest is spent with a high degree of accountability to help achieve national goals. That is, there is a strong interest to ensure greater accountability to ascertain that the funds from both public and private sources are used wisely (Ting 2014).

This is not to say that previous governments did not bother to account for the money they spent. But with greater influence from neoliberal ideologies and practices and consequent evolution of funding mechanisms, the mechanisms to ensure accountability have changed substantially. This has included changes from pre-audit and monitoring to post-audit and monitoring (with a focus on outputs, outcomes and impact of investment); from annual line-item budgeting to (multi-year) block grants; and from historical/political funding to performance-based and competitive funding. Hauptman (2007a, 91-92) highlights four financial accountability mechanisms: auditing and monitoring, regulatory performance measures, performance funding, and market-based strategies (see also Salmi 2009b, 8–9). With the changes in funding arrangements, governments have taken a more dominant role in setting priorities and providing financial incentives to stimulate the performance growth of HEIs (Agasisti 2009 cited in Ting 2014).

There are several accepted methods for calculating government expenditure on higher education. The measures include government expenditure on higher education as a percentage of GDP, government expenditure per tertiary student as a percentage of GDP, and higher education budget as a percentage of the total education budget. Expenditure on higher education varies significantly across the region. The world average expenditure on higher education is 1 percent of GDP (Ting 2014), and the OECD average is 1.4 percent (OECD 2014). The highest investors such as the US, New Zealand and Canada spend between 2.5 to 3.0 percent of GDP on higher education (Hauptman 2007a), while the lowest investors such as Cambodia and Laos spend less than 0.01 percent. The world average spending on higher education as a share of total government spending on education is 15 to 20 percent (Hauptman 2007a).

Table 1 presents government expenditure on higher education in selected ASEAN countries. Malaysia is the top spender among the four selected countries, followed by Thailand, Indonesia and Vietnam. In the past decade, Indonesia and Vietnam have injected significant amounts of money into their education systems to improve higher education. Indonesia's expenditure on tertiary education as a percentage of total education spending increased tremendously over the seven years to 2013. From only 4.9 percent in 2007, it rose to 8.5 percent in 2008, then climbed steadily to 10.1 percent in 2009, 12.7 percent in 2010 and 13.4 percent in 2011 (Negara and Benveniste 2014), and then shot up to 23 percent in 2013 (Ting 2014). Expenditure per tertiary student in 1998 was USD6,840 (World Bank 2009). Vietnam has also started to increase its investment in higher education, though figures were not available at the time of study. In Thailand, higher education expenditure averaged around 24 percent throughout the 2000s (Michel 2015), with expenditure per tertiary student of USD6,360 in 1998 (World Bank 2009, 68–70).

Table 1: Education expenditure in selected ASEAN countries

Country	Education expenditure as % of GDP	Education expenditure as % of total expenditure (all sectors)	Higher education budget as % of GDP	Higher education budget as % of total education budget
World	4.4 ^g	N/A	1ª	15–20 ^a
average	(2012)		(2007)	(2007)
Thailand	4.5 ^g	29.5 ^h	0.7°	17.9°
	(2012)	(2011)	(2007)	(2007)
Malaysia	5.1 ^h	21.3h	2.7°	35.0 ^b
	(2010)	(2011)	(2005)	(2014)
Vietnam	6.3 ^g	19.8 ^h	N/A	14.7 ⁱ
	(2012)	(2009)		(2010)
Indonesia	3.4^{g}	20.2 ^h	0.5^{j*}	23.2 ^b
	(2012)	(2011)	(2013)	(2014)
Singapore	3.1 ^g	21.0 ^h	N/A	38.0i
	(2012)	(2011)		(2012)
The	2.7 ^h	12.3 h	0.7°	12.37 ^d
Philippines	(2009)	(2009)	(2005)	(2006)

Note: * Budget in 2012 was 0.8%.

Sources: a Hauptman 2007b; b Ting 2014; c World Bank 2009; d UNESCO 2009; e Negara and Benveniste 2014; f UNESCO 2014; g http://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS; h ASEAN 2013; i www.nationmaster.com/country-info/ profiles/Vietnam/Education; www.nationmaster.com/country-info/profiles/Singapore/Education, www.nationmaster.com/ country-info/profiles/Singapore/Education; j OECD 2016

In the past decades, governments in the region have encouraged public HEIs to diversify their funding sources. Yet HEIs' reliance on government funding is still significant, and revenues from private sources, including tuition fees and other services remain low. In Thailand, public HEIs rely on government funding for 80 to 90 percent of their expenditure and revenue from tuition fees and other services for the remainder. In contrast, autonomous HEIs' reliance on government support has decreased significantly, though public funding still covers 30 to 40 percent of their expenditure, with revenue from tuition fees, research and other services covering another 30 to 40 percent and the rest coming from investments and properties.

Compared with their Thai counterparts, Malaysian HEIs continue to rely heavily on government subsidies. Government funding, even to autonomous HEIs, covers 80 to 90 percent of the budget, with revenue from tuition fees and other services standing at 10 to 20 percent. Public HEIs are allowed to operate private arms to generate more revenue streams, but such revenue is still minimal. With the adoption of the Malaysian Higher Education Blueprint 2015–25 (MOHE 2015), the government intends to diversify funding to HEIs and attempt to attract more funding from industries and endowments. Whether this will be successful remains to be seen.

2.2.1.2 Revenue diversification and new funding schemes

Hauptman (2007a, 88-89) identifies five common public funding policies for HEIs: historical or political allocations, funding formulas, policy-driven funding, performance-based funding, and categorical and competitive funds. The last three outcome-based approaches have been adopted most widely in the ASEAN region because they reward performance and results (ADB 2011; World Bank 2012). Some performance-based funding schemes include performance contracts, performance set-asides, payment for results, and matching funds. Categorical funding can be targeted for specific purposes such as improving selected institutions, and competitive funding is essential for quality improvement and innovation (Hauptman 2007a). Another notable change is the shift from line item budgeting, which allows for limited flexibility in budget management, to multi-year block grants. Given that higher education is expensive and governments are unable to foot the bill for the sector alone, public HEIs are encouraged to diversify their funding sources. To that end, research and innovation partnerships with industries as well as endowments and foundations are considered important sources of private sector revenue (Hauptman 2007a).

Thailand has adopted block grants, with multiple disbursements per annum and multi-year funding, for funding autonomous HEIs. Autonomous HEIs are allowed to roll over unspent budget to the following fiscal year. Line item budgeting is still predominantly used for funding public HEIs, and public HEIs are required to return unspent funds to the government at the end of each fiscal year. Each autonomous HEI negotiates for funding directly with the Budget Bureau of the Ministry of Finance. The government uses performance-based and competitive funding schemes to improve the competitiveness of Thai higher education through such projects as Reverse Brain Drain and the initiative to upgrade doctoral programs at selected HEIs (Rantz and Tangchuang 2005, 317–318). In line with the National Socio-Economic Development Plan 2017–2036, the Long-Range Plan for Higher Education 2017–2036 plans to adopt three types of funding for higher education: performance-based, policy-based and area-based.

Indonesia attempted to adopt block grants for its autonomous HEIs a few years ago. However, the initiative was blocked by the Ministry of Economy and Finance, which argued that there was no legal basis for such a funding scheme. Line item budgeting is thus still predominantly practiced. Through initial funding support from the World Bank and Asian Development Bank, the government has funded a number of performance-based and competitive higher education projects, several of which were later adapted by the government (Wicaksono and Friawan 2011). In addition, the government provides extra funding to HEIs for enrolment and graduation of students in identified areas of skill shortage and priority fields of study (Ting 2014).

