KINGDOM OF CAMBODIA
Nation-Religion-King

General Population Census of Cambodia 2019

Series Thematic Report
on
Literacy and Educational Attainment in Cambodia

National Institute of Statistics, Ministry of Planning
Phnom Penh, Cambodia

April 2022

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Ministry of Planning
CAMBODIA

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FOREWORD

The General Population Census of Cambodia of 2019 (GPCC) provides a crucial opportunity to examine past achievements and to guide future development plans and strategies of the Government of Cambodia. Acknowledging the vital importance of the project, the government allocated substantial national resources to the implementation of the census. I am gratified that the GPCC has been a success and that reliable and timely demographic data has been made available to specialized users and the general public.

I am also delighted that the *Literacy and Educational Attainment Report* has been completed. This thematic report uses data on educational attainment and literacy drawn from the 1998, 2008, and 2019 GPCC to enable policy makers and other data users to judge the adequacy of past measures and identify priorities for future measures by profiling the differences in literacy and educational attainment across demographic groups, such as age groups and genders, and across administrative divisions; and by revealing which groups face the highest absolute and relative risks of illiteracy. The report also documents Cambodia's progress towards achieving key education-related targets identified in the United Nations Sustainable Development Goals (SDGs).

On behalf of the Ministry of Planning, I would like to express our deep gratitude to Samdech Akka Moha Sena Padei Techo HUN SEN, Prime Minister of the Kingdom of Cambodia. His unwavering support has been critical for the successful completion of the census. I would also like to extend our sincerest thanks to Samdech Kralahorm Sar Kheng, Deputy Prime Minister, Minister of the Interior and chairman of the National Census Committee (NCC) and the other members of the Committee, for their guidance.

As chair of the Technical Committee and the Publicity Committee for the General Population Census of Cambodia of 2019, and on behalf of the Ministry of Planning, I would like to thank all members of the census committee working in the capital, provinces, municipalities, districts/*khans* and *communes/sangkats*. They did an excellent job and, by working together, we have been able to successfully implement our planned activities and obtain valuable results.

I would also like to thank the United Nations Population Program (UNFPA), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the Asian Development Bank (ADB), and the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics. Their financial and technical assistance supported the preparation of this thematic report. Special thanks go to Dr. Ricardo Neupert, census chief technical advisor, for providing overall technical assistance, and our ADB colleagues in Cambodia Resident Mission and Manila for providing much-appreciated help with the preparation and review of this report.

Last but not least, I would like to express my gratitude and appreciation to all the staff of the National Institute of Statistics. H.E. Ms. Hang Lina, delegate of the Government of Cambodia in-charge of the director-general of the National Institute of Statistics, who carefully coordinated all census operations, with the assistance of deputy director-general H.E. Sok Kosal, H.E. Saint Lundy, and H.E. They Kheam. I would like to express particular thanks

to all compatriots who supported and participated in the successful completion of census operations in the Kingdom of Cambodia in 2019.

We are pleased to present to line ministries, international agencies, nongovernment organizations, policy makers, program implementers, development planners, and researchers the publication of this thematic report. We hope to receive feedback and contributions from our readers so we may learn from our mistakes and improve the subsequent series of the thematic reports.

Senior Minister
Minister of Planning

Kitti Settha Pandita Chhay Than

ACKNOWLEDGEMENTS

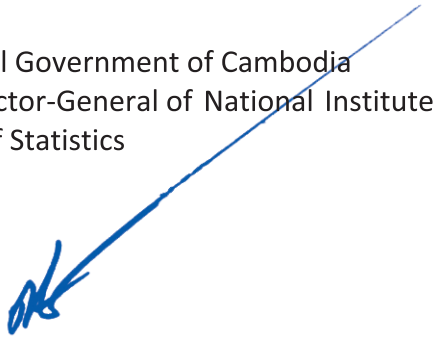
The National Institute of Statistics (NIS) would like to express our sincere gratitude to the individuals, many of whom cannot be named here, and the organizations that made the completion of the *Literacy and Educational Attainment Report* possible.

First, I would like to thank Kitti Settha Pandita Chhay Than, honorable senior minister, Ministry of Planning, whose keen interest in the census and in the thematic report was always a source of great inspiration and encouragement both to the national and international staff of the project.

Second, I would also like to extend our profound thanks to United Nations Population Fund (UNFPA) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) for their overall technical guidance, the Asian Development Bank (ADB) for its financial and technical assistance, and the United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics for the useful comments and inputs in the draft report.

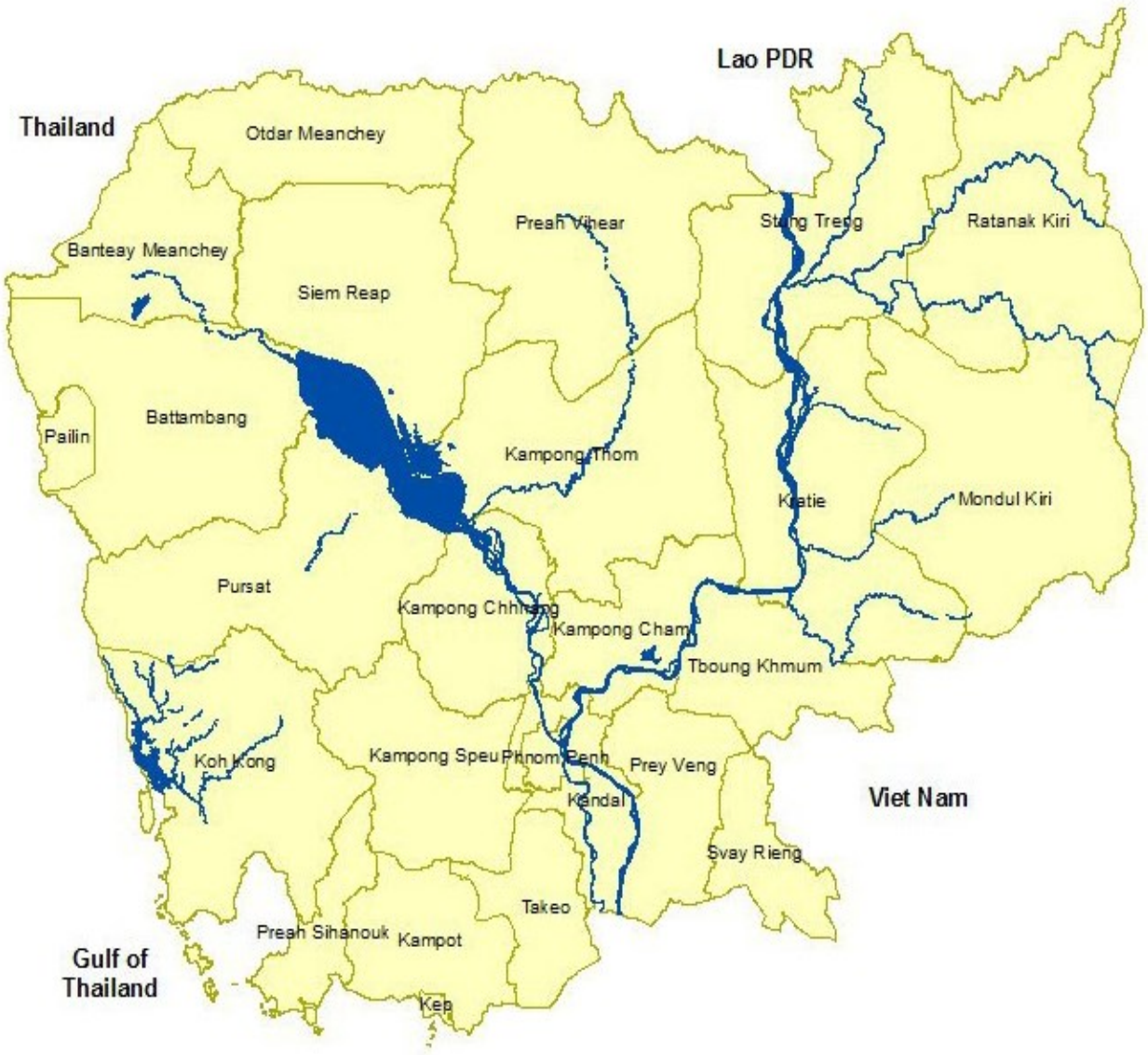
Finally, I wish to thank all NIS's staff, the provincial census officers, the district census officers, the commune census officers, village chiefs, field supervisors, and enumerators for their dedication and hard work. They have enabled us to produce timely data of good quality. My acknowledgements would be incomplete if I did not mention the members of the general public who provided the much-needed data without hesitation.

Delegate of Royal Government of Cambodia
In Charge of the Director-General of National Institute of Statistics



Ms. Hang Lina

Map of Cambodia



Abbreviations

GDP	gross domestic product
GPCC	General Population Census of Cambodia
ILO	International Labour Organization
ISCO	International Standard Classification of Occupation
NIS	National Institute of Statistics
OECD	Organisation for Economic Co-operation and Development
PIAAC	Programme for the International Assessment of Adult Competencies
PISA	Programme for International Student Assessment
PISA-D	PISA for Development
SDG	Sustainable Development Goal
STEP	Skills Towards Employment and Productivity
TVET	Technical and vocational education and training
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization

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Executive Summary

Rising levels of education have been shown to improve national standards of living by supporting higher levels of economic growth and social development.

This report uses data on educational attainment and literacy drawn from the General Population Census of Cambodia (GPCC) conducted in 1998, 2008, and 2019 to enable policy makers and other data users to judge the adequacy of past measures and to identify priorities for future educational investments by: (i) profiling the differences in educational attainment across demographic groups (e.g., age groups and genders) and across administrative divisions; (ii) profiling the differences in literacy across demographic groups and administrative divisions; (iii) profiling the joint distribution of educational attainment and literacy across demographic groups and administrative divisions; and (iv) revealing which groups in the population face the highest absolute and relative risks of illiteracy. The report also documents Cambodia's progress towards achieving key targets identified in the United Nations Sustainable Development Goals (SDGs) that are related to education.

With regard to the 1998, 2008, and 2019 GPCC, this report relies mostly on simple tabulations of population totals, percentages, and changes in totals and percentages—all derived from the census files for each year.

Educational attainment levels in Cambodia

In 2019, 4% of the individuals aged 15 or over had attained more than a secondary education, 9.6% had an upper secondary education, 20.1% a lower secondary education, and 31.1% a primary school education. The largest percentage (over 35%) had not completed primary school or had received no formal education at all. Cambodia did see a remarkable improvement in the level of educational attainment from 1998 to 2019 with education beyond the secondary level making the biggest gain during that period: from 0.7% in 1998 to 4% in 2019.

In 2019, the percentage of individuals who did not have any formal education was almost zero for almost all age groups. The percentage of individuals who had attended, but did not complete, primary school was lower for the younger age groups than for the older ones (e.g., 19.5% for those aged 15–24 versus 57.3% for those aged 65 and over). Younger age groups were more likely to complete primary and higher levels of education. Individuals in all age groups, except for those aged 65 and over, had improved their levels of education since 1998, with the 15–24 age group seeing the largest improvement: The percentage of the individuals in this group who had attended, but did not complete, primary school dropped by 35.7 percentage points during 1998–2019. All in all, the younger cohorts were more educated than their elders.

In 2019, a plurality of females (38.9%) had attended, but did not complete, primary school, while a plurality of males (31.5%) had completed primary school. Gender disparities in educational attainment at various levels were small in 2019. In fact, they were much smaller in 2019 than in 1998 (e.g., 7.6 percentage point difference in 2019 versus a 14.5 percentage

point difference in 1998 for primary education not completed), suggesting that females were more likely to obtain an education than their male counterparts during 1998–2019, an indication that Cambodia was on its way to achieving SDG 4 (quality education), Target 4.5 (eliminating gender disparities in education).

A significant proportion of the rural population in the 15–24 age group (42.5%) in 2019 had attended, but did not complete, primary school, as opposed to only 25.9% of their urban counterparts. The rural population is generally less likely to attain higher levels of education, suggesting that the rural–urban divide in attaining higher levels of educations remained in 2019, though it was much smaller than in 1998 for most levels of education (e.g., 11.7 percentage point difference in 1998 versus a 5.4 percentage point difference in 2019 for lower secondary education). The rural–urban divide widened during 1998–2019 for beyond a secondary education, suggesting that the government needs to do more to ensure that higher education is more accessible to the rural population.

The highest share of agriculture-sector workers in 2019 had attended, but not completed primary school (50.1%), while the lowest share in the service sector (16.1%) fell into that category. A plurality of workers (39.6%) in the industry sector possessed a primary school education in 2019. As a result, the service sector has the highest percentage of workers with a secondary education or above (24.5% for secondary and 20.2% for beyond a secondary education); and, as expected, this was in stark contrast with the agriculture sector. Since 1998, though, all economic sectors have improved the levels of their workers' education.

In 2019, the levels of occupational groups were positively correlated with levels of educational attainment. Occupation groups that required more qualifications tended have larger shares of their workforces attaining higher levels of education. The opposite was also true. For example, based on the International Labour Organization (ILO) classifications of occupations, 32.5% of the Major Group 2 workforce (professionals) possessed more than a secondary education, while over 77% of the Major Group 9 workforce (craft and related trades workers) had only a primary education or less. Since 1998, however, individuals in most groups have generally attained higher levels of education than their predecessors.

Participation by adults aged 15 and over (15+) in technical and vocational education and training (TVET) programs stood at 62,265 in 2019, a very tiny percentage of the total population; and this was a slight drop from the 64,937 participants in 2008. Female participation in TVET programs increased significantly during 2008–2019, from 23,052 to 27,979; however, male participation fell from 41,885 to 34,289. During the same period, TVET participation by males aged 15+ shifted from pre-secondary to postsecondary programs by 5.8 percentage points, and female participation shifted in the same direction by 5.9 percentage points.

A closer analysis of adults aged 15–24 reveals a different picture. TVET participation by adults in this age group actually increased for both females and males from 2008 to 2019, indicating that Cambodia had improved its TVET programs during this period. More younger adults were able to access TVET programs, so they replaced older cohorts with TVET qualifications who had passed away.

Adult literacy levels in Cambodia

In 2019, 9,466,160 Cambodians aged 15+, or 86.2% of the population, were literate in Khmer. This had more than doubled from 4,390,755 (67.3%) in 1998. Gender parity in literacy was almost achieved in 2019 in this age group, at 89.3% for males versus 83.4% for females.

By 2019, only adults reporting that they had no formal education had any material probability of being illiterate, with 89.9% reporting that they were literate in 2019.

The percentage of literate adults rose in all age groups, with the literacy rates of the older groups rising more rapidly. In 2019, the youngest age group (15–24) was the most literate, at 93.8%, as opposed to those aged 65+, who were the least literate at 71.6%. Notwithstanding this result, the older cohort had realized the greatest improvement in their rate of Khmer literacy, rising by 41.1 percentage points from 1998 to 2019.

When measuring whether adults had any formal education or not, there were two distinct patterns of results for 2019. The first pattern was a negative correlation between literacy and age. For example, the adults aged 15–24 who had no education had the highest rate of literacy, at 93.7% in 2019, having increased their literacy rate from 1998 by 40.9 percentage points. By contrast, older cohorts such as those aged 45–54 years old and those 65 and over were the least literate, with the 45–54 age group having improved by only 12.9 percentage points, ending with a 71.1% literacy rate by 2019, and the 65-and-over group having improved by only 11.7 percentage points, ending with a 71.2% literacy rate.

Almost all females and males aged 15–24 were literate in 2019, with a 94.1% rate for females and a 93.4% rate for males. By contrast, significant percentages of older cohorts, especially women, remained illiterate in 2019 (36.8% of women aged 65 and over and 15.7% of men in the same cohort). The percentage of literate adults declined with each older age group, even though older adults had made the largest gains in literacy from 1998 to 2019 (particularly females, who, for example, saw an increase of literacy by 52.9 percentage points for those aged 65 and over). Men outperformed women in every cohort, except for the youngest: those aged 15–24.

Most of the employed population was literate in 2019 (86.3%), followed by those not in the labor force (78.9%). The size of the literate working-age population overall more than doubled over the reference period, from 3.2 million in 1998 to 7.4 million in 2019. The percentage of unemployed adults who reported being literate actually declined for both males and females during that time, but at 78.9%, it was still relatively high, indicating that the labor market has access to a large pool of literate workers if needed. The services sector had the highest percentage of literate workers (95.3%) in 2019; however, it had seen the least gains in literacy during 1998–2019 (4 percentage points). By contrast, the agriculture sector had the highest percentage of illiterate workers, with 20% illiteracy in 2019; but it had realized the most rapid growth in literacy rates over the reference period.

In all three censuses (1998, 2008, and 2019), the overwhelming majority of the population aged 15+ who reported Khmer as their mother tongue were literate, with the level of literacy rising from 1998 to 2019. However, 100% of the population aged 15+ whose mother togue

was KCHAK reported that they were literate in 2019, though this was possibly due to the tiny size of the KCHAK minority group (about 3,300 in 2019). The literacy rates for adults whose mother tongue was not Khmer tended to be relatively low in 2019, with that of the ethnic Chinese the lowest (6%); among the exceptions were the KCHAK, the Suoy (86.6%), and the Klueng (85.7%).

Over half (53%) of the employed labor force fell within the ILO's Major Group 6 (skilled agricultural and fishery workers) in 2019; and 80% of these workers reported being literate in the Khmer language, the lowest percentage of any major group. Major Group 4 (clerks), which accounted for only 3.2% of the total employed population, had the highest percentage of literate workers (97.3%) in 2019. The groups based on occupations that require low literacy skills made significant improvements in literacy during 1998–2019 (e.g., by 12.5 percentage points for Major Group 6). By contrast, occupational groups that require high literacy skills (e.g., Major Group 1: legislators, senior officials, and managers) actually saw a small drop in the percentage of their literate workers over the same period.

Khmer literacy rates for TVET graduates were relatively high in 2019, ranging from 73.9% for TVET pre-secondary graduates aged 35–44 to 97.9% for TVET pre-secondary graduates aged 65 and over. The average Khmer literacy rates for TVET graduates have been falling since 2008, however.

There was a significant variation in Khmer literacy rates among the provinces in 2019, with Phnom Penh having the highest percentage of literacy (95%) and Preah Sihanouk Province the lowest (61.4%). Most provinces had Khmer literacy rates in the 80%–95% range in 2019. Another, smaller group of provinces had Khmer literacy rates around 70% that year. All of these provinces displayed significant differences in the rates at which their literacy rates had improved from 1998 to 2019, ranging from 9.8 percentage points (Phnom Penh) to 38.4 percentage points (Ratanak Kiri). Preah Sihanouk was the only province that saw its literacy rate decline, by 7.8 percentage points, during 1998–2019, perhaps as a result of the influx of Chinese-speaking immigrants toward the end of this period.

By 2019, Cambodia had almost closed the literacy gap between the rural areas (with 85.4% literacy) and the urban areas (93.3%), though rural residents were still less likely to be literate in the Khmer language than adults in urban areas, except in Preah Sihanouk Province, where the literacy rate for rural residents was significantly higher (81%) than for urban residents (57%). The urban–rural literacy gap remained the highest in the northeastern provinces, such as Mondul Kiri and Ratanak Kiri (23 percentage point difference), but it was zero in Phnom Penh, and the second-smallest gap was in Kampong Chhnang (1.2 percentage point difference). However, Mondul Kiri and Ratanak Kiri were also the provinces that had the greatest scope for narrowing the urban–rural literacy divide, given that the literacy gaps between the urban and rural areas were extremely wide: 43.2 percentage points in Mondul Kiri and 54 percentage points in Ratanak Kiri in 1998.

Participation of school-aged children in education in Cambodia

Over 3.6 million Cambodians aged 6 and above were attending or had attended school by the time of the 2019 GPCC, up from 2.5 million in 1998. This amounted to only 25.8% of the total

cohort population, and the attendance rate had barely changed since 1998. The data for the population aged 15+ and 15–64 showed similar results: School attendance remained very low (ranging from 9% to 10%), even declining slightly since 1998. Gender disparities in school attendance remained in 2019, with the highest found in the population aged 6 years and over (2.6 percentage point difference), although it had been gradually narrowing (from a 7.9 percentage-point difference in 1998). School attendance rates for females aged 6 and over, 15 and over, and 15–64 improved during 1998–2019, while the rates for males declined.

The analysis of the school attendance rates of the children aged 5, 6–11, and 12–14 in 2019 shows a very different picture. Admittedly, the national attendance rate for 5-year-olds remained low, at 34.5%. The rates differed significantly by province, however, ranging from the lowest (17.4%) in Kep to the highest (46.9%) in Koh Kong. All the provinces had improved from 1998 to 2019, but the rates of improvement differed significantly: ranging from 13.2 percentage points in Kep to 43 percentage points in Koh Kong.

The attendance rates for the older children were very high (much higher than in the 2008 census), at 90.6% for those aged 6–11 and 91.1% for those aged 12–14. Overall, the attendance rates improved significantly from 1998 to 2019, especially for the children aged 12–14, for whom they increased by 39 percentage points. The attendance rates for these two age groups also differed by province, though to a lesser extent than the rates for the 5-year-olds.

Regarding the 6–11 age group, the attendance rates ranged from a low of 77.7% in Mondul Kiri to a high of 95% in Prey Veng. Relatively low rates were also seen in Ratanak Kiri (78.2%) and in Stung Treng (81.7%). The rates of improvement in the provinces from 1998 to 2019 also varied significantly, from a low of 18.2% in Phnom Penh to a high of 63.9% in Ratanak Kiri. For the 12–14 age group, there was less variation in attendance rates by province than for the other two age groups. The 2019 rates ranged from a low of 80.4% in Modul Kiri to a high of 95.4% in Prey Veng. The rates of improvement from 1998 to 2019 did vary significantly by province, from a low of 4% in Phnom Penh to a high of 59.5% in Ratanak Kiri.

Across all three age groups, there were no significant differences between the attendance rates for boys and girls in 2019. The girls' attendance rates were only slightly higher than the boys'.

Completion rates at the primary, lower secondary, and upper secondary levels of education were much lower than the attendance rates discussed above, at 75.8% for the primary, 45.5% for the lower secondary, and 17.8% for the upper secondary levels in 2019. Gender gaps in the completion rates for the three levels of education were wide in 1998, but were reversed by 2019, with females performing better than males. Completion rates improved for all three levels of education during 1998–2019.

The 2019 provincial literacy rates in the Khmer language for boys and girls aged 6–11 were distinctly lower than those for boys and girls aged 12–14. For example, in the 6–11 age group, they ranged from 61.7% in Preah Sihanouk to 78.5% in Prey Veng for boys, whereas the literacy rates for their older peers ranged from 82.1% in Preah Sihanouk to 98.6% in Prey Veng. However, the literacy rates of both boys and girls aged 6–11 in 2019 were significantly

higher than the rates in 1998 in all provinces. The extent of improvement in the literacy rates did vary significantly by province, with the rates for boys ranging from a low of 6.7% in Phnom Penh to a high of 62.6% in Ratanak Kiri. There were no systematic differences between genders within the 6–11 and 12–14 age groups. In fact, and again, the girls in these groups were generally more likely than boys to be literate in 2019 than they were in 1998 across Cambodia.

Khmer literacy rates generally rose for each grade level over the reference period. By 2019, virtually all students in class 4 (10-year-olds) or higher had acquired basic literacy skills. In 2019, for the most part, literacy rates rose for each higher class.

Cambodia significantly improved the educational attainment and literacy rates of its population from 1998 to 2019. The evidence presented in this report, however, suggests a need for additional investment to raise the average level of education, reduce the percentage of adults who are illiterate, and increase the average literacy proficiency of the workforce. Because education is cumulative, this implies a need to invest more in maternal and child health, to increase children's readiness for school entry.

The government must work to increase the percentage of students completing the primary and secondary levels of education, for instance by improving the quality of instruction through focused teacher training. Falling birthrates should free up resources that could be redirected to quality improvement. Finally, since Cambodian birth rates have been declining steadily, and are projected to continue to fall through 2050, the numbers of literate youths entering the labor market will probably be not suffice to meet the projected demand for workers in occupations requiring strong literacy skills.

Literacy skill shortages have been shown to be economically damaging, so there may be a need for the government to offer literacy skill upgrading for unemployed adults, and to induce employers to upgrade the literacy skills of their staffs. These measures would serve to increase labor productivity, improve competitiveness, and reduce the negative impact of skill shortages on economic performance.

The optimal mix of investments in adult literacy training will depend on the balance that Cambodian policy makers can strike between measures focused on improving economic efficiency and those focused on reducing social inequality in such key outcomes as employment, income, and health. Focusing investments on economic sectors and occupations in need of workers with literacy skills will likely generate good short-term results, but could constrain economic growth. By contrast, focusing investments on those provinces and sub-provincial areas, as well as population groups, facing the highest risks of illiteracy would yield the most rapid reductions in social inequality. Over the long run, investment in youth and younger adults will yield the largest returns.

Chapter 1: Introduction

The levels of educational attainment have been shown to have a significant impact on social and economic development, and on the rates at which development indicators improve (Hanushek and Woessmann 2010). Literacy constitutes one of the key outcomes of the educational process. Average reading scores have been shown to be the single most important long-term determinant of gross domestic product (GDP) and productivity growth (Blaug 1966 and Johnston 2004), the two most important indicators of a country's standard of living. Differences in literacy skills have been shown to cause much of the social inequality over a broad range of individual educational, employment, social, and health outcomes. This report uses data on educational attainment and literacy drawn from the 1998, 2008, and 2019 General Population Census of Cambodia (GPCC) to conduct four types of analysis in order to provide policy makers and other data users with the means to judge the adequacy of past measures and identify priorities for educational investments going forward: [1]

(i) profiling the distribution of levels of educational attainment and identifying the differences in levels across demographic categories, such as age groups and genders, and across administrative divisions;
(ii) profiling the distribution of literacy skills and identifying the differences in literacy rates across demographic groups and administrative divisions;
(iii) profiling the joint distribution of educational attainment and literacy across demographic groups and administrative divisions; and
(iv) revealing which groups in the population face the highest levels of absolute and relative risks of illiteracy.

The analyses presented in this report expand on the initial results of the 2019 GPCC, which were released in 2020, and updates the trends documented in earlier GPCC reports (National Institute of Statistics [NIS], 2002, 2009, and 2020). Separate chapters in this report discuss the data regarding education and literacy for adults aged 15 and over (15+) and for individuals under the age of 15 in 2019, for the three rounds of the GPCC. The report also documents Cambodia's progress toward reaching key targets identified in the United Nations (UN) Sustainable Development Goals (SDGs), including the following, to be achieved by 2030:

(i) ensure that all girls and boys receive a free, equitable, and quality primary and secondary education, leading to relevant and effective learning outcomes (SDG 4, Target 4.1);
(ii) ensure that all girls and boys have access to quality early childhood development, care, and preprimary education, so that they are ready for primary education (SDG 4, Target 4.2);
(iii) eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations (SDG 4, Target 4.5); and

[1] By 2019, Cambodia had carried out four general population censuses. The first census was conducted in 1962, with follow-up exercises undertaken in 1998, 2008, and 2019. The GPCC is part of the 2019 round of population and housing censuses recommended by the United Nations (National Institute of Statistics [NIS] 2020).

(iv) ensure that all youth and a substantial percentage of adults, both men and women, achieve literacy and numeracy (SDG 4, Target 4.6).[2]

This report provides clear evidence of the remarkable progress that Cambodia has made in educating its population since 1998. Overall, the levels of educational attainment and literacy have risen dramatically over the reference period, and have become much more equitably distributed by gender. The results presented suggest that gender parity has been achieved for youth in access to early childhood education, primary education, and secondary education, as well as in literacy rates. Notwithstanding these generally positive conclusions, Cambodia still has a long way to go toward realizing the goal of universal primary and secondary education and universal literacy. Continued investment will be needed if these goals are to be met. Furthermore, the results reveal significant differences in the degree of progress towards these goals among the provinces and between urban and rural areas. Policy makers will have to focus on reducing these disparities over the coming decades.

This chapter introduces the report by setting out its areas of focus, and then explaining how the remaining chapters of the report are organized to present its findings.

Chapter 2 defines literacy and provides an overview of what is known about literacy's impact on social and economic outcomes, what is known about how literacy is acquired, and the role that literacy plays in public policy. It also discusses other key concepts relevant in this report: educational attainment, school attendance rates, and completion rates. Finally, the chapter outlines the data and methods used in the data analyses, as well as the limitations of the data.

Chapter 3 profiles the distribution of educational attainment revealed by the 1998, 2008, and 2019 GPCC, with a view to identifying population subgroups whose educational levels were likely to place them at risk economically. The chapter documents the rapid increases in average educational attainment levels and in equality for key social groups defined by age and gender. The chapter also compares the levels of educational attainment in Cambodia to the levels attained by neighboring countries and trading partners.

Chapter 4 profiles the distribution of literacy skills as measured in the 1998, 2008, and 2019 GPCC. The chapter begins with a description of the GPCC literacy measurement and how it relates to the current understanding of literacy skills. As with Chapter 3, the underlying goal is to identify population subgroups whose literacy skill levels were likely to place them at risk of realizing poor economic and social outcomes. The chapter confirms that Cambodia has realized rapid increases in average literacy rates, and concomitant reductions in inequality, for key social groups, including women and rural residents.

Chapter 5 profiles the joint distribution of educational attainment and literacy in the population aged 15+. The analysis shows how the size of the illiterate population had been dropping over time, and indicates which groups had the lowest literacy rates in 2019. The chapter concludes by identifying the groups facing the highest risks of illiteracy, and discusses

[2] SDG 4 specifies that by 2030, the government should ensure inclusive and equitable quality education and promote lifelong learning opportunities for all citizens (UN 2015).

the evidence that is key to focusing public investments where they are likely to yield the highest returns.

Chapter 6 profiles school attendance and completion rates for the populations aged 5, 6–11, 12–14, and 15–17 in Cambodia in 2019 and over the entire 1998–2019 period, as well as the literacy rates for some of these age groups. School attendance rates certainly improved over the two decades for these age groups, although they remain highly variable across provinces. School completion rates at the primary, lower secondary (equivalent to middle school), and upper secondary (equivalent to high school) levels of education, although improved over time, remain low.

Finally, Chapter 7 summarizes the report's findings and their implications for policy and practice. Cambodia has significantly improved its levels of educational attainment and literacy from 1998 to 2019. The evidence presented in this report, however, suggests a need for additional investment to raise average education levels, reduce the percentage of adults who are illiterate, increase the average literacy proficiency of the workforce, and to eliminate the remaining gaps in educational attainment and literacy rates among the provinces and between urban and rural areas.

Chapter 2: Measurements, Data, and Methods

This report uses measures of educational attainment and literacy adopted by the GPCC of 1998, 2008, and 2019. The census data from those years include all the individual residents in the Kingdom of Cambodia on the census days. This chapter defines the relevant key concepts of the report—including educational attainment, literacy, the school attendance rate, and school completion rate—and discusses how these concepts are measured. The chapter also outlines the data, methods of data analysis, and the limitations of the data.

2.1. Defining and Measuring Educational Attainment

The measures of educational attainment used in each GPCC and profiled in this report are based on the International Standard Classification of Education of the United Nations Educational, Scientific and Cultural Organization (UNESCO), which identifies nine levels of educational attainment as enumerated below (UNESCO 2012):

0 less than primary education,
1 primary education,
2 lower secondary education,
3 upper secondary education,
4 postsecondary non-tertiary education,
5 short-cycle tertiary education,
6 bachelor's degree or equivalent level,
7 master's degree or equivalent level, and
8 doctorate or equivalent level.

To be placed at a level of attainment, adults need to have completed study at that level and received a formal credential. Following this convention, and to be consistent with the 2010 *Literacy and Educational Attainment Report 7*, this report condenses the above nine categories into six levels of educational attainment:[3]

1 no formal education;
2 primary not completed: grades 1 to 5 completed,
3 primary completed: grades 6 to 8 completed;
4 lower secondary: completed grades 9 to 11 and received a lower secondary school certificate;
5 secondary/diploma: competed grade 12, obtained an upper secondary diploma or a technical or vocational pre-secondary certificate; and
6 beyond upper secondary: obtained a postsecondary degree, diploma, or certificate, or a postsecondary technical or vocational certificate.

Cambodian technical and vocational education and training (TVET) programs are organized and delivered on both the pre-secondary and postsecondary levels. For the purposes of this

[3] Unless otherwise specified, this report will use these six levels of educational attainment as its frame of reference.

analysis, and again for consistency with the *Literacy and Educational Attainment Report 7*, TVET pre-secondary and postsecondary levels were collapsed into levels 5 and 6 of educational attainment. However, as technical and vocational skills are becoming increasingly important to the growth of the Cambodian economy, this report includes separate profiles of technical and vocational attainment and of literacy rates to enhance our understanding of the progress made in TVET in 2019 and since 2008. It is worth noting that the technical–vocational category was not included in the 1998 GPCC.

2.2. Defining and Measuring Literacy

Literacy is both a human right and a necessity for economic, social, and democratic progress. it has become a passport to full and active participation in society. Literate adults are able to respond to the demands of daily life either orally or in writing. They are able to read and apply what they have read to better their lives, for instance by being able to get and keep a job, to learn independently, and to engage actively in the democratic process.

Most people acquire literacy through their early schooling, so the level of education in a country plays a large part in determining the aggregate supply of literacy skills. Beginning readers learn to match the sounds of the spoken word with the printed word, a process that serves as the foundation for building meaning. As a result, basic literacy is best first acquired from one's own mother, rather than through instruction in the education system. The aggregate supply of literacy skills is not, however, a static commodity. Research reveals that literacy can be both gained and lost in adulthood in response to the complex interplay of the demand for its use and the available supply.[4]

This chapter also defines literacy and provides an overview of what is known about the impact of literacy on labor-market, educational, health, and social outcomes at the individual, institutional, and macro levels. More specifically, the chapter provides some background on how literacy has been measured by the GPCC, and how the measurement of literacy in Cambodia relates to the way literacy has been defined and measured at the international level. This background is crucially important for interpreting the GPCC-based literacy skill distributions presented in Chapter 4 of this report. For instance, it is worth noting that the GPCC provide a useful indicator of whether individuals can read or not, but they reveal little about *how well* they can read.

Literacy has been defined by the Organisation for Economic Co-operation and Development (OECD) as the ability to understand, evaluate, use, and engage with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential.

UNESCO has adopted a slightly different definition of literacy: the ability to identify, understand, interpret, create, communicate and compute, using printed and written (and visual) materials associated with varying contexts.

The box just below summarizes how literacy has come to be defined and measured.

[4] See, for example, John Bynner's analyses of the British birth cohort data.

The Definition and Measurement of Literacy

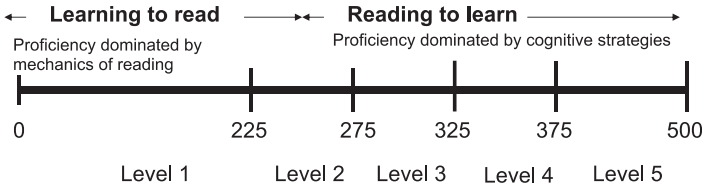
The interest in literacy is grounded in the work of Nobel laureate Amartya Sen, an economist who defined progress as the expansion of people's choices for living valuable and fulfilling lives.[a]

Sen describes ***functionings*** that are intrinsically valuable, such as getting an education, staying in good health, and enjoying a decent standard of living. Freedom of action and choice (***agency***) and equity are the core elements, since all people must be free of constraints and have an equal opportunity to pursue the things they value. Literacy was identified as a fundamental element of agency by Paulo Freire in his groundbreaking book on oppression and inequality.[b]

Our understanding of **literacy** has advanced a great deal since the 1980s. It used to be seen in terms of a dichotomy: One was either literate or not. But now it is understood to fall along a **continuum** defined by the individual's ability to handle reading tasks of various levels of difficulty. The least difficult reading tasks involve the "learning to read" component (e.g., letter recognition, word recognition, and decoding) that must be mastered to support the emergence of fluid and automatic reading that characterizes the upper ends of the international literacy proficiency scale. The more challenging reading tasks, in which readers are "reading to learn," include more challenging cognitive demands.[c]

Armed with this deep understanding of the features that underlie the relative difficulty of reading tasks, researchers have developed tests that allow individuals to be reliably placed on a meaningful proficiency scale. As illustrated in the first figure below, the results of international assessments of adult literacy skills have, as a matter of convention, been displayed on a 500-point proficiency scale. This scale is divided into five proficiency levels, each of which reflects a material shift in the skills needed to master reading tasks at that level. Individuals are assigned to proficiency levels based on their estimated probability of getting items at a given level of difficulty correct. For example, test takers are assigned to Level 3 if they display at least an 80% probability of getting the Level 3 tasks correct, but fail to display the same probability of doing the Level 4 tasks correctly. Similarly, test takers at Level 2 can get some Level 3 tasks correct, but the probability of their doing all the Level 3 tasks correctly is below 80%.

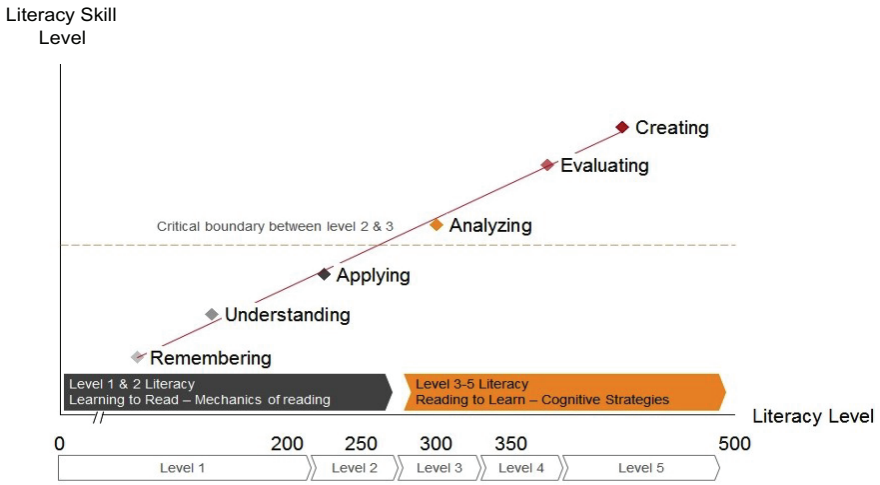
An International Scale for Assessing Adult Literacy



Source: World Bank. Skills Towards Employment and Productivity (STEP) Skills Measurement Program. https://microdata.worldbank.org/index.php/collections/step.

As illustrated below, research has linked the international literacy scales to Bloom's revised taxonomy of educational objectives in the cognitive domain, which identifies six levels of cognitive skills, ranging in complexity from remembering to creating.

Levels of Literacy and Related Cognitive Skills



Source: L. Anderson et al., eds. 2001. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Addison Wesley Longman.

At Level 1 literacy, readers are still in the process of learning to read. They are working to master the components of reading—letter recognition, word recognition, receptive vocabulary, fluency and accuracy of understanding, and working memory—that underlie the emergence of fluid and automatic reading.

At Level 2, readers can locate single or multiple pieces of information in a text.

At Level 3, readers are capable of making low-level inferences based on what they have read.

At levels 4 and 5, readers are able to master reading tasks that require them to make high-level inferences based on what they have read.

[a] A. Sen. 1999. *Development as Freedom*. Oxford, United Kingdom: Oxford University Press.
[b] P. Freire. 1968. *Pedagogy of the Oppressed*. Sao Paulo, Brazil: Name of Publisher.
[c] DataAngel Policy Research. 2009. *Addressing Canada's Literacy Challenge: A Cost-Benefit Analysis*. Fredericton, New Brunswick, Canada: National Adult Literacy Database; Organisation for Economic Co-operation and Development (OECD), Statistics Canada, and Human Resources Development Canada (HRDC). 1997. *Literacy Skills for the Knowledge Society: Further Results from the International Adult Literacy Survey*. Ottawa: Name of Publisher.

The literacy question included in the GPCC reflects the dichotomy conception of literacy, asking: "Can the person read and write with understanding in the Khmer language?" The adoption of this measurement is, however, necessary because the census covers all individual residents in the Kingdom of Cambodia, so it is impractical to survey all the individuals in the country with the sort of questions required in other literacy assessment tools, such as the OECD's Programme for International Student Assessment (PISA) and Programme for the International Assessment of Adult Competencies (PIAAC). That being said, such dichotomous literacy measurements are a useful starting point for thinking about policy, but there are important limits to what they can tell policy makers, as they tell little how *well* the population can read and write.

Furthermore, the UN includes Sustainable Development Goal (SDG) 4, Target 4.6, for measuring adult literacy and numeracy, and SDG Indicator 4.6.1,[5] for monitoring progress towards this target. Without testing, it is impossible to know exactly where Cambodian adults answering "No" to the GPCC literacy question would be placed on the international adult literacy scales. That being said, it is reasonable to assume that such respondents have either failed to master the mechanics of reading or have mastered the mechanics of reading, but have not yet acquired sufficient comprehension skills to build understanding. More specifically, they have failed to master the comprehension strategies that characterize tasks at Level 2 and above on the international literacy scales. If this analysis is accepted as true, then adults answering "No" to the GPCC literacy question are likely to be performing, on average, at Level 1 on the international adult literacy scales.

The placement of adults at Level 1 on the international scales is supported by the results of the PISA for Development (PISA-D) assessment of 15-year-olds' reading, mathematics, and science proficiency. Cambodian students scored the equivalent, on average, of 178 on the 500-point international adult literacy scale, roughly 80% of the way through Level 1.[6] If it can be assumed that the quality of education has risen over time, then this value sets an upper boundary on the likely true skill level of people answering "No" to the GPCC literacy question. Thus, the GPCC literacy measures are useful for identifying the size of the illiterate population, but reveals little about the true skill levels of people answering "Yes." Furthermore, it is impossible to know where people answering "Yes" to the GPCC literacy question should be placed on the 500-point international proficiency scale. They might have skills at levels 2, 3, 4, or 5, depending on their level of mastery of the underlying reading skills.

The use of these tests for large samples of students and adults has provided researchers and policy makers with a clear understanding of the impact that differences in literacy skills have on individual, institutional, and macro-level economic, social, health, and educational outcomes.

