THE GENDER WAGE GAP IN CAMBODIA

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By the United Nations Development Programme

53 Pasteur Street, Boeung Keng Kang 1, Phnom Penh, Cambodia.

This report was commissioned by UNDP Cambodia and authored by Dr. Oum Sothea, UNDP National Consultant.

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Report editors: Anika Funk and Denis Nguyen | report layout and design: Vandy Ros | illustration: Ing Phousera (Séra)

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EXECUTIVE SUMMARY

Over the past decade, up to the COVID-19 pandemic of 2020, Cambodia has enjoyed robust economic growth averaging 7.4%[1] as well as notable improvements in socio-economic development, with one of the regions fastest rate of improvement in its Human Development Index[2]. Progress on women's labour participation has also been significant. Female labour force participation rate in Cambodia was 84% in 2019[3], an increase from 77.5% in 2014 and 80.1% in 2017 and higher than neighboring countries.

Despite this, the wage gap between women and men remains a challenge, representing an enduring barrier for women job seekers, and for both men and women in its negative impact on productivity and economic growth. With COVID-19's social and economic impacts having turned both GDP and Human Development negative[4], for the first time since the civil war period, the opportunity to create a more equitable and efficient labour market has never been more important.

The Gender Wage Gap in Cambodia report employs the latest Cambodia Socio-Economic Survey (CSES) data for 2019-20 and examines changes in the trends in wage gap from 2014 and 2017.

The key findings of the study are:

- **The wage gap between women and men for equivalent work, attributable to gender discrimination, is 19%.** This is based on CSES data for 2019-20 and correcting for selection bias.
- **The gender wage gap is decreasing**. It has decreased from 24% in 2017 to 19% in 2020.
- The average gender wage gap – without adjusting for selection bias – is 16% in Cambodia, in line with 15.8% average for lower-middle income countries and 20.5% for the world, based on the International Labour Organization's Global Wage Report 2018-19.
- **Education, experience and type of occupation matter.** Gender disparities in education and experience contribute to explaining 6% and 14% respectively of the gross gender wage gap. Overrepresentation of women in low skilled occupations also explains 4% of the gap.
- **Types of workplace play an important role in narrowing the gender wage gap.** Women employed by foreign firms, NGOs and international organizations with equal pay structure contribute to reducing the gender wage gap by 25%. Women working in services and manufacturing also reduce the gap by 5%.
- **Women would earn more than men** in the absence of discrimination and other unobservable characteristics. Combined observable characteristics, including education, working experience, type of workplace, type of occupation and other factors, reduce the wage gap by 5%. Unobservable characteristics not captured in the survey, which are usually reflections of labour market discrimination but could also include soft skills or quality of education, explain 105% of the wage gap.

[1] Ministry of Planning, National Institute of Statistics.

[2] UNDP Human Development Index.

[3] Ministry of Planning, Cambodia Socio Economic Survey (CSES) 2019-20

[4] World Bank estimate GDP -3.1% in 2020 https://www.worldbank.org/en/country/cambodia/overview; UNDP "Projected Impacts of COVID-19 on the 2020 Human Development Index in Cambodia and its Neighbours", January 2021.

Other important findings include:

- Employed women in 2019 represented 41% of the female work force, as compared to men who accounted for 54% of the male work force.
- The share of self-employed is slightly higher for women than men, at 38.8% and 36.8% respectively. The gap is wider in the case of unpaid domestic work, at 20.3% and 9.3% respectively. Among unpaid family workers, both sexes are concentrated in agriculture, at 67.4% for women and 64.9% for men.
- Women remain over-represented in low-paid and low-skilled occupations, however there are some small improvements in their representation in some high-skilled occupations. For instance, the share of women in managerial roles increased from 0.9% in 2017 to 2% in 2019, in professional roles from 8% to 8.7%, and technician positions from 2% to 3.4%.
- Marital status is the most important determinant of women's wage employment. Women who are married are 38% less likely to be in paid employment.
- Larger family size and higher education levels in heads of households increases the likelihood of women becoming wage workers.
- There has been an improvement in women's level of education, with the mean number of years of education increasing from 7.8 years in 2014 to 8.15 years in 2019, closing the gap with men with 8.54 years of education.
- Applying Heckman's selection model, an additional year of education increases earnings by approximately 3.5% for both women and men, and an additional year of work experience increases earnings by about 1.2% in women and 1% in men.