Malaysia uses block grants that involve multi-year funding arrangements to fund its public HEIs, and the funding is disbursed once every year. Unspent public funds must be returned to the government at the end of the fiscal year. The two reform action plans covering the period 2007–2015 identified performance-based and competitive funding as key to improving higher education funding. The latest blueprint has endorsed a more sophisticated funding arrangement, and the government has attempted to attract more funding from industry and endowments and adopted performance-based funding formulas for a significant proportion of its budget (MOHE 2015).

Public funding arrangements are perhaps the least advanced in Vietnam, as the government still widely uses line item-budgeting and historical or political allocations to support public HEIs.

In sum, governments in the region are attempting to attract more funding from industry, albeit with varying degrees of success. Thailand and Malaysia, for example, allocate significant funds to incentivise HEIs to experiment with innovative spin-off projects and to encourage HEIs and industry to collaborate. However, even more developed countries like Thailand and Malaysia find it challenging to secure funding from industry or foster HEI-industry collaborations given the nature of heavy reliance on small and medium enterprises and foreign multinational companies in the economies.

2.2.1.3 Student loans

Student loan schemes in Thailand and Malaysia are more mature than those in Indonesia and Vietnam, yet challenges remain, especially regarding repayment. Thailand adopted its Student Loan Fund in 1997. This low-interest scheme covers both tuition fees and living allowance and is targeted at HEIs accredited by the Office for National Education Standards and Quality Assessment. The Thai scheme is not income contingent, although in 1997 the idea of adopting an income-contingent loan scheme was mooted. Upper secondary school students and undergraduates are eligible to apply for student loans. The government sets the maximum loan amounts for various fields of study, with engineering and medical science students eligible for higher levels of funding. Because it is not income contingent, students are required to start repaying their loan immediately after graduation or once they stop borrowing, and they have 15 years to pay it off. A government-endorsed public bank is designated to handle student loans, and a certain budget is allocated to target HEIs every year. Assessment for loan eligibility and determination of loan amount are done by a committee set up by the HEI, leading has led to criticism of the loan scheme for being supply-side oriented (Tangkitvanich and Manasboonphempool 2011; Rantz and Tangchuang 2005). Loan default rates are high, with repayment reportedly standing at some 20 percent of the loan portfolio.

Malaysia also adopted student loans in 1997. Higher education loans and student savings schemes are handled by the National Higher Education Fund Corporation (PTPTN) under the Ministry of Higher Education. Borrowers can get loans to attend local HEIs/programs that are accredited by the national accreditation agency. The loan amount depends on family income, degree level and field of study (with higher amount for medical sciences), and HEI status (public or private). The loan is not income contingent, and student loan repayment starts six months after graduation or when borrowing stops. Malaysia's student loan system and

management appears more sophisticated than Thailand, as reflected in better repayment and lower default rates, although repayment defaults pose an operational challenge. With new enforcement measures, including the listing of all student loans in the Central Credit Reference Information System, the blacklisting of student loan defaulters by the Immigration Department, and legal action (albeit rarely practiced given judicial complicity) have led to better repayment rates since 2015. According to discussion with the PTPTN, the repayment rate stands at more than 50 percent of the overall student loan portfolio and more than 80 percent of borrowers pay back their loans. The financial sustainability of the student loan scheme could be problematic given that the interest rate charged is very low (i.e. 1 percent per year), while the PTPTN pays higher interest rates for the funds it borrows from private banks. In recent years, there has been a move towards incentivising student savings to reduce financial pressure on the government.¹

Indonesia attempted to introduce a student loan scheme in 1998. The initiative was short-lived and abandoned in 2001. So far, the government has yet to introduce any new student loan scheme. Vietnam piloted a student loan program in 1994. Initially targeted to four public HEIs, the program was later rolled out to other HEIs. In 1997, the program was formally endorsed by the Vietnamese government, and a credit fund was established a year later. Students can take out interest-free loans and have up to 15 years after they graduate to repay their debt (Dai 2006).

2.2.2 Finance at the institutional level

The most marked regional trend is concomitant decreases in government funding to HEIs as they increasingly adopt new financing models that seek private sources of funding. Thailand's autonomous HEIs have three main funding sources: block grants from government; tuition fees; and revenues from service provision such as healthcare and medical services, patents, and asset rental. Autonomous HEIs rely on government funding for 30 to 40 percent of their institutional expenditure, and the two other sources for the rest. Public HEIs still rely heavily on public funding for 80 to 90 percent of their expenditure and tuition fees for the rest.

In Indonesia, Malaysia and Vietnam, the government is the major funder. In Indonesia, public HEIs depend heavily on government funding. Selected prominent autonomous HEIs like Gadjah Mada University and Universitas Indonesia have established private revenue streams, which can total some two-thirds of total revenue (Husen 2016). In Malaysia, even autonomous HEIs rely on the government for 80 to 90 percent of their expenditure, with the rest coming mainly from tuition fees and other services. The Malaysian Higher Education Blueprint lays the foundation for more diverse funding sources with a pronounced shift towards per student and performancebased funding models, and aims to attract more funding from private sources. In Vietnam, the government funds some 90 percent of institutional expenditure, with the remainder coming mainly from tuition fees for the special programs HEIs offer, usually in the evening.

Governments in the four countries urge HEIs to undertake greater research and innovation, especially in partnership with industry with the aim of commercialising research and innovation results. Thailand and Malaysia in particular have invested hundreds of millions of dollars in the past two decades to promote joint collaborations between HEIs and industry as well as local communities. These investments often take the form of incentives and funding that make joint research and innovation projects possible. In both countries, a few prominent HEIs have worked closely with key industries in areas that play significant roles in national development. However, even in these more advanced economies, university-industry linkages have remained

Pers. comm. with a Malaysian senior technocrat, December 2015.

relatively weak. By contrast, the Indonesian and Vietnamese governments have taken less vigorous measures, and joint collaborations between HEIs and industry have not been feasible.

In Thai and Indonesian autonomous HEIs, the governing board is the highest authority that makes financial decisions, including about budget allocations for recurrent and investment expenditures. Once the board approves the budget plan, it is implemented by the top executive team. In Thailand, some select autonomous HEIs require prior approval from the board for large expenditures above a certain threshold; for example, Chulalongkorn University must get prior approval for expenditures in excess of USD6.3 million. In Indonesia, before the regulation on autonomy was passed, HEIs typically allowed faculties to keep self-generated revenues in their own accounts to avoid the transfer of funds to central government. This was because the process and procedure to withdraw funds was cumbersome and bureaucratic. Such revenues are now transferred to the HEI's account, thus consolidating the power of the top executive team.

In Malaysia, although the board is the highest authority dealing with financial decisions, the law requires that decisions about expenditures above a certain threshold be made by a ministerial committee, leaving vice chancellors and their deputies to oversee everyday financial activities. In Malaysia and Thailand, each HEI puts all their revenues, including government funds, into a single account; and financial authorisation for a certain level of expenditure is devolved to the deans and heads of administrative division. At Thailand's Chulalongkorn University, for example, approval from the faculty council, which comprises all the heads of dependent departments, elected staff representatives and a few external experts, allows deans to approve expenditures below USD1.6 million, and at King Mongkut's University of Technology Thonburi the threshold is set at USD319,000.2 In Vietnam, the rectorate is the highest institutional body that makes financial decisions, with the technical supervisory ministry overseeing institutional financial management.

3. Key literature on higher education finance in Cambodia

This section overviews publications on Cambodian higher education finance, especially those published since the late 1990s. It does not intend to systematically review Cambodian literature against the conceptual framework or contrast Cambodia's experience with the regional experiences discussed in Section 2. Rather, it focuses on the most critical aspects of finance, at both system and institutional levels, as identified in these publications.