[5] SDG Indicator 4.6.1: Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (i) literacy and (ii) numeracy skills, by sex.

[6] The results of OECD PISA-D literacy assessments are reported on a 900-point scale, rather than the 500-point scale used to report adult literacy scores.

2.3. Defining and Measuring the School-Attendance and Completion Rates

This report uses the same standard definition of "school attendance rate" as the one used in the 2010 *Educational and Literacy Report 7*: the percentage of persons currently attending school at a given age of the entire population at the corresponding school-age (National Institute of Statistics [NIS] 2010, 12). The report also uses the measurement adopted in the GPCC. The census questionnaires asked all persons, including children aged 6 and below, whether they attended school or some other educational institution, to measure their school attendance.

The report applies UNESCO's definition of "completion rate," which is the "percentage of a cohort of children or young people aged 3–5 years above the intended age for the last grade of each level of education who have completed that grade" (UNESCO 2018, 14). This report also follows UNESCO's method of calculating the completion rate (UNESCO 2018, 14).

2.4. Data, Analytical Methods, and Limitations

This report uses the complete data sets from 1998, 2008, and 2019 GPCC. For the most part, it relies on simple tabulations of population totals, percentages, and changes in totals and percentages derived from the files for each census year, in order to conduct the four types of analyses described in Chapter 1. Separate analyses are presented for individuals aged 15+ and for children and youth under the age of 15. This grouping reflects the definition of "working age" as stipulated by the International Labour Organization (ILO), and roughly approximates the age at which children are no longer compelled to remain in school. It is also worth noting that nonresponse rates to census questions were high in the three rounds of the census, ranging from 15% in the 2019 GPCC to 32% in 1998 GPCC, for example, for the questions on educational attainments. Caution is thus advised when reading the results presented in this report, as they do not necessarily represent the views of those individuals who chose not to respond to certain census questions, and this may introduce an unknown level of bias into the results presented. The next chapter of this report profiles the distribution of educational attainment—the most important determinant of the aggregate supply of literacy skills—in the population aged 15+ in Cambodia.

Chapter 3: The Distribution of Educational Attainment in Cambodia

Cambodia is a strong supporter of SDG 4, which focuses on education as a fundamental human right that is necessary for the achievement of all the SDGs. Education supports the achievement of gender equality by empowering women, and is crucial for creating environmental resilience in an inclusive society.

The Constitution of the Kingdom of Cambodia underpins all the work done to improve education throughout the country. Article 65 covers citizens' rights to a quality education at all levels. Article 66 covers the state's responsibility for establishing a comprehensive and standardized educational system nationwide with (Article 67) modern teaching methods (Government of Cambodia 1993). Article 68 requires that the state provide free primary and secondary education to all citizens in public schools. Citizens are entitled to an education for at least 9 years. Key policy initiatives have been developed and implemented to help achieve the constitutional requirements. Among them are the Education for All National Plan, 2003–2015; Education Strategic Plan, 2014–2018 and 2019–2023; Education Sector Plan, 2019–2023; Education Sector Support Program 2001–2005; and the Cambodia Secondary Education Blueprint 2030. The Government of Cambodia has thus allocated significant resources to improve access to, and the quality of, education in the country; in fact, the education sector has recently become the largest recipient of government funding, receiving 11% of total national budget in 2019 (Government of Cambodia 2020).

This chapter profiles the distribution of educational attainment for the adult population aged 15+ in Cambodia using data from the 1998, 2008 and 2019 GPCC. Attainment is profiled by age group, gender, administrative division, economic sector, and major occupational group. The goals of the analysis presented in this chapter are (i) to document the distribution of educational attainment in 2019 and show which groups of the population are most in need of help from policy makers, and (2) to quantify how much progress has been made since 1998, especially in relation to SDG Target 4.1.

3.1. An Overview of Educational Attainment in Cambodia

Table 1 shows educational attainment for population aged 15+ in 1998, 2008, and 2019, documenting the trends in the distribution of educational attainment over the two-decade reference period. In 2019, 4% of the individuals aged 15+ had attained beyond a secondary education, 9.6% had attained an upper secondary education, 20.1% a lower secondary education, and 31.1% a primary school education. The largest percentage of the population in this age group (over 35%) either did not complete primary school or received no formal education at all. In other words, only one-third of the Cambodian population attained an education higher than lower secondary. The table, however, does document a remarkable improvement in the levels of educational attainment over the reference period. On the one hand, in terms of percentages, the group that went beyond a secondary education made the biggest gain during 1998–2019. The percentage of the population aged 15+ that had attained this level of education more than quadrupled, from 0.7% in 1998 to 4% in 2019. Lower secondary and upper secondary education made similar gains, although less remarkably than

the beyond secondary education category. The percentage of the population aged 15+ that completed these levels of education almost doubled, from 11.8% to 20.1% for lower secondary and from 3.5% to 9.6% for upper secondary over the same period. On the other hand, the percentage of the population aged 15+ reporting that they had no formal education fell below 1% by 2019, a finding that suggests that Cambodia has realized its goal of universal access to a primary education.

Table 1: Levels of Educational Attainment by Cambodians Aged 15 and Over, 1998, 2008, and 2019

Census Year	None	Primary Not Completed	Primary	Lower Secondary	Secondary/ Diploma	Beyond Secondary	Total
Number							
1998	59,559	2,477,640	1,169,934	523,302	155,576	32,306	4,418,317
2008	84,763	2,853,256	2,127,092	1,173,925	433,900	180,472	6,853,408
2019	5,492	3,278,184	2,902,145	1,870,468	897,820	373,602	9,327,711
Percentage							
1998	1.3	56.1	26.5	11.8	3.5	0.7	100.0
2008	1.2	41.6	31.0	17.1	6.3	2.6	100.0
2019	0.1	35.1	31.1	20.1	9.6	4.0	100.0

Note: The percentages may not total 100% because of rounding.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Taken together, these results confirm that Cambodia has made remarkable progress in improving its overall level of educational attainment since 1998. However, the fact that only 33% of the population aged 15+ has received a basic education means that the government's goal of universal access to education will continue to be a policy focus going forward. Cambodia still has a long way to go toward achieving SDG 4, Target 4.1.

3.2. Education and Age Groups

As noted in Chapter 2, the correlation between educational attainment and literacy skills, while strong, is far from complete. In populations with relatively low levels of attainment, some adults find a way to become literate even without the benefit of much formal education, and some adults with education fail to become fluid and automatic readers. Public policy that supports formal, nonformal, and informal adult learning can allow adults to become literate after leaving the initial cycle of education. Only the testing of adult skills can, however, determine the true skill levels achieved by adults.

Table 2: Levels of Educational Attainment in Cambodia, by Age Group, 1998, 2008, and 2019

Age Group and Year	None		Primary Not Completed		Primary		Lower Secondary		Secondary/Diploma		Beyond Secondary		Total	
	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
15–24														
1998	11,937	0.7	870,633	54.2	479,533	29.9	194,171	12.1	42,899	2.7	6,784	0.4	1,605,957	100.0
2008	19,640	0.8	794,279	30.5	983,471	37.7	570,080	21.9	139,522	5.4	99,049	3.8	2,606,041	100.0
2019	3,764	0.2	483,712	19.5	904,360	36.5	767,693	31.0	262,559	10.6	52,931	2.1	2,475,019	100.0
25–34														
1998	10,004	0.8	624,816	50.9	365,800	29.8	152,083	12.4	62,431	5.1	12,770	1.0	1,227,904	100.0
2008	15,635	1.0	647,186	42.9	444,961	29.5	216,366	14.3	102,537	6.8	83,227	5.5	1,509,912	100.0
2019	761	0.0	687,404	28.2	782,843	32.1	456,302	18.7	328,659	13.5	185,868	7.6	2,441,837	100.0
35–44														
1998	12,079	1.5	513,363	64.2	155,399	19.4	88,754	11.1	24,474	3.1	5,010	0.6	799,079	100.0
2008	14,698	1.2	568,935	47.2	349,132	29.0	167,135	13.9	61,779	5.1	43,421	3.6	1,205,100	100.0
2019	294	0.0	705,051	40.6	523,173	30.1	274,109	15.8	153,413	8.8	79,773	4.6	1,735,813	100.0
45–54														
1998	8,859	1.9	269,636	58.0	106,140	22.8	57,293	12.3	18,700	4.0	4,385	0.9	465,013	100.0
2008	14,237	1.8	453,555	56.1	179,603	22.2	118,920	14.7	26,521	3.3	15,773	2.0	808,609	100.0
2019	172	0.0	578,391	47.4	354,763	29.1	161,935	13.3	89,936	7.4	35,839	2.9	1,221,036	100.0
55–64														
1998	8,030	4.0	120,471	59.7	43,889	21.7	22,212	11.0	5,414	2.7	1,873	0.9	201,889	100.0
2008	9,371	2.1	236,698	52.2	112,419	24.8	68,546	15.1	16,381	3.6	9,792	2.2	453,207	100.0
2019	194	0.0	469,970	56.4	192,656	23.1	123,012	14.8	37,066	4.4	10,930	1.3	833,828	100.0
65+														
1998	8,650	7.3	78,721	66.4	19,173	16.2	8,789	7.4	1,658	1.4	1,484	1.3	118,475	100.0
2008	11,182	4.2	152,603	57.6	57,506	21.7	32,877	12.4	7,445	2.8	3,099	1.2	264,712	100.0
2019	307	0.0	353,656	57.3	144,350	23.4	87,417	14.2	26,187	4.2	5,427	0.9	617,344	100.0

No. = number.

Note: The percentages may not total 100% because of rounding.

Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 2 reveals the following points:

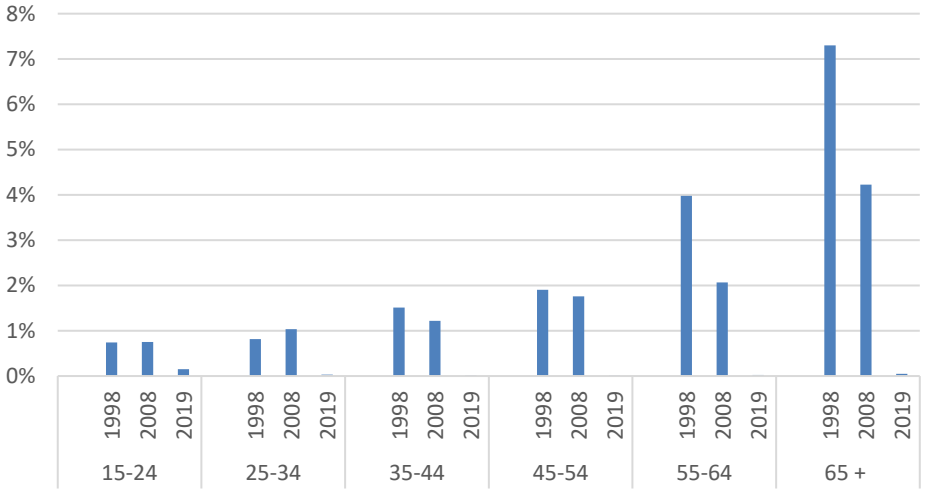
(i) In 2019 the percentage of individuals who had no formal education was almost zero in almost all age groups. This result suggests that Cambodia had achieved almost universal access to primary education by that year.
(ii) The percentage of individuals who had attended, but did not complete, primary school was higher among the older cohorts (e.g., 57.3% for those aged 65 and over versus 19.5% for those aged 15–24). Those in the older age groups who were born and/or lived through the civil wars of the Lon Nol and Khmer Rouge periods must have had their primary education interrupted during those wars.
(iii) As expected, the younger cohorts were generally more likely to attain primary and higher levels of education. Again, this reflects their better access to quality education.
(iv) Individuals in all age groups, except for those aged 65 and over, have improved their educational attainments across all levels of education since 1998, though the individuals aged 15–24 achieved the largest improvement: The percentage of this age group that had attended, but did not complete, primary school dropped by 35.7 percentage points during 1998–2019. By contrast, the percentage of individuals aged 65 and over that had attained beyond a secondary education fell by 0.4 percentage point over the same period.

All in all, Table 2 suggests that younger cohorts are more educated than their elders, again reflecting the improved access to, and quality of, education for that younger Cambodians have started to enjoy since 1998.

Figures 1–6 take a closer look at the distribution of educational attainment by various age groups encompassing individuals aged 15+ by plotting the evolution of their levels of education. Each analysis included six charts, one for each level of educational attainment. The goal of these analyses was to discover how the distribution of various levels of educational attainment had changed over the two decades covered by the censuses of 1998, 2008, and 2019.

Figure 1 reveals that, by 2019, the risk of an individual having no formal education had fallen to nearly zero for every age group. This finding suggests that Cambodia had achieved the goal of universal access to education. Only two cohorts, those aged 65 or over in 1998 and 2008, appeared to face any real risk of having no formal education.

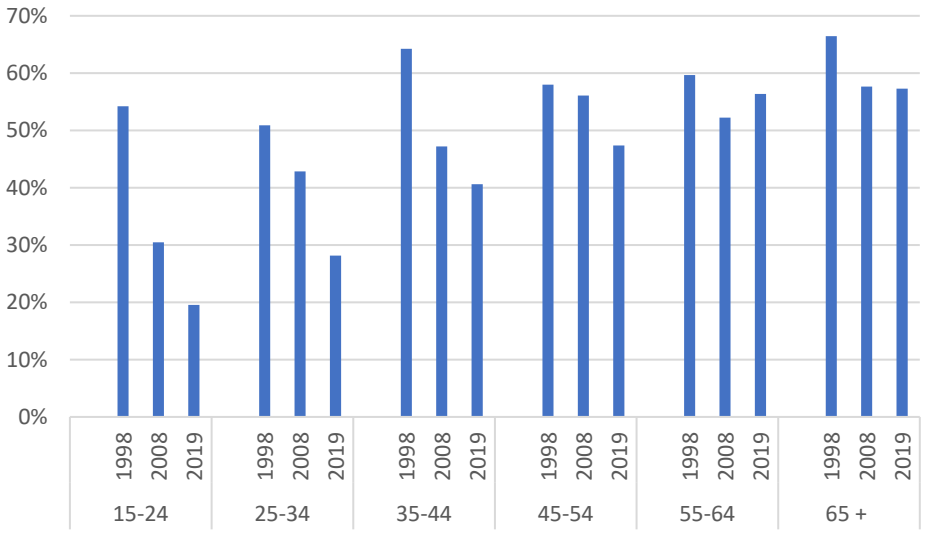
Figure 1: Cambodians Aged 15+ with No Formal Education, by Age Group, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 2 suggests that individuals in all age cohorts face a nontrivial risk of not completing their primary education, although the risk had certainly fallen during 1998–2019, especially for the younger cohorts. One troubling finding is that the percentage of individuals who reported having begun, but not completed their primary education was still high in 2019 for the older cohorts: 56.4% for those aged 55–64 and 57.3% for those aged 65 and over.

Figure 2: Cambodians Aged 15+ Who Did Not Complete Primary School, by Age Group, 1998, 2008, and 2019 (%)



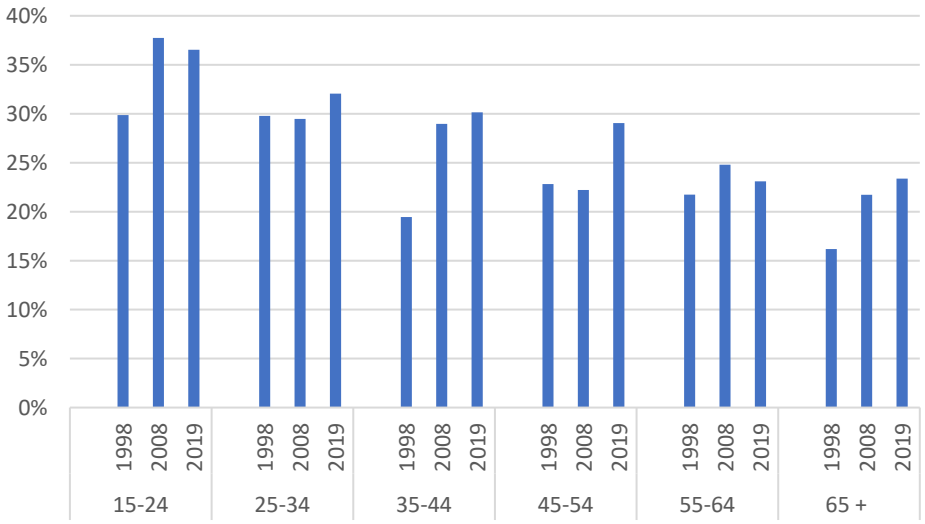
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

A comparison of the data for successive cohorts suggests that the education system may be affording some of these individuals an opportunity to complete their primary education by

alternative means in adulthood. For example, 30.5% of the individuals who were aged 15–24 in 2008 reported having begun, but not completed primary education. By 2019, when this cohort was aged 25–34, the percentage of non-primary completers had fallen to 28.2%, an apparent drop of 2 percentage points. If true, this finding represents a significant achievement in recovering primary school dropouts.[7]

Figure 3 reveals what appears to be an odd finding: The percentage of individuals aged 15–24 who reported having completed primary school rose by 8 percentage points from 1998 to 2008, but then fell 1 percentage point from 2008 to 2019. This latter apparent drop is likely the product of the increased percentage of individuals going on to higher levels of education. Overall, more individuals were completing their primacy education during 1998–2019, with the older cohorts seeing the largest gains. For example, by 2019, the percentage of individuals aged 35–44 who reported completing primary school reached 30.1%, up from 19.4% in 1998; while those 65 and over who reported completing primary school reached 23.4% in 2019, up from 16.2% in 1998.

Figure 3: Cambodians Aged 15+ Who Completed Primary School as Their Highest Level of Education, by Age Group, 1998, 2008, and 2019 (%)

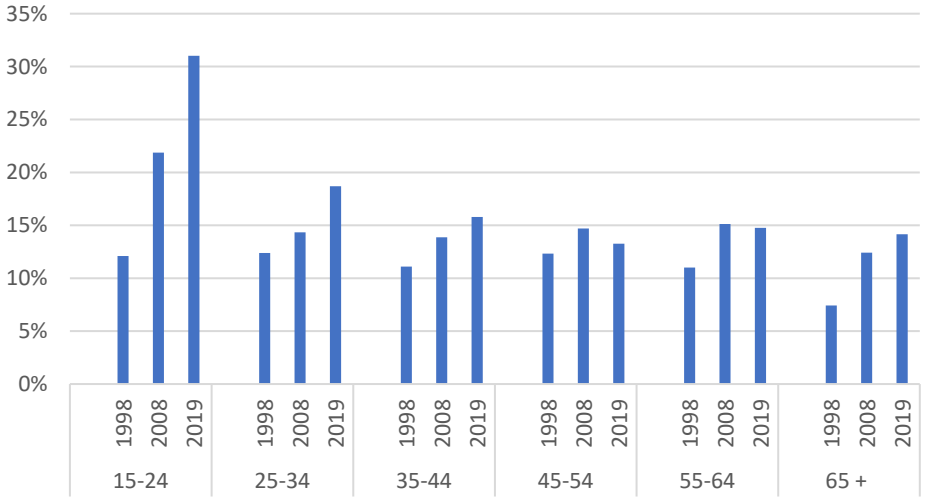


Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 4 shows a significant increase in the percentage of 15- to 24-year-olds earning a lower secondary degree. By 2019, 31% of individuals aged 15–24 had earned this degree, an increase of 18.9 percentage points since 1998. The rates of improvement for the older age groups during 1998–2019 were smaller, but still significant.

[7] This finding needs to be interpreted with caution, however, as it is possible that the observed increase in primary school completion rates might be the product of a response error in GPCC reporting, rather than a real change. More specifically, social stigma might cause some adults to report having completed primary school when, in fact, they had not. The GPCC data does not provide any means to evaluate this possibility.

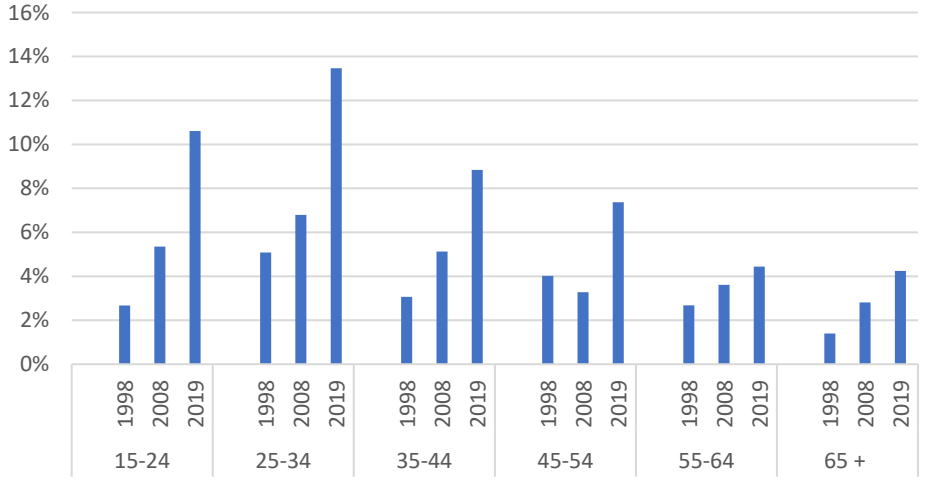
Figure 4: Cambodians Aged 15+ Who Completed Lower Secondary School as Their Highest Level of Education, by Age Group, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 5 documents a rapid increase in the percentage of adults aged 15+ who had obtained an upper secondary education/diploma. The two youngest cohorts, those aged 15–24 and 25–34, experienced the most rapid increases. By 2019, 10.6% of the 15–24 age group and 13.5% of the 25–34 age group had obtained this degree. The older age cohorts, however, were considerably less likely to have reached this level of educational attainment.

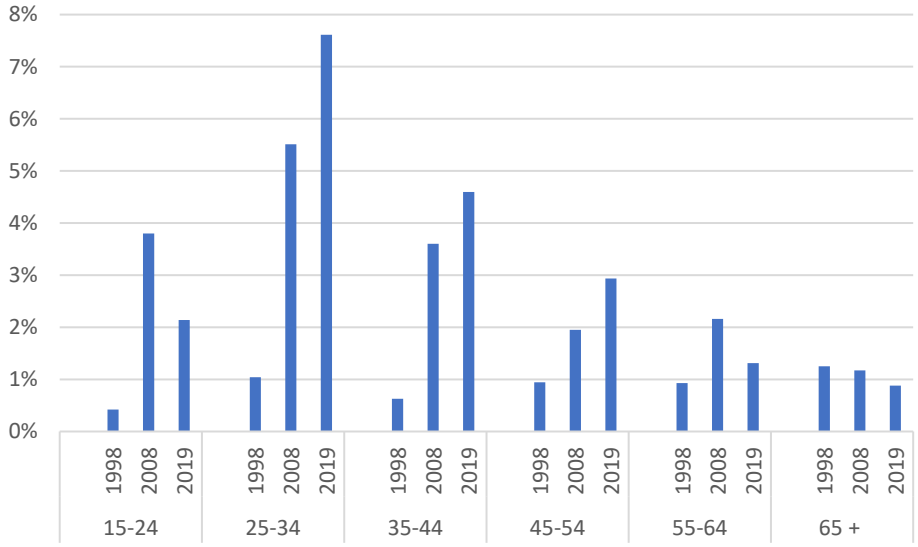
Figure 5: Cambodians Aged 15+ Who Completed Upper Secondary School as Their Highest Level of Education, by Age Group, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 6 shows that the probability of obtaining a post-secondary qualification has risen from near zero in 1998 to appreciable percentages for most age groups in 2019. As expected, those who were 15 to 24 years old in 2019 had a low probability, 2.1%, of having obtained a post-secondary education. This probability rose significantly to 7.6% for those 25 to 34 years old.

Figure 6: Cambodians Aged 15+ Who Had a Post-Secondary Qualification as Their Highest Level of Education, by Age Group, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

By way of summary, the figures above document the significant and steady progress that was made for all age groups during 1998–2019. As expected, again, the youngest age group, those aged 15–24, was the most educated in 2019, with the lowest percentage having only a primary education or less. The oldest age cohort, those aged 65 and over, had the highest percentage that had not completed primary school or had no formal education. Judged against the data presented above, even the 15–24 age group in 2019 were nowhere near realizing the goal of universal secondary education.

3.3. Education and Gender

Sustainable Development Goal (SDG) 4, Target 4.5 specifies that, by 2030, all countries should eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations. Historically, girls in many countries, including Cambodia, have had less access to educational opportunities and tend to have fewer years of education on average.

Table 3: Levels of Educational Attainment by Cambodians Aged 15+, by Gender, 1998, 2008, and 2019

Gender and Year	None		Primary Not Completed		Primary		Lower Secondary		Secondary/Diploma		Beyond Secondary		Total	
	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
Female														
1998	32,754	1.6	1,297,920	63.9	458,591	22.6	189,707	9.3	45,721	2.3	6,940	0.3	2,031,633	100.0
2008	51,519	1.6	1,568,609	47.5	977,082	29.6	491,004	14.9	123,811	3.8	87,046	2.6	3,299,071	100.0
2019	2,686	0.1	1,832,080	38.9	1,446,261	30.7	893,577	19.0	385,323	8.2	147,807	3.1	4,707,734	100.0
Male														
1998	26,805	1.1	1,179,720	49.4	711,343	29.8	333,595	14.0	109,855	4.6	25,366	1.1	2,386,684	100.0
2008	33,244	0.9	1,284,647	36.2	1,150,010	32.4	682,920	19.2	230,374	6.5	167,315	4.7	3,548,510	100.0
2019	2,806	0.1	1,446,104	31.3	1,455,884	31.5	976,891	21.2	512,497	11.1	222,961	4.8	4,617,143	100.0

No. = number.

Note: The percentages may not total 100% because of rounding.

Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

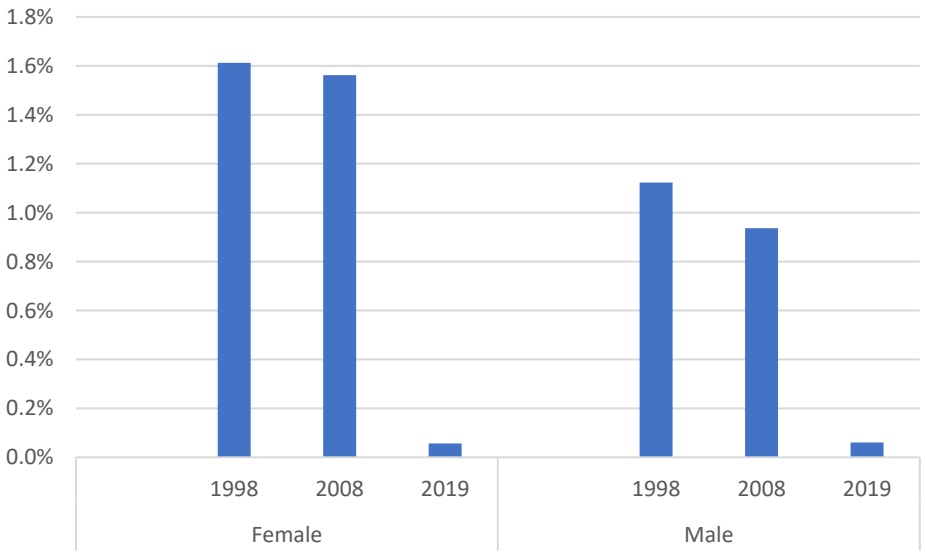
Table 3 reveals the following points:

(i) In 2019, a plurality of females (38.9%) attended, but did not complete, primary school. However, a plurality of males (31.5%) completed primary school that same year.

(ii) The gender disparities in the attainment of various levels of education were small in 2019; in fact, they were much smaller than in 1998. For instance, in 1998 the proportion of females who did not finish primary school was 14.5 percentage points higher than the proportion of males in the same category; by 2019, the difference was reduced to 7.6 percentage points. This suggests that Cambodia was well on its way to achieving SDG 4, Target 4.5.

Figures 7 through 12 plot the percentages of males and females with each level of education. Figure 7 shows that access to formal education improved rapidly during the reference period. More specifically, the percentage of women reporting that they had no formal education fell from 1.6% in 1998 to 0.1% in 2019. The percentage of men reporting that they had no formal education fell from 1.1% in 1998 to 0.1% in 2019. Thus, the data for 2019 suggest that Cambodia had achieved gender parity with respect to access to the education system.

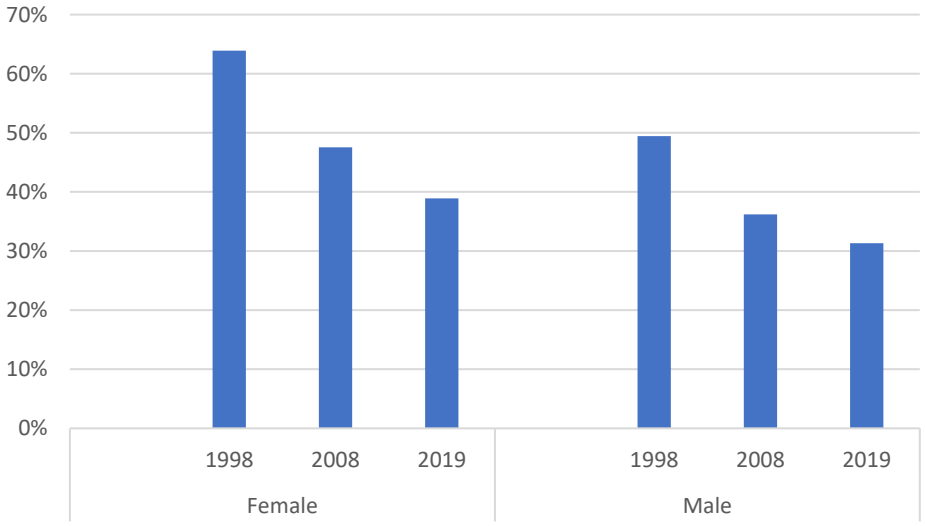
Figure 7: Cambodians Aged 15+ with No Formal Education, by Gender, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 8 shows that the percentage of women aged 15+ reporting that they had started, but not completed their primary education fell from 63.9% in 1998 to 38.9% in 2019. For men, the corresponding percentages were 40.4% and 31.3%. Thus, by 2019 there was only a 7.6 percentage point difference between men and women who did not complete primary school, with the men having the smaller percentage. However, the fact that over a third of adult men and women had failed to complete the primary cycle of education suggests that Cambodia has some distance to go toward achieving the goal of universal primary completion, as indicated in the SDG 4, Target 4.1.

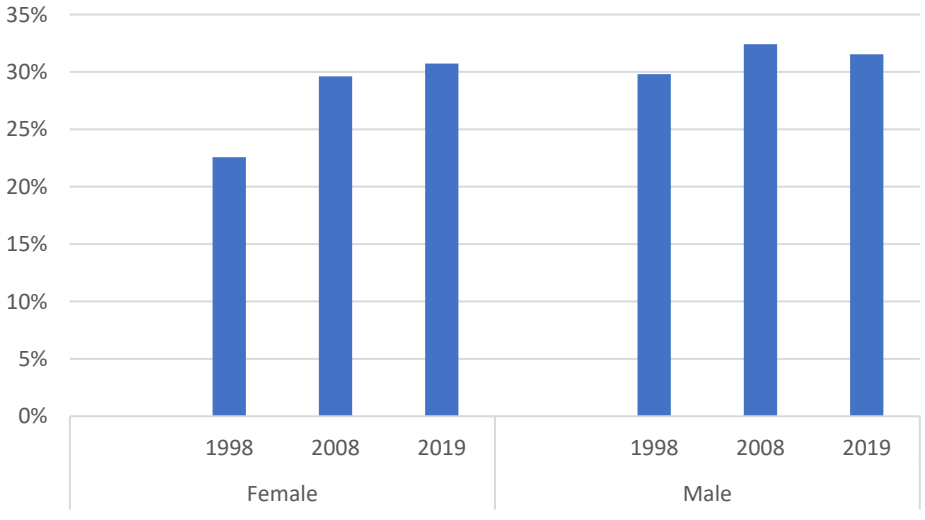
Figure 8: Cambodians Aged 15+ Who Did Not Complete Primary School, by Gender, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 9 shows a similar pattern of change in the percentages of women and men reporting that they had completed primary school, and that was their highest level of education. The percentage of women 15 years of age and over with a complete primary education rose from 22.6% in 1998 to 30.7% in 2019. By comparison, the percentage of men aged 15+ in the same category rose from 29.8% in 1998 to 31.5% in 2019. The data suggest that Cambodia had achieved gender parity in primary school completion.

Figure 9: Cambodians Aged 15+ Who Completed Primary School as Their Highest Level of Education, by Gender, 1998, 2008, and 2019 (%)

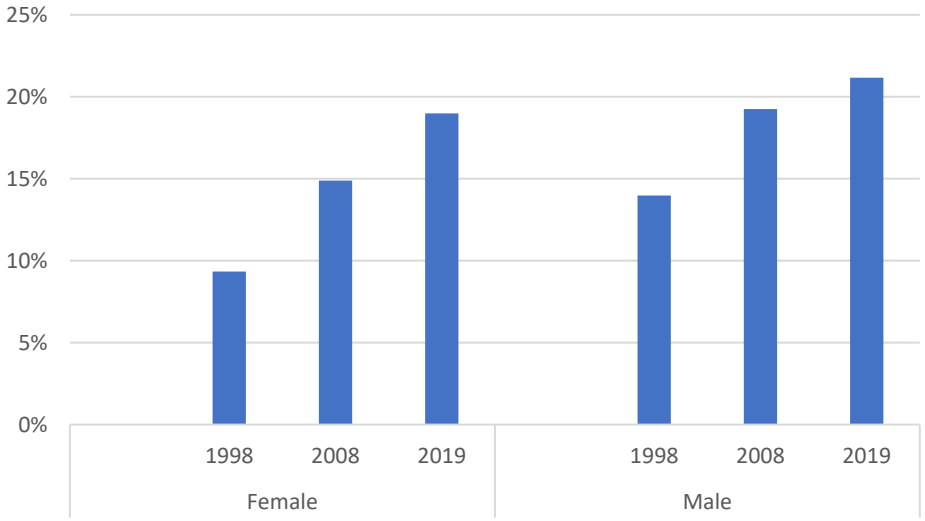


Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 10 documents significant improvements in the percentages of men and women obtaining a lower secondary degree. The percentage of women aged 15+ reporting lower secondary completion as their highest level of education rose from 9.3% in 1998 to 19% in 2019. The percentage of men aged 15+ with reporting the same rose from 14% in 1998 to

21.2% in 2019. The men rose from a higher level than the women, but the 4.7 percentage-point spread between them in 1998 was reduced to 2.2 percentage points in 2019.

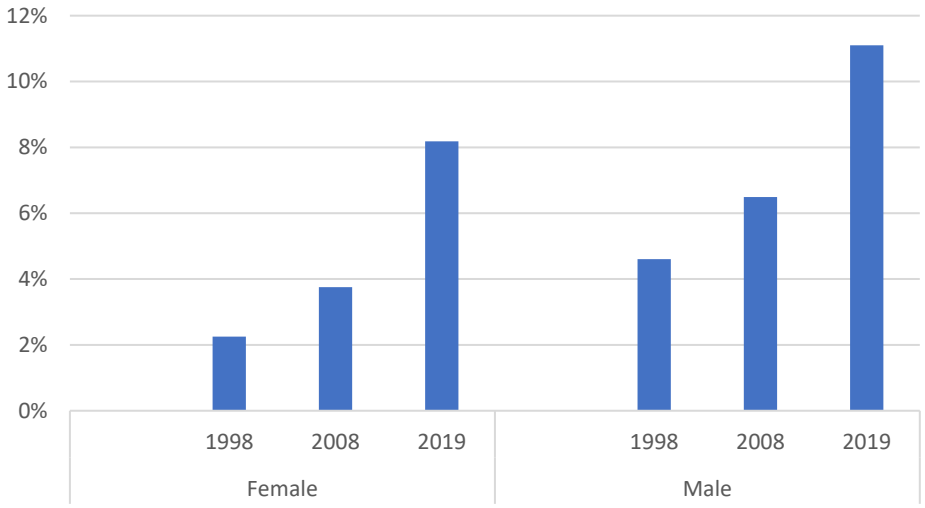
Figure 10: Cambodians Aged 15+ Who Completed Lower Secondary School as Their Highest Level of Education, by Gender, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

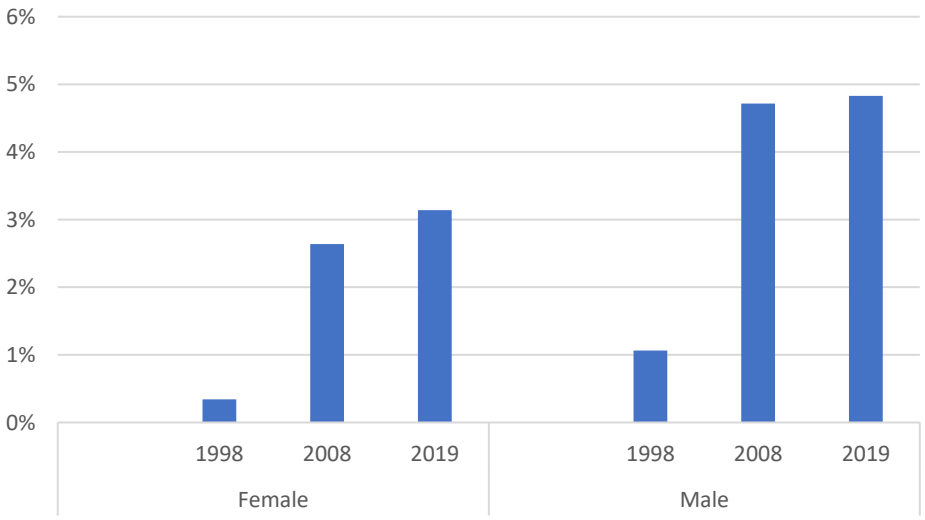
Figure 11 shows that the proportion of women aged 15 years and older with an upper secondary diploma rose from 2.3% in 1998 to 8.2% in 2019, a four-fold increase. In 1998, 4.6% of men aged 15+ reported having an upper secondary diploma; by 2019, this percentage more than doubled, rising to 11.1%. In 2019, men were still more likely than women to have completed a secondary diploma (11.1% versus 8.2%).

Figure 11: Cambodians Aged 15+ Who Completed Upper Secondary School as Their Highest Level of Education, by Gender, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 12: Cambodians Aged 15+ Who Had a Post-Secondary Qualification as Their Highest Level of Education, by Gender, 1998, 2008, and 2019(%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 12 shows that women aged 15+ had realized a rapid increase in the percentage reporting having a post-secondary qualification, rising from less than 1% in 1998 to 3.1% in 2019. For men, the percentage of individuals reporting that they had a post-secondary qualification rose from 1.1% in 1998 to 4.8% in 2019; so the men ended up 1.7 percentage points higher than the women.

Taken together, these results support the conclusion that Cambodian policy makers have done an excellent job in reducing what were once large gaps between men and women to at most 2% on average for every level of educational attainment. The gaps were almost closed at the lower levels of education; but remained relatively wide, at over 3%, at the lower

secondary or better levels. These results imply that reducing the size of the gender gaps in educational attainment must remain a priority for Cambodian policy makers.

3.4. Education and the Rural–Urban Divide

It is common to see significant variations in the educational attainment among subnational regions and between adults living in urban and rural areas. Table 4 plots trends in the percentage of adults in each level of educational attainment in urban and rural areas. These differences are often large enough to create large differences in the literacy levels among geographies, differences that themselves are large enough to have material impacts on the level of economic activity, average incomes and health.

Table 4: Levels of Educational Attainment by Cambodians Aged 15+, by Urban and Rural Area, 1998, 2008, and 2019

Rural/Urban Area and Year	None		Primary Not Completed		Primary		Lower Secondary		Secondary/Diploma		Beyond Secondary		Total	
	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
Rural														
1998	50,208	1.5	2,089,266	62.6	841,074	25.2	299,682	9.0	52,364	1.6	6,590	0.2	3,339,184	100.0
2008	65,133	1.3	2,413,720	47.2	1,645,026	32.2	758,605	14.8	170,153	3.3	61,176	1.2	5,113,813	100.0
2019	3,653	0.1	2,207,813	42.5	1,697,866	32.7	916,118	17.7	298,616	5.8	66,135	1.3	5,190,201	100.0
Urban														
1998	9,351	0.9	388,374	36.0	328,860	30.5	223,620	20.7	103,212	9.6	25,716	2.4	1,079,133	100.0
2008	19,630	1.1	439,536	25.4	482,066	27.8	415,319	24.0	184,032	10.6	193,185	11.1	1,733,768	100.0
2019	1,839	0.0	1,070,371	25.9	1,204,279	29.1	954,350	23.1	599,204	14.5	304,633	7.4	4,134,676	100.0

No. = number.

Note: The percentages may not total 100% because of rounding.

Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 4 reveals the following points:

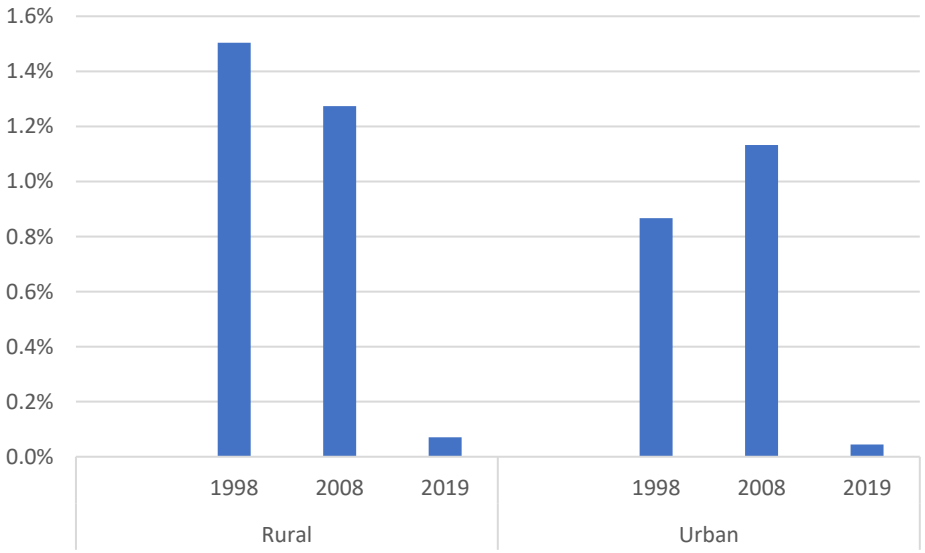
(i) A plurality of the rural population aged 15 and above (42.5%) in 2019 had attended, but did not complete, primary school, as opposed to only 25.9% of the urban population.