Policy recommendations

Recommended short-term measures include:

- Providing tax and other incentives to encourage women's participation in formal work.
- Investing in care policies and other social security measures specifically designed to promote women's employment opportunities.
- Expanding social protection policies and coverage to address the needs of women, especially those in informal and vulnerable situations exacerbated by the pandemic.
- A temporary basic income for women as a response to COVID-19's economic impact. An investment of 0.07% to 0.31% of developing countries' GDP, a Temporary Basic Income could protect as many as 2 billion women.
- Strengthening legal protection, along with increased awareness of gender discrimination, to ensure women are receiving fair pay. For instance, employers should be required to publish compensation reports and report on hiring practices and make these available for independent auditing.
- Granting paternity leave to reduce employers' preference to hire men and promote behavioural changes in favour of shared responsibilities for newborns' care.
- Strengthening the legal mechanisms to prevent and protect women from sexual harassment and violation of women's labour rights as an enabling environment.

In the medium and long-term, corrective policy measures may include:

- Increasing the minimum wage. Research shows that the less the overall wages inequality, the lower the penalties for being at the bottom of the wage hierarchy. As Cambodian women are still concentrated in the lowest paying or lower status jobs, it is imperative for the minimum wage to be set at a decent standard in relation to both living costs and median wages.
- Gathering more and better data to understand gender disparities more deeply. For example, the report shows how, on average, women work less hours than men in wage employment. However, this does not take into account women's time to attend to household chores. A survey on the use of time would shed some light on this.
- Raising the number of women in leadership positions at national and subnational levels, promoting women's entrepreneurship, education and vocational training as well as preventing human trafficking and violence against women and children.
- Promoting education and public awareness to challenge and shift discriminatory social norms regarding the roles of women and men with respect to unpaid care work.
- Unionizing workplaces to help narrow the gender pay gap. Unionized workplaces can also help women secure related benefits, like scheduling accommodations and paid leave.
- Expanding and increasing collectively financed maternity rights and protection, as well as parental and paternity leave and more family-friendly workplace policies, in line with international labour standards.

1. INTRODUCTION

Cambodia's National Strategic Development Plan (NSDP) 2019-2023 serves as a key policy instrument for the Royal Government of Cambodia (RGC), helping to set and guide the national development agenda, and related policies and priority actions. The NSDP 2019-2023 underscores the RGC's commitment to gender equality and the advancement of women in Cambodia, while recognizing that much work remains to be done. Along with challenges which include violence against women and the threat of human trafficking, longstanding, structural discrimination against women prevents women's access to education, employment opportunities, economic advancement, and ultimately, their full human development. Gender discrimination persists when women are employed as well, resulting in wage distortions and gaps, as documented in the present study.

Building on the Rectangular Strategy (RS), the NSDP 2019-2023 is anchored around the themes of growth, employment, equity, and efficiency, and capitalizing on the momentum of strong economic growth in Cambodia, has set forth a series of gender-oriented policy measures to promote opportunities that enhance women's empowerment and economic advancement. These include the commitment to establish women-friendly environments, and technical and vocational training that will provide them with tools that will allow them to more fully participate in, and contribute to, the country's economic development.

Cambodia has enjoyed sustained and robust economic growth at a rate of approximately 7% over the past decade along with notable improvements in socio-economic development including a decline in the country's poverty rate and improvements in the education and health sectors. Progress has also been noted in women's labour participation rate, which increased from approximately 77.5% in 2014 to 84.1% in 2019, compared to men's participation rate of approximately 87.4% in 2014 to 91% (NIS, 2019-2020). Contrasting data from the World Bank's World Development Indicators based on Cambodia's Labour Force Survey, noted that women's participation rate in Cambodia was 77.3% in 2019, which was greater than that of countries such as Indonesia (54.4%), Myanmar (55.3%), the Philippines (47.9%) and Thailand (67.2%) (World Bank, 2019).

At the headline level, women continue to earn less than men. An investigation of Cambodia's gender wage gap conducted in 2019, found that women only earn approximately 80% of men's wages (Cheng et al., 2019). The investigation also revealed that women continue to own fewer assets while facing greater obstacles that prevent their equitable access to better paying work opportunities. For example, on average, women's education levels continue to lag behind men's, and women's livelihoods tend to remain concentrated around low-paid jobs. The wage gap is even greater among higher income jobs where women face constraints in obtaining equal pay.

Gender inequality in wages could lead to an overall reduction of economic productivity and growth by preventing otherwise qualified and talented women from contributing to Cambodia's economic growth through their active participation in the national labour force under equal working conditions and wages.

The Royal Government of Cambodia (RGC) has long recognized the above issues and persistent challenges. It also understands the critical importance of women's economic empowerment along with the potential economic benefits of their empowerment. These issues, among others, are further addressed in the regular Cambodia Gender Assessment, a comprehensive overview of gender across all sectors, undertaken by the RGC's Ministry of Women's Affairs (MoWA).