3.1 Higher education finance

Studies on higher education finance at both the institutional and system level in Cambodia are very limited in number and scope. The latter address only public spending on higher education. Overall, they barely elaborate on the financial schemes and mechanisms for higher education. This might be because the higher education governance system is fragmented, as discussed in the twin paper on *Governance in Public Higher Education in Cambodia* (Mak et al. 2019).

This section summarises three studies on higher education finance, the most prominent of which is the following report:

1. Minxuan Zhang and Mark Bray. *Cost Sharing and Higher Education in Cambodia*. Phnom Penh: MOEYS and World Bank, 1997.

Pers. comm. with staff at Chulalongkorn University and King Mongkut's University of Technology Thonburi, December 2015.

This report was commissioned by the World Bank and AusAID. The objective was to find the best way to finance higher education in Cambodia with regard to promoting quality. It recommended financial cost sharing through tuition fees (to cover 20–30 percent of real unit costs) and scholarships for gifted low-income students, and it was suggested that the National Institute of Business (now the National University of Management) pilot fee-paying programs, a project sponsored by USAID. The tuition fees were calculated based on political assessment as there had been no fee-paying enrolments since the reopening of HEIs after the fall of the Khmer Rouge regime in 1979.3 If the pilot was successful, it was recommended that the number of regular (scholarship) student places be frozen, the number of fee-paying places increased and the program rolled out to all public HEIs.

At the institutional level, the report suggested that HEIs keep all the revenues from feepaying programs, but stipulated that a strong audit system be put in place to ensure budget transparency and accountability. This was to be achieved through the agreement of all stakeholders. Importantly, it was suggested that the money be allocated to four categories of spending: supplemental pay (40 percent), improving teaching and learning quality including administrative support (30 percent), student support services (20 percent), and the technical supervising ministry (for a scholarship foundation) (10 percent).

The next notable publication on financing higher education was authored by Francois Orivel and commissioned by the World Bank.

2. Francois Orivel. Financing of Higher Education in Cambodia. Phnom Penh: MOEYS, 2009.

At the time of Orivel's study, Cambodia was among the countries that spent the least on education in general and higher education in particular. Public spending on education as a share of total public spending had fluctuated significantly since the 1990s, but stood at 12.5 percent on average or 0.1 percent of GDP, eight times lower than the world average. Of the total public spending on education, higher education was allocated 3 to 4 percent on average, five to six times lower than the world average.

At the institutional level, cost sharing through fee-paying programs had been widely accepted since the late 1990s. The rationale behind the opening of fee-paying programs in public HEIs was based on two assumptions: fees would allow public HEIs to expand their capacity which had stagnated since the mid-1990s, and would also cover overtime payment (supplemental salaries) to help retain teaching staff.

A main problem was a lack of public regulations governing the quota of fee-paying places or the minimum/maximum fees that students had to pay, as mentioned in Zhang and Bray's 1997 report. What was happening on the ground was a race to the bottom, even among public HEIs, to attract students as funding from the government had flatlined. Consequently, 83.9 percent of higher education spending in Cambodia was privately funded, in almost complete contrast to the average public spending on higher education of 70–80 percent in more advanced countries in the region.

Another highlighted issue was that the government did not enforce the policy for supplemental salaries for teachers in public HEIs, most likely because the capacities of different public HEIs to attract fee-paying students were uneven. Each institution therefore set up its own rules, though these rules were not necessarily publicised.

Personal conversations with participants at a workshop to discuss fee-paying programs revealed that students locked the university gates in protest against the introduction of tuition fees.

At the time of study, teachers in public HEIs received an average monthly salary of USD100 for a 12-hour week, or about USD2 per hour. Extra teaching hours, however, were paid at a significantly higher level. A typical teacher with a master's degree teaching undergraduates (paid USD12 per hour) could get a 300 percent increase in remuneration by working 50 percent more hours. Therefore, they would not hesitate to sacrifice research for extra teaching duties.

A more recent publication is the policy paper commissioned under HEQCIP.

3. Ting Layheng. A Policy Paper on Cambodia's Higher Education Financing and Financial Management in Cambodia. Phnom Penh: MOEYS, 2014.

This paper examines government funding for higher education in Cambodia, which despite the increases in public spending on higher education to around 5 percent between by 2012, still ranked among the smallest share of public spending in the region.

At the institutional level, HEIs continue to rely on tuition fees for their financial health as the government provides limited support to the subsector. Complicating the meagre budget disbursement is the fact that funding to HEIs is done on a line-item basis.

Similarly to Orivel (2009), Ting hones in on HEIs' poor management of self-generated revenues from tuition fees and weak accountability mechanisms, and raises concerns about the calculation of supplemental pay. She suggests that pay inequity and inequality may be a problem at the institutional level and notes that at the time of study funds allocated to miscellaneous institutional activities accounted for 21 percent of total expenditure.

The paper also touches on government spending on research and innovation, which despite wide acknowledgment of its relevance to socioeconomic growth and evidence-based policy formulation, has remained static. Just USD4.58 million of the USD23 million for HEQCIP 2010-15 was set aside for the competitive development and innovation grants to promote research at Cambodian HEIs.

4. Public higher education finance in Cambodia

This section is divided into two parts. The first examines public higher education finance at the system level and the second focuses on the same at institutional level.

4.1 Higher education finance at the system level

4.1.1 Financing mechanisms

Financial management at public HEIs has changed remarkably over the years, shaped by tension between autonomy and centralised management. Partial program-based budgeting (PB) has been implemented in the education sector since 2008, superseding the 2001 Priority Action Program. PB mainly covers the recurrent budgets of public HEIs. The recurrent budget includes line items such as civil servants' salaries and allowances (which in recent years have been paid directly into individual private accounts), utilities (electricity and water) and capacity development activities (mission allowances, workshops). In 2015 MOEYS started implementing full PB, which means that the entire education budget will eventually be attached to specific programs and specific performance indicators.

Funding to public HEIs takes the form of line-item budgeting. In principle, this allows for stricter budget reallocation control, which must adhere to the rules and procedures set out in the Financial Management Manual issued by the MEF in 2007 and the official proclamation,

or "prakas", on the Adoption of the Guideline on Project Budgeting Implementation enacted in 2014. The guideline sets out the procedures for transferring budget allocations in order to meet actual needs. For instance, a credit transfer must be issued by subdecree proposed by the MEF. The transfer of credit from one account to another within the same Section must be approved by the MEF through a prakas issued by MOEYS. The transfer of credit from one subaccount to another under the same account must be approved by the technical supervising ministry with a copy to the MEF.

Ting (2014, 41–42) cautions that such a strict system "does not encourage universities to form their own strategies for resource utilization". Any unspent budget in each fiscal year must be returned to the treasury. Performance-based financing (e.g. performance contracts, performance set-asides, competitive funds, and payment by results) is either absent or in the infancy stage. Cambodia has lagged far behind Thailand, Indonesia, Malaysia and Hong Kong, which have introduced block grants and matching funds to achieve their development goals. Thailand has also allowed its autonomous universities to roll over the budget that they have not used in a particular year to the following year. By contrast, none of Cambodia's HEIs have institutional long-term action plans or strategic rolling plans. For example, when autonomous universities in Thailand request funding, they are required to develop and submit a three-year rolling budget plan to the Bureau of Budget.