(ii) The rural population is generally less likely to attain higher levels of education, suggesting that a rural–urban divide in that regard still existed in 2019. But the divide was small. In fact, it was much smaller than that in 1998 for most levels of education (e.g., a 11.7 percentage point difference in 1998 for lower secondary education dropped to a 5.4 percentage point difference in 2019).

(iii) Nevertheless, the rural–urban divide for beyond secondary education actually widened from 1998 to 2019, suggesting that the government needs to do more to ensure that higher education is more accessible to the rural population.

Figures 13–18 delve deeper into the trends described above by plotting the percentages of Cambodians aged 15+ at each level of education in urban and rural areas. Figure 13 shows a massive reduction during 1998–2019 in what had been large differences between urban and rural areas in the probability of Cambodian adults aged 15+ having no formal education, a change that was due to government policies. More specifically, significant improvements in educational access in rural areas had precipitated equally rapid reductions in the likelihood of rural adults having no formal education, so that by 2019 both urban and rural adults had virtually no probability of lacking any formal education.

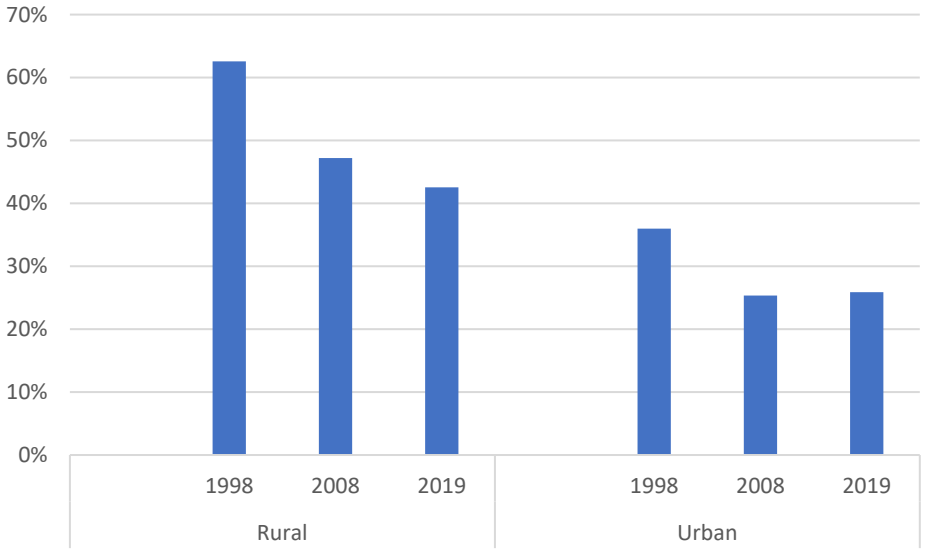
Figure 13: Cambodians Aged 15+ with No Formal Education, by Urban and Rural Area, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 14 shows that the percentage of rural adults aged 15+ who reported having started, but not completed, primary school fell from 62.8% in 1998 to 42.5% in 2019. For urban areas, the comparable percentages were 36% to 25.9%. Thus, as of 2019 there was still a 16.6 percentage-point difference in the proportion of adults aged 15+ who had started, but failed to complete, their primary education, with urban adults being less likely to drop out.

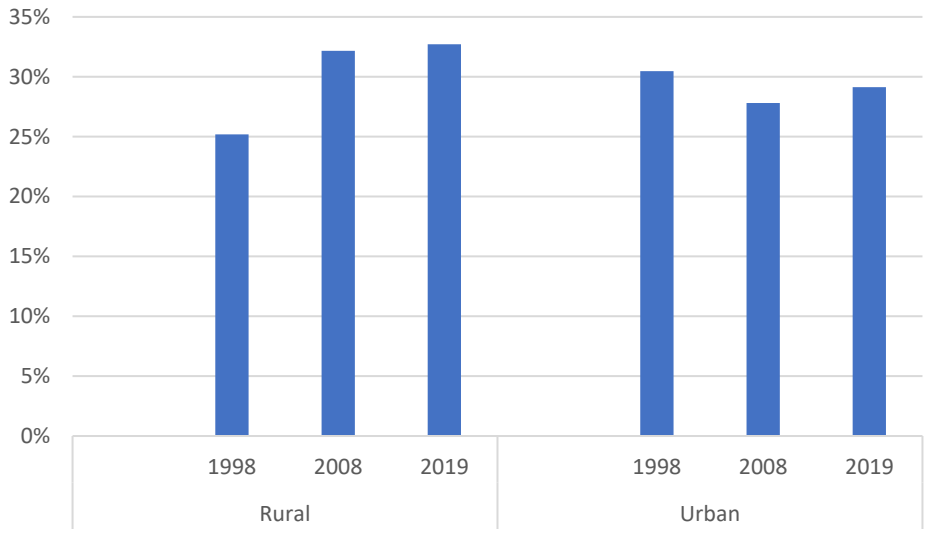
Figure 14: Cambodians Aged 15+ Who Did Not Complete Primary School, by Urban and Rural Area, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 15 shows that rural areas realized a steady increase in the percentage of adults aged 15+ who had completed primary school as their highest level of educational attainment. The percentage of urban adults aged 15+ with primary school as their highest level actually fell slightly during the reference period: from 30.5% in 1998 to 29.1% in 2019. This latter finding suggests that a higher percentage of urban adults aged 15+ had gone on to obtain higher levels of attainment than their rural peers.

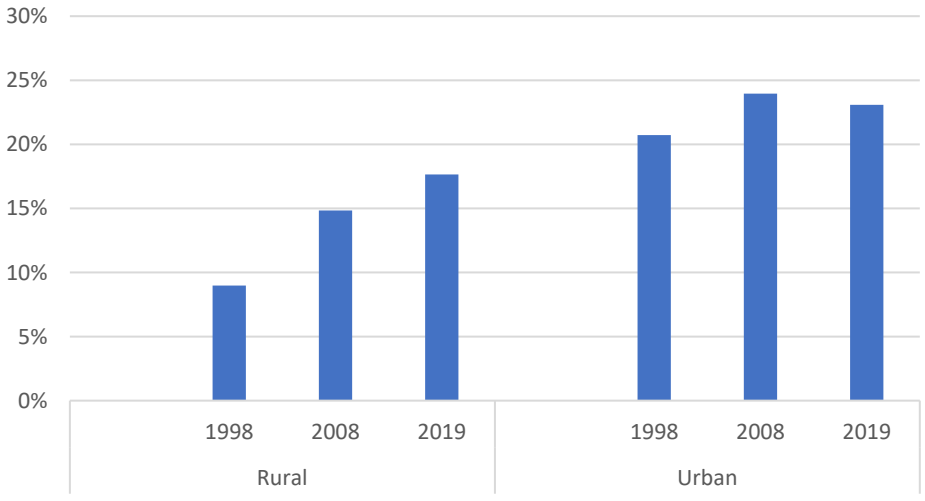
Figure 15: Cambodians Aged 15+ Who Completed Primary School as Their Highest Level of Education, by Urban and Rural Area, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 16 documents significant improvements in the percentage of adults aged 15+ obtaining a lower secondary qualification in rural areas. The percentage of rural adults aged 15+ reporting lower secondary completion as their highest level of educational attainment rose from 9% in 1998 to 17.7% in 2019. The percentage of urban adults aged 15+ reporting lower secondary completion as their highest level of educational attainment rose by a smaller degree, but from a higher level, than rural adults: from 20.7% in 1998 to 23.1% in 2019.

Figure 16: Cambodians Aged 15+ Who Completed Lower Secondary School as Their Highest Level of Education, by Urban and Rural Area, 1998, 2008, and 2019 (%)

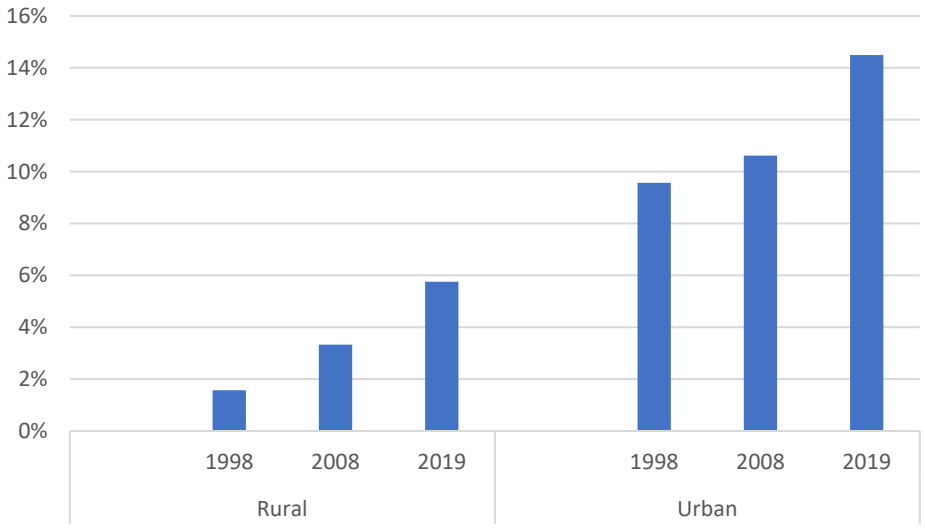


Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 17 confirms that educational expansion has driven more rapid improvement in the percentages of urban adults aged 15+ with an upper secondary diploma in urban areas, where it rose from 9.6% in 1998 to 14.5% in 2019. In rural areas, the percentage of rural adults aged 15+ who reported having an upper secondary diploma rose from 1.6% in 1998 to 5.8% in

2019. Whatever the differences in the levels of attainment and in the rates of improvement among urban and rural adults, neither group is close to meeting the Sustainable Development Goal (SDG) target of universal access to a complete secondary education.

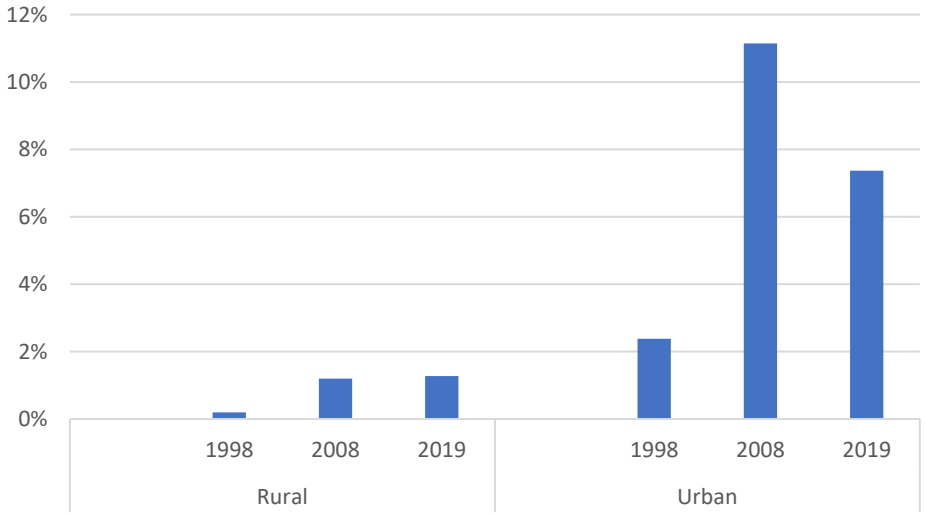
Figure 17: Cambodians Aged 15+ Who Completed Upper Secondary School as Their Highest Level of Education, by Urban and Rural Area, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 18 shows that adults aged 15+ in rural areas had virtually no probability of having obtained a post-secondary qualification in 2019. In sharp contrast, adults living in urban areas had a much higher probability of possessing a post-secondary qualification. Somewhat anomalously, the percentage of urban adults with a post-secondary qualification appears to have dropped 3 percentage points between 2008 and 2019, from 11.1% to 7.4%.

Figure 18: Cambodians Aged 15+ Who Had a Post-Secondary Qualification as Their Highest Level of Education, by Urban and Rural Area, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Taken together, these results support the conclusion that Cambodian policy makers have done a good job of reducing what were once large educational gaps between adults living in urban and rural areas. Nevertheless, the attainment levels in rural areas continue to lag those of urban areas, especially at the higher levels of education. This finding that suggests that there is a continuing need to increase attendance and graduation rates in rural areas.

3.5. Education and Economic Sectors

The structure of the Cambodian economy is changing rapidly. According to the United Nations Development Programme (UNDP) *Human Development Report 2019*, employment in agriculture had declined, falling from almost 35% of value added in 2011 to 22% in 2018, whereas value added for industry rose from 22% to 32% and for services from 38% to 39% (UNDP 2019). The observed trends mirrored a general trend towards more knowledge- and skill-intense production being driven by skill-biased technical changes and the growth of global markets (Crawford and Johal 2020).

Table 5: Levels of Educational Attainment by Cambodians Aged 15+, by Economic Sector, 1998, 2008, and 2019

Economic Sector and Year	None		Primary Not Completed		Primary		Lower Secondary		Secondary/Diploma		Beyond Secondary		Total	
	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
Agriculture														
1998	36,532	1.6	1,540,980	67.5	534,677	23.4	152,619	6.7	16,104	0.7	2,808	0.1	2,283,720	100.0
2008	49,008	1.4	1,932,072	55.8	1,041,467	30.1	365,198	10.6	62,543	1.8	10,743	0.3	3,461,031	100.0
2019	733	0.0	1,843,535	50.1	1,193,730	32.4	498,175	13.5	134,322	3.6	11,217	0.3	3,681,712	100.0
Industry														
1998	1,294	0.8	73,824	42.9	63,237	36.8	25,110	14.6	7,362	4.3	1,060	0.6	171,887	100.0
2008	3,115	0.8	135,031	34.7	160,444	41.2	68,765	17.7	16,214	4.2	5,795	1.5	389,364	100.0
2019	171	0.0	461,080	31.0	589,193	39.6	309,720	20.8	108,650	7.3	19,545	1.3	1,488,359	100.0
Service														
1998	2,500	0.5	126,849	26.1	135,446	27.8	125,330	25.8	79,137	16.3	17,260	3.5	486,522	100.0
2008	6,638	0.7	210,668	23.1	241,456	26.5	200,026	22.0	126,039	13.8	125,226	13.8	910,053	100.0
2019	516	0.0	206,502	16.1	263,989	20.6	235,807	18.4	313,872	24.5	258,132	20.2	1,278,818	100.0
Trade														
1998	2,478	0.9	129,858	47.1	87,276	31.7	41,708	15.1	12,734	4.6	1,363	0.5	275,417	100.0
2008	4,967	1.2	148,972	35.3	134,184	31.8	89,189	21.1	30,470	7.2	14,427	3.4	422,209	100.0
2019	76	0.0	225,549	27.0	254,827	30.5	196,924	23.6	124,521	14.9	34,273	4.1	836,170	100.0

No. = number.

Note: The percentages may not total 100% because of rounding.

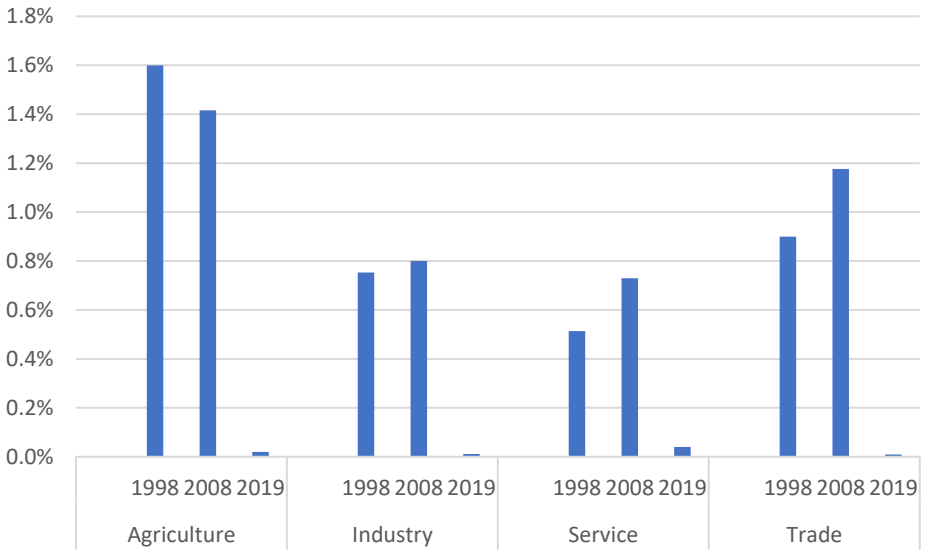
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 5 reveals the following points:

(i) In 2019, the highest share of the agriculture sector workforce attended, but did not complete, primary school (50.1%); while that was true for the lowest share of the service sector workforce (16.1%).
(ii) A plurality of the industry sector's workers possessed a primary education (39.6%).
(iii) In fact, the highest proportions of service sector workers in 2019 had either a secondary education or above a secondary education (24.5% for secondary and 20.2% for beyond a secondary education), in stark contrast to the agriculture sector.
(iv) These findings reflected the general trend of more educated workers being employed in the more sophisticated sectors. However, all economic sectors improved the levels of their workforces' educational attainment from 1998 to 2019.

Figures 19–24 plot the educational attainment of the employed population in each of four economic sectors (agriculture, industry, services, and trade) to see if the shift in economic activity is biased in favor of higher educational attainment. Figure 19 shows that, by 2019, the percentage of employed workers reporting no formal education had dropped to near zero in all four sectors. The drop in the percentage of employed workers with no formal education dropped the most in the agriculture sector.

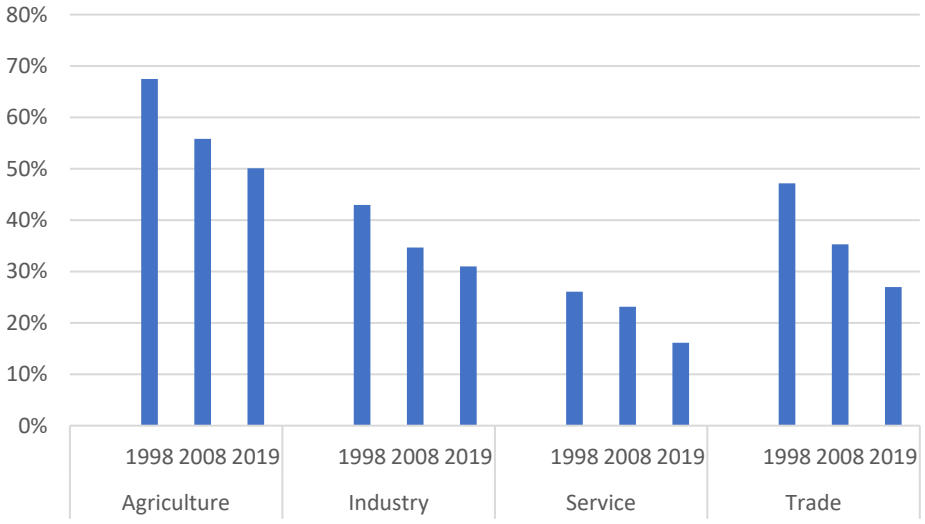
Figure 19: Employed Cambodians Aged 15+ with No Formal Education, by Economic Sector,1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 20 reveals a steady decline in the percentage of individuals aged 15+ who reported having started, but not completed, primary education across the economic sectors during 1998–2019. For example, in the agriculture sector the proportion of employed workers in this category fell steadily, from 67.5% in 1998 to 50.1% in 2019; and the service sector had the lowest proportion of individuals aged 15+ who had started, but not completed, their primary education (16.1%).

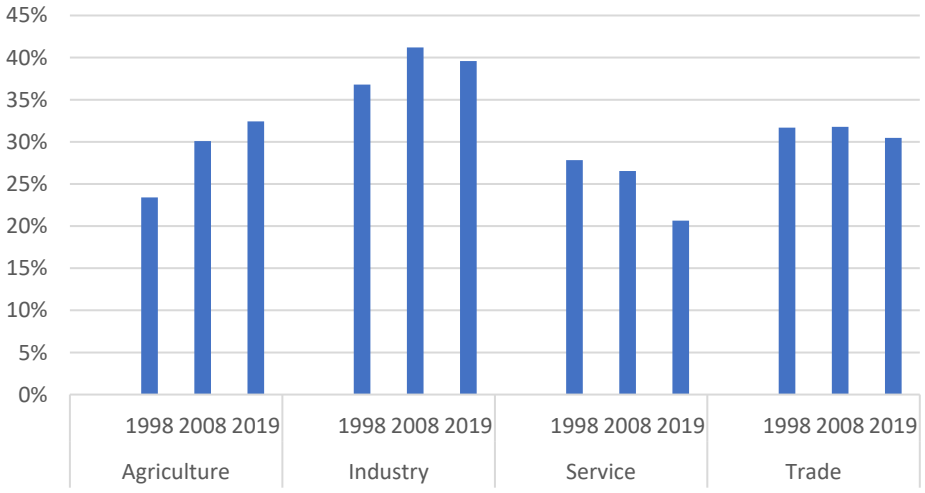
Figure 20: Employed Cambodians Aged 15+ Who Did Not Complete Primary School, by Economic Sector, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 21, which traces the percentages across the four economic sectors of employed Cambodians with a complete primary education, shows different results from those in Figure 20. The proportion of employed workers who had completed primary school rose steadily in the agriculture sector during 1998–2019, from 23.4% to 32.4%; but it fell during the same period in the service sector, from 27.9% to 20.6%. The percentages in the trade sector were relatively stable, ending at 30.5% in 2019. The industry sector has the highest share of its workers in 2019 with a complete primary education, at 39.6%.

Figure 21: Employed Cambodians Aged 15+ Who Completed Primary School as Their Highest Level of Education, by Economic Sector, 1998, 2008, and 2019 (%)

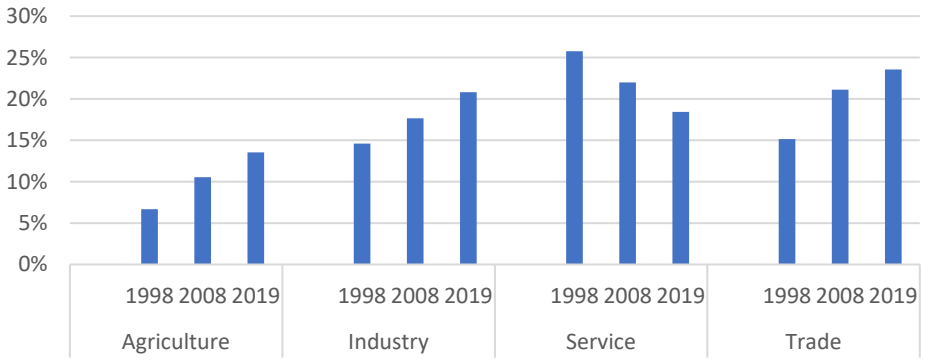


Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 22 documents a similarly complex pattern of change in the economic sectors' supply of workers with a lower secondary education. Except for the service sector, the percentage of the population aged 15+ with a lower secondary education as their highest qualification

steadily increased during 1998–2019: from 6.7% to 13.5% in the agriculture sector, 14.6% to 20.8% in the industry sector, and 16.1% to 23.6% in the trade sector. The service sector saw a decline in the percentage of workers with a lower secondary diploma, from 25.8% in 1998 to 18.4% in 2019, as more workers in this sector attained higher levels of education. The link between the educational attainment of workers and the potential for productivity growth makes these shifts important.

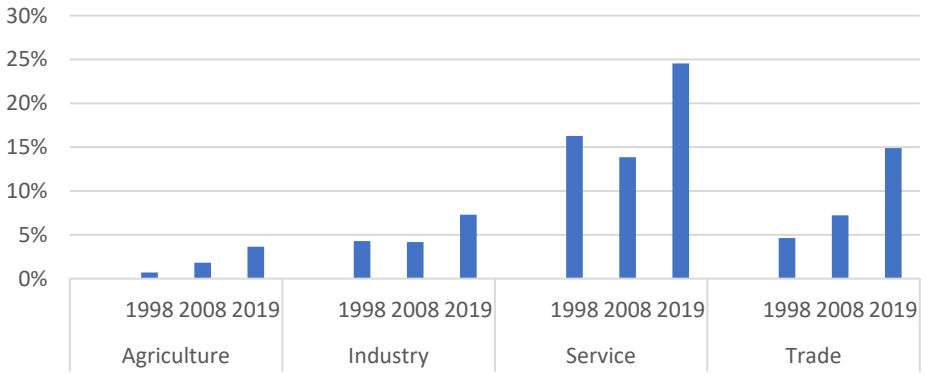
Figure 22: Employed Cambodians Aged 15+ Who Completed Lower Secondary School as Their Highest Level of Education, by Economic Sector, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 23 shows that in 2019 the agriculture and industry sectors employed very small percentages of workers with upper secondary diplomas, as opposed to the service sector, which employed the largest percentage of workers with this qualification. The service sector has also seen an increase in the percentage of workers with an upper secondary diploma as their highest level of education.

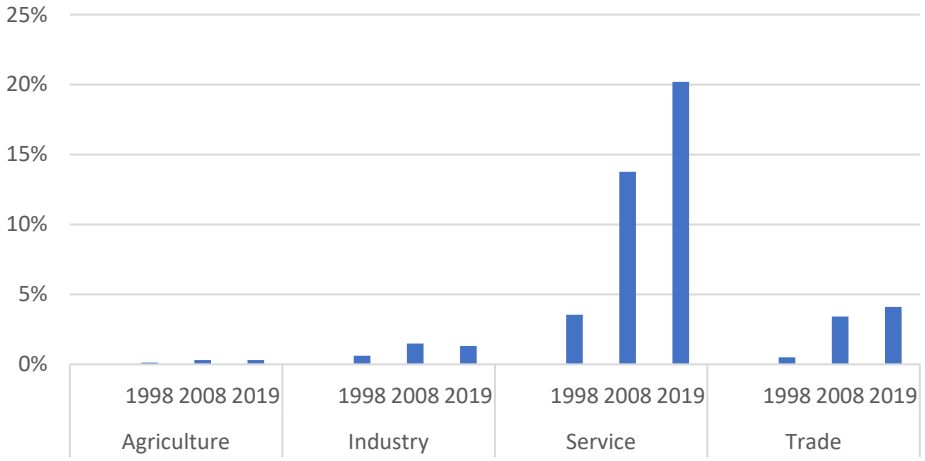
Figure 23: Employed Cambodians Aged 15+ Who Completed Upper Secondary School as Their Highest Level of Education, by Economic Sector, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 24 reveals that only the service sector employs a significant percentage of workers with educational attainment at beyond the secondary level. This sector has realized a rapid increase in the percentage of adults aged 15+ with a post-secondary qualification. In 1998, this percentage stood at 3.5%, rising to 20.2% in 2019.

Figure 24: Cambodians Aged 15+ Who Had a Post-Secondary Qualification as Their Highest Level of Education, by Economic Sector, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Taken together, these results document a rapid restructuring of the Cambodian economy, one in which the four economic sectors measured here have seen an increase in the educational levels of their workers. This restructuring is important, given the positive relationship between higher educational attainment by the workforce and the rates of GDP and productivity growth. Notwithstanding this generally positive trend, it remains to be seen if enough educated workers will have the type and quality of skills that will satisfy the expected growing demand on the part of employers. A skill demand study conducted by the International Labour Organization (ILO) found that the first-time jobseekers with higher education received the most positive comments from employers, with 64.1% of establishments expressing a high appreciation for their preparedness, and only 10.3% offering negative evaluations (Bruni, Luch, and Kuoch 2013). The reaction was similar for first-time jobseekers coming directly from technical and vocational schools, with 58.1% of establishments judging them to be "well or very well prepared." The worst reactions were those regarding first-time jobseekers from upper secondary school, with only 39.1% of the establishments judging the newly hired workers as well prepared, and 17.8% judging them to be poorly prepared. The most positive reactions came from the rubber and finance sectors; the most critical from the construction industry.

The establishments that complained about the preparedness of first-time jobseekers coming directly from the education system concentrated their criticism mainly on three areas: lack of skills and competencies required, lack of life experience and maturity, and lack of motivation. The lack of skills was especially noted regarding those coming from higher education, but also for graduates of vocational schools; a lack of motivation seemed not to affect university graduates, while a lack of experience appeared to be a common problem overall.

3.6. Education and Occupation

The level of education demanded by different occupations varies significantly. The Cambodian national occupation classification system was derived from the revised

International Standard Classification of Occupations (ISCO-88), and identifies 10 major groups.[8]

According to an analysis by the Organisation for Economic Co-operation and Development (OECD), ISCO-88 was designed and constructed around two key concepts: the specific job, and the skills required to do that job competently. A *job* is defined as the set of tasks or duties designed to be performed by one person. For the majority of job holders, the job is predefined before they are recruited into the post. Employers, professional bodies, or institutions formulate jobs as bundles of tasks and duties allocated to employees who are recruited for these jobs. Associated with a job may be a job description that details the required tasks and duties and indicates the job title through which the post holder identifies with the job. In some cases, particularly for self-employed individuals, the job is designed and conducted by the post holder.

"Skill" is defined in ISCO-88 as "the ability to carry out the tasks and duties of a particular job" (Elias 1997). To develop a taxonomy around this concept of occupational competence, two different dimensions of skill are defined. The *level of skill* associated with the competent performance of a job is intended to measure the complexity and range of the tasks and duties concerned. The *specialization of skill* defines the field(s) of knowledge required, tools and machinery used, material worked on, and the kind of goods or services produced. As in the earlier versions of ISCO (ISCO-58 and ISCO-68), the areas of skill specialization recognized in ISCO-88 form a taxonomy of types of work related to fields of knowledge, materials worked with, etc. Apart from a sharpening and updating of the definitions of such areas of knowledge, this concept as presented in ISCO-88 is not a novel one. The major change was the definition of skill levels.

To provide an operational definition of skill levels, ISCO-88 specifies four broad levels that are equated with levels of formal education:

(i) first skill level: primary education (begun at ages 5–7 and lasting approximately 5 years);
(ii) second skill level: secondary education (begun at ages 11–12 and lasting 5–7 years);
(iii) third skill level: tertiary education (begun at ages 17–18 and lasting 3–4 years, but without a university degree); and
(iv) fourth skill level: tertiary education (begun at ages 17–18 and lasting 3–6 years, and leading to university degree or equivalent).

In ISCO-88, these four levels are related to the extent of formal education, formal or informal training, and work experience generally associated with competent task performance.

[8] See for example: Government of Cambodia. Occupational Classification for Cambodia General Population Census 2008. https://www.stat.go.jp/info/meetings/cambodia/pdf/c8_occup.pdf.

Table 6: Major Groups and Skill Levels under the International Standard Classification of Occupations

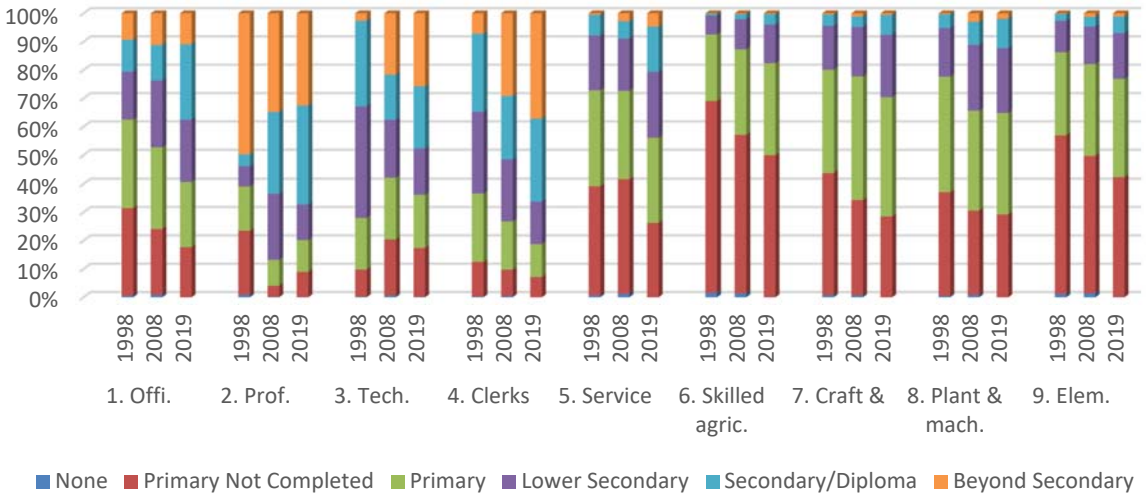
ISCO-88 Major Groups	ISCO Skill Levels
1. Legislators, senior officials, and managers	third and fourth
2. Professionals	fourth
3. Technicians and associate professionals	third
4. Clerks	second
5. Service workers and shop and market sales workers	second
6. Skilled agricultural and fishery workers	second
7. Craft and related workers	second
8. Plant and machine operators and assemblers	second
9. Elementary occupations	first
0. Armed forces[a]	first, second, and fourth

ISCO = International Standard Classification of Occupations, ISCO-88 = International Standard Classification of Occupations as revised by the International Labour Organization (ILO) in 1988.

[a] Major Group 0, which refers to the armed forces, is excluded from the analysis because of its special role in the public sector.

Source: ILO. 2012. *International Standard Classification of Occupations: Structure, Group Definitions and Correspondence Tables*. Geneva.

Figure 25: Levels of Educational Attainment by Cambodians Aged 15+, by Major Occupational Group, 1998, 2008, and 2019 (%)



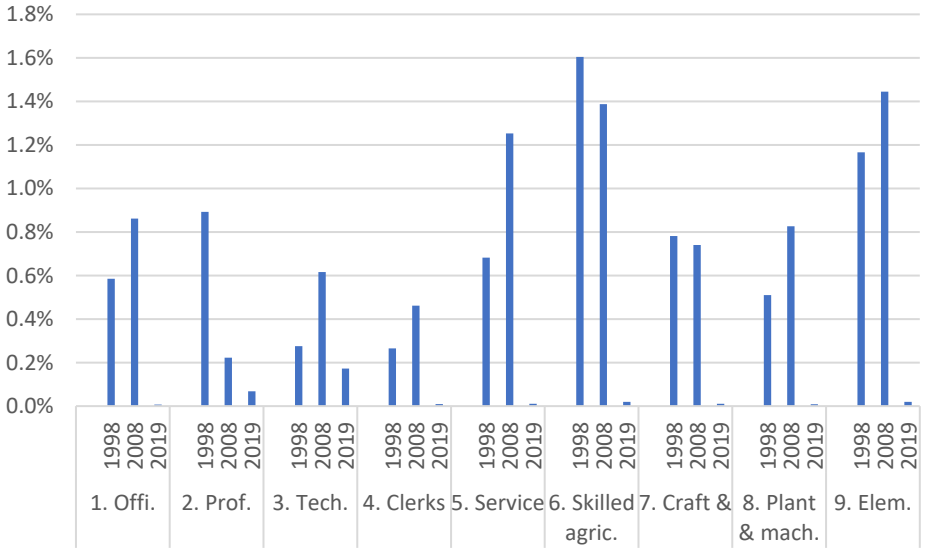
Craft = Craft and related workers; Elem. = Elementary occupations; Legis. = Legislators, senior officials, and managers; Plant = plant and machine operators and assemblers; Prof. = Professionals; Service = Service workers and shop and market sales workers; Skilled agric. = Skilled agricultural and fishery workers; Tech. = Technicians and associated professionals.

Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 25 shows that, as expected, the levels of occupational groups were positively correlated with the levels of educational attainment in 2019: Occupation groups that required higher levels of education tended to have higher shares of their workforces with higher levels of education. The converse was also true. For example, 32.5% of the Major Group 2 workforce possessed beyond secondary qualifications, whereas over 77% of the Major Group 9 workforce had a primary education or lower. From 1998 to 2019, however, more individuals attained higher levels of education in most occupational groups (Table A.1).

Figures 26–31 plot the trends in the educational attainment of the employed population in each of the major occupational groups to see if the shift in economic activity was biased in favor of those with more education. Figure 26 shows that, by 2019, the employment of adults aged 15+ with no formal education dropped to nearly zero in all occupational groups. This reflects the rapid decrease in the available supply of workers at this level. Major Group 5 (service workers and shop and market sales workers), Major Group 6 (skilled agricultural and fishery workers), and Major Group 9 (elementary occupations) experienced the largest declines in percentage of employed workers with no formal education during 1998–2019.

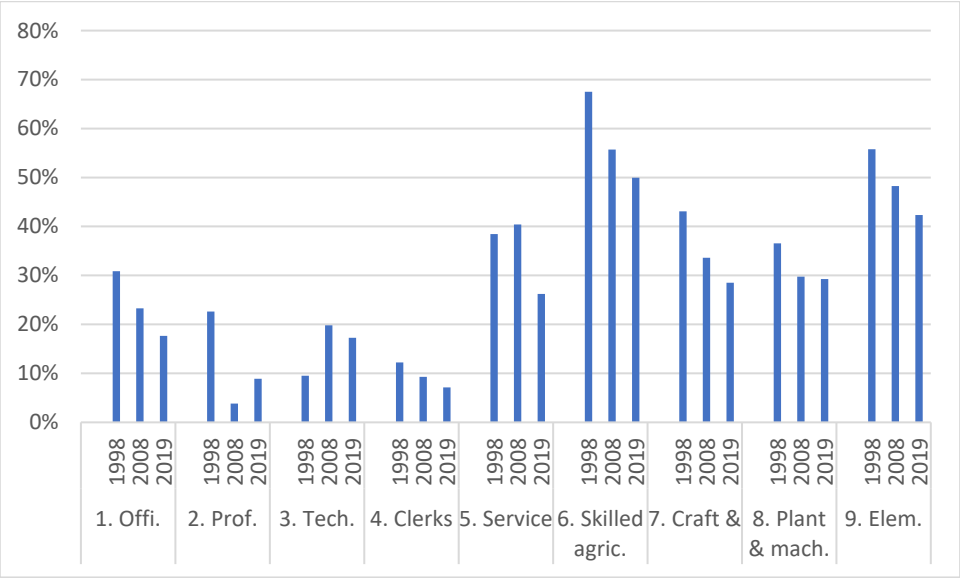
Figure 26: Cambodians Aged 15+ with No Formal Education, by Major Occupational Group, 1998, 2008, and 2019 (%)



Craft = Craft and related workers; Elem. = Elementary occupations; Legis. = Legislators, senior officials, and managers; Plant = plant and machine operators and assemblers; Prof. = Professionals; Service = Service workers and shop and market sales workers; Skilled agric. = Skilled agricultural and fishery workers; Tech. = Technicians and associated professionals.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Like Figure 26, Figure 27 shows that the percentage of the employed population aged 15+ who had started, but not completed, their primary education steadily declined during 1998–2019. The one exception was Major Group 2 (professionals), and the reason for this is not clear. That being said, in 2019 workers with an incomplete primary education unsurprisingly accounted for a significant percentage of the workforce in some major occupational groups that required lower- level skills (e.g., 49.9% of skilled agricultural and fishery workers and 42.4% of workers in elementary occupations).

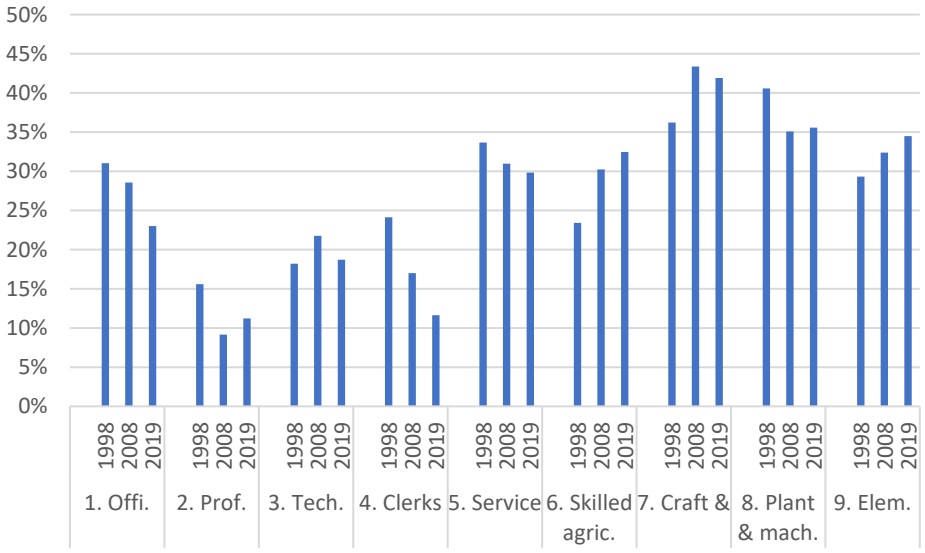
Figure 27: Employed Cambodians Aged 15+ Who Did Not Complete Primary School, by Major Occupational Group, 1998, 2008, and 2019 (%)



Craft = Craft and related workers; Elem. = Elementary occupations; Legis. = Legislators, senior officials, and managers; Plant = plant and machine operators and assemblers; Prof. = Professionals; Service = Service workers and shop and market sales workers; Skilled agric. = Skilled agricultural and fishery workers; Tech. = Technicians and associated professionals.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

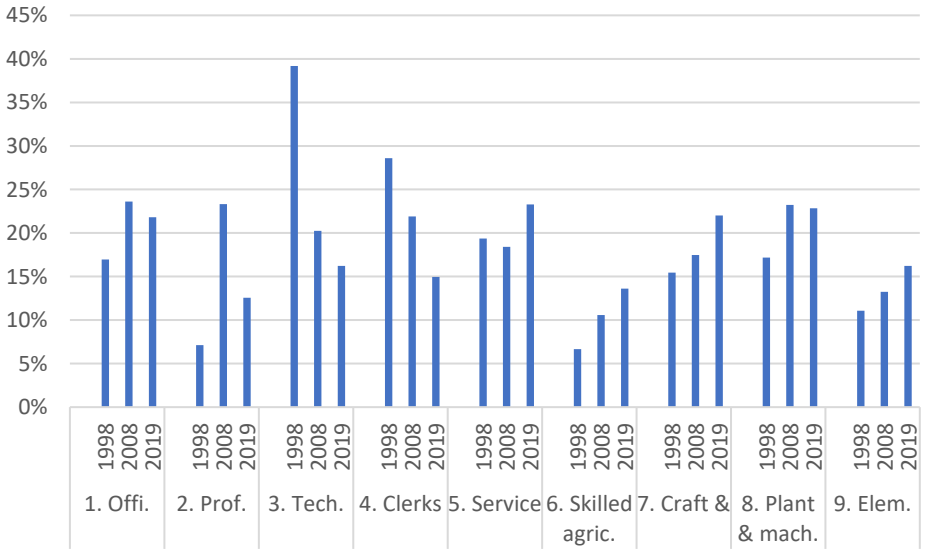
Figure 28 shows a pattern of results similar to that observed for workers with an incomplete primary education. The percentage of workers who completed primary school as their highest level of education fell in some occupations (e.g., legislators, senior officials, and managers) but it certainly rose in others (e.g., skilled agricultural and fishery workers). In 2019, the percentage of workers with a primary school education remained high in occupational groups that required low-level skills, with the highest percentage seen among the craft and related workers (41.9%). The economic restructuring of the Cambodian economy was clearly serving to concentrate the least educated into a few sectors.