This study also aims to unpack and explain issues related to Cambodia's ongoing gender wage gap, evolving trends, and factors that affect the wage gap. In addition, the study will empirically estimate the magnitude of the impact of various factors on the wage gap. Descriptive characteristics of unpaid family workers will be considered and analysed. Results from the study will inform priority policy interventions aimed at reducing the wage gap and promoting equality towards ensuring that women are not left behind on Cambodia's path towards socio-economic development.

Subsequent sections of this report are organized as follows: Section 2 reviews and summarizes relevant literature and previous studies on gender wage gap in Cambodia, Section 3 outlines the methodology and data used in the study's empirical analysis, Section 4 presents the study's results along with relevant analytical discussions, and Section 5 provides a number of policy recommendations along with conclusions.

2. LITERATURE REVIEW

Earnings inequality is linked to reduced economic efficiency. Poggi suggests that wage inequality driven by differences in workers' economic status, negatively impacts job satisfaction, leading to lower productivity (Poggi, 2014). At the macro level, inequality also slows economic growth by reducing labour force participation, fertility, labour productivity and working hours (Rebecca et al., 2009; Schober and Winter-Ember, 2009).

A number of studies are available on the gender wage gap in developing countries, for example covering Tanzania (Knight and Sabot, 1982), Malaysia (Chapman and Harding, 1985), and Bangladesh (Shahina, Shakil, and Imam, 2015). However, there are few credible studies that examine the root causes and underlying factors that contribute to the gender wage gap in Cambodia.

Roth and Lun noted high levels of inequality in educational attainment between men and women in Cambodia (Roth and Lun, 2014). Contrary to findings in other developing countries, their analysis did not examine the link between education and earning inequality in wage employment (Ñopo, Nancy, and Johanna, 2011).

Cheng et al., through their analysis of the Cambodia Socio-Economic Survey (CSES) 2014, concluded that the gender wage gap continues to persist in Cambodia, likely fuelled by unobserved factors (Cheng et al., 2019). Through the application of a similar approach, this study builds on Cheng et al.'s earlier analysis through the inclusion of key employment skills along with an update reflecting changes in the gender wage gap from 2014 to 2017.

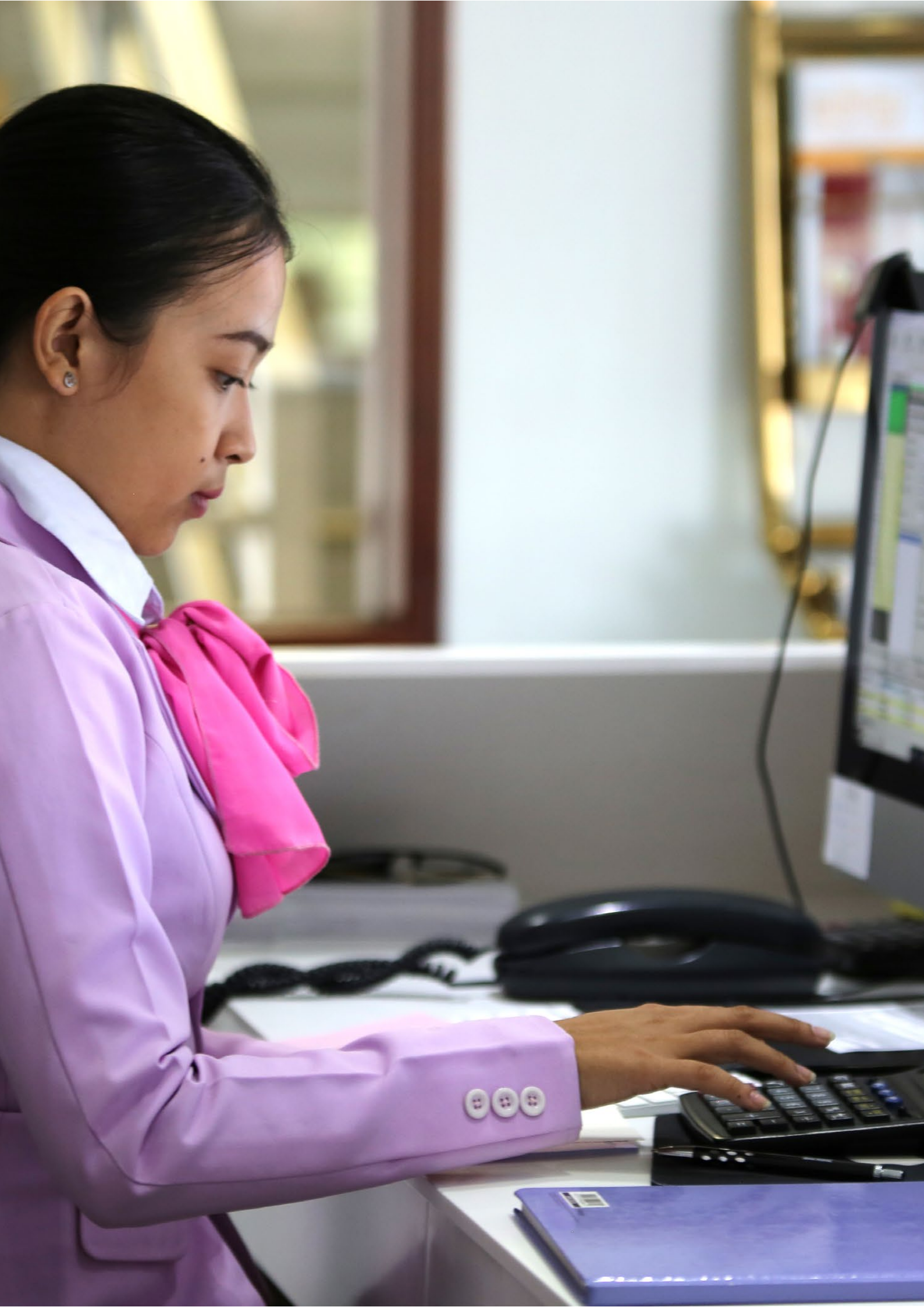
Findings from Daczo suggest that factors affecting wage inequality can be separated into two distinct groups (Daczo, 2012):