In Cambodia, each public HEI is required to prepare an annual operational plan and submit it to the technical supervising ministry for negotiation and consolidation and then to the MEF for budget negotiation and approval. Public HEIs merely submit their program-based budget requests to the MEF, rather than a single consolidated budget plan, and without reporting their other revenues. MOEYS, other technical ministries and the MEF scrutinise and negotiate the budget requests from each public HEI. The approved budgets are then sent to the National Assembly and Senate as a draft Consolidated Annual Budget Law for endorsement, pending enactment by royal decree. Irrespective of changes in public budget management, funding has been in the form of non-block grants based on the historical/political formula (see Hauptman 2007a). Once the budget is approved, funds are transferred to each HEI's Treasury Single Account, from which quarterly disbursements are made (SNEC 2015). The rectors/directors of public HEIs are authorised to manage the budget, and the rectors/directors of PAI HEIs are budget managers.

Budget disbursement is complex. Each public HEI receives the first quarter budget allocation, while the second disbursement is made when the HEI sends in its expenditure clearance form and supporting documents. Conversations with administrators at select public HEIs suggest that disbursement procedures are complex and bureaucratic. Procurements follow the Regulations on Public Procurement. According to these regulations, purchases and procurements under a certain threshold are managed by HEIs, and procurements above this threshold are managed by MOEYS and MEF.4

The public budgets of some PAI HEIs have decreased over the years. This is especially true for the PAI HEIs under MOEYS, for which only civil servant salaries and allowances are covered by the state and the rest mainly by their self-generated revenues. PAI HEIs that still receive other financial support from the state need to prepare their annual operational plans. Yet instead of lodging these plans with the technical supervising ministries, they submit them directly to the MEF with a copy to technical ministries. Once the budget has been approved, the funds are put into a Treasury Single Account.

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For more details, see RGC (2015) and MEF (2015).

Two areas of funding – or the lack of – are worth mentioning. There is no separate funding for research and innovation projects at HEIs, nor for large-scale capital investment in higher education. Budgets for research and innovation and capital investment form an integral part of the proposed annual operational plans, but they are still very small in proportion and amount. Expenditure mechanisms follow the general rules and procedures for public expenditure. This has especially serious implications for the promotion of research and innovation, which should have their own funding mechanisms and procedures.

4.1.2 Sources of funding

There is no aggregated data on total, private and public expenditure on higher education in Cambodia, and such data is patchy at best. Available evidence suggests that the level of public funding for higher education has been persistently low. Funding for higher education from development partners has likewise been insignificant. The main and increasing source of funding for higher education in general, and for public HEIs since 1997, has been from private sources, especially tuition fees. As Ahrens and McNamara (2013) note, Cambodian higher education has moved closer to the perception that higher education is a private rather than a public good. And this has serious and unpleasant implications and consequences for higher education access and quality, core services of public HEIs, higher education development, and the economy and society at large.

Public funding for higher education has been persistently and chronically inadequate, making it difficult to improve access and quality (Table 2). Until 1996, higher education in Cambodia was totally dependent on government funding. Since the introduction of feepaying programs, public funding for higher education has halved from around 20 percent of total public spending on education in 1989 to around 9 percent in 2016 (MOEYS 2017). Aggregate data on funding for higher education was not available at the time of study, though anecdotal evidence suggests that funding via other ministries for higher education has been minimal.⁵ Public funding for higher education via MOEYS was around 0.0005 percent of GDP in the past decade and less than 10.0 percent of the total education budget in recent years, climbing from 4.0 percent in 2012 to 9.0 percent in 2016. Cambodia is the lowest spender on higher education in ASEAN, trailing far behind the world average of 1.0 percent of GDP, the OECD average of 1.4 percent of GDP and the world average of 15–20 percent of total education spending. Notably, Cambodia's expenditure on higher education is way behind that of its more advanced ASEAN peers: throughout the 2000s, Malaysia spent some 35 percent, Indonesia 23 percent (Ting 2014) and Thailand 24.0 percent (Michel 2015) of their education budgets on higher education. Cognisant of the importance of higher education, the Cambodian government has increased the education budget, yet expenditure on higher education is still very low. Actual annual spending on the dozen or so public HEIs under MOEYS, the Directorate General of Higher Education (DGHE) and the Accreditation Committee of Cambodia (ACC) was around USD10 million between 2010 and 2012 (Table 2). In more recent years, higher education expenditure has generally been stable. As an illustration, higher education expenditure was USD15,069,541 in 2014, USD9,715,322 in 2015 and USD6,928,267 in 2016 (excluding wages).

Two other aspects of public higher education funding are noteworthy. Public expenditure on capital investment remains virtually non-existent, and significant capital budget is often funded by multilateral institutions such as the World Bank or bilateral partners such as Japan, France and South Korea. The biggest share of public expenditure goes to recurrent

In 2016, public funding allocated to the University of Health Sciences, a main university, was just USD1.5 million (Sok 2016).

expenditure, especially utilities and civil servants' remuneration (Ting 2014). Paradoxically, public funding for public HEIs, especially some PAI HEIs, has decreased over the years. Some PAI HEIs receive virtually no public funding except for remuneration, and some large Phnom Penh public HEIs reported that public funding covers roughly 10 to 20 percent of their annual expenditures. Smaller and provincial HEIs, however, have a significantly higher proportion of their expenditure covered by government funding.

Table 2: Government expenditure on higher education (USD), 2008–12

Year	Total MOEYS budget	Actual public sending on HE	Total GDP (billion)	MOEYS budget as % of total GDP	Spending on HE as % of total GDP	Spending on HE as % of total MOEYS budget
2008	155,500,000	7,550,525	10.4	1.5	0.07	4.9
2009	185,636,500	11,294,975	10.4	1.8	0.11	6.1
2010	206,219,750	10,547,650	11.3	1.8	0.09	5.1
2011	228,974,575	10,500,675	12.9	1.8	0.08	4.6
2012	251,906,600	10,241,150	14.2	1.8	0.07	4.1

Sources: MOEYS Expenditure Reports (2007-2016) for expenditure data; Australia's Department of Foreign Affairs and Trade for GDP data (Ting 2014)

Aggregate data on support from development partners for higher education in general and public HEIs in particular was not available at the time of study. Some development partners (especially multilateral institutions) work through the supervising ministries, while others (especially bilateral partners) work directly with HEIs, even with individual academic departments. Attempts to access such data from HEIs by previous studies were unsuccessful (for example, DRF 2010) and the official surveys conducted to obtain such data are incomplete. A general observation is that development partners' support for public universities is weak and variable, depending on external linkages. Such support is mainly in the forms of joint research projects and capital investment in physical infrastructure. The Institute of Technology of Cambodia (ITC), for example, is known to have numerous joint projects co-financed by its partners and has received significant investment in physical infrastructure from France and Japan. The Royal University of Phnom Penh (RUPP), the Royal University of Agriculture (RUA) and the University of Health Sciences (UHS) have also received significant research projects and supports from external partners. External support for higher education via the supervising ministries, especially MOEYS, has been limited. Dy (2015, 34) observes: "The flow of funding from development partners during the 1990s and 2000s to rebuild the basic education system detracted the government's attention and resources away from post-basic education, leaving higher education largely neglected and under-prioritised."

Overall, donor investment in higher education over the last 25 years has been insignificant, especially relative to investment in general education. The World Bank is the sole major donor that channels its funding through MOEYS. The first USD3 million directed to higher education through the Cambodian Education Sector Support Project 2005–11 marked a soft start to the World Bank's involvement in the subsector. RUPP was allocated USD1 million mainly to expand the Hun Sen Library; the ACC received USD1 million mainly to produce regulations and build human capacity; and DGHE received USD1 million again mainly to produce regulations and build human capacity. This was followed by the USD23-million HEQCIP 2011–17, Cambodia's first long-term higher education project. At the time of the writing, with the successful implementation of the project, the World Bank and the Cambodian government were preparing to roll out the second large-scale project of USD92.5 million – the Higher Education Improvement Project 2018–24.