Figure 28: Employed Cambodians Aged 15+ Who Completed Primary School as Their Highest Level of Education, by Major Occupational Group, 1998, 2008, and 2019 (%)



Craft = Craft and related workers; Elem. = Elementary occupations; Legis. = Legislators, senior officials, and managers; Plant = plant and machine operators and assemblers; Prof. = Professionals; Service = Service workers and shop and market sales workers; Skilled agric. = Skilled agricultural and fishery workers; Tech. = Technicians and associated professionals.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 29: Employed Cambodians Aged 15+ Who Completed Lower Secondary School as Their Highest Level of Education, by Major Occupational Group, 1998, 2008, and 2019 (%)



Craft = Craft and related workers; Elem. = Elementary occupations; Legis. = Legislators, senior officials, and managers; Plant = plant and machine operators and assemblers; Prof. = Professionals; Service = Service workers and shop and market sales workers; Skilled agric. = Skilled agricultural and fishery workers; Tech. = Technicians and associated professionals.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

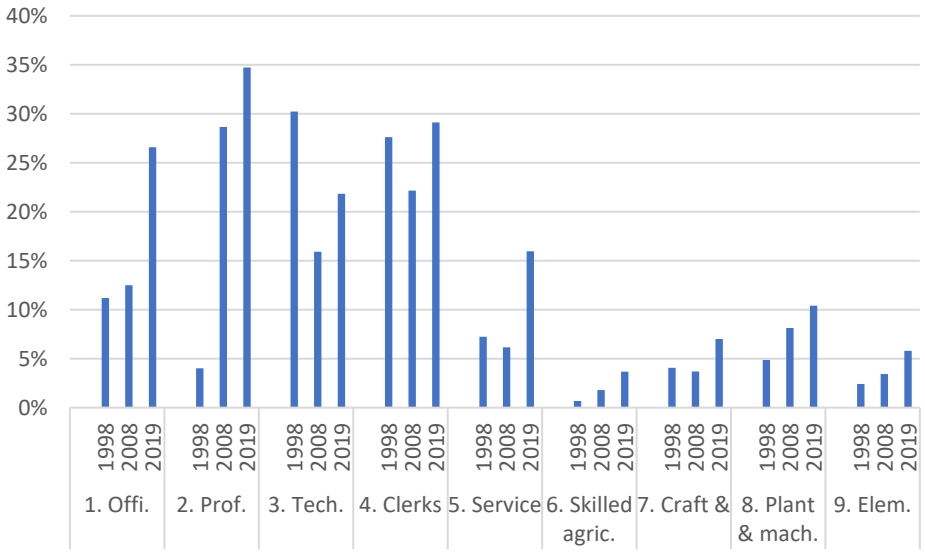
Figure 29 shows that the percentage of workers with a lower secondary qualification as their highest level of education increased over the reference period in most occupational groups, except for two of them: clerks and technicians and associate professionals. The increase corresponded with a general increase in the population with this level of education. However,

the size of this group overall remained small in 2019, with the largest portion belonging to the category of service workers and shop and market sales workers (23.3%).

Figure 30 shows significant variation in the distribution of skilled workers across the major occupational groups. As expected, the occupational groups that demanded higher-level skills had a larger share of workers with this level of education in 2019. For example, 34.7% of professionals had attained an upper secondary education as their highest qualification, while only 3.7% of skilled agricultural and fishery workers had done so. But all the major occupational groups, except for technicians and associate professionals, saw their percentage of adults aged 15+ with an upper secondary education as their highest qualification rise during 1998–2019.

Figure 30: Percentages at each level of educational attainment by major occupational group, population aged 15 and over reporting upper secondary completed as their highest level, Cambodia, 1998, 2008, and 2019

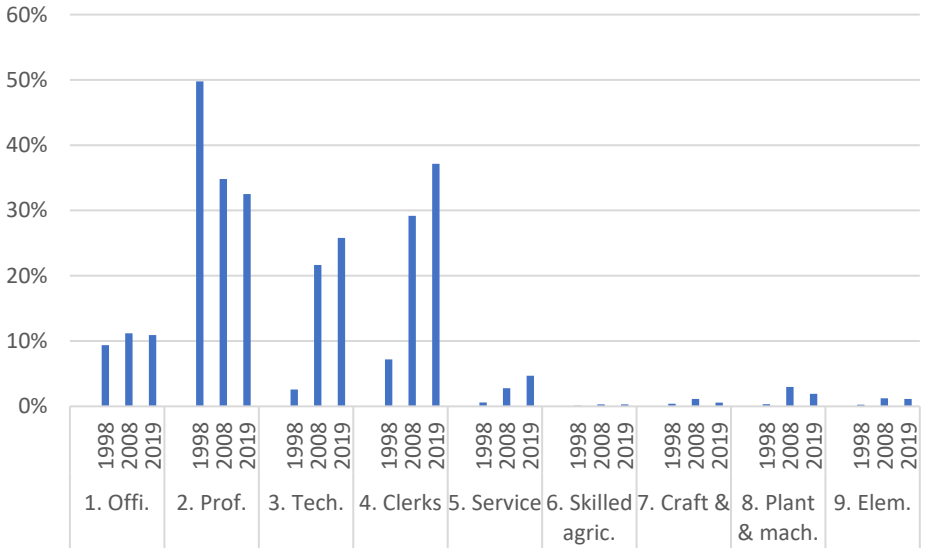
Figure 30: Employed Cambodians Aged 15+ Who Completed Upper Secondary School as Their Highest Level of Education, by Major Occupational Group, 1998, 2008, and 2019 (%)



Craft = Craft and related workers; Elem. = Elementary occupations; Legis. = Legislators, senior officials, and managers; Plant = plant and machine operators and assemblers; Prof. = Professionals; Service = Service workers and shop and market sales workers; Skilled agric. = Skilled agricultural and fishery workers; Tech. = Technicians and associated professionals.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 31, which looks at workers who had gone beyond an upper secondary education, shows a similar pattern of results as that seen in Figure 30.

Figure 31: Cambodians Aged 15+ Who Had a Post-Secondary Qualification as Their Highest Level of Education, by Major Occupational Group, 1998, 2008, and 2019 (%)



Craft = Craft and related workers; Elem. = Elementary occupations; Legis. = Legislators, senior officials, and managers; Plant = plant and machine operators and assemblers; Prof. = Professionals; Service = Service workers and shop and market sales workers; Skilled agric. = Skilled agricultural and fishery workers; Tech. = Technicians and associated professionals.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Taken together, these results provide further proof of a rapid restructuring of the Cambodian economy, one in which some, though not all, occupational groups saw an increase in the educational level of their workers. As noted previously, this restructuring is important, given the positive relationship between increases in the educational attainment of the workforce and rates of GDP and productivity growth. Notwithstanding this generally positive trend, it remains to be seen if this process of educational segregation by occupation will precipitate higher levels of inequality in key labor market outcomes such as levels of unemployment and wage rates.

3.7. Technical and Vocational Education and Training in Cambodia

Many countries have been expanding their technical and vocational education and training (TVET) programs to support higher levels of economic development. The tables and figures in this section provide a profile of trends in TVET participation in Cambodia at the time of the General Population Census of Cambodia (GPCC) in 2008 and 2019.

Table 7: Cambodians Graduating from Technical and Vocational Education and Training Programs, 15–24 and 15+ Age Groups, by Gender and Level, 2008 and 2019

Age Group/ Gender/ TVET Level	2008		2019		Percentage Point Change, 1998–2019
	(No.)	(%)	(No.)	(%)	
Aged 15–24					
Male	**10,690**	**100.0**	**11,130**	**100.0**	
Pre-secondary	2,552	23.9	3,066	27.5	3.6
Postsecondary	8,138	76.1	8,064	72.5	(3.6)
Female	**8,874**	**100.0**	**11,785**	**100.0**	
Pre-secondary	2,055	23.2	3,596	30.5	7.3
Postsecondary	6,819	76.8	8,189	69.5	(7.3)
Total	**19,564**	**100.0**	**22,915**	**100.0**	
Pre-secondary	4,607	23.5	6,662	29.1	5.5
Postsecondary	14,957	76.5	16,253	70.9	(5.5)
Aged 15+					
Male	**41,885**	**100.0**	**34,289**	**100.0**	
Pre-secondary	14,155	33.8	9,598	28.0	(5.8)
Postsecondary	27,730	66.2	24,691	72.0	5.8
Female	**23,052**	**100.0**	**27,976**	**100.0**	
Pre-secondary	7,954	34.5	8,003	28.6	(5.9)
Postsecondary	15,098	65.5	19,973	71.4	5.9
Total	**64,937**	**100.0**	**62,265**	**100.0**	
Pre-secondary	22,109	34.0	17,601	28.3	(5.7)
Postsecondary	42,828	66.0	44,664	71.7	5.7

( ) = negative, No. = number, TVET = technical and vocational education and training.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 7 documents several important trends. Overall, participation by adults aged 15+ in TVET programs stood at 62,265 in 2019, a tiny percentage of the total age group population; the number of participants had actually fallen slightly from 64,937 in 2008. Female TVET participation increased significantly from 2008 to 2019, from 23,052 to 27,979, but male participation fell from 41,885 to 34,289 during the same period. From 2008 to 2019, TVET participation in 15+ age group shifted from pre-secondary to postsecondary programs, by 5.8 percentage points for males and 5.9 percentage points for females.

However, a closer analysis of adults aged 15–24 reveals a different picture. TVET participation by adults in this age group actually increased for both females and males from 2008 to 2019, as more younger adults were able to access TVET programs than their predecessors.

Table 8 shows the trends in TVET graduations at the pre-secondary and postsecondary levels by age group. Again, as seen in Table 7, there were increases in the number of postsecondary and pre-secondary TVET graduates in the youngest age group (15–24). The numbers of TVET graduates at either level in the older age groups were small and, with a few exceptions, those numbers declined from 2008 to 2019.

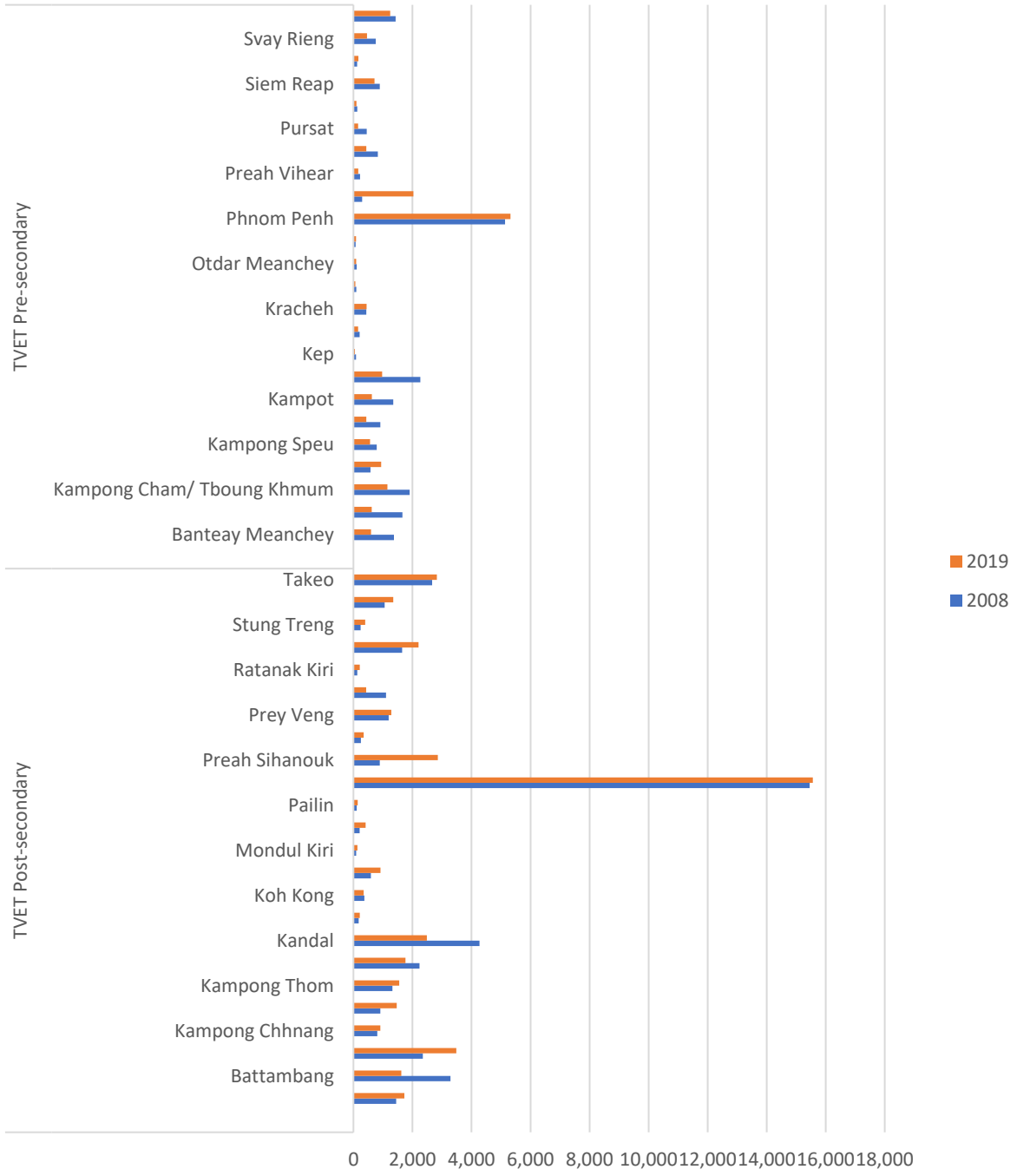
Table 8: Cambodians Aged 15+ Graduating from Technical and Vocational Education and Training Programs, by Level and Age Group, 2008 and 2019

Age Group/ Year	Postsecondary TVET (No.)	Postsecondary TVET (%)	Pre-Secondary TVET (No.)	Pre-Secondary TVET (%)	Total (No.)
15–24					
2008	14,957	76.5	4,607	23.5	19,564
2019	16,246	70.9	6,659	29.1	22,905
25–34					
2008	13,921	72.2	5,369	27.8	19,290
2019	15,633	76.7	4,746	23.3	20,379
35–44					
2008	8,133	55.7	6,461	44.3	14,594
2019	6,449	71.8	2,530	28.2	8,979
45–54					
2008	3,048	49.6	3,100	50.4	6,148
2019	4,499	64.9	2,430	35.1	6,929
55–64					
2008	2,069	51.3	1,967	48.7	4,036
2019	1,191	59.6	809	40.5	2,000
65+					
2008	700	53.6	605	46.4	1,305
2019	639	60.1	424	39.9	1,063
Total					
2008	42,828	66.0	22,109	34.0	64,937
2019	44,657	71.7	17,598	28.3	62,255

No. = number.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 32 shows significant differences among the provinces in their numbers of TVET graduates. In 2019, Phnom Penh was home to by far the largest number of TVET graduates at both levels: 5,250 pre-secondary and 15,980 postsecondary, followed by Preah Sihanouk (4,892) and Kampong Cham/Tboung Khmum (both 4,633). The numbers of TVET graduates increased in some provinces (e.g., Kampong Speu, Kampong Chhnang, and Siem Reap), and declined in others (e.g., Kandal, Battambang, and Kampot) (Table A.2). There appears to be no obvious relationship to other indicators of economic demand, so the observed differences are likely to be the product of policy choices made by provincial TVET authorities.

Figure 32: Cambodian Graduates of Technical and Vocational Education and Training Programs, Aged 15+, by Level and Province, 2008 and 2019



TVET = technical and vocational education and training.
Note: Different provinces are listed in the pre-secondary and postsecondary sections because they had TVET programs on one level or the other, but not on both.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 9 reveals that the overwhelming majority of TVET graduates (78.6%) are employed in the service sector for both levels in both reference years in 2019. However, the number (and the share) of TVET graduates employed in this sector have declined over time from 40,804 (85.6%) in 2008 to 32,513 (78.6%) in 2019. The same can said about TVET graduates employed in the agriculture sector. In contrast, number (and the share) of TVET graduates employed in

the industrial and trade sectors, while small, have increased significantly over the same period. This may reflect the increasing demand for graduates with TVET qualifications in these economic sectors.

Table 9: Cambodians Aged 15+ Graduating from Technical and Vocational Education and Training Programs, by Level and Economic Sector, 2008 and 2019

	2008		2019	
Industry/TVET	(No.)	(%)	(No.)	(%)
Agriculture	**3,302**	**100.0**	**2,919**	**100.0**
Postsecondary TVET	1,897	57.5	1,556	53.3
Pre-secondary TVET	1,405	42.5	1,363	46.7
Industry	**1,054**	**100.0**	**2,624**	**100.0**
Postsecondary TVET	749	71.1	1,752	69.9
Pre-secondary TVET	305	28.9	872	34.8
Service	**40,804**	**100.0**	**32,513**	**100.0**
Postsecondary TVET	25,527	62.6	24,059	74.0
Pre-secondary TVET	15,277	37.4	8,454	26.0
Trade	**2,492**	**100.0**	**3,436**	**100.0**
Postsecondary TVET	1,810	72.6	2,271	66.1
Pre-secondary TVET	682	27.4	1,165	33.9
Total	**47,652**	**100.0**	**41,492**	**100.0**

No. = number, TVET = technical and vocational education and training.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 10 shows that in 2019, the single largest portion of TVET graduates were employed in Major Group 2 occupations (54%), followed by Major Group 4 (13.3%) and Major Group 5 (11%). Additionally, the table reveals a significant reduction in the number of TVET graduates employed Major Group 3 occupations, from 10,700 in 2008 to 1,941 in 2019, but a significant increase in Major Group 4 occupations, from 1,681 in 2008 to 5,517 in 2019. Overall, there was a general shift of TVET graduates from higher-skilled occupation groups to lower-skilled ones, and the reasons for this shift are unclear and beyond the scope of this report.

Table 10: Cambodians Aged 15+ Graduating from Technical and Vocational Education and Training Programs, by Level and Major Occupational Group, 2008 and 2019

	Postsecondary TVET		Pre-Secondary TVET		Total
Occupation Group/Year	(No.)	(%)	(No.)	(%)	(No.)
Major Group 1: Legislators, Senior Officials, and Managers					
2008	1,140	71.5	455	28.5	1,595
2019	781	70.7	323	29.3	1,104
Major Group 2: Professionals					
2008	13,427	56.4	10,380	43.6	23,807
2019	16,590	73.9	5,855	26.1	22,445
Major Group 3: Technicians and Associate Professionals					
2008	7,538	70.4	3,162	29.6	10,700
2019	1,496	77.1	445	22.9	1,941
Major Group 4: Clerks					
2008	1,298	77.2	383	22.8	1,681
2019	4,197	76.1	1,320	23.9	5,517
Major Group 5: Service Workers and Shop and Market Sales Workers					
2008	3,102	71.1	1,259	28.9	4,361
2019	3,087	68.1	1,446	31.9	4,533
Major Group 6: Skilled Agricultural and Fishery Workers					
2008	1,564	56.5	1,204	43.5	2,768
2019	1,467	53.2	1,293	46.8	2,760
Major Group 7: Craft and Related Workers					
2008	431	73.7	154	26.3	585
2019	553	66.2	282	33.8	835
Major Group 8:. Plant and Machine Operators and Assemblers					
2008	1,108	69.7	481	30.3	1,589
2019	1,175	70.0	503	30.0	1,678
Major Group 9: Elementary Occupations					
2008	376	66.3	191	33.7	567
2019	442	58.8	310	41.2	752
Total					
2008	29,984	62.9	17,669	37.1	47,653
2019	29,788	71.7	11,777	28.3	41,565

No. = number, TVET = technical and vocational education and training.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Chapter 4: The Distribution of Literacy in Cambodia

This chapter builds on the analyses in Chapter 3 by exploring the distribution of literacy skills as measured by the literacy questions in the General Population Census of Cambodia (GPCC), and by assessing the progress Cambodia made toward achieving Sustainable Development Goal (SDG) Target 4.6 (Chapter 1). The GPCC included the following question to identify if a person is Khmer literate:

> Can the person read and write with understanding in the Khmer language?
>
> Yes
> No

The GPCC questionnaire also identifies whether respondents can speak and read a language other than Khmer. Thus, adults aged 15+ can be classified as literate or illiterate in Khmer, literate or illiterate in another language, literate in both Khmer and the other language, or illiterate. The questionnaire thus identifies that part of the adult population who are most at risk of realizing poor outcomes in the changing Cambodian and global economy (e.g., those who cannot read and write at all).

For adults working in economic sectors such as forestry, fishing, or agriculture, where traditional production methods are used, the absence of literacy might not translate into much disadvantage because most of what they need to know is transmitted orally or visually, from generation to generation. The lack of literacy will, however, limit the rate at which new, more information-rich production technologies are adopted. Lower rates of technological adoption will, in turn, reduce productivity growth in, and the competitiveness of, these sectors.

Skill-biased technical change, globalization, and falling trade barriers have been increasing the level of literacy proficiency needed to compete in global markets. Analysis of trends in employment data for member countries of the Organisation for Economic Co-operation and Development (OECD) suggests that job creation is highly concentrated in occupations that require Level 3 literacy proficiency according to the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). Again, without objective literacy testing, it is impossible to say just how literate the Cambodian workers answering "yes" to the GPCC literacy question really are. Thus, the GPCC literacy measurement is best thought of an indicator of economic exclusion, one based on the percentage of the Cambodian population that have failed to acquire the foundational literacy skills needed to take full advantage of education at the secondary and postsecondary levels and to succeed in the modern, global knowledge economy. The GPCC literacy measurement affords little insight into how well the literacy levels of the population align with the emerging levels of literacy skills demanded by employers.

The Cambodian economy has changed dramatically since 2008, with sustained growth of over 7% per year and the emergence of higher value-added industrial and service sectors. Such growth is bound to change the occupational distribution of employment, and, by extension,

the average level of literacy needed for employment. Sustaining growth rates will depend upon generating a matching supply of literacy skills. Furthermore, although the mechanisms are not yet fully understood, climate change is likely to precipitate an increase in the economic demand for literacy, as many of the measures needed to mitigate the impacts will depend on the availability of a literate and numerate workforce.[9]

Studies have established that literacy is socially and economically important. For instance, they have shown that: (i) higher levels of literacy skill precipitate higher levels of economic growth (Murray, Schwerdt, and Weiderhold 2019); (ii) differences in average literacy skills across population subgroups are one of the most important determinants of social inequality across a broad range of key labor-market, health, social, and educational outcomes (OECD, Statistics Canada, and Human Resources Development Canada [HRDC] 1997); (iii) workers whose literacy skill levels are below the level demanded by their job generally work fewer weeks, work longer hours at lower wage rates, earn less, and experience more workplace illnesses and accidents than their peers at or above the literacy level demanded by their job (Murray and Shillington 2009); and (iv) the market demand for literacy skills is increasing rapidly in response to skill-biased technical change (Murray and Binkley 2021).

Given the economic value of literacy, an understanding of where literacy skill shortages are likely to constrain economic development will become crucial. Moreover, the public and policy makers both deserve to know where policies have had the most impact on literacy rates since 1998, and which population subgroups are the furthest away from achieving the goal of universal literacy.

4.1. Literacy in Cambodia Since 1998

Table 11: Literacy Rates for Cambodians Aged 7+, by Age Group and Gender, 1998, 2008, and 2019

Age Group	1998			2008			2019		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Number									
7+	3,104,889	2,673,480	5,778,369	4,557,347	5,007,571	9,564,918	5,837,300	5,923,438	11,760,738
15+	2,383,479	2,007,276	4,390,755	2,998,759	3,522,000	6,520,759	4,670,420	4,795,740	9,466,160
15–64	2,287,597	1,983,487	4,271,084	2,835,434	3,292,380	6,127,814	4,366,099	4,447,034	8,813,133
Percentage									
7+	68.1	53.4	60.4	81.0	70.6	75.6	87.5	83.1	85.2
15+	79.5	57.0	67.3	84.3	70.0	76.7	89.3	83.4	86.2
15–64	80.7	60.2	69.7	84.9	73.2	78.8	89.7	85.5	87.5

Note: This table shows the rates of literacy in the Khmer language.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 11 shows the very rapid growth of the Khmer-literate population since 1998. In 2019, 9,466,160 Cambodians aged 15+ (86.2%) were literate in Khmer. This was more than double the number in 1998: 4,390,755 (67.3%). Gender parity in literacy was almost achieved in 2019 in this age group, at 89.3% for males versus 83.4% for females. The table also shows that the

[9] Canada's agricultural extension program generated rapid increases in agricultural productivity and sustainability. Importantly in the current context it included a literacy skill upgrading component for farmers.

literate Cambodian population grew rapidly in all three age groups. With an overall adult literacy rate of 87.5%, Cambodia is moving closer to achieving SDG 4, Target 4.6 (Chapter 1). However, compared with its regional peers, except for the Lao People's Democratic Republic (Lao PDR) and Myanmar, Cambodia still lags far behind (Table 12).

Table 12: Literacy Rates for Populations Aged 15+ in Southeast Asian Countries, by Gender, 2000–2019 (%)

	2000			2001			2010			2011			2018			2019		
Country	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**	**M**	**F**	**T**
Brunei Darussalam	…	…	…	95.2	90.2	92.7	…	…	…	97.4	94.7	96.1	98.1	96.3	97.2	…	…	…
Indonesia	…	…	…	…	…	…	…	…	…	95.6	90.1	92.8	97.3	94.0	95.7	…	…	…
Lao PDR	81.4	58.5	69.6	77.0	60.9	68.7	…	…	…	67.4	49.7	58.3	…	…	…	…	…	…
Malaysia	92.0	85.4	88.7	…	…	…	95.4	90.7	93.1	…	…	…	96.1	93.5	94.9	96.2	93.6	95.0
Myanmar	93.9	86.4	89.9	…	…	…	…	…	…	…	…	…	…	…	…	92.4	86.3	89.1
Philippines	92.5	92.7	92.6	…	…	…	…	…	…	…	…	…	…	…	…	95.7	96.9	96.3
Singapore	96.6	88.6	92.5	…	…	…	98.0	93.8	95.9	98.4	94.1	96.2	98.9	95.9	97.3	98.9	96.1	97.5
Thailand	94.9	90.5	92.6	…	…	…	96.4	96.4	96.4	…	…	…	95.2	92.4	93.8	…	…	…
Timor-Leste	…	…	…	45.3	30.0	37.6	63.6	53.0	58.3	…	…	…	71.9	64.2	68.1	…	…	…
Viet Nam	93.9	86.6	90.2	…	…	…	…	…	…	…	…	…	…	…	…	97.0	94.6	95.8

… = no data available, F = Female, Lao PDR = Lao People's Democratic Republic, M = Male, and T = Total.

Note: The countries included in this table are members of the Association of Southeast Asian Nations (ASEAN).

Source: United Nations Educational, Scientific and Cultural Organization (UNESCO), Institute for Statistics. Data for the Sustainable Development Goals.

Figures 33–36 plot the percentage of adults who were literate in the Khmer language in 2019 by tracing the changes in the percentage of adults observed to be Khmer literate in 1998, 2008, and 2019. The figures reveal which population subgroups made the most progress over the two decades, and how far each group was from 100% literacy in 2019. The horizontal axis in each figure measures the literacy rate: The farther to the right a dot is placed, the closer the group represented by the dot is to achieving universal literacy. The vertical axis in each figure represents the percentage point changes in literacy: The higher up the dot is placed, the more the literacy rate has improved since 1998. How high the dots are placed indicates which subpopulations were in most need of improvement, while how far to the right the dots are placed reflects how much impact government policy has had on the literacy rates of those subpopulations.

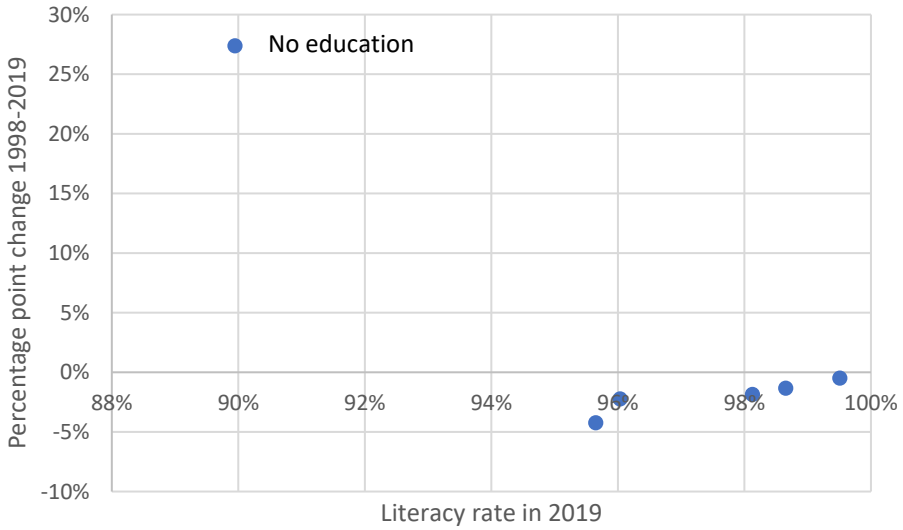
4.2. Literacy and Education

Research suggests that adults must have at least a primary education to have a high probability of mastering the mechanics of reading and writing, the skills needed to be classified as literate according to GPCC criteria. Similarly, adults with an upper secondary education who live in an OECD member state have a reasonably high probability of being classified at Level 3 literacy proficiency based on the OECD's PIAAC literacy scale. The results for PISA for Development (PISA-D) suggest that this is not true for Cambodia, however; and this finding indicates that educational quality in Cambodia may be lagging behind global and regional benchmarks.

PIAAC Level 3 is thought by many to be the proficiency level needed for countries to compete in, and for individuals to take full advantage of, the emerging global knowledge economy. Level 3 has also been shown to be the threshold at which the probability of experiencing poor educational, labor-market, health, and social outcomes falls dramatically. It is worth noting, however, that the relationships between educational attainment and literacy skill levels are far from complete. In populations with relatively low levels of attainment, such as Cambodia, some adults find a way to become highly literate even without the benefit of much formal education, and some adults with an education fail to become fluid and automatic readers. Only the testing of adult skills can determine the true literacy levels of adults.

Figure 33 displays the joint distribution of educational attainment and literacy in the Cambodian population aged 15+ in 1998, 2008, and 2018. As noted in Chapter 2, education is the single most important determinant of literacy rates, and only those who are 15 years of age and older with no formal education or with an incomplete primary education, face any material risk of ending up illiterate. It is worth noting, however, that the nonresponse rates to these questions were relatively high (32% in 1998, 23% in 2008, and 15% in 2019), and this trend caused an unknown level of bias in the results.

Figure 33: Changes in Khmer Literacy Rates for Cambodians Aged 15+, by Educational Attainment, 1998–2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 13: Changes in Khmer Literacy Rates for Cambodians Aged 15+, by Educational Attainment, 1998, 2008, and 2019

Educational Attainment	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change 1998–2019
None	62.6	68.1	89.9	27.3
Primary not completed	98.3	97.8	96.0	(2.3)
Primary	100.0	99.9	99.5	(0.5)
Lower secondary	100.0	99.9	98.7	(1.3)
Secondary/diploma	100.0	99.6	98.1	(1.9)
Beyond secondary	99.9	98.6	95.7	(4.2)

( ) = negative.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

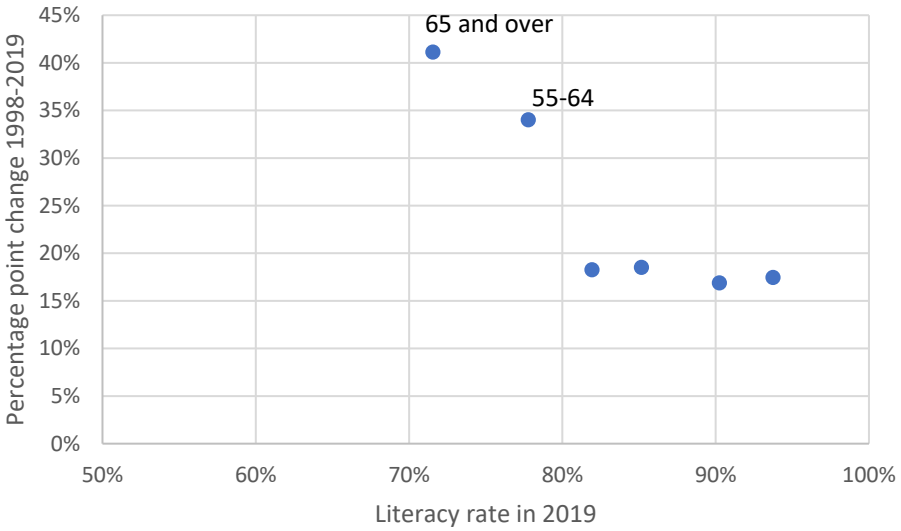
Figure 33 and Table 13 show that almost all Cambodian adults aged 15+ with any level of education self-reported as being literate in the Khmer language, irrespective of the census year or their level of educational attainment. By 2019, only adults with no formal education had any probability of reporting that they were illiterate, though even 89.9% of them reported that they were literate. While it is possible for adults with no formal education to become literate over the course of their lives, the reported increase in this group's literacy rate is perhaps too good to be true. More specifically, the reported improvement in the literacy rate of Cambodian adults who were 15 years of age and older and had no formal education could reflect (i) real additions to their literacy skills thanks to adult education and training programs; (ii) real additions to their literacy skills through self-learning in adulthood; or false additions to their literary skills due to rising response error, itself driven by the increased stigma associated with being illiterate. In the absence of data based on objective assessments of literacy skills, and on the rates of participation in adult literacy programs and their measured efficacy, it is impossible to judge how much response error might be distorting the findings.

The figure and table also show unexpected results. For instance, the percentage of Khmer-literate adults actually fell, though very slightly, at all other levels of educational attainment during 1998–2019. Cambodia has been becoming more linguistically diverse with time, so it is likely that these decreases reflect an increase in the percentage of adults educated in languages other than Khmer, especially foreign-educated adults. On the other hand, the drop may be due to the high nonresponse rates mentioned earlier.

4.3. Literacy and Age

The levels of educational attainment have been rising steadily in Cambodia since 1998. Figure 34 plots the changes in the percentage of adult Cambodians aged 15+ by age group to see if the percentage of literate adults rose at roughly the same rate. As in section 4.2, how high the dots are placed indicates which subpopulations were in most need of improvement, while how far to the right the dots are placed reflects how much impact government policy has had on the distribution of literacy rates.

Figure 34: Trends in Literacy Rates for Cambodians Aged 15+, by Age Group, 1998–2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 14: Trends in Khmer Literacy Rates for Cambodians Aged 15+, by Age Group, 1998, 2008, and 2019

Age Group	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change, 1998–2019
15–24	76.3	86.9	93.8	17.5
25–34	73.4	77.9	90.3	16.9
35–44	66.7	75.7	85.2	18.5
45–54	63.7	70.1	81.9	18.2
55–64	43.8	67.4	77.8	34.0
65+	30.5	46.6	71.6	41.1

Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 34 and Table 14 show the expected pattern of results. The percentage of literate adults did rise in all age groups, with the literacy rates of the older groups rising more rapidly. In 2019, the youngest age group (15–24) was the most literate at 93.8%, as opposed to the oldest adults (65+), who were the least literate at 71.6%. Notwithstanding this result, those aged 65 and over realized the greatest improvement in their rate of Khmer literacy, (i.e., by 41.1 percentage points from 1998 to 2019). The figure implies, however, that only the 15–24 age group had attained a literacy rate close to the threshold of 95%, which is conventionally seen as the indicator of universality as specified in SDG Target 4.6. In any case, average literacy rates will rise naturally over the coming decades, when successive cohorts of highly literate youth will replace their less literate elders as they move into the older age groups.

The rapid increase in the literacy rates of the older age groups is notable; though in the case of the 65+ group, it was likely due to a selection effect in which the least literate adults had much higher probabilities of early death, thus raising the literacy rates of the surviving adults. Alternately, being literate might have become more socially desirable over the reference period, leading more older adults to report themselves as being literate. Without more objective ways to measure literacy, linkage of GPCC records to death records, and/or longitudinal measurements of literacy, it is impossible to determine how much the observed trends in literacy rates were being distorted by response error.

Looking at the evolution of literacy rates within each cohort provides some insight into the relative impact of the components of change. For example, the literacy rate of the cohort that was 15–24 years old in 1998 rose by 8.9 percentage points, from 76.3% to 85.2% in 2019 (when they were 35–44 years old). Yet this change was much smaller than the 17.5 percentage point change observed between the 15–24 age group in 1998 and the 15–24 age group in 2019. Similarly, the literacy rates of Cambodian adults aged 45–54 in 2008 increased by 7.9 percentage points, from 63.7% to 71.6% in 2019 (when they were 65+ years old). Again, the percentage point improvement within this cohort was much smaller than the 41.1 percentage point improvement observed in the 65+ age groups from 1998 to 2019 (i.e., involving different cohorts in the different years). The observed increases in literacy rates within cohorts as they progressed through the age ranges suggest that, although a small number of adults were finding ways to become literate after the normal age for leaving the initial cycle of education, most of the increases in literacy rates is being driven by improvements in the quality and quantity of education among, rather than within, age cohorts.

For the youngest age group (15–24), the findings suggest that the quality of initial education was rising in response to improved maternal health, curriculum reform, and teacher training; higher participation rates; and increases in the economic demand for literacy, driven by shifts in the industrial structure. As a result, in 2019 this age group was close to achieving the goal of universal literacy.

While promising, these findings should not engender complacency. Recent research suggests that the average quality of Cambodian secondary education lags behind the quality found in many countries around the world. Specifically, Cambodia chose to participate in the OECD's PISA for Development (PISA-D) initiative to inform national education policies, programs, and priorities (Ministry of Education, Youth, and Sports 2018). The World Bank has identified PISA Level 2 as the minimum level of reading proficiency needed to reach SDG Target 4.6.[10] Only 8% of the 15-year-old students in Cambodia who participated in this assessment achieved PISA literacy proficiency Level 2 or higher. Analysis of the data for the 15-year-old Cambodian students revealed that Cambodia outperformed two other low-income countries, Senegal and Zambia, but had significantly lower reading scores than the other PISA-D member countries, and lower than the ASEAN countries (Vietnam, Thailand, Indonesia, and Singapore) that participate in the regular Programme for International Student Assessment (PISA). By extension, 92% of the 15-year-old Cambodian students were still below the basic competency level (below Level 2), compared with other PISA-D countries (72%), with the other ASEAN countries participating in PISA-D (43%), and with the countries participating in the OECD's regular PISA assessment (21%). This implies that the overwhelming majority of Cambodian secondary students have failed to attain the level of literacy needed to compete in the emerging global knowledge economy.

It must also be kept in mind that the PISA-D results show that the 15-year-old students in Cambodia who attend school from grades 7 to 12 represent only 28.1% of the total population of 15-year-olds. This suggests that approximately 72% of the Cambodian youth have dropped out of school or have been delayed in their schooling (i.e., they are still below grade 7). These youth are unlikely to have acquired the level of literacy skills needed to support their economic and social aspirations.

A large body of international research identifies the inputs associated with the performance of education systems (Willms 2005). Collectively, the relatively poor quality of Cambodian primary and secondary education suggests a need for Cambodian policy makers to create more inclusive environments, foster quality instruction, increase learning time, provide more material resources, and solicit higher levels of family and community support for primary and secondary schools. Given the persistently high primary and secondary school dropout rates, there is a need to provide young dropouts with a pathway to a lower secondary education equivalency certificate, higher education, and decent employment. For example, UNESCO's Basic Education Equivalency Programme is designed to meet this need.

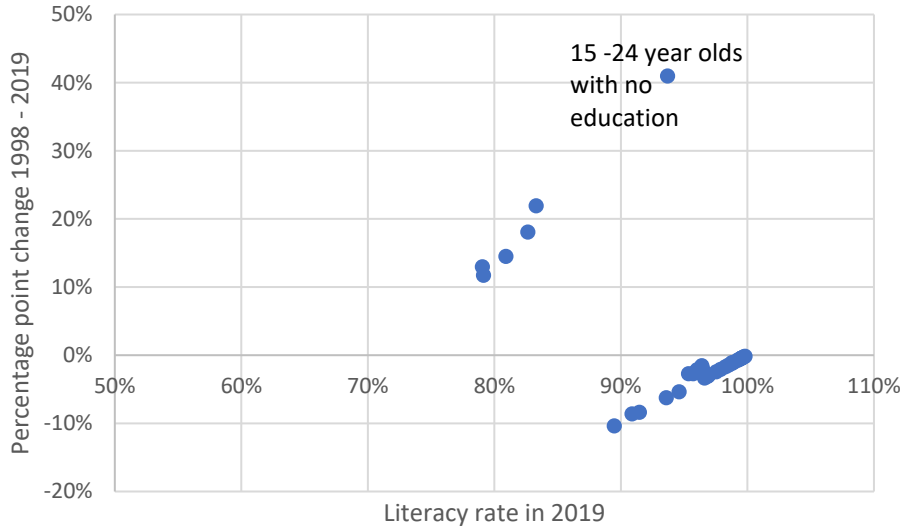
[10] Note that PISA student results are reported on a 900-point scale, rather than the 500-point that is used for the OECD's adult skill assessments. Students scoring below 539 on the PISA scale would be classified below level 3 on the adult literacy scale.

Choosing the optimal mix of policy measures that might yield the most improvement in the quality and equity of Cambodian education can only come from a thoughtful analysis of a much wider range of data than is available from the GPCC.

4.4. Literacy, Education, and Age

Figure 35 plots the joint distribution of literacy based on educational attainment and age group in 1998, 2008, and 2019. As in the previous figures, the data serve to identify population subgroups that faced the highest probabilities of illiteracy in 2019. This information could help policy makers focus available resources where the need is greatest. The graph in this figure also shows where government policy has generated the most improvement.

Figure 35: Trends in Khmer Literacy Rates for Cambodians Aged 15+, by Age Group and Educational Attainment, 1998–2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 15: Changes in Khmer Literacy Rates for Cambodians Aged 15+, by Age Group and Educational Attainment, 1998, 2008, and 2019

Education and Age Group	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change, 1998–2019
None				
15–24	52.8	78.2	93.7	40.9
25–34	61.4	68.6	83.3	21.9
35–44	64.6	66.0	82.7	18.1
45–54	66.1	63.9	79.1	13.0
55–64	66.4	63.5	80.9	14.5
65+	67.4	61.8	79.2	11.8
Primary Not Completed				
15–24	98.0	98.0	96.4	(1.6)
25–34	98.6	97.7	96.5	(2.1)
35–44	98.4	97.8	95.9	(2.5)
45–54	98.5	97.7	95.7	(2.8)
55–64	98.2	97.7	96.0	(2.2)
65+	98.1	96.8	95.4	(2.7)
Primary				
15–24	100.0	99.9	99.5	(0.5)
25–34	100.0	99.9	99.6	(0.4)
35–44	100.0	99.9	99.4	(0.6)
45–54	100.0	99.8	99.2	(0.8)
55–64	100.0	99.9	99.6	(0.4)
65+	100.0	99.8	99.8	(0.2)
Lower Secondary				
15–24	100.0	99.9	99.6	(0.4)
25–34	100.0	99.8	98.7	(1.3)
35–44	100.0	99.8	97.9	(2.1)
45–54	100.0	99.7	94.6	(5.4)
55–64	100.0	99.8	98.9	(1.1)
65 +	100.0	99.7	99.8	(0.2)
Secondary/Diploma				
15–24	100.0	99.9	99.3	(0.7)
25–34	100.0	99.6	98.3	(1.7)
35–44	100.0	99.3	96.6	(3.4)
45–54	100.0	99.1	96.9	(3.1)
55–64	100.0	99.2	97.6	(2.4)
65+	100.0	99.4	98.5	(1.5)
Beyond Secondary				
15–24	99.9	99.7	98.8	(1.1)
25–34	99.9	98.6	96.9	(3.0)
35–44	99.9	97.4	93.6	(6.3)
45–54	99.9	95.9	91.5	(8.4)
55–64	99.9	96.7	89.5	(10.4)

Education and Age Group	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change, 1998–2019
65 +	99.5	95.4	90.9	(8.6)

( ) = negative.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 35 and Table 15 reveal essentially two distinct patterns of results defined by whether the respondents had any formal education. For those with no formal education, the table and figure show that literacy is negatively correlated with age. For example, in 2019 the youngest age group (15–24) was the most literate of all Cambodians at this level of educational attainment, with a Khmer literacy rate of 93.7%; and that rate had risen by 40.9 percentage points since 1998. By contrast, the older groups, such as those aged 45–54 and 65+, were the least literate in 2019 among those with this level of education. The literacy rate for the 45–54 age group had risen by only 12.9 percentage points since 1998, ending at 71.1% in 2019; and the literacy rate for the 65+ age group had risen by 11.7 percentage points over the same period, ending at 71.2%. Thus, the GPCC data suggest that, among those with no education, only the youngest age group came close to achieving the SDG target of universal literacy.

For all other levels of educational attainment, Khmer literacy rates appear to have fallen slightly from 1998 to 2019, but most educational-attainment groups remained above 95% in 2019, irrespective of their age groups.

Khmer literacy rates for those aged 55–64 who had more than a secondary education fell 10 percentage points from 1998 to 2019; and the rate for those aged 65+ with the same level of education fell 9 percentage points over the same period. It is likely that these drops reflected a shift in the mother tongues of these cohorts, rather than any decline in the quality of Khmer language education. Again, the drops are also likely due to response errors and high nonresponse rates, as discussed earlier.

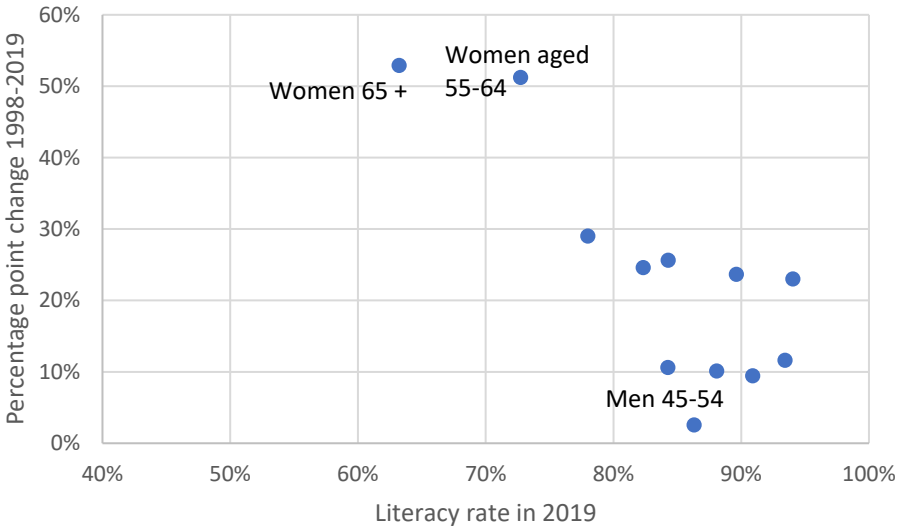
These results reveal the limitations of the GPCC literacy measurements for informing policy, since they offer very little guidance on gauging the actual literacy levels of respondents with any amount of formal education. The results for adults with no formal education also raise concerns about the validity of the GPCC data on literacy, as the observed increases in literacy rates might be the product of response error associated with the increased stigma of illiteracy, rather than the result of participation in what would have to be significant levels of adult learning. The GPCC literacy measurements should be improved; however, as discussed in Chapter 2, given that the measurements are used in censuses, not in surveys, such limitations are bound to persist and, therefore, must be deemed acceptable.

4.5. Literacy, Age Group, and Gender

Women play an important role in the generation of literacy through the process of intergenerational transfer, largely through the opportunities to learn that they create in the home. More directly, a higher percentage of illiterate mothers will translate into lower levels of school readiness for the children and, by extension, lower school performance and higher probabilities of dropping out (Willms 2005). Figure 36 documents the joint distribution of literacy, age group and gender over the three GPCC periods 1998, 2008, and 2019. As above,

the figure plots the change in the estimated percentage of literate adults observed between 1998 and 2019 by the Khmer literacy rate observed in 2019.

Figure 36: Changes in Literacy Rates for Cambodians Aged 15+, by Age Group and Gender, 1998–2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 16: Changes in Khmer Literacy Rates for Cambodians Aged 15+, by Gender and Age Group, 1998, 2008, and 2019

Gender and Age Group	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change, 1998–2019
Female				
15–24	71.1	85.0	94.1	23.0
25–34	66.0	72.9	89.6	23.6
35–44	57.8	69.3	82.3	24.5
45–54	49.0	62.5	78.0	29.0
55–64	21.6	55.3	72.7	51.2
65+	10.4	29.0	63.2	52.8
Male				
15–24	81.8	88.9	93.4	11.6
25–34	81.5	83.1	90.9	9.4
35–44	78.0	82.7	88.1	10.1
45–54	83.8	80.0	86.3	2.5
55–64	73.7	84.4	84.3	10.6
65+	58.7	72.5	84.3	25.6

Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 36 and Table 16 document several interesting findings:

(i) Almost all the members of the youngest age group (15–24) were literate in 2019, at a 94.1% literacy rate for females and a 93.4% rate for males. By contrast, a significant percentage of the older cohorts, especially women, remained illiterate in 2019 (36.8% for women aged 65+ and 15.7% for men in the same age group).

(ii) The percentage of literate adults was lower in each older age group in 2019, even though the older adults had made the largest gains in literacy during 1998–2019. This was particularly true for females; for example, the literacy rate for women in the 65+ age group had risen 52.9 percentage points by 2019.

(iii) Men outperformed women in every age group but the youngest (15–24) in 2019. Remarkably, given the disadvantage traditionally experienced by Cambodian women with regard to literacy, the women in the 15–24 age group in 2019 outperformed the men, albeit by only 1 percentage point. However, the literacy rates for the three oldest age groups of Cambodian women in 2019 (45–54, 55–64, and 65+) remained under 80%, which was well below the aspirational SDG literacy target for adults.

Only 5.9% of females aged 15–24 and 11.4% of women aged 25–34 (the prime child-bearing age range) reported being illiterate in 2019. Given the nature of the GPCC literacy measurements, it is not clear whether these women's more literate peers had enough literacy skills to generate the benefits known to result from having a fully literate mother. Assuming that this was not the case, family literacy programs that offer instruction to mothers and their children might yield benefits for mothers in both age groups.

4.6. Literacy Rate and Employment Status

Sustained rapid economic growth and the shifting industrial structure are likely to create dramatic upward shifts in the general demand for advanced knowledge and skills, including literacy. While the rapid increases in literacy rates across the board suggest that illiteracy will be unlikely to constrain economic growth, in the absence of objective skill testing, it remains an open question whether aggregate literacy skill shortages might constrain economic growth.

Table 17: Changes in Khmer Literacy Rates for Cambodians Aged 15+, by Employment Status, 1998, 2008, and 2019

Gender and Employment Status	1998		2008		2019		Percentage Point Change, 1998–2019
	(No.)	(%)	(No.)	(%)	(No.)	(%)	
Male							
Employed	1,837,252	78.1	2,787,834	82.2	3,904,608	88.8	10.7
Unemployed	22,257	78.3	10,041	82.6	14,449	68.9	(9.4)
Not in labor force	1,245,380	39.9	1,791,912	57.6	1,912,833	79.6	39.7
Female							
Employed	1,396,329	56.3	2,423,865	68.4	3,540,364	83.7	27.4
Unemployed	21,124	61.0	9,788	69.9	13,722	58.0	(3.0)
Not in labor force	1,256,027	36.9	1,849,856	55.7	2,358,521	78.3	41.4
Total							
Employed	3,233,581	66.9	5,211,699	75.1	7,444,972	86.3	19.4
Unemployed	43,381	68.8	19,829	75.8	28,171	63.1	(5.7)
Not in labor force	2,501,407	38.4	3,641,768	56.6	4,271,354	78.9	40.5

( ) = negative, No. = number.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 17 documents the basic trends in labor force participation and literacy during 1998–2019, and presents the following important findings:

(i) As expected, most of the employed population were literate (86.3%) in 2019, followed by those not in the labor force (78.9%).

(ii) The size of the literate working-age population more than doubled over the reference period, from 3.2 million in 1998 to 7.4 million in 2019.

(iii) The percentage of unemployed adults who reported being literate declined during 1998–2019 for both males and females. That being said, the Cambodian labor market appeared to be putting illiterate adults at a higher risk of unemployment, given that 31.1% of unemployed male workers and 42% unemployed female workers were illiterate in the Khmer language in 2019. Literacy-skill-upgrading programs could be used to increase the employability of these adults.

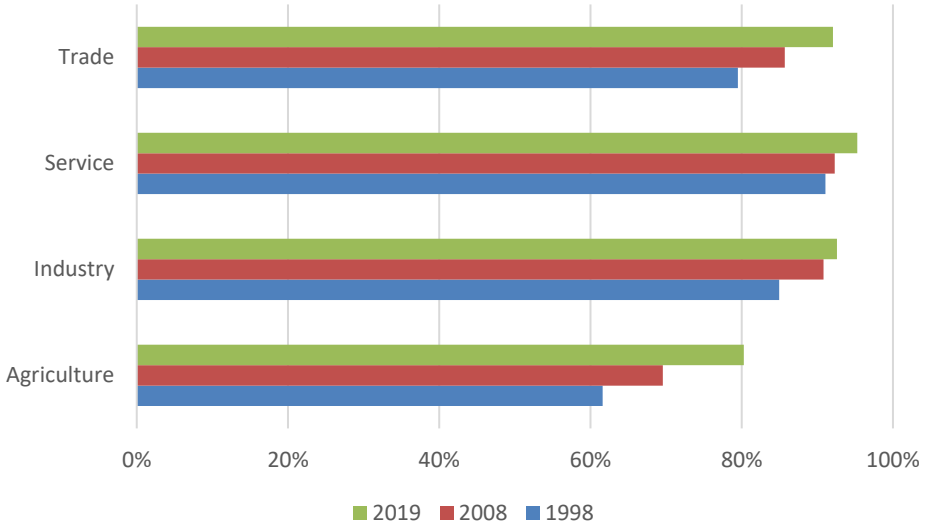
(iv) The overall literacy rate of working-age adults who were not in the labor force was relatively high, at 78.9%, indicating that there is a large pool of literate workers, if needed. This section of the population also made the largest gains in literacy during 1998–2019.

4.7. Literacy and Economic Sector

As noted above, advanced literacy skills are crucial for the efficiency of learning and the application of higher-order skills and knowledge in nonroutine ways. In many of the world's economies, what is known as "skill-biased technical change" is precipitating rapid increases in the demand for advanced levels of literacy and numeracy (Levy 2010). Advanced literacy and numeracy skills have been shown to be critical for the nonroutine application of technical skills in information-rich, complex teams. In many cases, the rapid rate at which jobs are knowledge- and skill-intensifying is outstripping the rate at which the national education and training systems are generating new graduates with the requisite literacy and numeracy skills.

The resulting skill shortages reduce the country's GDP and productivity growth by constraining employers' options with regard to production technology and work organization and by increasing material wastage, error, and workplace accidents. Studies such as those under the World Bank's Skills Towards Employment and Productivity (STEP) program are specifically designed to gain insights into the relative conditions of skill supply and demand, and how they are influencing individual, firm, and macroeconomic performance. Although Cambodia has yet to participate in such studies, the rate at which its industrial structure has been changing since the 1990s suggests a strong likelihood that the economic demand for literacy skills in Cambodia is outstripping the currently available supply, with the result that literacy skill shortages will impair productivity growth.

Figure 37: Employed Cambodians Aged 15+ Who Are Literate, by Economic Sector, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 37 plots the percentages of the workers in the agriculture, industry, trade, and service sectors who were literate in 1998, 2008, and 2019. The figure shows that the service sector had the highest percentage of literate workers (95.3%) in 2019; however, it had seen the least gains in literacy during 1998–2019: only 4 percentage points (Table A.3). By contrast, the agriculture sector had the highest percentage of illiterate workers, but realized the biggest rise in employee literacy over the reference period: About 62% of workers in agriculture were literate in 1998, and by 2019, only 20% of workers in agriculture remained illiterate. The result is impressive, but there remains the question of how rapidly the Cambodian agriculture sector is intensifying its utilization of literacy skills and, by extension, whether the growth of literacy will be rapid enough to keep literacy skill shortages from growing to economically damaging levels.

More constructively, literacy-skill upgrading programs delivered in the workplace are likely to yield significant returns. As noted above, any investment designed to raise average literacy scores will result in significant long-term increases in GDP and productivity growth, particularly if they are focussed on increasing the skills of adults at levels 1 and 2 on the international adult literacy scales. Analyses have shown that increases in average skill levels precede, rather than follow, increases in growth, a finding that suggests a causal relationship

between skills and growth. For instance, that causal relationship was confirmed by a large-scale, randomized literacy-skill upgrading trial known as "UPSKILL," which was conducted in Canada in the food and accommodations industries. The trial documented impressive 25% annual rates of return on investment in both the individual workers and their employers (Social Research and Demonstration Corporation 2014). Of note for Cambodia is the finding that the percentages of literate workers were highest in the rapidly growing sectors of the Canadian economy. Furthermore, the fact that only 7% of industrial workers and 4% of service workers were illiterate was a positive development, as the evidence from the UPSKILL experiment suggests that the presence of workers with low levels of literacy will decrease output per hour worked, and will increase accident rates, material wastage, and redo and error rates, even in service jobs that require low levels of skill use.

4.8. Literacy and the Mother Tongue

Cambodia is home to adults who have mother tongues other than Khmer. In 2019, just over 4.0% of the adult population aged 15+ had a mother tongue other than Khmer. These adults may be literate in both Khmer and their mother tongue; or literate in their mother tongue, but not in Khmer; or illiterate in both languages. Literacy in the dominant national language is believed to confer economic and social benefits above and beyond the benefits that accrue to literacy in any minority language (Bordieu 1982). In 2019, 87.8% of adults who reported that Khmer was their mother tongue also reported that they were literate in the Khmer language, compared with 6% of adults reporting that Chinese was their mother tongue, for example.

These differences matter for policy and practice. Research has revealed that it is easier for youth and adults to become literate in their mother tongue, as these learners benefit from the relationship between the spoken word and the written word. Youth and adults who have a mother tongue other than Khmer, and who manage to acquire literacy in their mother tongue first, especially if it is alphabetic, will be able to acquire literacy in the Khmer language more rapidly because they already understand the mechanics of reading. Youth and adults who have a mother tongue that uses a different alphabet from that used in Khmer will acquire Khmer literacy at a slightly slower pace because they will need to memorize a new set of symbols. Youth and adults whose mother tongues are nonalphabetic, such as Chinese, will first have to learn alphabetic principles, including phonetics. Youth and adults who are not literate in any language, however, will have to master the component reading skills that underlie the emergence of fluid and automatic reading in any language.

Table 18: Trends in Khmer Literacy Rates for Cambodians Aged 15+, by Mother Tongue, 1998, 2008, and 2019

Census Year	Population Aged 15+ (No.)	Literacy Rate (%)	Mother Tongue
2008	132,969	59.1	Chaam
2019	181,787	73.7	Chaam
2008	15,613	31.9	Chaaraay
2019	17,592	44.4	Chaaraay
1998	20,373	74.3	Chinese
2008	5,716	59.4	Chinese
2019	85,132	6.0	Chinese
1998	1,175	95.7	English
2008	2,036	51.2	English
2019	4,840	58.1	English
1998	747	92.4	French
2008	726	49.2	French
2019	1,379	42.7	French
2008	352	45.2	Japanese
2019	1,000	48.4	Japanese
2008	3,611	22.5	Kaaveat
2019	4,616	44.7	Kaaveat
2008	8	62.5	Kchak
2019	15	100.0	Kchak
2008	372	65.6	Kchruk
2019	210	80.0	Kchruk
1998	6,237,362	68.5	Khmer
2008	8,563,466	77.9	Khmer
2019	10,506,653	87.8	Khmer
2008	433	24.7	Khogn
2019	95	72.6	Khogn
2008	503	76.9	Klueng
2019	335	85.7	Klueng
2008	761	56.5	Korean
2019	2,121	41.4	Korean
2008	2,420	35.2	Kraol
2019	3,787	50.4	Kraol
2008	11,984	24.0	Krueng
2019	14,104	52.5	Krueng
2008	16,833	46.6	Kuoy
2019	11,712	59.9	Kuoy
1998	13,984	41.7	Lao
2008	11,237	42.6	Lao
2019	9,218	49.8	Lao
2008	190	13.7	Lon
2019	632	60.3	Lon
2008	20,350	36.4	Phnong

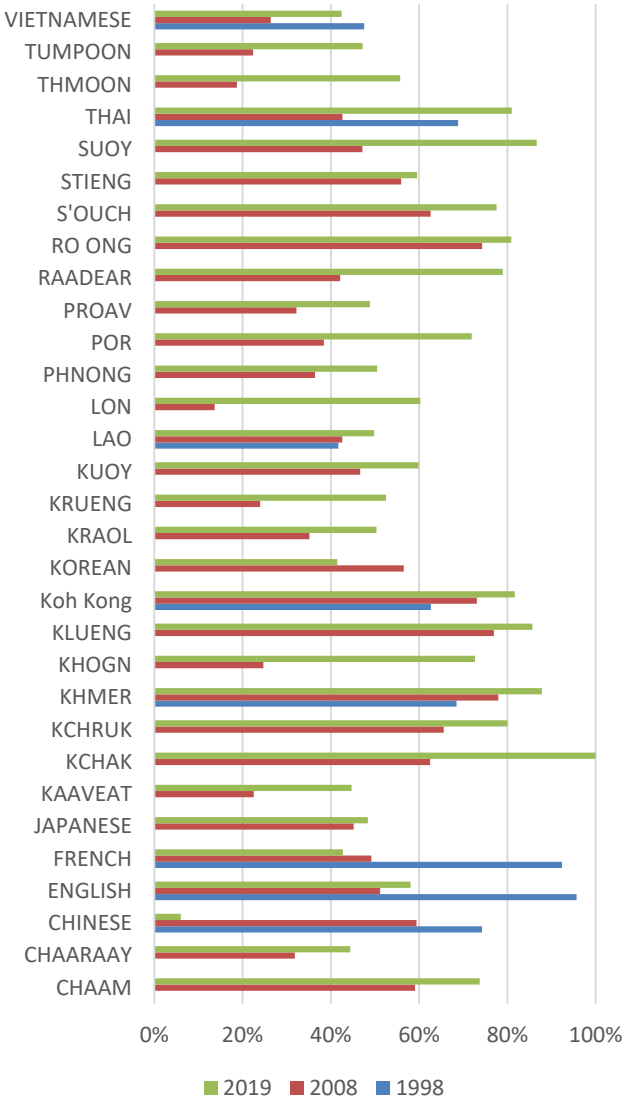
Census Year	Population Aged 15+ (No.)	Literacy Rate (%)	Mother Tongue
2019	22,798	50.5	Phnong
2008	1,041	38.4	Por
2019	712	71.9	Por
2008	5,308	32.2	Proav
2019	6,793	48.8	Proav
2008	19	42.1	Raadear
2019	171	78.9	Raadear
2008	1,700	74.3	Ro Ong
2019	460	80.9	Ro Ong
2008	433	62.6	S'ouch
2019	196	77.6	S'ouch
2008	4,533	55.9	Stieng
2019	3,590	59.6	Stieng
2008	511	47.2	Suoy
2019	584	86.6	Suoy
1998	1,957	68.8	Thai
2008	2,367	42.6	Thai
2019	5,972	81.0	Thai
2008	497	18.7	Thmoon
2019	691	55.7	Thmoon
2008	17,136	22.4	Tumpoon
2019	22,955	47.2	Tumpoon
1998	91,859	47.6	Vietnamese
2008	53,630	26.4	Vietnamese
2019	61,743	42.4	Vietnamese

No. = number.
Note: For some of the mother tongues, there were not data for 1998.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Table 18 provides the Khmer literacy rates (in terms of numbers and percentages) for Cambodians aged 15+, grouped by mother tongue, for 1998–2019. The table reveals some significant changes that occurred in the linguistic mix of the population during the reference period. It also shows that, during all three censuses, the overwhelming majority who reported that Khmer was their mother tongue said that they were literate; in fact, their literacy rate had improved during 1998–2019. However, in 2019, 100% of the population aged 15+ whose mother tongue was Kchak reported that they were literate in Khmer; perhaps this was because the population of this minority group was tiny (15 in 2019). Finally, the table shows that Khmer literacy rates were generally low for the minority linguistic groups in 2019 (lowest for the Chinese at 6%),[11] though there were some exceptions, such as the Kchak (again 100%), Suoy (86.6%), and Klueng (85.7%). This lack of literacy in the language of the dominant culture will impair the social and economic prospects of the members the minority groups.

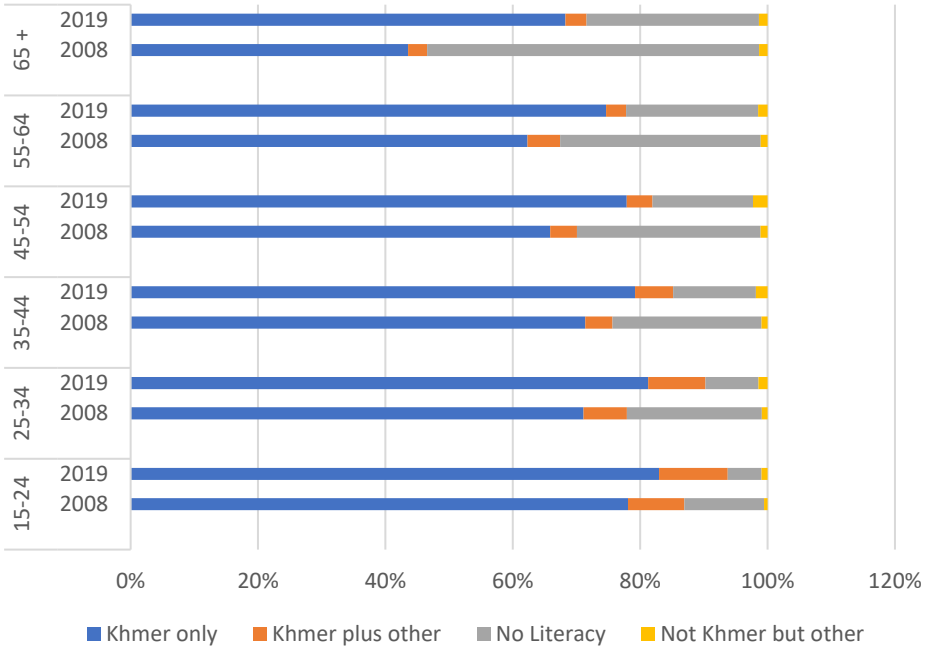
[11] It is not clear why the percentage of the Khmer-literate population whose mother togue was Chinese dropped significantly during 1998–2019, from 74.3% in 1998 to 6% in 2019. One reason might be that Chinese migrants who had flocked to work in Cambodia in the years leading up to 2019 were enumerated in the census for that year.

Figure 38: Trends in Khmer Literacy for Cambodians Aged 15+, by Mother Tongue, 1998, 2008, and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 39: Trends in Khmer Literacy, Literacy in Khmer and Another Language, Literacy in Another Language Only, and Illiteracy among Cambodians Aged 15+, by Age Group, 2008 and 2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 39 offers the following important insights for policy and practice:

(i) Relatively small numbers of adults with mother tongues other than Khmer resided in Cambodia during 2008–2019. As noted previously, only 4% of Cambodians aged 15+ reported a mother tongue other than Khmer.

(ii) A relatively small percentage of Cambodians were illiterate in Khmer, but literate in another language, or were literate in both their mother tongue and in Khmer (Table 4.10). By extension, a smaller percentage of adults were truly illiterate, as they could read neither Khmer nor their mother tongue. These adults will need intense instructional interventions that parallel the curricula used in primary classrooms.

(iii) Illiteracy in any language was disproportionately distributed among the older adults, specifically, those who were 55+, an age that limits the return on any skill upgrading program.

4.9. Literacy and Occupation

Changes in production technologies and work organization underlie the significant rises in the levels of literacy proficiency demanded by employers (Levy 2010). Technical advances and globalization have been driving a rapid increase in the demand for workers with higher levels of literacy proficiency.

Table 19 provides the context within which Figure 40 should be interpreted. It is worth noting that the economy is changing so fast, 7% of the total employees in 2019 worked at jobs that did not yet have a code under the International Labour Organization (ILO) classifications of occupations. The table reveals several important facts: (i) Over half (53%) of the employed labor force were in jobs that were classified under Major Group 6 (skilled agricultural and

fishery workers); (ii) 80% of workers in this group reported being literate in the Khmer language in 2019, the lowest percentage of all the major occupational groups. Major Group 4 (clerks), which represented only 3.2% of the employed workforce, had the highest percentage of self-reported Khmer literacy (97.3%) in 2019.

Given the relationship between wages and productivity growth, it is reasonable to assume that workers in major groups with lower literacy rates will earn lower wages and generate less productivity growth than their more literate peers. The next section of the report documents the differences in the rates at which major occupational groups became more literate from 1998 to 2019.

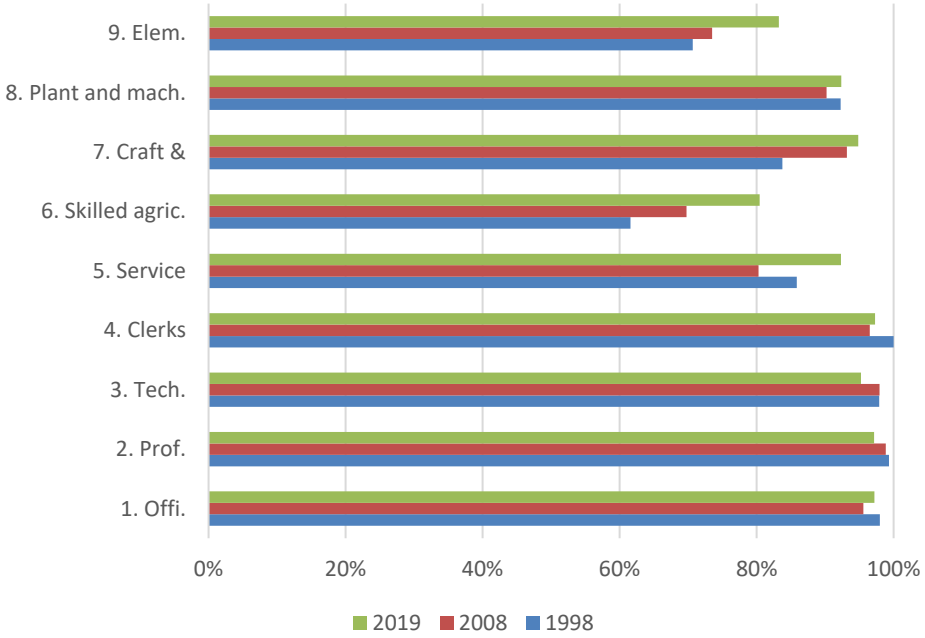
Table 19: Employed Cambodians Aged 15+, by Major Occupational Group, 2019

Major Occupational Group	Employed Workers Aged 15+ in Jobs with an Occupation Code (%)	Employed Workers Aged 15+ in Jobs with an Occupation Code (No.)	Employed Workers Reporting Being Khmer Literate (%)
Major Group 1. Legislators, senior officials, and managers	1.4	117,958	97.2
Major Group 2. Professionals	4.0	344,599	97.2
Major Group 3. Technicians and associate professionals	1.4	116,329	95.2
Major Group 4. Clerks	3.2	278,864	97.3
Major Group 5. Service workers and shop and market sales workers	12.5	1,075,397	92.3
Major Group 6. Skilled agricultural and fishery workers	52.8	4,548,762	80.4
Major Group 7. Craft and related workers	11.4	981,902	94.8
Major Group 8. Plant and machine operators and assemblers	7.3	630,460	92.4
Major Group 9. Elementary occupations	6.0	512,891	83.2

No. = number
Source: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 40 plots changes in the percentage of literate workers by occupation over the reference period. The major groups have been sorted by the Khmer literacy rate observed in 2019 to highlight those groups that have improved the most over the period. The figure reveals that occupational groups that require low literacy skills made significant improvements in literacy over the 1998-2019 period (e.g., by 18.8 percentage points for Major Group 6). In contrast, occupational groups (e.g., Major Group 1) that require high literacy skills have lost a small percentage of their literate workers over the same period (see also Table 4.12 in Appendix A). While the former development is certainly welcome for the agricultural sector, perhaps due to better access to more quality education by average Cambodians over the period, it is not clear what explains the latter.

Figure 40: Literacy Rates of Employed Cambodians Aged 15+, by Major Occupational Group, 2019 (%)



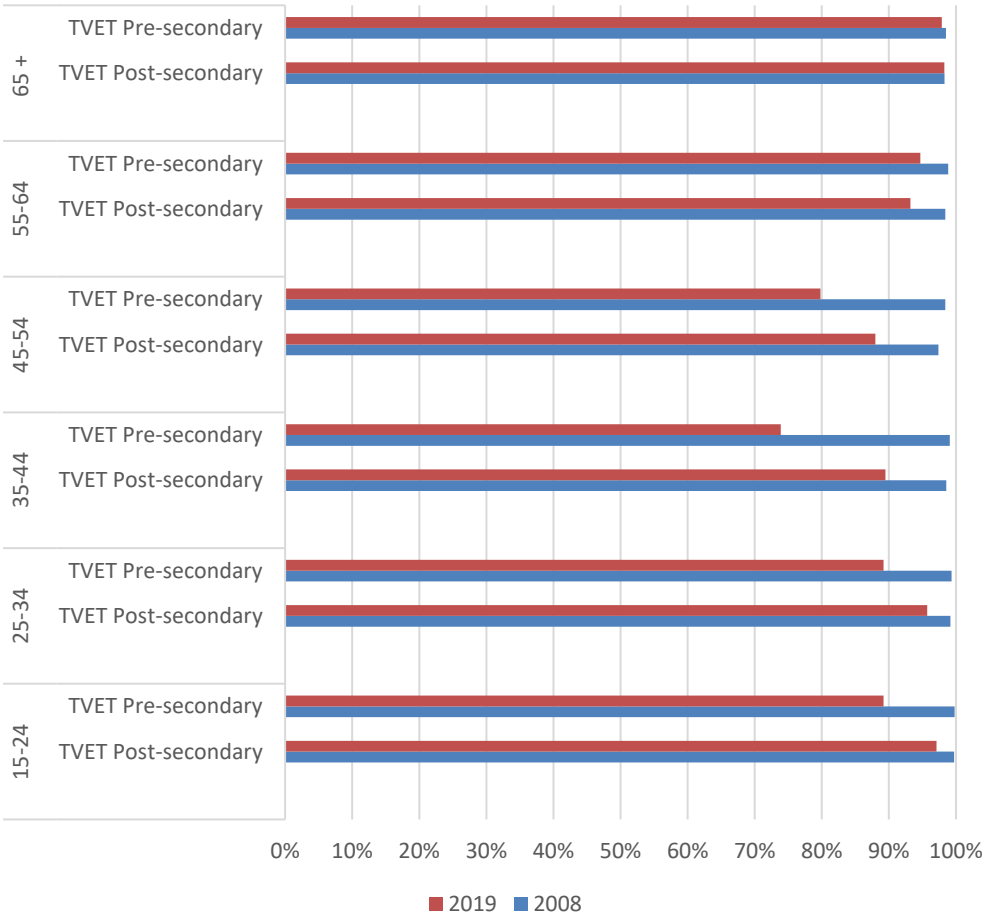
Craft = Craft and related workers; Elem. = Elementary occupations; Legis. = Legislators, senior officials, and managers; Plant = plant and machine operators and assemblers; Prof. = Professionals; Service = Service workers and shop and market sales workers; Skilled agric. = Skilled agricultural and fishery workers; Tech. = Technicians and associated professionals.

Note: The specific occupations are categorized into the major groups based on the first digit of each occupational code under the Cambodian National Occupational Classification.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

4.10. Literacy and Technical and Vocational Education and Training

Figures 41–44 profile trends in the Khmer literacy rates of graduates of technical and vocational education and training (TVET) programs by educational level.

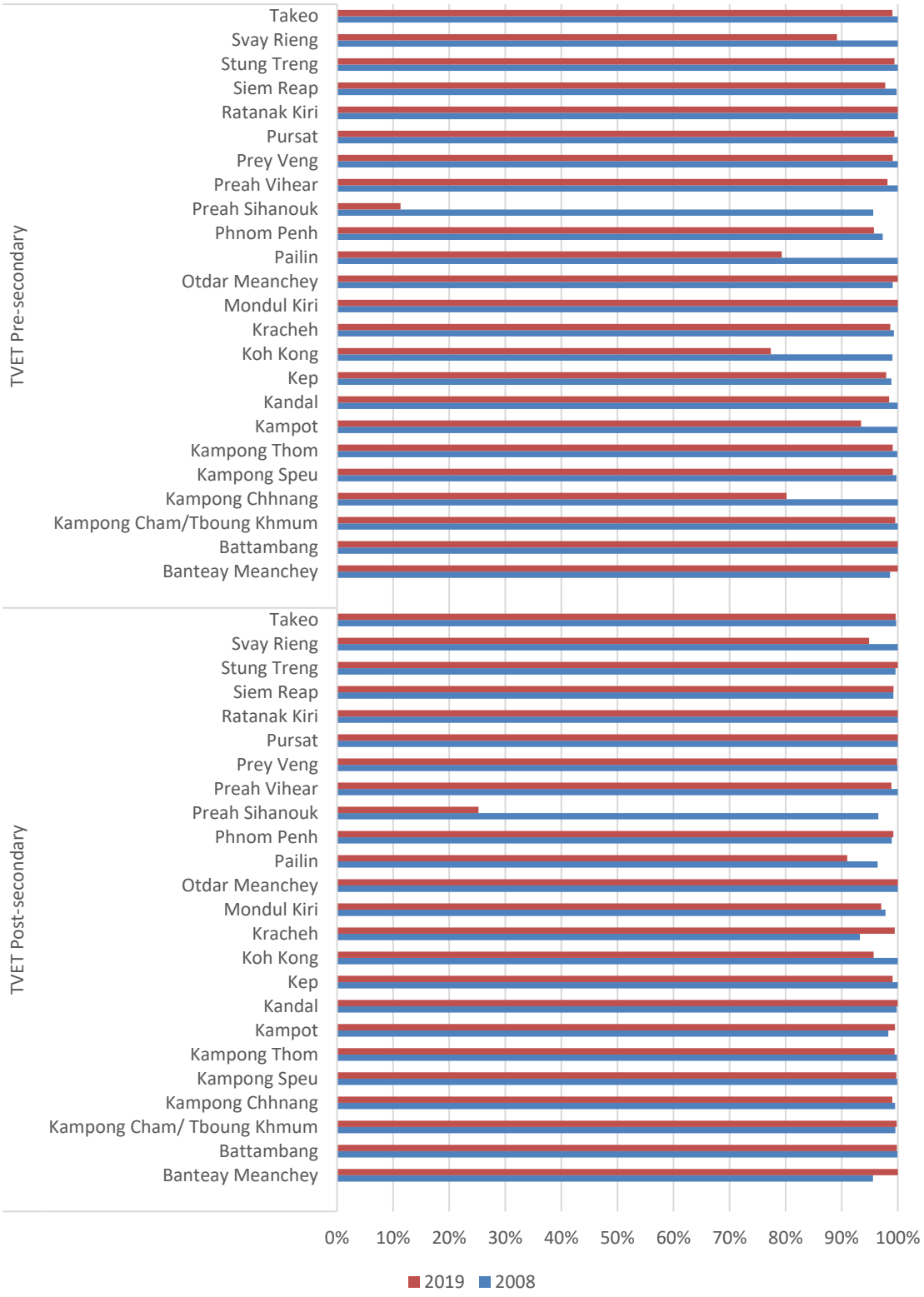
Figure 41: Trends in Khmer Literacy Rates for Graduates of Technical and Vocational Education and Training Programs, by Age Group and Program Level, 2008 and 2019 (%)



TVET = technical and vocational education and training.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 41 plots the literacy rates in the Khmer language by age group and TVET level for 2008 and 2019, and it reveals an interesting pattern: Overall, the rates for TVET graduates were relatively high in 2019, ranging from a low of 73.9% for TVET pre-secondary graduates aged 35-44 to a high of 97.9% for TVET pre-secondary graduates aged 65+ (Table A.6). That said, the data suggest that the average Khmer literacy rates for TVET graduates have been falling since 2008. This result most likely reflects a shift toward less academically oriented learners.

Figure 42: Trends in Khmer Literacy Rates for Graduates of Technical and Vocational Education and Training Programs, by Province and Program Level, 2008 and 2019 (%)

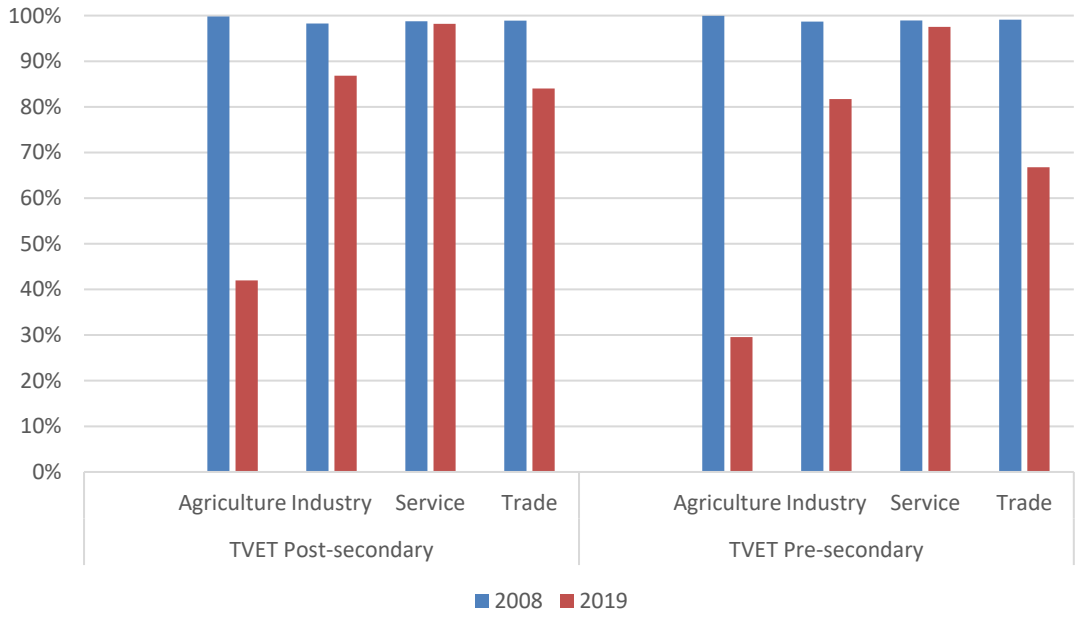


Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 42 extends this analysis by profiling the Khmer literacy rates of TVET graduates by province. The figure reveals that the overwhelming majority of TVET graduates were literate in the Khmer language in 2019. The notable exception was Preah Sihanouk, where the majority of graduates from both TVET levels of were illiterate in the Khmer language: 89% for TVET pre-secondary level and 75% for TVET postsecondary level (Table A.7). As noted earlier, this situation is likely attributable to the influx of Chinese-speaking workers. Again, literacy among TVET graduates generally declined during 2008–2019 across all provinces, more precipitously among pre-secondary TVET graduates in provinces bordering on neighboring countries (e.g., Koh Kong, Pailin, and Svay Rieng), for reasons cited in the preceding analysis.