4.1.3 Tuition fees

Tuition fees for tertiary education vary significantly between HEIs and are based on the types of degrees offered. Prominent private universities and UHS charge thousands of dollars for their degree programs, while some HEIs charge as little as USD100 a year for a bachelor's degree (Ting 2014). Apart from UHS and ITC, which charge relatively high tuition fees, all other public HEIs under MOEYS generally charge between USD400-600 a year for bachelor's degree programs, and around USD1,000 a year for master's degree programs.

Tuition fees, according to surveys by Orivel (2009) and Ting (2014), have increased only slightly, barely enough to offset inflation. They found that between 2008 and 2012, on average, tuition fees at private HEIs increased from USD325 to USD378 and at public HEIs from USD267 to USD291. These fees are lower than in 1997, when the first private university charged around USD600 a year for a bachelor's degree. Observations suggest that tuition fees at public HEIs have increased by as little as USD100 in the past decade.

The share of private expenditure on higher education since 1997 has increased steadily. Aggregate data was not available at the time of study; however, it can be assumed that there has been an exponential increase in private expenditure given the rapid increase in the number of fee-paying students, from a few thousand in the 1990s to more than 200,000 in recent years. That is, some 90 percent of tertiary students are self-sponsored. Supposing each student spends an average of USD400 a year on tuition fees, total annual private expenditure on tuition fees alone (excluding living costs) would be USD80 million, roughly eight times the annual public expenditure. The large share of private expenditure in total higher education spending is also reflected in anecdotal reports that the tuition fees and other revenues public HEIs generate account for almost 90 percent of their annual expenditure. Personal conversations with experts and scholars from Thailand and Malaysia relay a different experience in those countries. In Malaysia, 80 to 90 percent of public (including autonomous) HEIs' funding comes from government, and in Thailand even autonomous HEIs receive 30 to 40 percent of their funding from government.

Overall, public funding for public HEIs is low, whether they come under MOEYS or other state agencies. Public spending on UHS, supposedly one of the most important universities for Cambodia's development, is illustrative. The UHS receives little state funding, and its reliance on tuition revenue for its operation and development has steadily increased. In 2008, there were some 4,300 students at UHS, 20 percent of whom were eligible for fee waivers (Orivel 2009). The total budget then was some USD3 million, 70 percent of which was tuition revenue and 30 percent (i.e. USD935,904) government funds (Orivel 2009). The government spent USD220 per student or USD1,060 per fee-waiver student. In 2015, the government budget allocated to UHS was USD1.5 million, much of which went on civil service salaries and electricity. The total number of students was 7,665, 10 percent of whom were eligible for a fee waiver, giving an estimated tuition revenue of USD8 million. Thus government funding accounted for 14.7 percent of UHS's total revenue, suggesting a significant decline in the share of government funding. Estimated public spending declined to USD196 per fee-paying student or USD1,960 per fee-waiver

Pers. comm. with informants at public HEIs.

student. A large slice of the self-generated revenue went on paying teacher salaries and savings for capital investment. Little went to research and innovation.⁷

Low public expenditure on higher education and heavy reliance on private expenditure have numerous unfavourable implications and consequences for higher education development as well as for the society and economy at large. Access to higher education in Cambodia is low compared with that in other ASEAN countries, recorded at 16 percent in 2014, 12 percent in 2015 and 11 percent in 2016. The pay-for-your-own higher education and limited steering and investment from the state to areas of study which are of priority for national development have given rise to popular low-cost majors, predominantly business studies (almost half of enrolments), foreign languages, especially English (12 percent of enrolments) and IT, mainly programming and networking (10 percent of enrolments). Important value-added majors such as basic sciences, engineering, agriculture and medical sciences that can provide graduates with knowledge and skills key to the country's economic and social advancement attract fewer students. Similarly, majors in creative arts, philosophy, social work and community development that are core to promoting national identity, culture, social cohesion and civic engagement are less marketable; hence enrolment rates remain low.8 The rapid increase in students has enabled the mushrooming of private HEIs and fee-paying programs at public HEIs, which have presented challenges for the state to properly monitor and supervise higher education development, leading to stakeholders expressing grave concern about subprime degrees (Ford 2013; Ting 2014).

Another repercussion of reliance on student fees for funding, especially in a context where the subsector is not fully supervised and state regulatory and oversight capacity is rather limited, is the race-to-the-bottom competition in tuition fees to attract and retain students. Increasing competition for enrolment has undermined education quality and teacher wages. In turn, low pay undermines HEIs' ability to attract and retain competent teaching staff (Ting 2014).

4.1.4 Scholarships, student loans and subsidies

Up until 1997, the state was the sole provider and sponsor of public higher education, and provided roughly 2,000 scholarships (i.e. largely free places at HEIs) a year to high school leavers. Since 2008, the number of tertiary students has increased to more than 200,000, with an annual intake of 40,000–50,000 new students. Yet the state has only provided scholarships to some 10 percent of the total intake, or around 4,000-5,000 scholarships (Table 3). In 2013 the total number of scholarship students enrolled at public HEIs was 18,906, or 18.7 percent of total enrolments in tertiary education, up from 9,097 (16.4 percent) in 2009. Although the number of scholarships has more than doubled in the past decade, the percentage of high school leavers receiving scholarships is low (Table 4). For example, in 2011/12 only 5 percent of high school leavers received scholarships (Department of Planning cited in Ting 2014).

Scholarships have traditionally been provided by public HEIs and more recently by private HEIs. In 2013/14, for example, public HEIs provided 80 percent of scholarships and private HEIs 20 percent (Ting 2014). The scholarship scheme is managed by the Department of Higher Education (DHE) within MOEYS, and is both merit (based on the aggregate score of selected subjects and the high school leaving exam) and needs-based (targeted at disadvantaged and vulnerable students). Sixty percent of scholarships have traditionally been allocated based on merit and 40

Most of the data for 2015 draws on a presentation one of the authors made at a conference held at UHS in

For instance, only 17 scholarship and 7 fee-paying students enrolled in the 2017/18 Community Development course at the Royal University of Phnom Penh, according to a faculty member.

percent to priority students, mainly female students, poor students and those from rural areas. However, not all students awarded a scholarship follow through. In 2012/13, for example, 17 percent of the grantees dropped out or did not enrol in their nominated HEI (Ting 2014).

Table 3: Scholarship targets, 2007/08 to 2016/17

V	Mania	Priority		Total %.		% Priority			
Year	Merit	Female	Poor	Rural	Merit	Female	Poor	Rural	
2016/17	3,855	873	1,241	377	6,346	61	14	19	6
2015/16	3,457	734	1,013	318	5,522	63	13	18	6
2014/15	3,052	677	914	293	4,936	62	14	18	6
2013/14	2,859	687	912	348	4,806	59	14	19	7
2012/13	2,760	659	907	281	4,607	60	14	20	6
2011/12	2,848	762	771	543	4,924	58	15	16	11
2010/11	2,333	623	675	409	4,040	58	15	17	10
2009/10	2,001	498	516	330	3,345	60	15	15	10
2008/09	1,949	479	513	319	3,260	60	15	16	10
2007/08	1,569	392	392	262	2,615	60	15	15	10

Sources: Adapted from Ting 2014, 31-32; DHE 2017

Table 4: Tertiary scholarships vs number of high school leavers, 2011/12 to 2016/17