Figures 43 and 44 document variations in the Khmer literacy rates of TVET graduates by their economic sector and type of occupation.

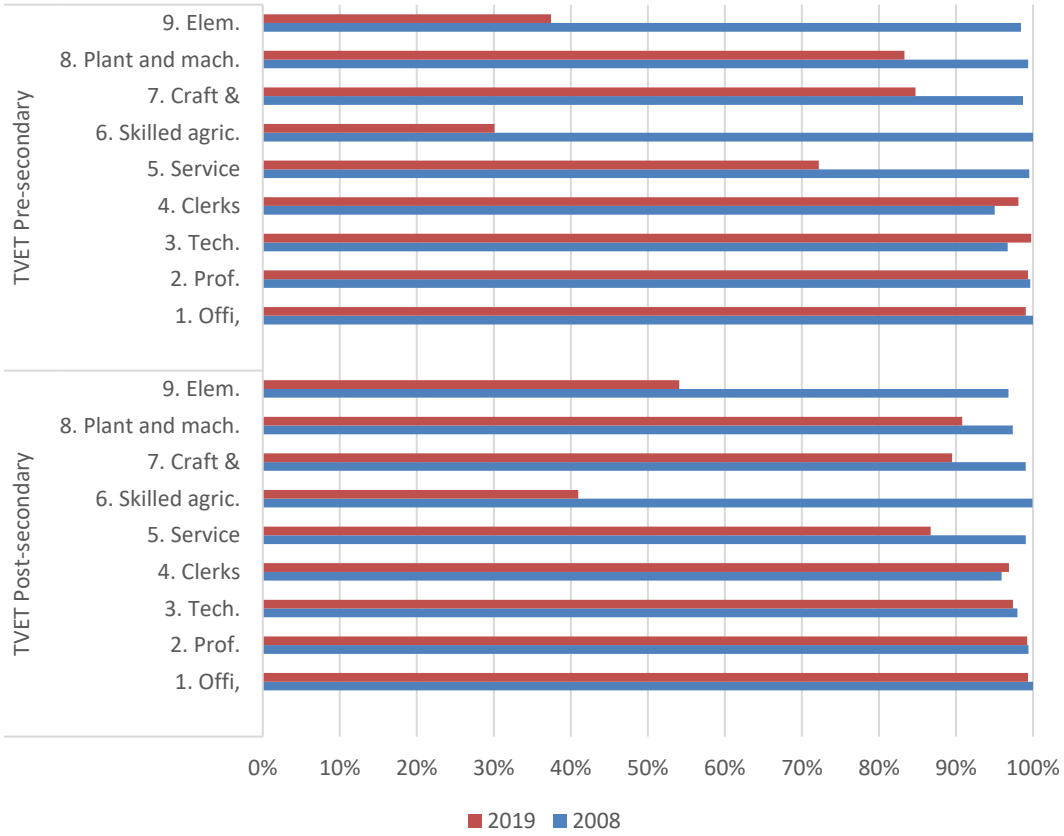
Figure 43: Trends in Khmer Literacy Rates for Graduates of Technical and Vocational Education and Training Programs, by Economic Sector and Program Level, 2008 and 2019 (%)



TVET = technical and vocational education and training.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 43 reveals that the service sector had the highest percentage of Khmer literacy among its TVET graduates in 2019 (98%), and that applied to the graduates of both levels of TVET programs. By contrast, the agriculture sector had the smallest percentage of TVET graduates who were Khmer literate that year (less than 50%). The agriculture sector also saw the largest drops in Khmer literacy among its TVET graduates, including the graduates of both program levels; for instance, Khmer literacy among the graduates of pre-secondary TVET programs dropped from 100% in 2008 to 29.6% in 2019 (Table A.8). The Khmer literacy rates of TVET graduates fell in all sectors and levels, however. The declines were most likely due to selection effects whereby the qualifications of TVET trainees dropped as other educational opportunities opened up for better-prepared students. The relatively low levels of literate TVET graduates will likely constrain growth rates in settings where technical advances are driving increases in the demand for advanced cognitive skills, including literacy.

Figure 44: Trends in Khmer Literacy Rates for Graduates of Technical and Vocational Education and Training Programs, by Major Occupational Group and Program Level, 2008 and 2019 (%)



Craft = Craft and related workers; Elem. = Elementary occupations; Legis. = Legislators, senior officials, and managers; Plant = plant and machine operators and assemblers; Prof. = Professionals; Service = Service workers and shop and market sales workers; Skilled agric. = Skilled agricultural and fishery workers; Tech. = Technicians and associated professionals.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 44 plots trends in the Khmer literacy rates of TVET graduates by major occupational group, and shows significant variations in the rates among TVET graduates. As expected, the occupational groups that demand high literacy skills (e.g., Major Group 1) had the highest percentage of literate graduates from both TVET program levels in 2019. The opposite was true for occupational groups that demand low literacy skills (e.g., Major Group 9). In fact, the Khmer literacy rate among TVET graduates working in Major Group 9 jobs declined the most during 1998–2019, for both TVET levels; the literacy rate for graduates from pre-secondary TVET programs, for example, dropped from 98.4% in 2008 to 37.4% in 2019. As discussed above, the low literacy rates in these occupations will likely constrain the rate at which the industries that employ these workers can adopt productivity-enhancing technologies. Similar patterns were observed for postsecondary TVET graduates.

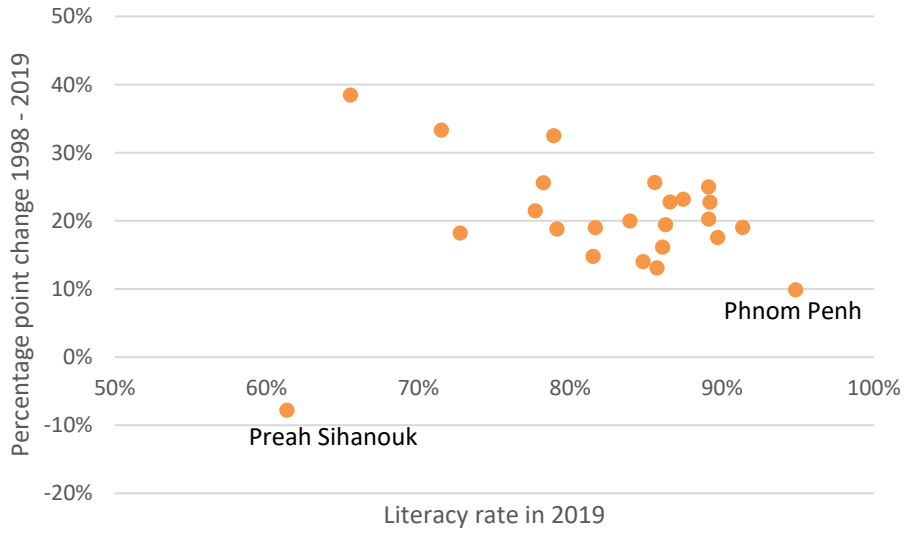
The observed declines in the Khmer literacy rates among TVET graduates in some economic sectors and occupations are of policy interest, as they may constrain the rates of productivity growth realized by these sectors over the coming decade.

Chapter 5: Absolute and Relative Risks of being Illiterate in the Khmer Language

This chapter provides a summary analysis of which groups in the working-age Cambodian population face the highest risks of being illiterate in the Khmer language, and which variables have the largest impact on the probability of being literate. Literacy rates have a direct and causal relationship to rates of economic growth and of social development over the long term, so the differences among provinces are important.

5.1. Literacy Rates and Administrative Divisions

Figure 45: Changes in Khmer Literacy Rates for Cambodians Aged 15+, by Province, 1998–2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 45 plots the absolute probability of being literate by province. The graph reveals a significant variation in Khmer literacy rates among the provinces in 2019, with Phnom Penh, the country's capital city and most dynamic economic center, having the highest percentage of literacy, 94.6%, and Preah Sihanouk Province having the lowest percentage, 61.4% (Table 20). Figure 45 reveals that most provinces had Khmer literacy rates in the 80%–95% range in 2019. Another, smaller group of provinces had Khmer literacy rates around 70% that year. The provinces also displayed significant differences in the extent to which their literacy rates improved during 1998–2019, with the increases ranging from 9.8 percentage points (Phnom Penh) to 38.4 percentage points (Ratanak Kiri).[12] That being said, Preah Sihanouk was the only province that saw its literacy rate decline, by 7.8 percentage points, over the same period. Perhaps this was again due to the influx of Chinese immigrants.

Finally, Figure 45 shows several provincial outliers. First, although Phnom Penh had the highest literacy rate in 2019, it experienced the smallest improvement in that rate during 1998–2019, rising by only 9.8 percentage points. Second, at 66%, Ratanak Kiri, a remote

[12] Phnom Penh had already had high literacy rates, both in 1998 and 2019, while literacy rates for rural, remote provinces such Ratanak Kiri and Mondul Kiri were markedly variable during 1998–2019.

province in eastern Cambodia, had the second-lowest rate of Khmer literacy in 2019, after Preah Sihanouk. It is important to note, however, that Ratanak Kiri also realized the country's greatest increase in the percentage of Khmer-literate adults—38 percentage points from 2008 to 2019. Mondul Kiri, also a remote province, had a slightly higher Khmer literacy rate in 2019 (71.5%), and similarly realized a high increase (33 percentage points) in its Khmer literacy rate over the same period.

Table 20: Changes in Khmer Literacy Rates for Cambodians Aged 15+, by Province, 1998–2019

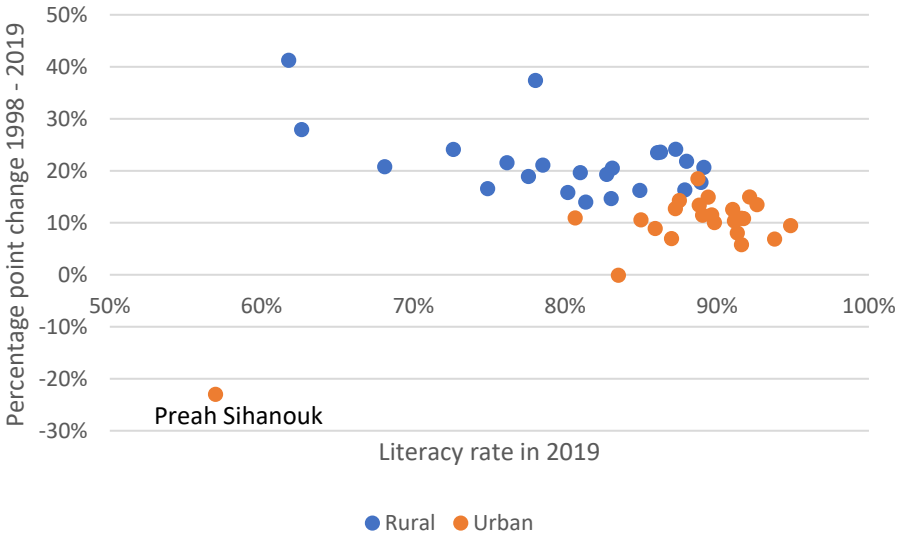
	Literacy Rates			
	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change, 1998–2019
Banteay Meanchey	66.9	76.2	86.3	19.4
Battambang	70.8	78.6	84.8	14.0
Kampong Cham/Tboung Khmum	64.0	74.0	83.9	19.9
Kampong Chhnang	63.9	74.3	86.6	22.7
Kampong Speu	64.2	75.3	89.1	24.9
Kampong Thom	60.4	67.6	79.1	18.7
Kampot	64.3	76.6	87.5	23.2
Kandal	72.4	81.7	91.4	19.0
Kep	60.0	72.4	85.6	25.6
Koh Kong	62.7	73.1	81.7	19.0
Kracheh	66.8	72.8	81.5	14.7
Mondul Kiri	38.2	59.3	71.5	33.3
Otdar Meanchey	46.5	63.2	78.9	32.4
Pailin	72.7	74.5	85.7	13.0
Phnom Penh	85.0	91.1	94.9	9.9
Preah Sihanouk	69.2	78.7	61.4	(7.8)
Preah Vihear	56.3	63.0	77.7	21.4
Prey Veng	68.9	78.6	89.1	20.2
Pursat	70.0	75.8	86.1	16.1
Ratanak Kiri	27.1	42.3	65.5	38.4
Siem Reap	52.7	68.2	78.2	25.5
Stung Treng	54.6	60.3	72.8	18.2
Svay Rieng	72.2	78.2	89.7	17.5
Takeo	66.5	77.1	89.2	22.7

( ) = negative.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Literacy rates have generally improved across Cambodia, particularly in the rural, remote provinces. As a result, literacy gaps among the provinces have narrowed over time. For the differences that remain, it is important to highlight the fact that, given the relationship between economic performance and literacy levels observed across a large number of countries, it is reasonable to assume that interprovincial differences in literacy will continue to contribute to large differences in the rates of GDP and productivity growth across

provinces. More directly, provinces with the largest percentage of illiterate adults will realize the lowest growth rates, all other things being equal (Hanushek 2013).[13]

Figure 46: Changes in Khmer Literacy Rates for Cambodians Aged 15+, by Province and Urban and Rural Area, 1998–2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

[13] Differences in average literacy scores, and in the percentage of adults with literacy skills below Level 3, have been shown to explain the differences in provincial GDP and productivity rates over the long term in Canada (Schwerdt, Wiederhold, and Murray 2019). Preah Sihanouk Province has, however, experienced significant economic growth in recent years, thanks to the influx of Chinese investments and nationals into the province.

Table 21: Changes in Khmer Literacy Rates for Cambodians Aged 15+, by Province and Urban and Rural Area, 1998–2019

Province and Urban/Rural Area	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change in Literacy Rate, 1998–2019
Banteay Meanchey				
Rural	63.5	72.4	82.7	19.2
Urban	77.2	85.7	92.2	15.0
Battambang				
Rural	68.4	76.9	83.0	14.6
Urban	78.5	85.8	91.0	12.5
Kampong Cham/Tboung Khmum				
Rural	62.7	72.9	83.1	20.4
Urban	79.8	86.2	89.8	10.0
Kampong Chhnang				
Rural	62.7	73.7	86.3	23.6
Urban	73.3	79.8	87.5	14.2
Kampong Speu				
Rural	62.6	74.0	86.1	23.5
Urban	80.8	88.7	91.2	10.4
Kampong Thom				
Rural	58.7	66.3	77.6	18.9
Urban	85.9	88.5	91.6	5.7
Kampot				
Rural	63.2	75.9	87.3	24.1
Urban	75.5	82.9	88.8	13.3
Kandal				
Rural	71.2	80.3	88.9	17.7
Urban	79.2	88.7	92.6	13.5
Kep				
Rural	57.5	70.6	78.5	21.0
Urban	74.6	83.1	87.3	12.7
Koh Kong				
Rural	58.4	69.2	74.9	16.5
Urban	70.3	81.2	88.7	18.4
Kracheh				
Rural	64.4	70.8	80.2	15.8
Urban	80.8	86.8	91.6	10.8
Mondul Kiri				
Rural	34.8	56.3	62.6	27.8
Urban	77.1	87.4	85.9	8.9
Otdar Meanchey				
Rural	40.7	61.9	78.1	37.4
Urban	69.8	74.4	80.7	10.9
Pailin				
Rural	67.4	71.9	81.4	14.0

Province and Urban/Rural Area	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change in Literacy Rate, 1998–2019
Urban	80.1	83.2	87.0	6.9
Phnom Penh				
Rural[a]	75.4	88.9		
Urban	85.4	91.2	94.9	9.5
Preah Sihanouk				
Rural	61.4	72.2	81.0	19.6
Urban	80.0	87.2	57.0	(23.0)
Preah Vihear				
Rural	54.6	61.2	76.2	21.6
Urban	78.2	87.6	89.7	11.5
Prey Veng				
Rural	68.5	78.4	89.1	20.6
Urban	77.6	81.9	89.1	11.5
Pursat				
Rural	68.7	74.9	84.9	16.2
Urban	83.4	87.4	91.3	7.9
Ratanak Kiri				
Rural	20.6	35.0	61.8	41.2
Urban	74.5	84.7	85.0	10.5
Siem Reap				
Rural	48.6	63.0	72.6	24.0
Urban	74.5	87.3	89.4	14.9
Stung Treng				
Rural	47.4	54.4	68.1	20.7
Urban	83.7	88.7	83.5	(0.2)
Svay Rieng				
Rural	71.6	77.7	87.9	16.3
Urban	87.0	90.5	93.8	6.8
Takeo				
Rural	66.2	76.9	88.0	21.8
Urban	81.0	86.4	91.8	10.8

( ) = negative.

[a] All of Phnom Penh was classified as urban based on the criteria of the 2019 General Population Census of Cambodia; that is why there is no rural percentage for 2019.

Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 46 plots the probabilities of being literate in 2019 based on the percentage increase in the Khmer literacy rates by province and by urban and rural area. While Cambodia almost closed the literacy gap between the urban and rural areas at the national level by 2019, at 93.3% versus 85.4% (National Institute of Statistics [NIS] 2020), the figure data were disaggregated to highlight the very high variation among provinces. Figure 46 and Table 21 reveal significant differences in the probability of being literate based on the province and each location's status as an urban or rural area. In 2019, almost all rural residents were less likely to be literate in the Khmer language than residents of urban areas, except for those in Preah Sihanouk Province, where the percentage of literate rural residents was significantly

higher than that of literate urban residents (81% versus 57%). The urban–rural literacy gap remained highest in the remote northeastern provinces such as Mondul Kiri and Ratanak Kiri (23 percentage point difference in both),[14] but was zero in Phnom Penh and second-lowest in Kampong Chhnang (1.2 percentage point difference) in 2019. However, Mondul Kiri and Ratanak Kiri saw the greatest reductions in their urban–rural literacy divides since 1998: 43.2 percentage points in Mondul Kiri and 54 percentage points in Ratanak Kiri.

Cambodian policy makers should be commended for significantly improving the literacy rates in both urban and rural areas and for the narrowing the urban–rural literacy gap during 1998–2019. However, additional effort will be needed to close the gap that remains. In addition to increasing public investment in the education sector in rural areas to expand access to education there, the government should work on generating greater demand for education in those areas. This would mean, for example, creating more job opportunities for rural residents, especially high-quality jobs that require higher literacy skills, given that the low literacy rates in rural areas may be partly due to the low demand for education, which is itself a disincentive for learning to read (Easterly 2002).

5.2. The Relative Risks of Being Literate

Previous figures in this report have documented the presence of large differences in the literacy rates of various subpopulations. Figure 5.3 plots the results of a multivariate regression analysis that documents the probability of being literate in 2019 for a range of characteristics, including:

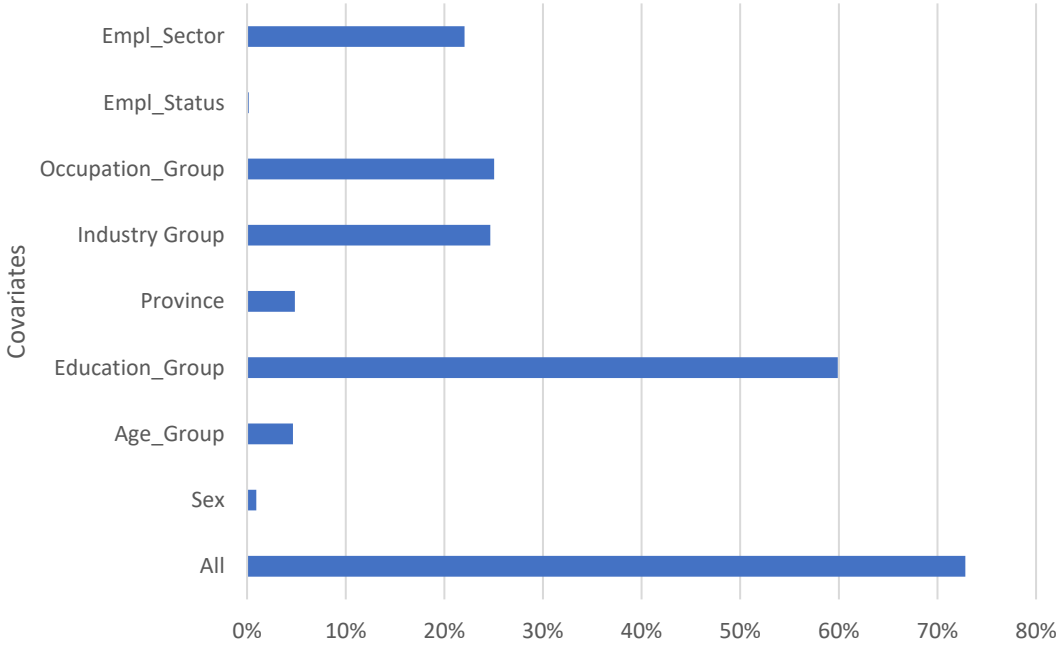
(i) age group,
(ii) gender,
(iii) education level,
(iv) province,
(v) industry group,
(vi) occupation group,
(vii) employment status, and
(viii) employment sector

The dependent variable of interest in this multivariate analysis is literacy, which is binary (i.e., 0= illiterate, 1= literate). The analysis provides maximum-likelihood estimates to determine which coefficients make the observed outcome—being Khmer literate—more likely. The pseudo R^2 values plotted in the graph gauge the extent to which each variable, or combination of variables, does the best job of predicting the observed literacy rates.[15] The urban–rural variable was excluded from the model because the rapid rate of urbanization

[14] The illiteracy rates in the rural areas of Mondul Kiri and Ratanak Kiri may be high because many residents depend on agriculture, fisheries, and forestry for their livelihoods, and so may not find it necessary to be literate.
[15] The statistical significance of the adjusted probabilities can be found in Table 5.3 in the column labeled "Z Score." The Z score for the 5% significance level is 1.96, and for the 1% significance level it is 2.76. Because the analysis presented is based on a sample comprising 10% of the population, all of the Z scores are far greater than 2.76.

(i.e., the flow of population from rural to urban areas) would make the observed results more difficult to interpret.

Figure 47: Adjusted Probabilities of Literacy in the Khmer Language for Cambodians Aged 15+, 2019 (%)



Empl. = Employment.
Source: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 47 indicates that the effects of the listed variables—education, age, gender, province, industry, occupation, employment status, and employment sector—collectively explain 72% of the observed variance in literacy rates. The remaining variance may be attributed to other characteristics, for which data are not available, such as the individuals' interest in reading; how often they chose to read for leisure, how much they are required to use reading in their work; and whether they have participated in various forms of adult learning, including literacy-upgrading programs.

As expected, the level of education had the largest impact, explaining 59.9% of the observed variance in literacy rates. It is interesting to note that gender only affected the probability of being literate by 1%, a finding that suggests that Cambodia has managed to eliminate gender-based inequality in basic Khmer literacy. Similarly, age and province had quite small effects on literacy rates, at only 5% each. Finally, as expected, industry explained 25% of the observed variance, occupation, 25%; and the industrial sector, 22%.

These findings are important because they imply that government policy had virtually eliminated interprovincial and age-based inequality in basic Khmer literacy rates, as measured by the 2019 General Population Census of Cambodia (GPCC). Put another way, one's gender, age group, and province of residence had little impact on the probability of one's being literate. Conversely, the risk of being illiterate in the Khmer language was largely explained

by educational level, the sector and industry in which one is employed, and by one's occupation. This finding also aligns with international research, which suggests that market demand for literacy skills plays an important role in supporting the acquisition and maintenance of those skills (Murray, Binkley, and Shillington 2015). Provided that the market demand for literate workers exceeds the available supply, workplace-based skill upgrading programs will yield material economic benefits in Cambodia.

Chapter 6: Participation of School-Aged Children in Education in Cambodia

The supply of literacy skills available for economic, social, and democratic ends is driven by increases in the average quantity and quality of early education. This chapter analyzes school-attendance and completion rates for the populations aged 5, 6–11, 12–14, and 15–17 in Cambodia in 2019 and during the full reference period (1998–2019), as well as the literacy rates for some of these age groups. The age ranges listed here reflect the commonly used groupings, which approximate the normal ages for the preprimary through secondary levels. Children aged 5 are typically in preprimary school. They are focus of Sustainable Development Goal (SDG) efforts to reduce inequality in school readiness among population subgroups. Children aged 6–11 are in the normal age range for primary school, children aged 12–14 are in the normal range for lower secondary school, and those aged 15–17 are in the normal range for upper secondary school. This analysis attempts to inform the extent to which Cambodia has been able to meet SDG targets 4.1 (free, equitable, and quality primary and secondary education for all) and 4.2 (access for all to quality early childhood development, care, and preprimary education).

6.1. School Attendance Rates in Cambodia since 1998

According to Table 22, the numbers of 5-year-olds attending school nearly quintupled during 1998–2019, to almost 105,000; the percentage also rose, but still remained relatively low at just under 35%. Similarly, almost 3.6 million Cambodians aged 6+ (25.8%) were attending school at the time of the 2019 GPCC, up from almost 2.5 million in 1998; but in percentage terms, the attendance rate for this age group had barely changed over the reference period. The data for populations aged 15+ and 15–64 show similar results, with the percentages remaining very low (ranging from 9% to 10%); in fact, they had actually declined slightly since 1998. This suggests that, as expected, older Cambodians in 2019 were less likely to have attended school than the older Cambodians in 1998, given that their schooling was interrupted during the Pol Pot period. Gender disparities in school attendance remained in 2019, and were highest among the population aged 6+ (2.6 percentage point difference), although it had narrowed over time (from a 7.9 percentage point difference in 1998). Females aged 6+, 15+, and 15–64 marginally improved their school attendance rates since 1998, while the males suffered declines over the same period, suggesting that gender disparities will likely to be eliminated if these trends persist until 2030. Table 22 also shows very rapid growth in the school-age and working-age populations, rapid enough to require the education system and labor market to expend more effort in training and/or absorbing new entrants.

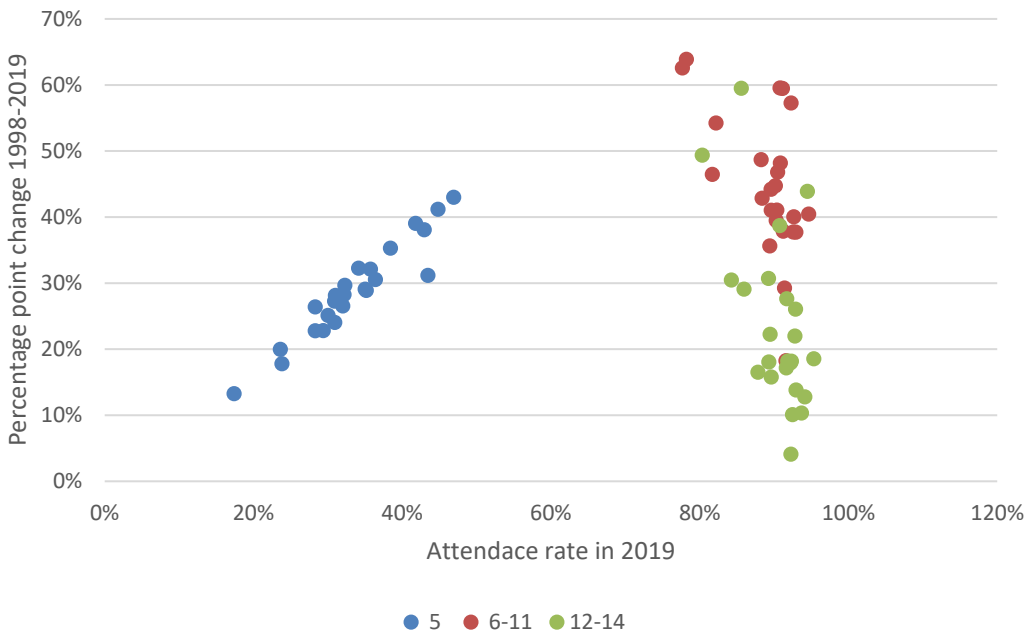
Table 22: School Attendance Rates in Cambodia, by Gender and Age Group, 1998–2019

Gender and Age	1998		2008		2019		Percentage Point Change, 1998–2019
	(No.)	(%)	(No.)	(%)	(No.)	(%)	
Males							
5	10,998	5.7	16,487	11.0	52,234	33.6	27.9
6+	1,364,619	29.9	1,807,372	31.9	1,814,901	27.2	(2.7)
6–11	557,703	52.4	696,886	75.9	844,569	90.1	37.7
12–14	389,978	78.5	473,351	87.0	455,732	90.4	11.9
15+	416,938	13.9	469,592	11.2	514,600	9.8	(4.1)
15–64	415,899	14.6	637,135	16.8	514,600	10.6	(4.0)
Females							
5	10,533	5.6	16,588	11.5	52,732	35.4	29.8
6+	1,102,085	22.0	1,583,318	26.1	1,750,100	24.6	2.6
6–11	513,741	50.9	665,737	76.8	812,315	91.1	40.2
12–14	336,001	70.3	447,989	86.3	449,058	92.8	22.5
15+	252,343	7.1	469,592	10.0	488,727	8.5	1.4
15–64	252,343	7.1	469,592	10.8	488,727	9.4	2.3
Total							
5	21,531	5.6	33,075	11.3	104,966	34.5	28.9
6+	2,466,704	25.7	3,390,690	28.9	3,565,001	25.8	0.1
6–11	1,071,444	51.6	1,362,623	76.3	1,656,884	90.6	39.0
12–14	725,979	74.5	921,340	86.7	904,790	91.6	17.1
15+	669,281	10.2	939,184	10.6	1,003,327	9.1	(1.1)
15–64	668,242	10.5	1,106,727	13.3	1,003,327	10.0	(0.5)

( ) = negative.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

The school attendance rates for the children aged 6–11 and 12–14 in 2019 show a remarkedly different picture: 90.6% for the 6–11 age group and 91.1% for the 12–14 age group. There were no significant differences between the attendance rates for boys and girls in the two age groups in 2019, although the girls' rates were slightly higher. Overall, the attendance rates had improved significantly during 1998–2019, especially the rate for the children aged 12–14, which increased by 39 percentage points. Nevertheless, these results suggest that, as of 2019 Cambodia was still far from achieving SDG 4, Target 4.2.

Figure 48: Changes in the School Attendance Rates for Cambodians Aged 5, 6–11, and 12–14, by Province, 1998–2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 48 plots the school participation rates for the children aged 5, 6–11, and 12–14 during 1998–2019, broken down by province. The figure reveals several insights of importance to policy makers (Table A.10). First, the 2019 attendance rates for children aged 5 were still low in most provinces, with the national average just under 35% (Table 22), but they varied significantly among the provinces, from the lowest (17.4%) in Kep to the highest (46.9%) in Koh Kong. This broad range is likely associated with the marked differences among the provinces in school readiness, but it is not clear why remote provinces such as Koh Kong performed better than Phnom Penh (43.5%). Second, all the provinces improved their attendance rates for 5-year-olds during 1998–2019, although the rates of improvement also varied significantly: from 13.2 percentage points in Kep to 43 percentage points in Koh Kong. This pattern is likely to amplify the already large differences in school readiness, and the expected result will be noticeable differences in learning outcomes once this cohort enters primary school.

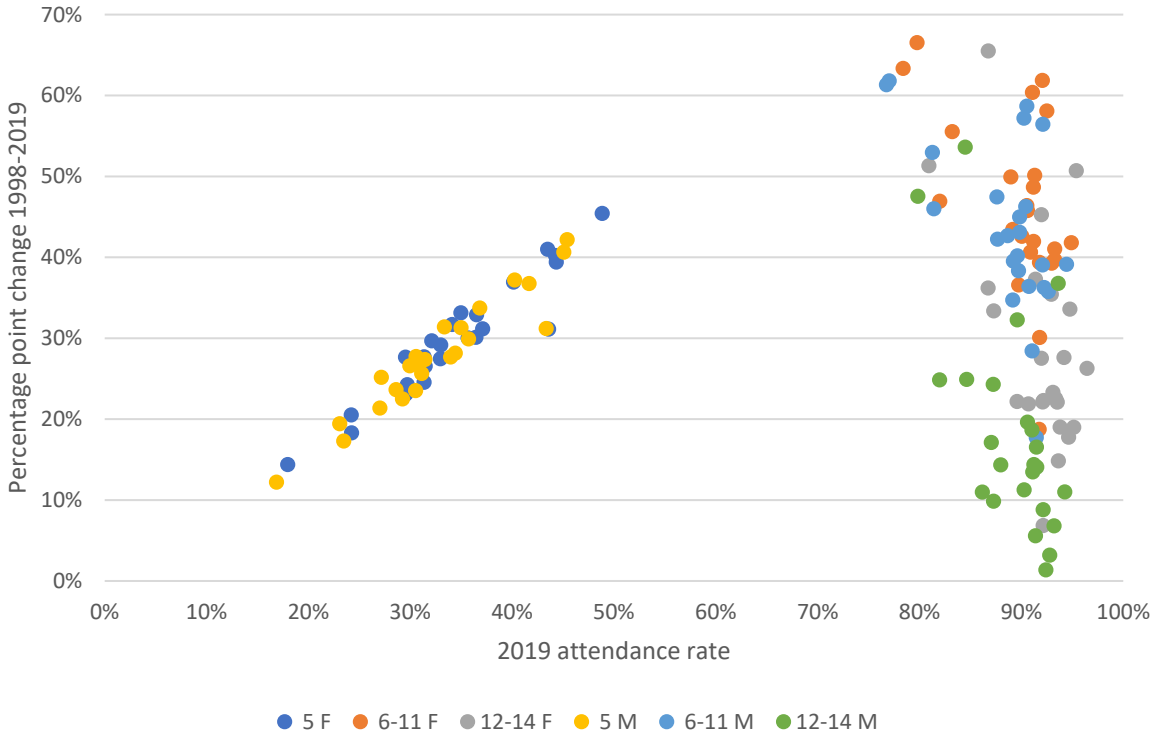
Third, the overall attendance rate for the 6–11 age group was high in 2019 (Table 22), but there was also a great deal of variation among the provinces (although so less than for the 5-year-olds), ranging from a low of 77.7% in Mondul Kiri to a high of 95% in Prey Veng. Again, it was not clear why rural provinces such as Prey Veng did better than Phnom Penh. Ratanak Kiri was at the lower end of the range for this age group, with an attendance rate of 78.2%, as was Stung Treng, with an attendance rate of 81.7%. The rates of increase for the 6–11 age group also varied significantly, from a low of 18.2% in Phnom Penh to a high of 63.9% in Ratanak Kiri. The less-than-spectacular improvement in the attendance rate in Phnom Penh was because the capital city already had a high attendance rate in 1998.

Finally, the 2019 attendance rates for the 12–14 age group were generally high across the Cambodian provinces, and they varied less by province compared with the rates for the children aged 5 and 6–11. The 2019 attendance rates for the children in this age group ranged from a low of 80.4% in Modul Kiri to a high of 95.4% in Prey Veng. Again, provinces in the northern part of Cambodia, such Ratanak Kiri and Stung Treng, tended to do less well than the rest of Cambodia. The rates of increase in attendance for the children aged 12–14 during 1998–2019 also varied significantly by province, from a low of 4% in Phnom Penh to a high of 59.5% in Ratanak Kiri. The fact that Ratanak Kiri experienced the largest gain, however, was a reflection of the very low attendance rates in that province at the start of the period of reference.

The GPCC data do not help explain why these differences exist, but the magnitude of the differences suggests that the provinces are pursuing very different paths to improvement. In the interest of equity, government policy should focus on reducing the size of these gaps in a systematic way. It is possible that those provinces that are lagging might need additional resources and support.

The observed interprovincial variations in the 2019 attendance rates for all three age groups indicate that Cambodia has yet to realize the promise of universal preprimary, primary, and lower secondary education, as set out in SDG 4, Target 4.2. Policies need to focus on both raising attendance rates and reducing interprovincial differences in attendance rates, so that all children have an equal opportunity to learn.

Figure 49: Changes in School Attendance Rates for Cambodians Aged 5, 6–11, and 12–14, by Province and Gender, 1998–2019 (%)



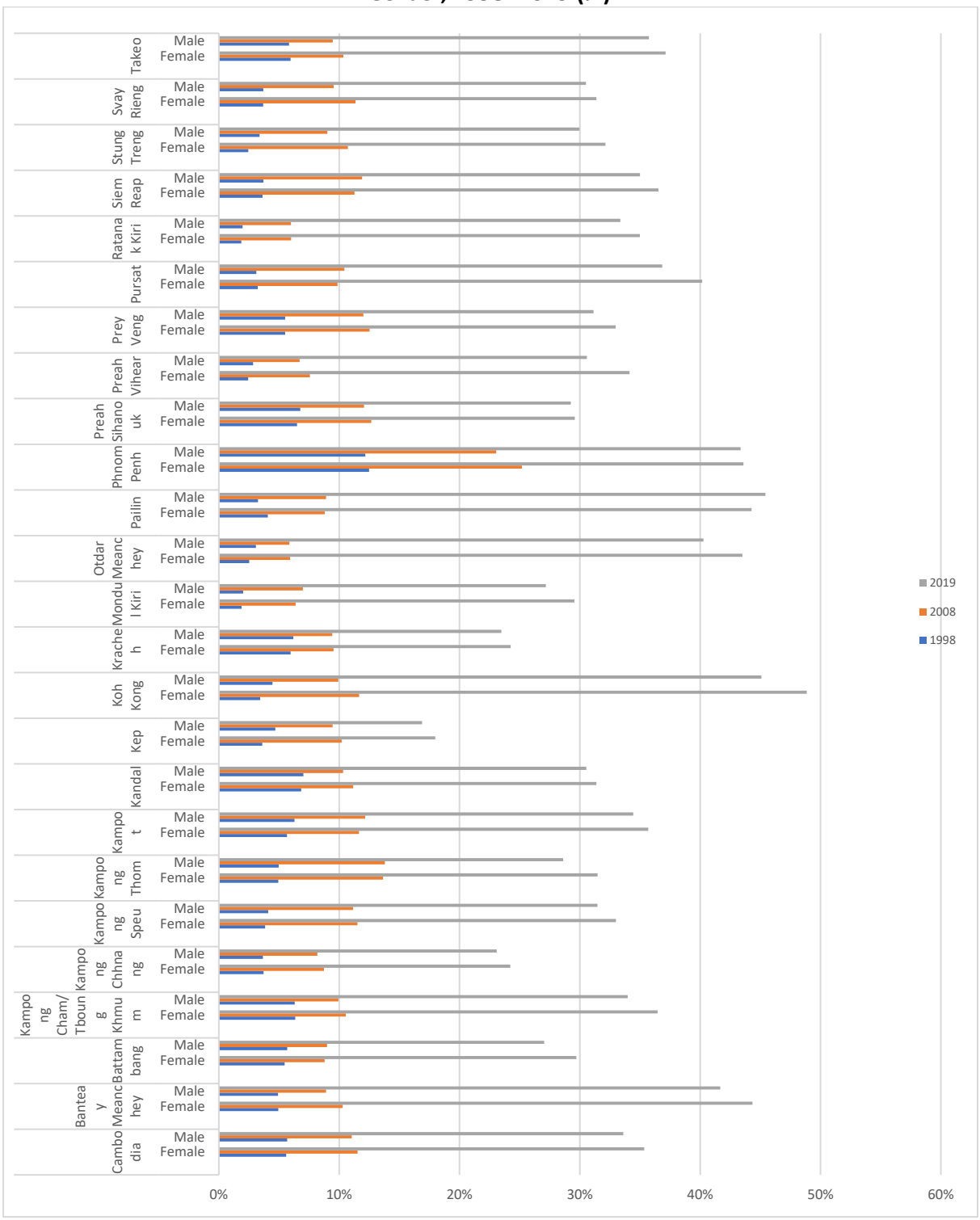
F = female, M = male.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 49 plots the 2019 participation rate by the percentage change in participation realized from 1998 to 2019. In that figure, the analysis is extended to account for province and gender.

6.1.1. Attendance Rates for the 5-Year-Old Age Group

Figure 50 plots the attendance rates by province and gender for 5-year-old children in 1998, 2008, and 2019; and highlights several important findings. As in the preceding analysis, the attendance rates for 5-year-old boys and girls varied significantly across provinces; and despite the significant improvements in their attendance rates during 1998–2019, the rates for both genders remained low. For example, Koh Kong Province had the highest attendance rate for girls, at 48.9%, and the highest rate for boys, at 45.1% (Table A.11). Significantly, there were no systematic differences in the attendance rates for 5-year-old boys and girls by province in 2019, though girls usually had higher attendance rates than boys, which had not been the case in 1998. Again, the data suggest a need for Cambodia to take additional measures to reduce the magnitude of interprovincial differences in 5-year-old attendance rates, in order to achieve the SDG 4, Target 4.2.