Year	Number of scholarship students via MOEYS	Number of high school leavers	Scholarships as % of high school leavers
2016/17	5,026	55,753	9.01
2015/16	4,380	46,560	9.41
2014/15	3,589	33,997	10.56
2013/14	4,116	91,370	4.50
2012/13	4,450	96,023	4.63
2011/12	5,638	92,236	6.11

Source: Statistics compiled by Admissions Office, Department of Higher Education 2017

Table 5: Expenditure per student at selected public HEIs in 2011/12

	Public	Total	Share of public
HEI	expenditure/	expenditure/	expenditure in total
	student (USD)	student (USD)	expenditure/student (%)
Svay Rieng University	134	317	42
Meanchey University	177	331	54
Kampong Cham National School of	181	337	54
Agriculture			
Institute of Technology of Cambodia	139	432	32
Royal University of Fine Arts	915	1,101	83

Source: Ting 2014, 9

Scholarships in Cambodia are mostly in the form of a tuition-fee waiver, given that the stipend provided is meagre or non-existent. The monthly stipend was USD3-4 per student two decades ago and is now around USD10 for 10 percent of the enrolees at public HEIs, and nil for those at private HEIs. The scholarship funding channelled to public HEIs via program-based budgeting lags far behind tuition provision. Public spending on higher education per student is lagging too. In 2010, Cambodia spent USD218 per tertiary student, compared to USD531 in Vietnam

and USD816 in Thailand (UNESCO 2014). Public expenditure per student in Cambodia varies significantly between HEIs, largely depending on the student-teacher ratio. Table 5 shows the results of a survey of five public HEIs in 2011/12; public spending per student at the Royal University of Fine Arts (RUFA), where there are fewer students per teacher, was USD915, compared to only USD134 at Svay Rieng University (Ting 2014). An emerging trend reported by some public HEIs is a shift in financial responsibility for state-sponsored scholarships to some PAI HEIs, which receive no budget allocations for the scholarships they provide via the technical ministry or the living stipend they are expected to provide to grantees.

Apart from the scholarships administered by the DHE, it has become customary for public HEIs to provide scholarships in the name of prominent public figures or institutions. These scholarships outnumber those administered by the DHE, with some HEIs providing hundreds of scholarships. However, the selection procedure and criteria are not determined by the HEIs themselves, which merely receive a list of grantees from the individuals or institutions concerned.9 Few public HEIs administer their own scholarship schemes and the number of scholarships they provide is very small.

The provision of a more liveable stipend and full-fee scholarships for each grantee has been piloted under HEQCIP. Under the pilot, 1,000 students from low-income families were selected to join the scheme. Their tuition fees were paid directly to the HEI of their choice and a monthly stipend of USD75 for Phnom Penh-based students and USD90 for province-based students was transferred to their bank accounts. The retention rate for these students was exceptionally high with close to 90 percent of them graduating, some from prominent HEIs such as ITC and UHS. The results of the pilot program have big policy implications for scaling up the initiative, yet so far have received little attention at the policy or political level.

Unlike more advanced countries in the region, Cambodia does not have a national student loan scheme. Under HEQCIP, a study was commissioned to better understand neighbouring countries' experiences of student loans and the current status of student loans in Cambodia. A draft policy on scholarships, subsidies and student loans has been prepared and is pending further revision and formal endorsement and implementation (if any). Many stakeholders, especially from the private sector, seem to be enthusiastic about national student loans, however, the limited capacity of the government to handle such a loan scheme (especially to ensure proper repayment) means that any initiative should proceed with caution. Sporadic efforts from non-state actors to offer student loans exist, with a number of private banks and a few NGOs offering student loans, usually with high interest rates (up to 1.0–1.2 percent per month) and early repayment schemes. Some private HEIs have also offered a limited number of loans to their students, each with their own rules and regulations on repayment (Ting 2014).

4.2 Higher education finance at institutional level

This section looks into funding sources at public HEIs, institutional expenditure mechanisms, and institutional revenue generation.

4.2.1 Sources of funding

Very little has been documented about the sources of finance of public HEIs in Cambodia. Ting (2014) attempted to survey the sources of finance of all public and private HEIs, but only five public HEIs returned the questionnaire. The survey results indicate that the three main sources of finance are government funding, tuition revenue and non-tuition revenue such as private donations, contract research, consultancies and business activities (e.g. canteen and hall rental). On average, government funding between 2008 and 2012 accounted for around one

Pers. comm. with HEI administrators.

third of respondent HEIs' total expenditures, tuition revenue slightly more than one third, and other self-generated revenue slightly less than one third (Table 6). In short, the self-generated revenue accounted for two-thirds of expenditures and government support was still significant (see Ting 2014).

Not one PAI HEI took part in the survey. However, some PAI HEIs receive less government funding than public HEIs. The National University of Management and the Royal University of Law and Economics, for example, receive no government funding, except for the salaries of their small pools of civil servants. According to their financial reports, they depend almost entirely on self-generated revenue to cover their operational costs; government funding for civil servant salaries accounts for around 10 percent of annual expenditure. UHS and the RUA still receive financial support from the government. However, public spending on UHS has declined in percentage terms. For example, the USD800,000 it received in 2008 accounted for some 20 percent of total expenditure, while the USD1.5 million allocated in 2015 accounted for roughly 15 percent.

Table 6: Public expenditure on higher education in 2016

Sub- program	Unit	Approved budget (KHR)	USD	Revised budget (KHR)	Actual expense (KHR)	Actual expense (%)	Unspent funds (KHR)	(%)
]	Program 2	36,879,800,000	9,219,950	35,167,352,000	27,713,069,768	78.80	7,454,282,232	21.2
2.1.	Department of Higher Education	3,732,800,000	933,200	3,603,300,000	2,530,353,252	70.22	1,072,946,748	29.8
2.2.	Department of Scientific Research	4,444,700,000	1,111,175	3,947,900,000	3,233,828,695	81.91	714,071,305	18.1
2.3	Royal University of Phnom Penh	3,632,600,000	908,150	3,632,600,000	2,640,795,555	72.70	991,804,445	27.3
2.4	Royal University of Fine Arts	459,500,000	114,875	459,500,000	434,974,890	94.66	24,525,110	5.3
2.5	Chea Sim University of Kamchaymear	3,811,400,000	952,850	3,733,400,000	2,736,665,322	73.30	996,734,678	26.7
2.6	Institute of Technology of Cambodia	2,387,300,000	596,825	2,387,300,000	2,156,070,790	90.31	231,229,210	9.7
2.7	National Institute of Education	5,783,600,000	1,445,900	5,477,939,000	4,243,853,655	77.47	1,234,085,345	22.5
2.8	Svay Rieng University	3,396,000,000	849,000	3,268,927,000	2,952,403,300	90.32	316,523,700	9.7
2.9	Mean Chey University	3,177,000,000	794,250	3,177,000,000	2,565,094,140	80.74	611,905,860	19.3
2.10	University of Battambang	3,026,500,000	756,625	2,889,186,000	2,385,597,529	82.57	503,588,471	17.4
2.11	National University of Management	0	0	0	0	0	0	0
2.12	Royal University of Law and Economics	0	0	0	0	0	0	0
2.13	Accreditation Committee of Cambodia	2,410,200,000	602,550	2,137,100,000	1,451,869,740	67.94	685,230,260	32.1
2.14	Kampong Cheuteal Institute of Technology	618,200,000	154,550	453,200,000	381,562,900	84.19	71,637,100	15.8

Source: General Directorate of Administration and Finance 2017

Some slight variations in public funding are noteworthy. First, provincial public HEIs receive a higher share of government support than Phnom Penh-based public HEIs, and generally generate relatively negligible non-tuition revenue (Table 7). The higher public expenditure is understandable in that provincial HEIs are generally newly founded and need more investment, while student preference to study at Phnom Penh-based HEIs leaves provincial HEIs with fewer fee-paying students. Second, RUFA, which given its role in the promotion and preservation of the arts, culture and tourism should be considered a key public university, receives the smallest proportion of public revenue. Third, PAI HEIs generally receive much less government funding than public HEIs, with tuition fees the sole major source of income. Conversations with staff at several public (including PAI) HEIs and a review of a few financial reports from sampled HEIs indicate that their annual surplus is small – at around 10 percent of annual self-generated revenue. Public HEIs have built up reserves, which are deposited at private banks. Some big public HEIs have a reserve of around USD10 million.