Figure 50: Education Participation Rates for 5-Year-Old Children in Cambodia, by Province and Gender, 1998–2019 (%)

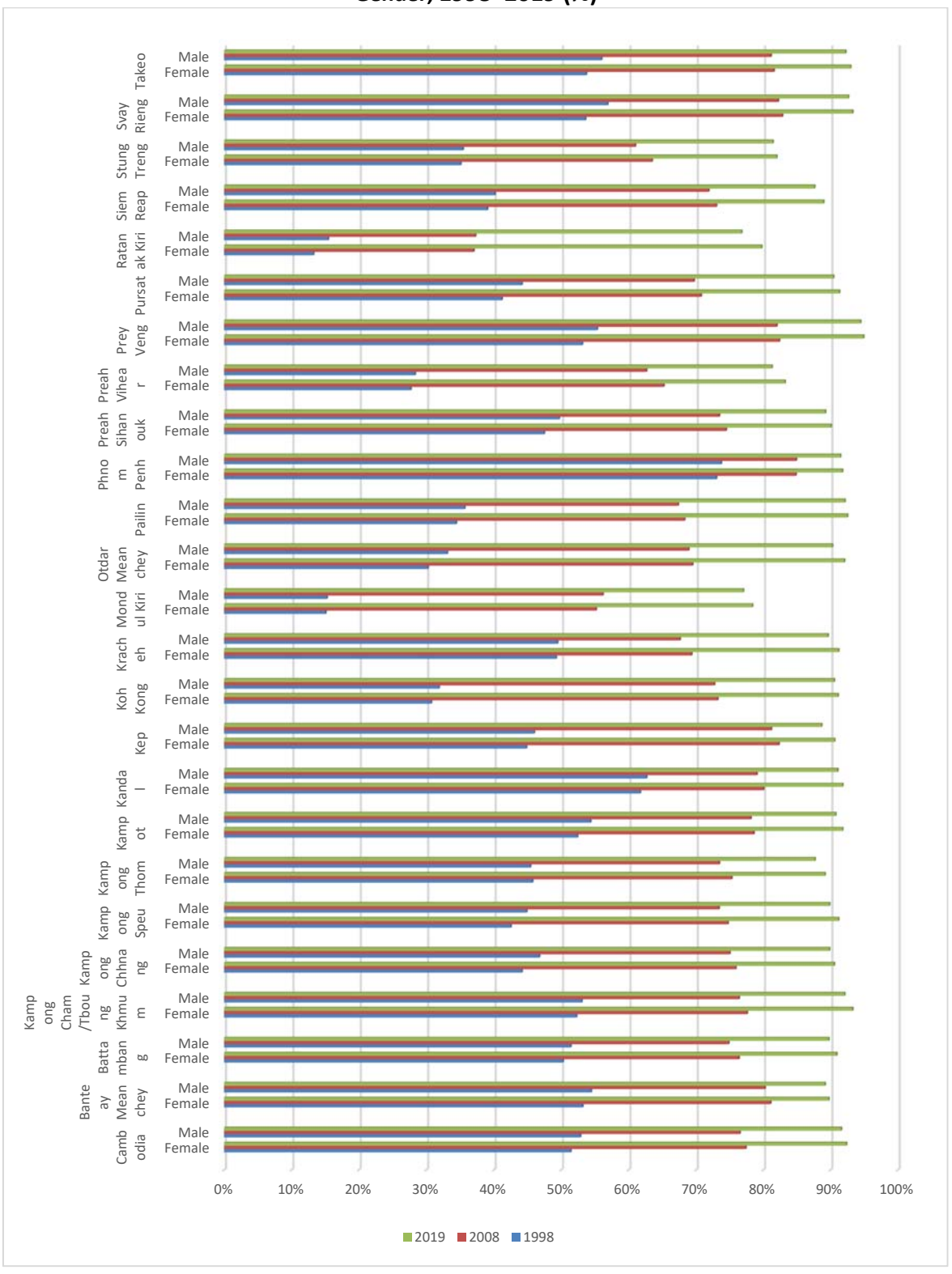


Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

6.1.2. Attendance Rates for the 6–11 Age Group

Figure 51 reveals several important facts about the boys and girls who were 6–11 years old in 2019. Compared with the findings for 5-year-olds presented in Figure 50, the attendance rates for boys and girls in the 6–11 age group in 2019 were much higher and slightly less variable by province (Table A.11). For example, the attendance rates for girls aged 6–11 ranged from a low of 78.4% in Mondul Kiri to a high of 94.9% in Prey Veng, a level that was close to the universal completion target specified in SDG 4, Target 4.1. Moreover, as in the case of the 5-year-old girls, more girls in the 6–11 age group attended school in 2019 than in 1998. By 2019, attendance rates for the 6–11 age group had improved significantly for both boys and girls—by 41.9 percentage points on average for boys and by 44.3 percentage points on average for girls—enough to reduce the interprovincial gender differences in this age group. That being said, additional measures may still be needed to ensure that Cambodia meets SDG 4.1 for girls and boys in the 6–11 age group.

Figure 51: Education Participation Rates for Cambodian Children Aged 6–11, by Province and Gender, 1998–2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

6.1.3. Attendance Rates for the 12–14 Age Group

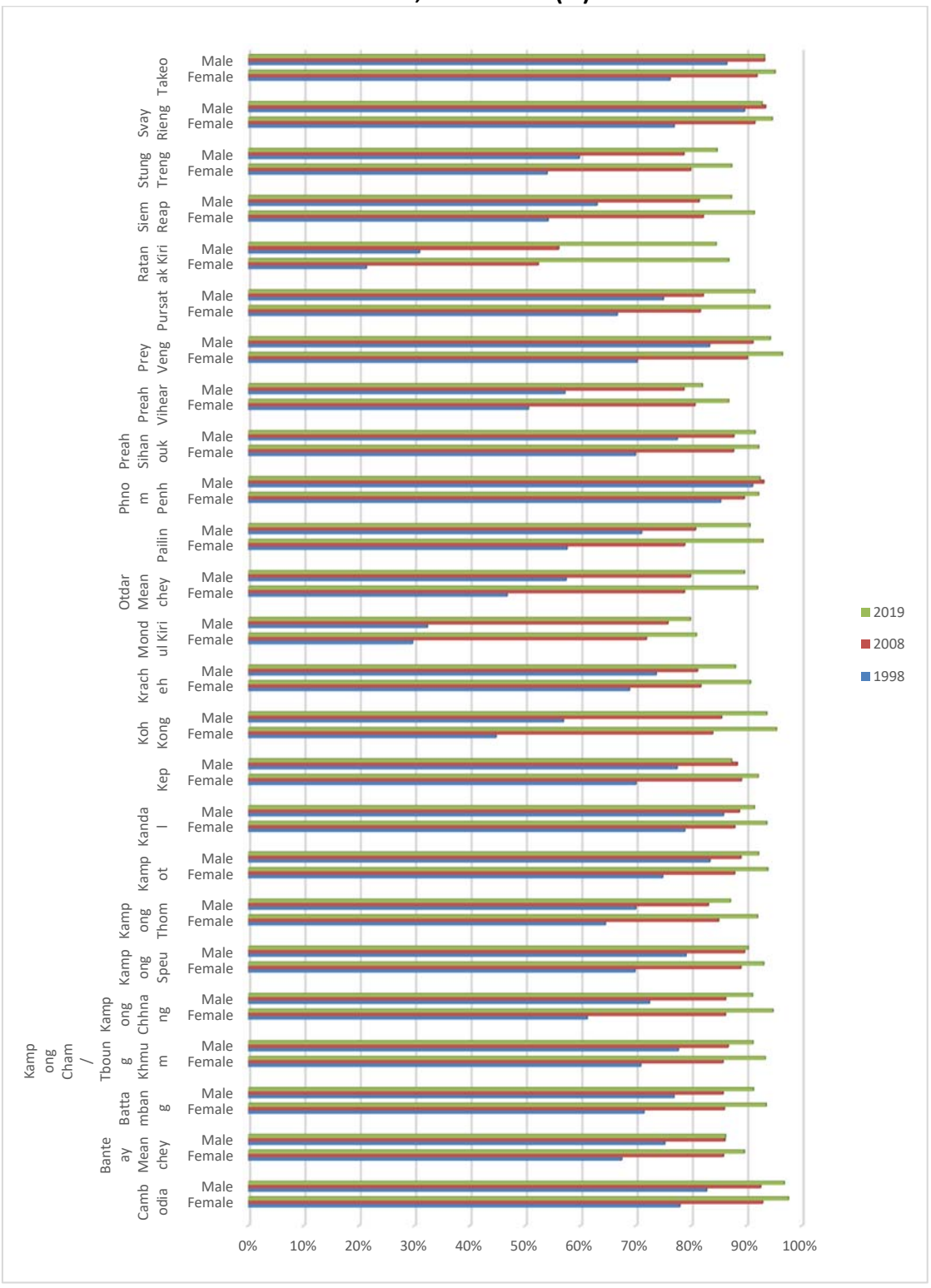
Figure 52 shows that in 2019 provincial attendance rates for both boys and girls aged 12–14 mirrored the analysis in Figure 49 for the same age range for both sexes. That is, their provincial attendance rates were high—higher than the rates for boys and girls aged 5 and 6–11 in 2019. For the boys aged 12–14, the 2019 attendance rates ranged from a low of 79.8% in Mondul Kiri to a high of 94.3% in Prey Veng. For the girls aged 12–14, the rates ranged from 80.9% to 96.5% in the same provinces. The rates of increase in the attendance rates for the 12–14 age group also varied, from a low of 1.4 percentage points in Phnom Penh to a high of 53.6 percentage points in Ratanak Kiri for the boys, and from a low of 6.8 percentage points to a high of 65.4 percentage points in the same provinces for the girls. Again, Phnom Penh achieved the least gains because the capital city already had high attendance rates in 1998, in contrast to Ratanak Kiri, whose attendance rates were 21.3% for girls and 30.9% for boys in 1998, and 86.8% for girls and 84.5% for boys in 2019.

Again, there were no systematic differences between the attendance rates for boys and girls in the 12–14 age group in 2019. That said, the attendance rates for the girls in this age group rose much more rapidly than the rates for the boys (Table A.11). The faster rate of increase realized by the female 12–14 age group during 1998–2019 eliminated any significant gender difference in the attendance rates for this age group; in fact, like the analyses of the attendance rates for boys and girls aged 5 and 6–11 in 2019, more girls attended school on average across Cambodian provinces. This represents a reversal of the trends in 1998.

The improvements in attendance rates realized from 1998 to 2019 are to be commended. But, again, Cambodian policy makers should continue their measures to reduce interprovincial differences in attendance rates for the 12–14 age group, and they should support the efforts of all the provinces to move towards the universal completion target set out in SDG 4.1. The fact that the attendance rates for girls in this age group grew more rapidly than the boys' rates will, with time, further reduce the gender differences in educational and labor-market outcomes.

The increases in educational participation realized between 1998 and 2019 are bound to translate into increased completion rates. The credentials obtained through completion play an important role in supporting educational and labor-market transactions, so increases in the percentage of youth completing various levels of education will matter to both individual outcomes and the efficiency of education and labor markets. Measures to reduce lower-secondary school dropout rates will alleviate the labor market disadvantage suffered by youth without credentials and, more generally, improve the skill-matching efficiency of the labor market and the overall efficiency of the economy.

Figure 52: Education Participation Rates for Cambodian Children Aged 12–14, by Province and Gender, 1998–2019 (%)



Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

6.2. School Completion Rates

School attendance rates, while useful in showing how well Cambodians were able to gain an education (relevant for SDG 4, Target 4.2), says little about how often those who attended school actually completed a particular school level (relevant to SDG 4, Target 4.1). The analysis that follows covers the completion rates at the primary, lower secondary, and upper secondary levels in Cambodia, in 2019 and during 1998–2019.

Table 23 shows that the completion rates at the primary (75.8%), lower secondary (45.5%), and upper secondary (17.8%) levels of education were much lower than the attendance rates discussed in section 6.1. The gender gaps in the completion rates for the three levels were wide in 1998, but were reversed by 2019, with females performing better than males at the three levels. The completion rates improved at all three levels over the reference period, but certainly not enough to ensure that Cambodia would achieve SDG 4, Target 4.1.

Table 23: School Completion Rates at the Primary, Lower Secondary, and Upper Secondary Levels, 1998, 2008, and 2019 (%)

Level of Education	1998			2008			2019		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Primary	31.6	25.8	28.7	59.9	62.7	61.2	72.4	79.4	75.8
Lower secondary	15.6	9.8	12.6	29.5	27.6	28.6	42.7	48.3	45.5
Upper secondary	4.4	2.2	3.2	14.4	11.4	12.9	17.1	18.6	17.8

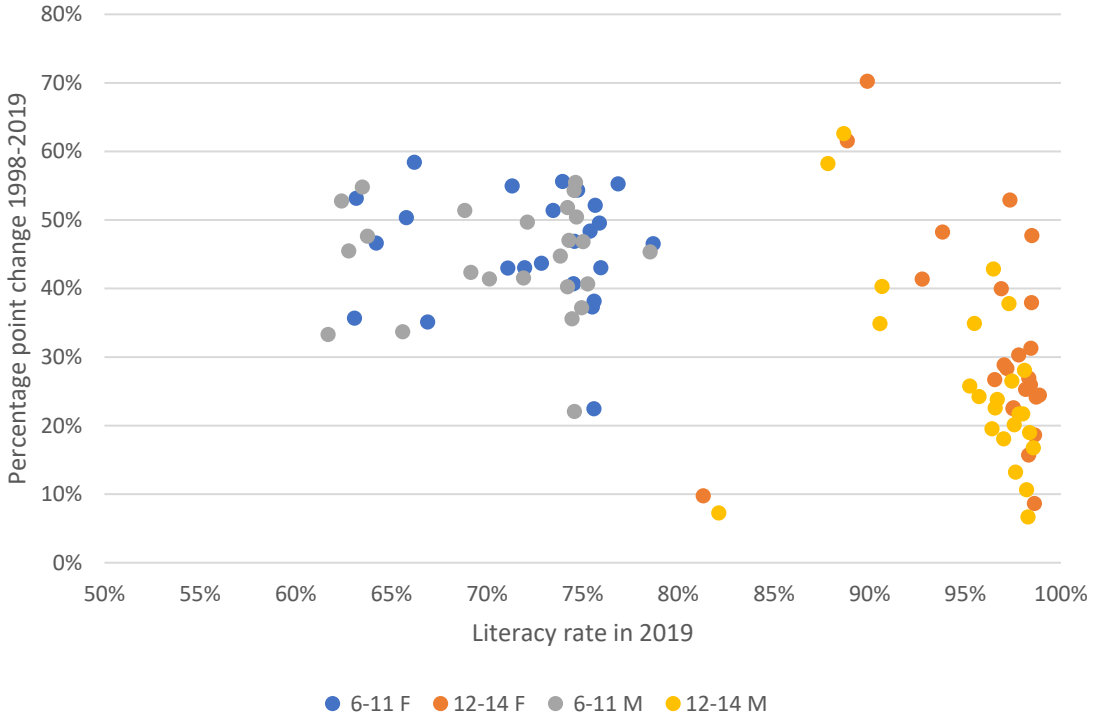
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

6.3. Literacy Rates by Age Group, Gender, and Province

The foregoing analysis provides some insight into how the educational participation of Cambodian youth evolved from 1998 to 2019. While the analysis notes a remarkable increase in the participation and completion rates, however, it reveals little about the learning outcomes associated with school attendance and completion.

Figure 53 measures the quality of education in Cambodia by showing the percentages of youths who reported being literate in the Khmer language in 2019, disaggregating the data by age group, gender, and province. The figure plots the 2019 rates against the changes in reported literacy rates realized from 1998 to 2019.

Figure 53: Changes in the Khmer Literacy Rates for Cambodian Children Aged 6–11 and 12–14, by Age Group, Gender, and Province, 1998—2019 (%)



F = female, M = male.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 53 reveals the following points:

(i) The 2019 provincial literacy rates in the Khmer language for boys and girls aged 6–11 were distinctly lower than the rates for boys and girls aged 12–14. For example, the boys in the 6–11 age group ranged from 61.7% in Preah Sihanouk to 78.5% in Prey Veng, compared with 82.1% to 98.6% for their older peers in the same provinces (Table 6.5). Clearly, Cambodian children were systematically increasing their probability of being literate in the Khmer language as they progressed from age 11 to age 14.

(ii) In 2019, the literacy rates for both boys and girls in the 6–11 age group were significantly higher in all provinces than the rates reported in 1998. The rates at which the literacy rates rose varied significantly by province, however. For example, for boys aged 6–11, they ranged from a low of 6.7% in Phnom Penh to a high of 62.6% in Ratanak Kiri.

(iii) The data suggest that there were no systematic differences based on gender in the probabilities of being literate for the 6–11 and 12–14 age groups. In fact, and again, the girls in these age groups in 2019 were generally more likely to be literate than the girls in the same age groups in 1998 across Cambodia.

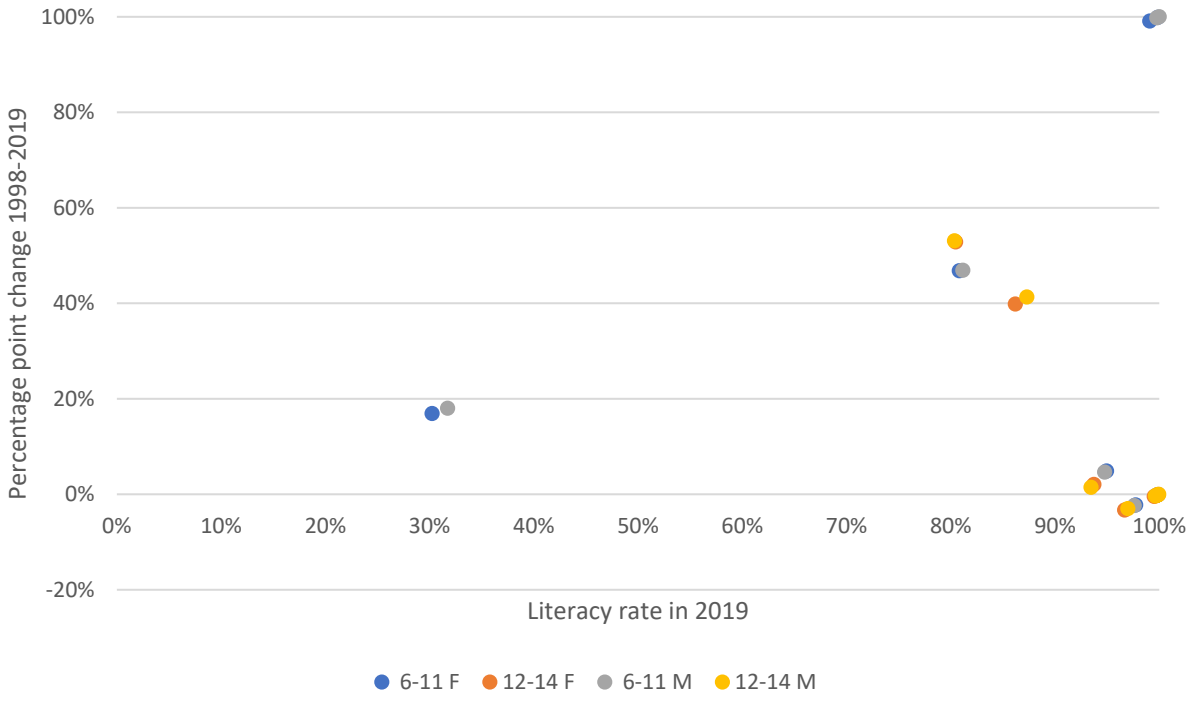
The fact that the overwhelming majority of children aged 12–14 in 2019 reported being literate, while a positive development, should not be taken as a sign that Cambodia no longer has a literacy problem. As noted previously, the PISA for Development (PISA-D) assessments, conducted by the Organisation for Co-operation and Development (OECD), suggest that the average literacy scores in Cambodia are relatively low when compared with the international

standards and with the scores for Cambodia's regional trading partners. This finding suggests that there is a need to shift the policy focus away from "Can people read?" to "Can people read well enough to support individual and national economic and social goals?"

6.4. Khmer Literacy Rates and School Class Conditions

Classes in which all the students are literate, and have roughly the same level of literacy skills, are easier for teachers to handle. By contrast, students who are illiterate will have difficulty learning independently. And the wider the range of literacy levels in a given class, the more difficult it will be for the teacher to manage the instructional process in a way that will yield uniform results. Only highly skilled and well-supported teachers are able to generate consistently high skill gains under such conditions, particularly if the class sizes are large. By ignoring these points, educational policy often contributes to the variability in literacy skill levels within school classes, forcing some students to repeat years.

Figure 54: Changes in the Khmer Literacy Rates for Cambodian Children Aged 6–11 and 12–14, by School Grade and Gender, 1998–2019 (%)



F = female, M = male.
Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Figure 54 and Table 24 both suggest that Khmer-language literacy generally rose over the reference period by school grade, and that, in 2019, virtually all students in grade 4 (age 10) and higher had acquired basic literacy skills. This finding reinforces the need to get all youth into school and keep them there until at least grade 4, so they can acquire the basic literacy skills needed to get full value from educational investments made at higher levels. The relationships presented in the figure mirror those presented in the table for educational participation and for each age level.

As previous figures confirmed, the quantity of education in Cambodia is improving at a rapid rate, which means that an increasing percentage of the population are likely to possess economically meaningful credentials.

Table 24: Changes in Khmer Literacy Rates for Cambodians Aged 6–11 and 12–14, by School Grade and Gender, 1998–2019

Grade, Gender, and Age Group	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change in Literacy Rates, 1998–2019
None or Preschool				
Female				
6–11	13.4	20.5	30.2	16.8
12–14	27.7	74.5	80.5	52.8
Male				
6–11	13.7	24.2	31.7	18.0
12–14	27.3	79.8	80.4	53.1
Grade 1				
Female				
6–11	34.0	50.0	80.8	46.8
12–14	46.4	70.6	86.2	39.8
Male				
6–11	34.3	51.1	81.2	46.9
12–14	46.0	71.0	87.3	41.3
Grade 2				
Female				
6–11	90.1	88.1	95.0	4.9
12–14	91.7	89.5	93.7	2.0
Male				
6–11	90.1	87.9	94.8	4.6
12–14	92.0	88.8	93.5	1.5
Grade 3				
Female				
6–11	100.0	100.0	97.8	(2.2)
12–14	100.0	100.0	96.7	(3.3)
Male				
6–11	100.0	100.0	97.6	(2.4)
12–14	100.0	100.0	97.0	(3.0)
Grade 4				
Female				
6–11	100.0	100.0	99.8	(0.2)
12–14	100.0	100.0	99.5	(0.5)
Male				
6–11	100.0	100.0	99.8	(0.2)
12–14	100.0	100.0	99.6	(0.4)

Grade, Gender, and Age Group	1998 (%)	2008 (%)	2019 (%)	Percentage Point Change in Literacy Rates, 1998–2019
Grade 5				
Female				
6–11	100.0	100.0	99.9	(0.1)
12–14	100.0	100.0	99.8	(0.2)
Male				
6–11	100.0	100.0	99.9	(0.1)
12–14	100.0	100.0	99.7	(0.3)
Grade 6				
Female				
6–11	100.0	100.0	99.9	(0.1)
12–14	100.0	100.0	99.8	(0.2)
Male				
6–11	100.0	100.0	99.8	(0.2)
12–14	100.0	100.0	99.8	(0.2)
Grade 7				
Female				
6–11	…	…	99.9	…
12–14	100.0	100.0	99.8	(0.2)
Male				
6–11	…	…	99.8	…
12–14	100.0	100.0	99.9	(0.1)
Grade 8				
Female				
6–11	…	…	99.1	…
12–14	100.0	100.0	99.9	(0.1)
Male				
6–11	…	…	100.0	…
12–14	100.0	100.0	99.9	(0.1)
Grade 9				
Female				
12–14	100.0	100.0	99.8	(0.2)
Male				
12–14	100.0	100.0	100.0	0.0

… = no data available, ( ) = negative.

Sources: Government of Cambodia, Ministry of Planning, National Institute of Statistics (NIS).

Chapter 7: Summary, Conclusions, and Implications for Policy

This report profiles the distribution of educational attainment and literacy skills among Cambodia's working-age population (age 15 and over) in the national census years of 1998, 2008, and 2019. The report also addresses the trends in school attendance and Khmer-language literacy among Cambodian children aged 5, 6–11, and 12–14.

Previously released analyses based on the General Population Census of Cambodia (GPCC) revealed that the level of educational attainment rose during 1998–2008. The analyses presented in this report, however, document the even more remarkable improvement in the educational profile of the population that occurred from 2008 to 2019. Whatever the policy changes underlying these improvements, Cambodia has greatly expanded access to early childhood education, made great strides towards realizing the goal of universal access to primary education, boosted the rates of primary and secondary completions, and tripled the percentage of the working-age population with a post-secondary qualification. The findings presented in this report also document the impressive improvement in the school completion rates for women and girls, to the point where the country is close to realizing gender parity at many levels of the education system.

Notwithstanding these positive trends, the analyses undertaken in this report also revealed the need for the government to work on (i) expanding the percentage of 5-year-olds who are accessing early-childhood education; and (ii) decreasing the significant differences among the provinces and between urban and rural areas with regard to literacy rates and primary and secondary school completion, for both children and the working-age population. There is also a need to expand enrollment in technical and vocational education and training (TVET) programs, whether at technical training institutes or through work-based learning initiatives, so the workforce can meet the needs of a rapidly restructuring economy. Also, although the absolute numbers are relatively small, there is a group of adults who report having a mother tongue other than Khmer who have failed to become literate in any language. This is likely to inhibit their participation in Cambodia's formal economy.

Analysis of data from the OECD PISA-D study has shown that, while Cambodia's average literacy rate lags behind the rates of many of its regional trading partners, increased government investment in education since 1998 has raised the educational levels of both the school-age and adult populations, and greatly reduced the probability of Khmer-language illiteracy among Cambodian youth. Notably, the data also suggest that educational policies and investments have greatly reduced geographic-, age-, and gender-based inequality concerning the basic literacy of Cambodian adults in the Khmer language. Educational attainment appears to have the largest effect on the probability of Cambodian adults being literate. The probability of current cohorts of Cambodian youth being illiterate is relatively low, however, provided that they have completed at least grade 4.

Even after controlling for known factors such as age, gender, and level of education, this analysis found that some groups of adults face a significantly higher likelihood of being illiterate. Specifically, the adult's occupation and industry still had an impact on the probability of illiteracy in 2019. This finding reflects the fact that the more literate youth generally have better access to a post-secondary education, which will strengthen their

literacy and prepare them for jobs that will demand more advanced literacy skills and allow them to at least maintain their literacy levels over the course of their lives. At the individual level, the remaining differences in educational attainment and literacy will serve to perpetuate inequalities in individual labor-market, health, social, and educational outcomes over the coming decades.

Thus, the evidence presented in this report suggests a need for additional investments to raise the average educational levels, further reduce the percentage of adults who are illiterate, and increase the average literacy level of the workforce. The largest variations in school attendance and completion rates observed in the population aged 15+ occurred among the provinces. Because education is cumulative, for the population under 15, there should be more investment in maternal and child health, to increase the children's' school readiness and reduce the social inequality in school readiness at the point of school entry.

The government must also work to increase the percentage of students completing the primary and secondary levels of education, and it must work to improve the quality of instruction through focused teacher training. Birth rates have been falling steadily in Cambodia since 1950, and are projected to continue to fall until 2050 (World Bank 2021). The declining birthrates should free up resources for use in extending the average years of schooling and improving the quality of education.

Finally, given Cambodia's projected population decline, the supply of literate youth entering the labor market will unlikely be enough to satisfy the projected market demand for literacy skills.[16] As noted in Chapter 2 of this report, literacy skills are conventionally reported on a 500-point scale that is divided into five distinct proficiency levels, each of which can be directly linked to the demands of different occupations. Literacy skill shortages are known to be economically damaging, so the government may have to offer literacy, numeracy, and other basic skill training for unemployed adults, and it may have to induce employers to upgrade the literacy skills of their employees. The goal of such measures would be to (i) create a better match between the skills demanded by employers and the skills possessed by the workforce, (ii) increase labor productivity, (iii) improve competitiveness, and (iv) reduce the negative impact of skill shortages on the country's economic performance. Literacy upgrading will, however, remain the priority because of the influence that literacy rates exert on the efficiency with which the other skills are acquired and applied.

The findings presented in this report should be useful for guiding policy. They provide a clear picture of "what is." In addition, through comparisons of education and literacy profiles across population subgroups and geographic areas, they also provide a sense of "what could be" if attention were focused on those population subgroups and geographic areas most in need of remedial support. What the results do not reveal is "what should be," as this will necessarily depend on a broad-based discussion of Cambodia's social and economic goals and the role that the education system must play in meeting them. The optimal mix of investments will depend on the balance that Cambodian policy makers choose to strike between measures focused on economic efficiency and measures focused on reducing social inequality with regard to key outcomes (e.g., employment, income, and health). Investments that target

[16] From 1998 and 2019 the birth rate per 1,000 women in Cambodia fell from 30.75 to 22.26.

economic sectors and industries where shortages of workers with literacy skills are likely to constrain economic growth are likely to realize the highest short-term economic returns; whereas investments targeting provinces and subprovincial areas, as well as population groups, that face the highest risk of illiteracy would yield the most rapid reductions in social inequality. Over the long run, investment in youth and younger adults will yield larger returns.

Developing an evidence-based policy response to the issues identified in this analysis will require better data than are available from the GPPC files. Among other areas, there is a need for data on:

(i) the market demand for literacy skills and the how that demand is expected to evolve over the medium term;
(ii) the current supply of literacy skills and their distribution by proficiency level, also how the supply is likely to evolve; and
(iii) the likely extent of the expected literacy skill shortages, and their impact on economic performance and social inequality.

It would also be useful for the government to assess the teaching of literacy skills in the education system on a regular basis. These assessments could identify the trends affecting the quality of education in terms of literacy, as well as the individuals, schools, and regions most in need of remedial support. Systems such as the Learning Bar's Early Years Evaluation (EYE) provide a means for assessing the development of the physical, social, emotional, and cognitive skills of individual children in kindergarten through grade 6. The fact that the EYE system provides reliable results means that educators can focus on identifying those students most in need of remedial support.

Assessments such as the OECD's PISA-D program do not provide statistically reliable proficiency estimates at the individual level; their estimates are reliable only when aggregated for population subgroups. The resulting averages and distributions of skill by proficiency level can thus be used only to allocate resources to the groups most in need, rather than to the individuals most in need.

The foregoing analysis documented the steady progress that was made in Cambodia in improving educational access and attainment. The report also documented the steady improvement in the percentage of the adult population reporting themselves as literate. Notwithstanding these accomplishments, Cambodia has yet to achieve the SDG 4 targets, which are related to educational access, primary and secondary completion, and literacy. The data presented in this report should provide policy makers with a clear way to identify the populations, parts of the education system, and the places most in need of additional investment.

The report also raises several important questions that the GPCCs cannot answer. Key among them are:

(i) What are the key barriers to improved educational access and completion rates?
(ii) How rapidly must access and completion rates be improved to support the economy's skill needs?

(iii) What literacy levels are actually needed to support Cambodia's economic and social goals?

Answering these questions will require the collection of additional data, as well as thoughtful policy analysis.

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Appendix: Statistical Tables

Chapter 3

Table A.1: Levels of Educational Attainment in Cambodia, by Major Occupational Group, 1998, 2008, and 2019

Occupational group and year	None		Primary Not Completed		Primary		Lower Secondary		Secondary/Diploma		Beyond Secondary		Total	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
1. Legislators, senior officials and managers	**752**	**0.4**	**42,137**	**20.7**	**52,199**	**25.7**	**45,036**	**22.1**	**41,036**	**20.2**	**22,171**	**10.9**	**203,331**	**100.0**
1998	85	0.6	4,483	30.9	4,505	31.0	2,461	16.9	1,624	11.2	1,362	9.4	14,520	100.0
2008	659	0.9	17,806	23.3	21,857	28.6	18,071	23.6	9,563	12.5	8,549	11.2	76,505	100.0
2019	8	0.0	19,848	17.7	25,837	23.0	24,504	21.8	29,849	26.6	12,260	10.9	112,306	100.0
2. Professionals	**643**	**0.1**	**37,716**	**7.9**	**51,445**	**10.8**	**73,227**	**15.4**	**153,352**	**32.2**	**160,514**	**33.7**	**476,897**	**100.0**
1998	124	0.9	3,143	22.6	2,166	15.6	990	7.1	557	4.0	6,918	49.8	13,898	100.0
2008	292	0.2	5,021	3.8	11,994	9.2	30,525	23.3	37,521	28.7	45,603	34.8	130,956	100.0
2019	227	0.1	29,552	8.9	37,285	11.2	41,712	12.6	115,274	34.7	107,993	32.5	332,043	100.0
3. Technicians and associate professionals	**1,827**	**0.4**	**72,571**	**15.9**	**90,809**	**19.9**	**115,648**	**25.3**	**100,023**	**21.9**	**75,502**	**16.5**	**456,380**	**100.0**
1998	403	0.3	13,915	9.5	26,604	18.2	57,246	39.2	44,157	30.2	3,765	2.6	146,090	100.0
2008	1,234	0.6	39,686	19.8	43,627	21.8	40,580	20.2	31,874	15.9	43,397	21.7	200,398	100.0
2019	190	0.2	18,970	17.3	20,578	18.7	17,822	16.2	23,992	21.8	28,340	25.8	109,892	100.0
4. Clerks	**384**	**0.1**	**30,771**	**8.2**	**53,489**	**14.3**	**67,341**	**18.0**	**105,115**	**28.1**	**117,264**	**31.3**	**374,364**	**100.0**
1998	163	0.3	7,512	12.2	14,831	24.1	17,582	28.6	16,973	27.6	4,413	7.2	61,474	100.0
2008	196	0.5	3,950	9.3	7,214	17.0	9,300	21.9	9,406	22.2	12,382	29.2	42,448	100.0
2019	25	0.0	19,309	7.1	31,444	11.6	40,459	15.0	78,736	29.1	100,469	37.1	270,442	100.0

5. Service workers and shop and market sales workers	**12,118**	**0.6**	**680,877**	**33.4**	**626,558**	**30.7**	**425,710**	**20.9**	**224,363**	**11.0**	**70,999**	**3.5**	**2,040,625**	**100.0**
1998	1,458	0.7	82,190	38.5	71,959	33.7	41,374	19.4	15,468	7.2	1,254	0.6	213,703	100.0
2008	10,551	1.3	340,466	40.4	260,950	31.0	155,107	18.4	51,782	6.1	23,448	2.8	842,304	100.0
2019	109	0.0	258,221	26.2	293,649	29.8	229,229	23.3	157,113	16.0	46,297	4.7	984,618	100.0
6. Skilled agricultural and fishery workers	**80,171**	**0.9**	**5,043,737**	**56.4**	**2,630,659**	**29.4**	**966,397**	**10.8**	**202,406**	**2.3**	**22,130**	**0.2**	**8,945,500**	**100.0**
1998	36,206	1.6	1,523,376	67.5	528,203	23.4	150,377	6.7	15,462	0.7	2,629	0.1	2,256,253	100.0
2008	43,259	1.4	1,736,821	55.7	943,155	30.2	329,803	10.6	55,998	1.8	9,055	0.3	3,118,091	100.0
2019	706	0.0	1,783,540	49.9	1,159,301	32.5	486,217	13.6	130,946	3.7	10,446	0.3	3,571,156	100.0
7. Craft and related workers	**3,337**	**0.2**	**419,542**	**31.1**	**561,884**	**41.6**	**274,733**	**20.4**	**80,711**	**6.0**	**9,019**	**0.7**	**1,349,226**	**100.0**
1998	1,082	0.8	59,634	43.1	50,148	36.2	21,373	15.4	5,614	4.1	553	0.4	138,404	100.0
2008	2,156	0.7	97,829	33.6	126,258	43.4	50,846	17.5	10,715	3.7	3,297	1.1	291,101	100.0
2019	99	0.0	262,079	28.5	385,478	41.9	202,514	22.0	64,382	7.0	5,169	0.6	919,721	100.0
8. Plant and machine operators and assemblers	**2,643**	**0.3**	**279,289**	**30.2**	**333,000**	**36.0**	**206,880**	**22.3**	**85,062**	**9.2**	**18,924**	**2.0**	**925,798**	**100.0**
1998	502	0.5	35,970	36.6	39,935	40.6	16,898	17.2	4,782	4.9	312	0.3	98,399	100.0
2008	2,092	0.8	75,297	29.8	88,781	35.1	58,795	23.2	20,574	8.1	7,554	3.0	253,093	100.0
2019	49	0.0	168,022	29.3	204,284	35.6	131,187	22.8	59,706	10.4	11,058	1.9	574,306	100.0
9. Elementary occupations	**5,538**	**0.7**	**391,220**	**47.0**	**272,926**	**32.8**	**118,793**	**14.3**	**36,656**	**4.4**	**8,012**	**1.0**	**833,145**	**100.0**
1998	2,166	1.2	103,559	55.8	54,452	29.3	20,567	11.1	4,487	2.4	457	0.2	185,688	100.0
2008	3,289	1.4	109,863	48.3	73,711	32.4	30,142	13.2	7,815	3.4	2,826	1.2	227,646	100.0
2019	83	0.0	177,798	42.4	144,763	34.5	68,084	16.2	24,354	5.8	4,729	1.1	419,811	100.0

Table A.2: Cambodian Graduates of Technical and Vocational Education and Training Programs Aged 15+, by Level and Province, 2008 and 2019

Province/ Year	TVET Post-secondary	TVET Post-secondary	TVET Pre-secondary	TVET Pre-secondary	Total
Banteay Meanchey	**Count**	**Percent**	**Count**	**Percent**	Count
2008	1,447	51.3	1,374	48.7	2,821
2019	1,727	74.3	597	25.7	2,324
Battambang					
2008	3,286	66.4	1,661	33.6	4,947
2019	1,623	72.3	621	27.7	2,244
Kampong Cham/ Tboung Khmum					
2008	2,351	55.3	1,903	44.7	4,254
2019	3,483	74.8	1,150	25.2	4,633
Kampong Chhnang					
2008	809	58.4	577	41.6	1,386
2019	913	49.4	937	50.6	1,850
Kampong Speu					
2008	911	53.5	791	46.5	1,702
2019	1,467	72.3	562	27.7	2,029
Kampong Thom					
2008	1,321	59.2	910	40.8	2,231
2019	1,549	78.0	438	22.0	1,987
Kampot					
2008	2,240	62.4	1,349	37.6	3,589
2019	1,764	73.8	625	26.2	2,389
Kandal					
2008	4,270	65.3	2,268	34.7	6,538
2019	2,489	72.0	970	28.0	3,459
Kep					
2008	178	67.2	87	32.8	265
2019	213	81.6	48	18.4	261
Koh Kong					
2008	372	64.1	208	35.9	580
2019	348	68.6	159	31.4	507
Kracheh					
2008	591	57.5	436	42.5	1,027
2019	914	67.3	444	32.7	1,358
Mondul Kiri					
2008	91	48.1	98	51.9	189
2019	135	67.5	65	32.5	200
Otdar Meanchey					
2008	211	65.9	109	34.1	320
2019	411	81.9	91	18.1	502
Pailin					
2008	111	59.7	75	40.3	186
2019	144	62.3	87	37.7	231
Phnom Penh					
2008	15,456	75.1	5,138	24.9	20,594
2019	15,562	74.5	5,322	25.5	20,884
Preah Sihanouk					
2008	892	75.1	296	24.9	1,188
2019	2,861	58.5	2,031	41.5	4,892
Preah Vihear					
2008	251	52.7	225	47.3	476
2019	345	67.8	164	32.2	509
Prey Veng					
2008	1,193	59.1	824	40.9	2,017
2019	1,285	74.6	437	25.4	1,722
Pursat					
2008	1,102	71.0	451	29.0	1,553
2019	432	73.0	160	27.0	592
Ratanak Kiri					

2008	129	49.8	130	50.2	259
2019	214	67.5	103	32.5	317
Siem Reap					
2008	1,648	64.9	892	35.1	2,540
2019	2,207	75.6	713	24.4	2,920
Stung Treng					
2008	244	66.5	123	33.5	367
2019	399	70.6	166	29.4	565
Svay Rieng					
2008	1,058	58.4	754	41.6	1,812
2019	1,347	74.5	461	25.5	1,808
Takeo					
2008	2,666	65.1	1,430	34.9	4,096
2019	2,825	69.4	1,247	30.6	4,072
Total					
2008	42,828	66.0	22,109	34.0	64,937
2019	44,657	71.7	**17,598**	28.3	62,255

Chapter 4

Table A.3: Employed Cambodians Aged 15+ Who Are Literate, by Economic Sector, 1998, 2008, and 2019

Economic sector	1998 (percent)	2008 (percent)	2019 (percent)
Agriculture	61.6	69.6	80.3
Industry	85.0	90.8	92.6
Service	91.1	92.3	95.3
Trade	79.5	85.7	92.1

Table A.4: Trends in Khmer Literacy, Literacy in Khmer and Another Language, Literacy in Another Language Only, and Illiteracy among Cambodians Aged 15+, by Age Group, 2008 and 2019

Age group and Year	Khmer only		Khmer plus other		No Literacy		Not Khmer but other	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Age Group								
15-24								
2008	2,333,250	78.1	264,515	8.9	374,363	12.5	16,331	0.5
2019	2,210,550	83.0	287,455	10.8	140,924	5.3	25,479	1.0
25-34								
2008	1,369,622	71.1	131,462	6.8	407,962	21.2	17,516	0.9
2019	2,221,822	81.3	246,003	9.0	227,464	8.3	38,886	1.4
35-44								
2008	1,129,403	71.4	67,828	4.3	369,878	23.4	15,257	1.0
2019	1,630,471	79.2	123,276	6.0	267,851	13.0	37,540	1.8
45-54								
2008	753,907	65.9	47,912	4.2	329,920	28.8	12,616	1.1
2019	1,171,562	77.9	60,917	4.1	237,209	15.8	34,388	2.3
55-64								
2008	416,670	62.3	34,269	5.1	210,580	31.5	7,192	1.1
2019	825,876	74.6	34,795	3.1	229,404	20.7	16,328	1.5
65 +								
2008	248,867	43.6	17,077	3.0	297,683	52.1	7,618	1.3
2019	622,850	68.3	30,150	3.3	246,948	27.1	12,465	1.4

Table A.5: Literacy Rates for Employed Cambodians Aged 15+, by Major Occupational Group, 1998, 2008, and 2019

Occupational group	1998		2008		2019		Total
	Count	Percent	Count	Percent	Count	Percent	Count
Major Group 1. Legislators, senior officials and managers	15,217	98.0	80,809	95.6	117,958	97.2	213984
Major Group 2. Professionals	14,684	99.3	132,744	98.9	344,599	97.2	492027
Major Group 3. Technicians and associate professionals	150,728	97.9	211,869	98.0	116,329	95.2	478926
Major Group 4. Clerks	63,641	100.0	43,887	96.5	278,864	97.3	386392
Major Group 5. Service workers and shop and market sales workers	253,191	85.9	1,047,069	80.3	1,075,397	92.3	2375657
Major Group 6. Skilled agricultural and fishery workers	3,657,925	61.6	4,444,895	69.8	4,548,762	80.4	12651582
Major Group 7. Craft and related workers	171,123	83.8	313,823	93.2	981,902	94.8	1466848
Major Group 8. Plant and machine operators and assemblers	112,490	92.3	281,216	90.2	630,460	92.4	1024166
Major Group 9. Elementary occupations	274,814	70.7	310,186	73.5	512,891	83.2	1097891
Total	**4713813**		**6866498**		**8607162**		

Table A.6: Trends in Khmer Literacy Rates for Graduates of Technical and Vocational Education and Training Programs, by Age Group and Program Level, 2008 and 2019

Age group and TVET	2008		2019	
	Percent	Count	Percent	Count
15-24				
TVET Post-secondary	99.7	14,957	97.1	16,246
TVET Pre-secondary	99.8	4,607	89.2	6,659
25-34				
TVET Post-secondary	99.2	13,921	95.7	15,633
TVET Pre-secondary	99.3	5,369	89.2	4,746
35-44				
TVET Post-secondary	98.5	8,133	89.5	6,449
TVET Pre-secondary	99.1	6,461	73.9	2,530
45-54				
TVET Post-secondary	97.4	3,048	88.0	4,499
TVET Pre-secondary	98.4	3,100	79.8	2,430
55-64				
TVET Post-secondary	98.4	2,069	93.2	1,191
TVET Pre-secondary	98.8	1,967	94.7	809
65 +				
TVET Post-secondary	98.3	700	98.3	639
TVET Pre-secondary	98.5	605	97.9	424

Table A.7: Trends in Khmer Literacy Rates for Graduates of Technical and Vocational Education and Training Programs, by Province and Program Level, 2008 and 2019

TVET and Province	2008 (percent)	2019 (percent)
TVET Post-secondary		
Banteay Meanchey	95.6	100.0
Battambang	99.9	99.8
Kampong Cham/ Tboung Khmum	99.6	99.8
Kampong Chhnang	99.5	99.0
Kampong Speu	99.9	99.7
Kampong Thom	99.8	99.4
Kampot	98.3	99.5
Kandal	99.8	100.0
Kep	100.0	99.1
Koh Kong	100.0	95.7
Kracheh	93.2	99.5
Mondul Kiri	97.8	97.0
Otdar Meanchey	100.0	100.0
Pailin	96.4	91.0
Phnom Penh	98.9	99.2
Preah Sihanouk	96.5	25.2
Preah Vihear	100.0	98.8
Prey Veng	99.9	99.8
Pursat	100.0	100.0
Ratanak Kiri	100.0	100.0
Siem Reap	99.2	99.2
Stung Treng	99.6	100.0
Svay Rieng	100.0	94.9
Takeo	99.7	99.6
TVET Pre-secondary		
Banteay Meanchey	98.6	100.0
Battambang	100.0	100.0
Kampong Cham/Tboung Khmum	100.0	99.5
Kampong Chhnang	100.0	80.1
Kampong Speu	99.7	99.1
Kampong Thom	99.9	99.1
Kampot	99.9	93.4
Kandal	100.0	98.5
Kep	98.9	97.9
Koh Kong	99.0	77.4
Kracheh	99.3	98.6
Mondul Kiri	100.0	100.0
Otdar Meanchey	99.1	100.0
Pailin	100.0	79.3

Phnom Penh	97.3	95.7
Preah Sihanouk	95.6	11.3
Preah Vihear	100.0	98.2
Prey Veng	100.0	99.1
Pursat	100.0	99.4
Ratanak Kiri	100.0	100.0
Siem Reap	99.8	97.8
Stung Treng	100.0	99.4
Svay Rieng	100.0	89.2
Takeo	100.0	99.0

Table A.8: Trends in Khmer Literacy Rates for Graduates of Technical and Vocational Education and Training Programs, by Economic Sector and Program Level, 2008 and 2019

Economic sector and TVET	2008		2019	
	Percent	Count	Percent	Count
TVET Post-secondary				
Agriculture	99.8	1,897	42.0	1,556
Industry	98.3	749	86.8	1,752
Service	98.7	25,527	98.2	24,059
Trade	98.9	1,810	84.0	2,271
TVET Pre-secondary				
Agriculture	99.9	1,405	29.6	1,363
Industry	98.7	305	81.7	754
Service	98.9	15,277	97.5	8,454
Trade	99.1	682	66.8	1,165
Total		**47,652**		**41,374**

Table A.9: Trends in Khmer Literacy Rates for Graduates of Technical and Vocational Education and Training Programs, by Major Occupational Group and Program Level, 2008–2019

TVET and occupational group	Percent		Count	
	2008	2019	2008	2019
Technical / Vocational Post-secondary				
Major Group 1. Legislators, senior officials and managers	100.0	99.4	1,140	781
Major Group 2. Professionals	99.4	99.2	13,427	16,590
Major Group 3. Technicians and associate professionals	98.0	97.4	7,538	1,496
Major Group 4. Clerks	95.9	96.9	1,298	4,197
Major Group 5. Service workers and shop and market sales workers	99.1	86.7	3,102	3,087
Major Group 6. Skilled agricultural and fishery workers	99.9	41.0	1,564	1,467
Major Group 7. Craft and related workers	99.1	89.5	431	553
Major Group 8. Plant and machine operators and assemblers	97.4	90.8	1,108	1,175
Major Group 9. Elementary occupations	96.8	54.1	376	442
Technical / Vocational Pre-secondary				
Major Group 1. Legislators, senior officials and managers	100.0	99.1	455	323
Major Group 2. Professionals	99.6	99.4	10,380	5,855
Major Group 3. Technicians and associate professionals	96.7	99.8	3,162	445
Major Group 4. Clerks	95.0	98.1	383	1,320
Major Group 5. Service workers and shop and market sales workers	99.5	72.2	1,259	1,446
Major Group 6. Skilled agricultural and fishery workers	100.0	30.1	1,204	1,293
Major Group 7. Craft and related workers	98.7	84.8	154	282
Major Group 8. Plant and machine operators and assemblers	99.4	83.3	481	503
Major Group 9. Elementary occupations	98.4	37.4	191	310
Total			**47,653**	**41,565**

Chapter 6

Table A.10: Changes in School Attendance Rates for Cambodians Aged 5, 6–11, and 12–14, 1998–2019

Province and age group	1998 (percent)	2008 (percent)	2019 (percent)	Percentage point change in literacy rate 1998 -2019
Banteay Meanchey				
5	4.9	9.6	43.0	38.1
6-11	53.8	80.6	89.4	35.6
12-14	71.4	86.0	87.8	16.5
Battambang				
5	5.6	8.9	28.3	22.8
6-11	50.9	75.6	90.3	39.4
12-14	74.2	85.9	92.4	18.1
Kampong Cham/ Tboung Khmum				
5	6.3	10.2	35.2	28.9
6-11	52.7	77.0	92.7	40.0
12-14	74.3	86.2	92.2	17.9
Kampong Chhnang				
5	3.7	8.5	23.6	20.0
6-11	45.5	75.5	90.2	44.7
12-14	66.9	86.2	92.9	26.0
Kampong Speu				
5	4.0	11.3	32.2	28.2
6-11	43.7	74.1	90.5	46.8
12-14	74.5	89.3	91.7	17.1
Kampong Thom				
5	5.0	13.7	30.0	25.1
6-11	45.6	74.4	88.4	42.8
12-14	67.2	84.0	89.5	22.2
Kampot				
5	6.0	11.9	35.0	29.1
6-11	53.4	78.4	91.3	37.8
12-14	79.2	88.4	93.0	13.8
Kandal				
5	6.9	10.7	30.9	24.0
6-11	62.2	79.5	91.4	29.2
12-14	82.4	88.3	92.5	10.1
Kep				
5	4.2	9.8	17.4	13.2
6-11	45.4	81.7	89.6	44.2
12-14	73.9	88.7	89.6	15.7
Koh Kong				
5	4.0	10.8	46.9	43.0
6-11	31.3	73.0	90.8	59.5

12-14	50.6	84.7	94.5	43.9
Kracheh				
5	6.1	9.5	23.9	17.8
6-11	49.4	68.5	90.4	41.0
12-14	71.3	81.4	89.3	18.0
Mondul Kiri				
5	2.0	6.7	28.3	26.4
6-11	15.2	55.7	77.7	62.5
12-14	31.0	73.8	80.4	49.3
Otdar Meanchey				
5	2.8	5.9	41.8	39.0
6-11	31.7	69.2	91.1	59.4
12-14	52.1	79.3	90.8	38.7
Pailin				
5	3.7	8.9	44.8	41.2
6-11	35.1	67.8	92.3	57.3
12-14	64.1	79.8	91.7	27.6
Phnom Penh				
5	12.3	24.1	43.5	31.1
6-11	73.4	84.9	91.6	18.2
12-14	88.2	91.3	92.3	4.1
Preah Sihanouk				
5	6.6	12.4	29.4	22.8
6-11	48.6	73.9	89.6	41.0
12-14	73.7	87.7	91.8	18.2
Preah Vihear				
5	2.6	7.1	32.3	29.6
6-11	28.0	63.9	82.2	54.2
12-14	53.8	79.6	84.3	30.4
Prey Veng				
5	5.5	12.3	32.0	26.5
6-11	54.3	82.2	94.7	40.4
12-14	76.8	90.6	95.4	18.5
Pursat				
5	3.2	10.2	38.4	35.3
6-11	42.7	70.2	90.9	48.2
12-14	70.9	81.9	92.8	21.9
Ratanak Kiri				
5	1.9	6.0	34.2	32.2
6-11	14.4	37.2	78.2	63.9
12-14	26.2	54.3	85.6	59.5
Siem Reap				
5	3.7	11.6	35.8	32.1
6-11	39.6	72.4	88.3	48.7
12-14	58.6	81.8	89.3	30.7
Stung Treng				

5	2.9	9.8	31.0	28.1
6-11	35.3	62.2	81.7	46.4
12-14	56.9	79.3	86.0	29.1
Svay Rieng				
5	3.7	10.4	30.9	27.2
6-11	55.3	82.5	93.0	37.7
12-14	83.4	92.5	93.7	10.3
Takeo				
5	5.9	9.9	36.4	30.5
6-11	54.9	81.4	92.6	37.7
12-14	81.4	92.6	94.2	12.7

Table A.11: Changes in School Attendance Rates for Cambodians Aged 5–14, by Province, Gender, and Age Group, 1998–2019

Province and gender	1998 (percent)	2008 (percent)	2019 (percent)	Percentage point change in literacy rate 1998 -2019
Banteay Meanchey				
Female				
5	4.9	10.3	44.3	39.4
6-11	53.2	81.1	89.7	36.6
12-14	67.4	85.8	89.6	22.2
Male				
5	4.9	8.9	41.7	36.8
6-11	54.5	80.2	89.2	34.7
12-14	75.2	86.1	86.2	11.0
Battambang				
Female				
5	5.5	8.8	29.7	24.2
6-11	50.3	76.4	90.9	40.6
12-14	71.4	86.0	93.5	22.1
Male				
5	5.7	9.0	27.0	21.4
6-11	51.4	74.9	89.7	38.3
12-14	76.9	85.8	91.2	14.4
Kampong Cham/ Tboung Khmum				
Female				
5	6.4	10.5	36.5	30.1
6-11	52.3	77.6	93.3	41.0
12-14	70.9	85.7	93.4	22.5
Male				
5	6.3	9.9	34.0	27.7
6-11	53.1	76.4	92.1	39.0
12-14	77.7	86.7	91.1	13.5
Kampong Chhnang				
Female				

5	3.7	8.7	24.2	20.5
6-11	44.2	75.9	90.5	46.4
12-14	61.2	86.2	94.8	33.6
Male				
5	3.7	8.2	23.1	19.4
6-11	46.8	75.0	89.8	43.1
12-14	72.4	86.2	91.1	18.7
Kampong Speu				
Female				
5	3.8	11.5	33.0	29.2
6-11	42.5	74.8	91.2	48.7
12-14	69.8	89.0	93.1	23.3
Male				
5	4.1	11.1	31.5	27.4
6-11	44.9	73.4	89.8	45.0
12-14	79.0	89.6	90.3	11.3
Kampong Thom				
Female				
5	4.9	13.6	31.5	26.5
6-11	45.7	75.3	89.2	43.4
12-14	64.5	84.9	92.0	27.5
Male				
5	5.0	13.8	28.6	23.6
6-11	45.4	73.5	87.7	42.2
12-14	70.0	83.1	87.1	17.1
Kampot				
Female				
5	5.7	11.6	35.7	30.0
6-11	52.4	78.6	91.8	39.4
12-14	74.8	87.8	93.8	19.0
Male				
5	6.3	12.2	34.4	28.2
6-11	54.4	78.2	90.8	36.4
12-14	83.4	89.0	92.2	8.8
Kandal				
Female				
5	6.8	11.2	31.4	24.5
6-11	61.7	80.0	91.8	30.1
12-14	78.8	87.9	93.6	14.8
Male				
5	7.0	10.3	30.5	23.5
6-11	62.6	79.0	91.1	28.4
12-14	85.8	88.7	91.4	5.6
Kep				
Female				
5	3.6	10.2	18.0	14.4

6-11	44.8	82.3	90.6	45.8
12-14	70.0	89.1	92.1	22.1
Male				
5	4.7	9.5	16.9	12.2
6-11	46.0	81.2	88.7	42.7
12-14	77.4	88.3	87.3	9.9
Koh Kong				
Female				
5	3.4	11.7	48.9	45.4
6-11	30.7	73.2	91.1	60.4
12-14	44.7	83.9	95.4	50.7
Male				
5	4.5	9.9	45.1	40.6
6-11	31.9	72.7	90.5	58.7
12-14	56.9	85.5	93.6	36.8
Kracheh				
Female				
5	6.0	9.5	24.3	18.3
6-11	49.2	69.4	91.2	42.0
12-14	68.8	81.7	90.7	21.9
Male				
5	6.2	9.4	23.5	17.3
6-11	49.5	67.6	89.6	40.2
12-14	73.7	81.1	88.0	14.3
Mondul Kiri				
Female				
5	1.9	6.4	29.5	27.7
6-11	15.1	55.2	78.4	63.3
12-14	29.6	71.9	80.9	51.3
Male				
5	2.0	7.0	27.2	25.2
6-11	15.2	56.2	77.0	61.8
12-14	32.3	75.8	79.8	47.5
Otdar Meanchey				
Female				
5	2.5	5.9	43.5	41.0
6-11	30.2	69.5	92.1	61.8
12-14	46.7	78.8	92.0	45.3
Male				
5	3.1	5.9	40.3	37.2
6-11	33.1	68.9	90.3	57.2
12-14	57.4	79.8	89.6	32.3
Pailin				
Female				
5	4.1	8.8	44.3	40.2
6-11	34.4	68.3	92.5	58.1

12-14	57.5	78.8	93.0	35.4
Male				
5	3.3	8.9	45.4	42.2
6-11	35.7	67.3	92.1	56.4
12-14	71.0	80.8	90.6	19.6
Phnom Penh				
Female				
5	12.5	25.2	43.6	31.1
6-11	73.0	84.8	91.8	18.7
12-14	85.3	89.6	92.1	6.8
Male				
5	12.2	23.0	43.4	31.2
6-11	73.7	84.9	91.5	17.7
12-14	91.1	93.1	92.4	1.4
Preah Sihanouk				
Female				
5	6.5	12.7	29.6	23.1
6-11	47.5	74.5	90.1	42.6
12-14	69.9	87.6	92.2	22.3
Male				
5	6.8	12.1	29.3	22.5
6-11	49.7	73.5	89.2	39.5
12-14	77.5	87.7	91.5	14.1
Preah Vihear				
Female				
5	2.4	7.6	34.1	31.7
6-11	27.7	65.2	83.2	55.5
12-14	50.5	80.7	86.7	36.2
Male				
5	2.8	6.7	30.6	27.7
6-11	28.3	62.6	81.3	53.0
12-14	57.1	78.7	82.0	24.9
Prey Veng				
Female				
5	5.5	12.5	33.0	27.5
6-11	53.1	82.4	94.9	41.8
12-14	70.2	90.1	96.5	26.3
Male				
5	5.5	12.0	31.1	25.6
6-11	55.3	82.0	94.5	39.1
12-14	83.3	91.1	94.3	11.0
Pursat				
Female				
5	3.2	9.9	40.2	36.9
6-11	41.2	70.8	91.3	50.1
12-14	66.6	81.6	94.2	27.6

Male				
5	3.1	10.4	36.8	33.7
6-11	44.2	69.7	90.4	46.3
12-14	75.0	82.1	91.5	16.5
Ratanak Kiri				
Female				
5	1.9	6.0	35.0	33.1
6-11	13.2	37.0	79.8	66.5
12-14	21.3	52.3	86.8	65.5
Male				
5	2.0	6.0	33.4	31.4
6-11	15.4	37.3	76.8	61.3
12-14	30.9	56.0	84.5	53.6
Siem Reap				
Female				
5	3.6	11.3	36.5	32.9
6-11	39.0	73.0	89.0	49.9
12-14	54.1	82.2	91.4	37.3
Male				
5	3.7	11.9	35.0	31.3
6-11	40.2	71.9	87.6	47.4
12-14	62.9	81.4	87.2	24.3
Stung Treng				
Female				
5	2.4	10.7	32.1	29.7
6-11	35.1	63.5	82.0	46.9
12-14	53.9	79.9	87.3	33.4
Male				
5	3.4	9.0	30.0	26.6
6-11	35.4	61.0	81.4	46.0
12-14	59.7	78.6	84.6	24.9
Svay Rieng				
Female				
5	3.7	11.4	31.4	27.7
6-11	53.6	82.8	93.3	39.7
12-14	76.9	91.5	94.7	17.8
Male				
5	3.7	9.5	30.5	26.8
6-11	56.9	82.2	92.7	35.8
12-14	89.6	93.4	92.8	3.2
Takeo				
Female				
5	6.0	10.3	37.1	31.2
6-11	53.7	81.6	93.0	39.3
12-14	76.2	91.9	95.2	19.0
Male				

5	5.8	9.5	35.7	29.9
6-11	56.0	81.1	92.2	36.3
12-14	86.4	93.2	93.2	6.8

Table A12: Changes in the Khmer Literacy Rates for Children Aged 6–11 and 12–14, by Age Group, Gender, and Province, 1998–2019

Province, gender and age group	1998 (percent)	2008 (percent)	2019 (percent)	Percentage point change in literacy rate 1998 -2019
Banteay Meanchey				
Female				
6-11	37.5	63.0	75.6	38.1
12-14	75.0	93.5	97.5	22.5
Male				
6-11	38.9	62.2	74.5	35.6
12-14	79.0	92.4	97.0	18.0
Battambang				
Female				
6-11	31.8	60.8	66.9	35.1
12-14	74.9	92.7	97.5	22.6
Male				
6-11	31.9	59.1	65.6	33.7
12-14	76.9	91.9	96.4	19.5
Kampong Cham/ Tboung Khmum				
Female				
6-11	33.9	63.7	74.5	40.7
12-14	72.9	92.0	98.2	25.3
Male				
6-11	34.0	62.5	74.2	40.2
12-14	76.3	91.5	98.0	21.7
Kampong Chhnang				
Female				
6-11	27.7	59.1	74.6	46.9
12-14	67.5	92.5	97.8	30.3
Male				
6-11	29.1	57.4	73.8	44.7
12-14	72.9	91.6	96.7	23.8
Kampong Speu				
Female				
6-11	29.2	57.8	72.9	43.7
12-14	71.4	92.8	98.3	26.9
Male				
6-11	30.4	56.1	71.9	41.5
12-14	77.5	92.1	97.6	20.1
Kampong Thom				

Female				
6-11	29.0	57.0	72.0	43.0
12-14	68.2	89.6	97.0	28.8
Male				
6-11	28.8	55.2	70.1	41.4
12-14	69.5	88.1	95.2	25.7
Kampot				
Female				
6-11	27.0	64.2	75.4	48.4
12-14	72.5	93.6	98.4	25.9
Male				
6-11	27.3	63.4	74.3	47.0
12-14	76.1	93.4	97.8	21.7
Kandal				
Female				
6-11	38.2	66.1	75.5	37.3
12-14	82.6	94.4	98.3	15.7
Male				
6-11	37.8	64.9	75.0	37.2
12-14	84.4	93.7	97.6	13.2
Kep				
Female				
6-11	21.6	64.5	76.9	55.2
12-14	67.2	93.9	98.4	31.3
Male				
6-11	22.4	61.7	74.2	51.8
12-14	71.0	92.8	97.4	26.5
Koh Kong				
Female				
6-11	18.4	60.6	74.0	55.6
12-14	50.8	90.4	98.5	47.7
Male				
6-11	19.2	59.1	74.6	55.5
12-14	59.5	89.3	97.3	37.8
Kracheh				
Female				
6-11	28.1	52.8	71.1	43.0
12-14	69.9	87.0	96.5	26.7
Male				
6-11	26.8	51.5	69.2	42.3
12-14	71.5	85.9	95.7	24.2
Mondul Kiri				
Female				
6-11	10.0	44.7	63.2	53.2
12-14	27.3	73.5	88.8	61.5
Male				

6-11	9.6	45.4	62.4	52.8
12-14	29.6	77.4	87.8	58.2
Otdar Meanchey				
Female				
6-11	16.4	50.6	71.3	54.9
12-14	44.5	84.3	97.3	52.9
Male				
6-11	17.5	50.2	68.8	51.4
12-14	53.6	84.8	96.5	42.8
Pailin				
Female				
6-11	20.4	52.1	74.7	54.3
12-14	60.5	87.2	98.5	37.9
Male				
6-11	20.3	50.4	74.6	54.3
12-14	70.1	85.8	98.1	28.0
Phnom Penh				
Female				
6-11	53.2	71.6	75.6	22.4
12-14	90.0	95.8	98.6	8.6
Male				
6-11	52.5	71.8	74.6	22.1
12-14	91.6	96.0	98.3	6.7
Preah Sihanouk				
Female				
6-11	27.4	61.8	63.1	35.7
12-14	71.6	92.8	81.3	9.7
Male				
6-11	28.4	60.2	61.7	33.3
12-14	74.9	91.4	82.1	7.2
Preah Vihear				
Female				
6-11	15.5	44.6	65.8	50.3
12-14	45.6	81.8	93.8	48.2
Male				
6-11	16.1	42.6	63.8	47.6
12-14	50.4	78.3	90.7	40.3
Prey Veng				
Female				
6-11	32.2	66.3	78.7	46.5
12-14	74.4	94.7	98.9	24.4
Male				
6-11	33.2	65.8	78.5	45.3
12-14	81.8	94.8	98.6	16.7
Pursat				
Female				

6-11	26.4	58.0	75.9	49.5
12-14	68.9	89.1	97.2	28.3
Male				
6-11	28.2	56.6	75.0	46.8
12-14	74.0	88.5	96.6	22.6
Ratanak Kiri				
Female				
6-11	7.8	24.3	66.2	58.4
12-14	19.7	51.1	89.9	70.2
Male				
6-11	8.7	24.6	63.5	54.8
12-14	26.1	55.3	88.7	62.6
Siem Reap				
Female				
6-11	22.1	61.2	73.5	51.4
12-14	56.9	89.1	96.9	40.0
Male				
6-11	22.5	60.1	72.1	49.7
12-14	60.6	88.0	95.5	34.9
Stung Treng				
Female				
6-11	17.6	37.8	64.2	46.6
12-14	51.4	76.3	92.8	41.4
Male				
6-11	17.3	35.7	62.8	45.5
12-14	55.7	73.4	90.5	34.9
Svay Rieng				
Female				
6-11	32.9	64.5	76.0	43.0
12-14	80.0	95.6	98.6	18.6
Male				
6-11	34.6	64.0	75.3	40.7
12-14	87.6	95.9	98.2	10.6
Takeo				
Female				
6-11	23.6	63.4	75.7	52.1
12-14	74.6	95.8	98.7	24.1
Male				
6-11	24.3	62.5	74.7	50.4
12-14	79.4	95.2	98.4	19.0

STRICTLY CONFIDENTIAL

Royal Government of Cambodia

General Population Census of Cambodia, March 2019

FORM A HOUSELIST

Page Numnber: .....

Total number of pages for EA:.....

Identification Particulars

Name	Province/Municipality	District/Khand/Krong	Khum/Sangkat	Phum	Enumeration Area No.
Code					

Building/Structure and Household Particulars

Line No.	Building/ Structure Number	Predominant Construction Material of Building/Structure: Wall	Roof	Floor	Purpose of Building/Structure: 1. Residence; 2. Residence & shop; 3. Residence & workshop; 4. Residence & any other establishment; 5. Institutional household	Household No.	Particulars of Head of Household: Name of Head of Household	Sex (1. Male 2. Female (Enter Code))	Number of persons usually living in the HH: Male	Female	Total	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13
1												
2												
3												
4												
5												
6												
7												
8												
9												
0												
					(**Count the numbers recorded and tc**Total			Total				

***List of codes**

Col. 3. Wall Material	Col. 4. Roof Material	Col. 5. Floor Material
1. Bamboo /Thatch / Grass / Reeds	1. Bamboo / Thatch / Grass/ Reeds	1. Earth / Clay
2. Earth	2. Tile	2. Wood / Bamboo planks
3. Wood / Plywood	3. Wood / Plywood	3. Concrete / Brick / Stone
4. Concrete / Brick / Stone	4. Concrete / Brick / Stone	4. Polished stone
5. Galvanised Iron/Aluminium/Other metal sheets	5. Galvanised Iron / Aluminium / Other metal sheets	5. Parquet / Polished wood
6. Asbestos cement sheets	6. Asbestos cement sheets	6. Mosaic / Ceramic tiles
7. Salvaged/Improvised materials	7. Plastic/ Synthetic material sheets	7. Other (specify)
8. Other (specify)	8. Other (specify)	

Name of Enumerator .....

Signature / / DD MM YYYY

Name of Supervisor .....

Signature / / DD MM YYYY

Identification Particulars

Royal Government of Cambodia

General Population Census of Cambodia, March 2019

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FORM B HOUSEHOLD QUESTIONNAIRE PART 1

	Province/Municipality		District/Khand/Krong		Khum/Sangkat		Phum		EA No.		Building No.			Household No.		Name of Head of Household
Name																
Code																

Population Particulars

Statement 1.1 : Usual Members Present on Census Night

Type of Household/ Population (Enter code in the box below) 1. Normal or Regular Household 2. Institutional Household 3. Homeless Household 4. Boat Population 5. Transient Population (Specify the location)	Sl. No.	Name of the person (Write the name of the person starting with the head)	Relationship to Head of Household (Write in words)	Sex (Write in words)
	1	2	3	4
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
	0			

Statement 1.2 : Visitors Present on Census Night

Sl. No.	Name of the person (Write full name of the visitor)	Relationship to Head of Household (Write in words)	Sex (Write in words)	Usual Residence: Within Cambodia (Write name of Khum/Sangkat, Srok/Khand/ Krong, Province in col. 5(a))		Usual Residence: Outside Cambodia (Write name of country in col. 6(a))	
1	2	3	4	5 (a)	5 (b)	6 (a)	6 (b)
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							

Statement 1.3 : Usual Members Absent on Census Night

Sl. No.	Name of the person (Write full name)	Relationship to Head of Household (Write in words)	Sex (Write in words)	Age (In completed years)	Location on Census Night: Within Cambodia: Write name of Khum/Sangkat, Srok/Khand/Krong, Province in col. 6 (a)	Within Cambodia: Code of Location	Within Cambodia: Reason for shifting	Outside Cambodia: Write name of the country in col. 7 (a)	Outside Cambodia: Code of Location	Outside Cambodia: Reason for shifting	How long absent (in completed months) Write 0 for less than 1 month
1	2	3	4	5	6 (a)	6 (b)	6 (c)	7 (a)	7 (b)	7(c)	8
1											
2											
3											
4											
5											

Total No. of Persons in Statement 1.1	

Total No. of Persons in Statement 1.2	

Total No. of Persons in Statement 1.1&1.2	

Column 5 Age

000. Less than 1 year 001 1 year 002: 2 years

097: 97 years 099: 99 years 120:120 years

Statement 1.3: Col. 6(c) and Col. 7 (c)

1. Employment 2. Business 3. Tourism
4. Education 5. Marriage 6. Medical 7. Other

	Name:	Signature	DD	MM	YYYY
Enumerator:					
Supervisor:					

Number of Form B used for the household ☐☐

FORM B HOUSEHOLD QUESTIONNAIRE PART 2: INDIVIDUAL PARTICULARS

For all persons					For children aged 0-14 years	For all persons	For other than never married	For all persons							
Sl. No.	Name of the person	Relationship	Sex	Age				Mother Tongue	Religion	Birth Place		Previous Residence		Duration of Stay	Reason for Migration
	Names of usual members present and visitors during the census night (Please refer to Statements 1.1 & 1.2 in Part 1)	Relationship to Head of Household (Enter code from list below)	1. Male 2. Female (Enter Code)	In completed years (Enter Code)	Whether living with own mother? (See note below)	Marital Status (Enter code from list below)	Age at first marriage in completed years (Ask only married, widowed, divorced or separated person)	(Enter code from list below)	(Enter code from list below)	-If in this village, enter code 1. -If in another village, give name of the Khum/Sangkat of that village and write names of District/Khand/Krong and Province /Khet -If outside Cambodia, write name of the country		-If always lived in this village, enter 1 and skip to col.15(a). -If in another village, give name of the Khum /Sangkat of that village and write name of District/Khand/Krong and Province/Khet. -If outside Cambodia, write name of the country		How long has the person lived in this village? (Enter code from list below)	(Enter code from list below)
										Khum/Sangkat Srok/Khan/Krong, Khet or Country	Code of Location	Khum/Sangkat Srok/Khan/Krong, Khet or Country	Code of Location		
1	2	3	4	5	6	7	8	9	10	11(a)	11(b)	12(a)	12(b)	13	14
1															
2															
3															
4															
5															
6															
7															
8															
9															
0															

Codes for Column 3 Relationship to Head of Household
1. Head
2. Wife / Husband
3. Son / Daughter
4. Father / Mother
5. Grand child
6. Other Relative
7. Non-Relative including boarder

Codes for Column Age
000: less than 1 year
001: 1 year
002: 2 years
:
:
:
:
120 : 120 years

Column 6
Write serial number of natural mother (if living in this household) for child aged 0-14.

If mother not living in this household write '0'.

Column 7
1. Never Married
2. Married (i.e. currently married)
3. Widowed
4. Divorced
5. Separated

Codes for Column 9 Mother Tongue

01. Khmer	11. Chaam	21. Ro Ong
02. Vietnames	12. Kaaveat	22. Kraol
03. Chinese	13. Klueng	23. Raadear
04. Lao	14. Kuoy	24. Thmoon
05. Thai	15. Krueng	25. Mel
06. French	16. Lon	26. Khogn
07. English	17. Phnong	27. Por
08. Korean	18. Proav	28. Suoy
09. Japanese	19. Tumpoon	29. Other
10. Chaaraay	20. Stieng	

Column 10
1. Buddhism
2. Islam
3. Christianity
4. Other

Codes for Column 13 Duration of Stay
00. less than 1 year
01. 1 to less than 2 years
02. 2 to less 3 years
.....
10. 10 to less than 11 years
.....
20. 20 to less than 21 years
.....
.....
120. 120 to less than 121 years

Codes for Column 14: Reason for Migration
01. Transfer of work place
02. In search of employment
03. Education
04. Marriage
05. Family moved
06. Lost land / lost home
07. Natural calamities
08. Dislocated due to Dam construction
09. Dislocated due to other major or small projects
10. Insecurity
11. Repatriation or return after displacement
12. Orphaned
13. Visiting only
14. Other (specify .....)

Sl. No.	For all persons								For persons aged 5 years and more												
	Literacy		Full Time Education						Functional Difficulty						Main Activity	Occupation		Employment Status	Agriculture, Industry, Trade or Service		Sector of Employment
	15 (a)	15 (b)	16 (a)	16 (b)		16 (c)		16 (d)	17						18	19		20	21		22
	Can the person read and write with understanding in Khmer language? 1. Yes 2. No *(Enter Code)*	Can this person read and write with understanding in any other language? -If so which *(Enter code from list below)*	Has the person attended School/ Education Institution?	Currently attending grade for code 2 of col.16(a)? *(Enter code from list below)*		What is the highest grade completed? *(Enter code from list below)*		Main subject of study for codes 15 to 20 in col.16(b) or 16(c). For other codes in col.16(b), (c) skip to col. 17.	See the note below (Enter code from list below)						Main activity of the person during last year. *Enter code from list below*	Types of occupation/employment Write the occupation in word		Employment Status/ Class *Enter code from list below*	Nature of Economic Activity (Agriculture, Industry, Trade or Service) Write the nature of economic activity in words		Sector in which employed *(Enter code friom list below)*
								Description	Code	1	2	3	4	5	6	Name of Occupation	Code		Nature of Economic Activity	Code	
1																					
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
0																					

Codes for column 15(b)

1. No other language
2. Vietnamese
3. Chinese
4. Lao
5. Thai
6. French
7. English
8. Chaam
9. Other

Codes for column 16(a)

1. Never
2. Now
3. Past

Codes for column 16 (b): Currently Attending Grade

For code 1 and 3 in column 16 (a), put dash (-) in 16(b)

For code 2 in column 16 (a), enter code from list below.

Common Codes for column 16 (b) and 16 (c)

00. Pre-school/Kindergarten
01. Class 1
02. Class 2
:
:
11. Class 11
12. Class 12
17. Undergraduate course
18. Master's Degree course
19. Ph.D. course
20. Any other course

Separate Codes for column 16 (b)

15. Technical/vocational pre-secondary diploma/certificate course
16. Technical/vocational post-secondary diploma/certificate course

Codes for column 16 (c) What is the highest grade completed?

For code 1 in column 16 (a), put dash (-) in column 16 (b)

For code 2 and 3 in colum 16 (a), enter code from the list below.

Separate Codes for column 16 (c)

13. Lower Secondary/ Diploma/ Certificate
14. Upper Secondary/Diploma/Certificate/Baccalaureate
15. Technical/vocational pre-secondary diploma/certificate
16. Technical/vocational post-secondary diploma/certificate
17. Graduate Degree
18. Master's Degree
19. Ph.D Degree
20. Any Other Diploma/Degree completed
88. No grade completed

Column 17: Functional Difficulties

Do you have difficulty.....

17.1. seeing, even if wearing glasses?
17.2 hearing, even if using a hearing aid?
17.3 walking or climbing step?
17.4 remembering or concentrating?
17.5 with self-care (such as washing all over or dressing)?
17.6 using your usual (customary) language, do you have difficulty speaking, for example understanding or being understood?

Codes for column 17

1. No – no difficulty
2. Yes – some difficulty
3. Yes – a lot of difficulty
4. Cannot do at all

Codes for column 18

Main activity during last year

1. Employed (fill in cols. 19 to 22)
2. Unemployed (Employed any time before) (Fill in col.19 to 22 for last employment).
3. Unemployed (Never employed any time before)
4. Home maker
5. Student
6. Dependent
7. Rent-receiver, Retired or other income recipient
8. Other

(For codes 3 to 8 put dash (-) in cols. 19 to 22)

Codes for column 20: Employment Status/Class

1. Employer
2. Paid employee
3. Own-account worker
4. Unpaid family worker
5. Other (specify..)

Codes for column 22 Sector of Employment

1. Government
2. State owned enterprise
3. Cambodian private enterprise
4. Foreign private enterprise
5. Non-profit institution
6. Household sector
7. Embassies, International institutions, and foreign aid, and development agencies
8. Other (specify....)

3/6

FORM B HOUSEHOLD QUESTIONNAIRE PART 3: FERTILITY INFORMATION OF FEMALES AGED 15 AND OVER LISTED IN COLUMN 2 OF PART 2

Sl. No.	Name of the woman (for woman aged 15 and over)	Sl. No. in column 1, Part 2	FERTILITY INFORMATION FOR WOMAN AGED 15 AND OVER						Particulars of Birth in the last 12 months to woman aged 15-49 years			
			Number of Children Born *(Give number in two digits like 01, 02,.....10, 11. If None, write '00')*						Particulars of Birth in the last 12 months to woman aged 15-49 years			
			How many Children have been born alive to the woman ?		How many of them are living ?		How many of them have died?		Any child born alive to the woman during the last 12 months? (Give actual number like 1, 2 under the appropriate column.If none write 0) (If no child was born to the woman in the last 12 months, skip to part 4)		State who assisted her during the delivery. (Enter code from list below)	Did the person register the birth of this baby with the Civil Authority? (Enter code from list below)
1	2	3	4		5		6		7		8	9
			(a) Male	(b) Female	(a) Male	(b) Female	(a) Male	(b) Female	(a) Male	(b) Female		
1												
2												
3												
4												
5												
6												
7												
8												
9												
0												

Codes for column 8	
1: Doctor	4: Traditional Birth Attendant
2: Nurse	5: Other (specify.....)
3: Midwife	6: None

Codes for column 9
Yes = 1
No = 2

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FORM B HOUSEHOLD QUESTIONNAIRE PART 4 : HOUSING CONDITIONS, AMENITIES AND ASSETS POSSESSED BY HOUSEHOLD

(Enter code in the boxes below)

On what basis does this household occupy this dwelling?	Main Source of light	Main Cooking Fuel	Type of toilet facility household usually uses	Share facility with other household	Main Source of drinking water supply	Time take to go there, get water, and come back	No. of rooms occupied by household (exclude kitchen, bathroom, toilet and storeroom)	Availability of separate kitchen within premises
1	2	3	4	5	6	7	8	9
1. Owner occupied 2. Rent 3. Not owner but rent free 4. Other (Please specify)	1. City Power 2. Generator 3. Both city power and generator 4. Kerosene 5. Candle 6. Battery 7. Other (Please specify)	1. Firewood 2. Charcoal 3. Kerosene 4. Liquefied Petroleum Gas(LPG) 5. Electricity 6. None 7. Other (Please specify)	1 . None, not using toilet 2. Pour flush (or flush) connected to sewerage 3 . Pour flush (or flush) to septic tank or pit 4 . Pour flush (or flush) to elsewhere (i.e. not a sewer or pit/tank) 5 . Pit latrine with slab 6. Pit latrine without slab or open pit 7. Latrine overhanging field or water (drop in the field, pond, lake, river, sea) 8 . Other, specify	1. Yes 2. No	1. Piped into dwelling 2. Piped into compound, yard or plot 3. Public tap / standpipe 4. Tube Well, Borehole 5. Protected well 6. Unprotected well 7. Protected spring 8. Unprotected spring 9. Rainwater collection 10. Tanker-truck 11. Cart with small tank / drum 12. Surface water (river, stream, dam, lake) 13. Bottled water 14. Other (specify)	1. Water on premises 2. Less than 30 minutes 3. More than 30 minutes 4. Don't' Know	1. One room 2. Two rooms 3. Three rooms 4. Four rooms 5. Five rooms 6. Six rooms 7. Seven rooms 8. Eight rooms and more	1. Yes 2. No
(Enter code)	*(Enter code)*	*(Enter code)*	*(Enter code)*	*(Enter code)*	*(Enter code)*	*(Enter code)*	*(Enter code)*	*(Enter code)*

PARTICULARS OF AMENITIES AND ASSETS POSSESSED BY HOUSEHOLD (Give number for each, write "00" if not owned)

Radio/ Transistor	Television	Telephone (Fixed)	Cell phone	Laptop and Desktop Computer	Bicycle	Motorcycle	Refrigerator	Washer	Fan	Air-Conditioner	Car/Van
10	11	12	13	14	15	16	17	18	19	20	21

Boat	Tractor (See note below)	
	(a). Big tractor	(b).Hand tractor(Koyaon)
22	23	

State whether the household accesses internet

At home	Outside home
24	25
1. Yes 2. No *(Enter code)*	1. Yes 2. No *(Ente code)*

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FORM B HOUSEHOLD QUESTIONNAIRE PART 5: DEATH IN HOUSEHOLD

Deaths in Household in the last 12 months : **Total Number of Deaths** | | |

Death Particulars												
Sl. No.	Name of Deceased	Sex 1. Male 2. Female *Enter code*	Relastionship to Head of Household *Enter code from list below*	Age at Death See note below *Enter code from list below*			What was the cause of the death? Death caused by illness? (Enter code from list below)		Registration of death Has this death been registered with the civil authority ? 1. Yes 2. No	For woman aged 15-49 who died Did the woman die while pregnant, during delivery or within 42 days after giving birth? **1**: Yes **2**: No	If "Yes " in Column 8(a) State where the Death *took place?* *(Enter code from list below)*	If "Yes " in Column 8(a) State who attended on her before death? *(Enter code from list below)*
1	**2**	**3**	**4**	**5**			**6**		**7**	**8 (a)**	**8(b)**	**8 (c)**
1												
2												
3												
4												
5												
6												
7												
8												
9												
0												

Codes for column 4
1. Head
2. Wife / Husband
3. Son / Daughter
4. Father / Mother
5. Grand child
6. Other Relative
7. Non-Relative including boarder

Codes for column 5
Write the age in total years completed at the time of Death
000: Less than 1 year
001: 1 year to less than 2 years
002: 2 years to less than 3 years
:
:
:
:

Code for Column 6 Cause of Death			
Illness		Accident	Not Know
01. Fever	09. Pregnancy complication	13. Land mine	17: Don't know
02. Diarrhoea	10. Delivery complication	14. Road accident	
03. Tuberculosis	11. Within 42 Days after deliver	15. Drowning	
04. Heart disease	12. Other illness	16: Other accident	
05. Dengue fever			
06. Malaria			
07. Tetanus			
08. HIV/AIDS			

Codes for column 8 (b)
Place of Death
1. Hospital
2. Health Center
3. Home
4. Other (specifiy…)

Codes for column 8 (c)	
1: Doctor	4: Traditional Birth Attendant (TBA)
2: Nurse	5: Other (specify….)
3: Midwife	6: None