Table 7: Distribution of income of selected public HEIs by funding sources (%)

Public HEIs	Year	Government support	Tuition fees	Other self-generated resources
Kampong Cham	2008	54	15	31
National School of Agriculture	2009	5	15	80
	2010	46	15	39
	2011	47	15	38
	2012	50	17	33
Institute of Technology	2008	33	44	23
Cambodia	2009	33	35	32
	2010	29	48	23
	2011	27	54	19
	2012	27	53	20
Mean Chey University	2008	35	65	0
	2009	40	38	22
	2010	43	57	0
	2011	49	51	0
	2012	54	46	0
Svay Rieng University	2008	33	67	0
	2009	34	38	28
	2010	57	43	0
	2011	41	59	0
Samuel Adams de la constitución	2012	43	57	0

Source: Adapted from Ting 2014

4.2.2 Revenue generation through commercialisation of research and innovation

Not much is known about the commercialisation of research and innovation. Cambodian HEIs are not known to have created any patents. For some large public HEIs, a big slice of research commercialisation revenue comes from consultancy work for private firms and the fees faculty members pay for using the name of their institutions to bid for research and consultancy projects (DRF 2010).

Because HEIs rely heavily on tuition fees to cover operational costs, they focus mainly on teaching, often at the cost of neglecting investment in research and community services – two core functions of HEIs. Further, teachers at private HEIs and public HEIs with fee-paying programs generally work casual hours and are hourly paid thus failing to induce commitment to research and community service. This has significantly hindered the creation of a strong research culture at HEIs and career pathways for academic staff, and has resulted in poor education quality. To quote Chet Chealy (2006, 24), "research is still in the dark ages for Cambodian higher education"; and community service (both within universities and their broader communities) is thin at best. Some select HEIs, in cooperation with foreign universities, have ongoing community service programs, but it is questionable whether these will be mainstreamed into strategic planning in HEIs.

Although HEQCIP has helped establish a fledgling research culture at HEIs, which in itself is ground breaking, the sustainability of this endeavour is questionable. Poor investment in research and innovation has resulted in few institutional publications and no HEI-based patents. In 2015, for instance, according to the International Science Ranking, Cambodia produced 287 citable documents, way behind its neighbours. With 12,256 HEI teaching staff, that equates to one article per 43 teachers (assuming that all the citable publications were produced by HEI staff, though this was not the case).

4.2.3 Expenditure mechanisms

The budgeting processes for public and PAI HEIs are similar. Each HEI is required to prepare an annual operation plan to request public funds and submit it to the technical supervising ministry for review and endorsement. The plan is then sent to the MEF for negotiation and approval, before the bundled budget for each ministry is sent to the legislature for enactment as an annual budget law for signing off by a royal decree. The annual operation plan is usually prepared by the accounting office in consultation with the rector and vice rector for finance and often with the endorsement of the governing board, if the board is functional. For the budget plan, the general practice is that each dependent faculty and administrative office is asked to supply the accounting office with its annual budget plan. This usually covers mainly the supply of basic equipment and stationery. Both recurrent budget and capital investment are included in the budget plan. The budget plan submitted to the MEF should comply with the guidelines set out in the Guidelines on Procedures to Implement Program-Based Budgeting issued by the MEF in 2014.

The budget disbursement process for public HEIs is as follows. The treasury disburses the budget allocations for the first quarter at the beginning of the fiscal year; the accounting office of each HEI then requests the budget allocation for the next quarter by submitting to the treasury a completed expenditure form and other supporting documents for the quarter; the rector acts as the authorised budget manager; the annual budget plan is prepared by the accounting office in consultation with the rector and must be approved by the supervising technical ministry.

PAI HEIs have more control than public HEIs over budget management because government funds are paid into their designated treasury single accounts. The mechanisms and procedures for budget expenditure are determined by the governing board, with prior approval from the technical supervising ministry and the MEF. The rector is the budget manager and is allowed to manage revenues and expenditures, with formal approval from the governing board of the annual budget plan. The disbursement of government funds follows the guidelines set by the MEF.

The rules for the management of self-generated revenues have changed following the 2015 Royal Decree on PAIs. At the time of writing, however, the decree was not in full force, pending the issuance of a decision to implement it. This decree aims to give PAI HEIs and public HEIs with de facto power to generate revenues more control over how they want to manage their budgets and spend their funds. At public HEIs, the authority to decide on and approve the budget plan and expenditure lies fully with the governing board or, if the board is not fully functioning or non-existent, with the rector/director, with piecemeal or no approval from the board. At PAI HEIs, the rector/director is the designated budget manager and has more control over how the budget is managed than the rector/directors of public HEIs.

Procurement procedures vary, with some HEIs reporting to have set up an internal procurement committee and use the rules and procedures issued by the MEF, while others have yet to adopt serious internal procurement measures. In general, procurement of goods and services follows the procurement mechanisms and guidelines set by the MEF, and is handled by the procurement unit of the HEI. The use of petty cash is likewise governed by the financial management guidelines set by the MEF.

The passage of the new PAI decree is meant to systematise the management of public institutions that generate revenues. In essence, this decree is to transform all public HEIs that generate their own revenues into PAI HEIs and bring them under a single regulatory framework. The decree will bring about a few key changes in financial management, with the budget disbursements for each public HEI transferred to a designated treasury single account. Their annual budget plans will be initially approved by the governing board, then sent to the supervising technical ministry for endorsement and to the MEF for approval. Procurement rules and procedures will have to conform to the regulations set out by the MEF in a separate prakas.

Conversations with government officials and public HEI administrators indicate differences in how this new PAI reform is perceived. The former seem to believe that the new budget disbursement mechanism will systematise financial management in public HEIs and boost transparency and accountability for handling public resources after years of loose regulation. The latter, having had full authority to manage, spend and invest their funds for the past 20 years, appear to distrust the new mechanism, fearing imminent stringent controls over financial management, the centralisation of resources, and the cumbersome bureaucratic administrative requirements they will have to meet before they can "spend their money".

Public HEIs report their financial expenditure to the supervising technical ministry, and PAI HEIs report first to their governing board and then to the technical supervising ministry with notification to the MEF. Both public and PAI HEIs are required to undergo external audits of their financial records. They are audited by the National Audit Authority every one or two years and by MEF and the technical supervising ministry every year (Ting 2014). The law does not require HEIs, whether public or PAI, to share their financial statements with stakeholders or have them audited by a credible private firm, and none has done so. Almost all HEIs have no internal auditors, and there are no internal audit committees directly responsible to the governing boards, as practiced by public HEIs in more advanced ASEAN countries.¹⁰

Pers. comm. with a technical expert on financial management, January 2017.

At public HEIs in Thailand, Malaysia and Singapore, the delegation of authority (financial or non-financial) to dependent faculties and administrative divisions is common (see Sok 2016). In Cambodia, such a practice does not generally exist and almost every financial decision, however small, is usually centralised to the rector, and overall financial management and control lies with the governing board.¹¹ Even at prominent universities such as NUM and RULE, the delegation of financial authority does not exist. At RUPP, given the de facto autonomy of some leading faculties, financial delegations exist but without written rules: in principle each faculty can manage 60 percent of the budget it generates (mainly tuition fees), and the university manages the other 40 percent; in practice the funds allocated to each faculty are kept in the university's account. A survey of 54 Cambodian HEIs in 2011–12 (Un and Sok 2014) identified devolution of decision making within academic management even to the departmental level; however, decisions about financial management and financial administration were generally made centrally by the rector and the governing board. When the decision is to do with budget such as faculty salary and wages, there is a general tendency for lower level administrators to consult top institutional administrators, especially the rector and vice-rector for finance (Un and Sok 2014).

Financial reports and conversations with experts familiar with administrators and accountants suggest complexities and irregularities in financial management at public HEIs. Some public HEIs have no clear internal guidelines, policies and procedures for financial management (of revenues and expenditures); thus financial management is based more on individuals' financial know-how and patchy (sometimes unwritten) rules. At many HEIs, selected dependent faculties and administrative units reported that public funds are managed centrally within the HEI and that they have meagre (though sometimes clearly designated) operating budgets.¹² External monitoring and auditing are often known to be pro forma, while complaints of complexities in the disbursement of public funds are quite common (see Un and Sok 2014). At some public HEIs, the procurement office is either non-existent or not fully functioning. Documents on financial management are usually kept secret, and public access to HEI's financial documents such as financial expenditure and expenditure records and annual budget expenditure reports is hard and restricted. These documents are not widely shared within HEIs either. Such restricted circulation and publication of documents which are generally available to broader stakeholders in more advanced countries does not bode well for the establishment of sound, transparent and accountable financial management or the delegation of greater institutional autonomy. Capacity in accounting, let alone financial management and financial planning, is low, with little on-the-job training or skills upgrading, according to an unpublished assessment by the Directorate General of Higher Education of MOEYS in mid-2016.

5. Concluding remarks

Cambodian higher education finance reform has come a long way in the past 20 years, yet more needs to be done in systematic way to enhance the quality, relevance to the market and society, and equitable access of higher education. It is also important that these reforms bring the higher education system in line with other countries in the region. Cambodia can no longer take its higher education finance for granted if it aspires to have an advanced higher education system that can play a prominent role in knowledge generation, national development and enhanced regional competitiveness. Initiatives to improve funding from the government, diversify institutional funding sources and enhance institutional financial management and performance are needed.

Pers. comm. with a technical expert on financial management, January 2017.

Authors' observations at selected HEIs, 2016.

While efforts to increase funding to higher education and to roll out institutional financial management reforms should be accredited and applauded, there is a need to conduct more earnest systematic financial reforms, at both system and institutional levels, to ensure that higher education plays its role in national development, social progress and engagement, and knowledge building.

Public higher education finance is a complex issue that requires immediate attention and remedial action if Cambodia is to have an advanced higher education system that is quality-oriented and responsive to national development needs. A caveat worth highlighting is that there is no-onesize-fits-all financial management arrangement for higher education, at either the system or institutional level. In August 2017, MOEYS issued the Policy on Higher Education Governance and Finance for Cambodia; the authors were deeply involved in designing and preparing this policy. The policy recommends 10 sets of interlocking policy measures to improve public higher education governance and finance, five of which cover finance, as follows.

- 1. Public HEIs shall have a reliable financial management system and strong internal controls: The current financial management systems at virtually all public HEIs are not robust or reliable enough to prevent non-compliance and potential leakage or ensure strong performance that can deliver desired results. The internal control systems are not up to the required standards to ensure efficiency and effectiveness and reduce mismanagement and malpractice. Likewise, external controls are known to be pro forma, not very rigorous and inconsistent. The actions below are proposed to improve financial management and control:
 - Strategic Action 1: Improve the accounting software and management information systems of public HEIs.
 - Strategic Action 2: Strengthen the capacity of the finance, accounting and auditing staff of public HEIs.
- 2. The higher education system shall be better funded by the state: By any measure, public higher education is poorly funded. Should the current level of funding continue, there is little hope for a significant increase in higher education quality or for improvement in the state's ability to regulate and steer the development of the subsector to achieve its broader national development goals. This calls for significantly more funding for higher education. If Cambodia aims to become a middle-income country by 2030, a status now held by only two ASEAN member states - Thailand and Malaysia, there is a need to gradually increase public funding to at least the level that these two countries funded their public higher education 20 years ago or so. There is also a recommendation to create a national database system to monitor entire investment in higher education with indicators for comparator countries in the region. Three strategic actions are proposed, as follows:
 - Strategic Action 1: Increase public funding for higher education (comparable to Thailand or Malaysia in the medium to long term).
 - Strategic Action 2: Create a national database on higher education budgets and expenditures and make it widely available to stakeholders.
 - Strategic Action 3: Develop and implement the national scholarship, subsidy and student loan schemes.
- 3. Funds provided by the state to public HEIs shall be in the form of block grants and performance based: The current practice of historical/political funding models is obsolete and not sophisticated enough to allow for institutional flexibility and creativity let alone

performance for results. A gradual move towards block grant funding is recommended. This shall be supplemented with various performance-based funding modalities to ensure institutional performance and better alignment between institutional outputs/outcomes and national needs in terms of human resources and other products that serve the economy and society. Two strategic actions are recommended:

- Strategic Action 1: Develop and implement the block grants for public HEIs, especially public autonomous HEIs.
- Strategic Action 2: Supplement the block grants with various performance-based funding, especially to promote research and innovation and priority areas of study for national development.
- 4. Public HEIs shall be legally allowed to vary their tuition fees, with fee waivers available from and funded by the state: The issue of tuition fees, especially for undergraduate programs, is a politically sensitive issue in any country, including OECD member states. Common practice runs on a continuum of total state control to total institutional control. Many countries have struck a middle ground, with the government setting the minimum fee, especially for undergraduate programs for local students, but providing a range of fees for HEIs to manipulate. In Cambodia, there is no legal stipulation on fee setting, public HEIs will be reluctant to increase their tuition fees to any significant level, partly for competitive reasons. For non-fee paying students, some institutions receive no subsidy from the government to cover the costs (except for civil servant staff salary), and for the others the subsidy is too low and covers just a small fraction of the cost. In a sense, a significant portion of the expenditure on non-fee paying students is covered by the revenue from fee-paying programs. The current practice of little public subsidy is not healthy for the development of the subsector. Two strategic actions are recommended:
 - Strategic Action 1: Legally allow HEIs to set tuition fees, yet minimum tuition fees for undergraduate programs for local students shall be set by the government.
 - Strategic Action 2: Cover the state-sponsored scholarships and liveable living stipends.
- 5. Research and innovation shall be better funded by the state, with research/innovation funds provided on a competitive and categorical basis: The current level of public funding for research and innovation conducted by HEIs is ridiculously low. Apart from the USD5.5 million under HEQCIP between 2010 and 2015, there has been no other public funding for research and innovation. National and institutional mechanisms and procedures to manage national research funds are also non-existent. The following strategic actions are necessary to increase research funding:
 - Strategic Action 1: Establish a National Research Fund to advance research and innovation.
 - Strategic Action 2: Provide funding for research and innovation to HEIs on the competitive and categorical basis.
 - Strategic Action 3: Allocate research and innovation funds, especially to National Centres of Excellence and quality PhD programs.
 - Strategic Action 4: Encourage and incentivise HEIs to allocate funds for research and innovation and to attract international collaborations.
 - Strategic Action 5: Encourage government agencies and private industries to fund research and innovation conducted by HEIs.

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