- Group 1: "Group specific endowment factors" or "non-wage related factors" are comprised of observable factors (e.g. education and work experience) or unobservable factors (e.g. soft skills, teamwork, etc.), unobserved characteristics (e.g. work ethics, attitude, etc.), and labour discrimination. The gender wage gap generally increases when women possess both lower observed and unobserved skills or face gender discrimination;
- Group 2: "Return to endowment factors" or "wage related factors" are comprised of various levels of return to both observed and unobserved factors, mainly linked to wage distribution. This includes return to observed and unobserved skills as well as discrimination.

Some studies suggest that non-wage related factors may also be influenced by gender discrimination. For example, women's lower levels of educational attainment compared to men may be attributed to social, cultural, and economic barriers that prevent women's access to higher education.

It is important to note that unobserved skills are frequently and continuously redefined, given the ambiguous definition of job skills. Skills generally consist of hard and soft components. Hard skills refer to skills required to complete a job, while soft skills refer to behavioural traits that contribute to job competence and success, and may include for example, abilities related to mentoring, negotiation and persuasion. The definition of skills is also sometimes expanded to encompass employees' willingness to acquire new skills, workplace attitude, integrity, honesty, and self-confidence (Gordon 2002, 2004). While job skills are critical to workers' success, most are difficult to measure.

The Oaxaca-Blinder (OB) decomposition methodology outlined in the following section, is useful to identify differences in observable and unobservable endowments, contributing to a deeper understanding of wage structures and policy implications (Oaxaca, 1973).



3. METHODOLOGY AND DATA

3.1 Methodology

Building on earlier findings by Cheng et al. (2019), this study undertakes an analysis of Cambodia's gender wage gap through the application of the Oaxaca-Blinder (OB) decomposition[5], the global standard for analyses of labour market discrimination (Blinder 1973, Oaxaca 1973), to identify key factors that contribute to the wage gap between men and women. The findings should provide critical insight and evidence to inform policy interventions aimed at reducing Cambodia's gender wage gap. The OB decomposition is estimated through application of the following equation:

Where:

$$w_m - w_f = (X_m - X_f)\beta_m + Xf\,(\beta_m - \beta_f) + (\varepsilon_m - \varepsilon_f)\ (1)$$

- $i=m$ refers to men; $i=f$ refers to women
- w_i refers to the natural logarithm of monthly wage
- X_i denotes the matrix of individual characteristics (e.g. education, language skills, work experience, marital status, family size, head of household's education, household assets, type of establishment, firm characteristics, occupations, economic sectors, urban, part-time, and ethnicity)
- β_i denotes vector of regression coefficients
- ε_i denotes random error, which is assumed to follow normal distribution.

The term on the left side of the equation (1) represents the difference of log wage between male and female workers. The first term $(X_m - X_f)\beta_m$ on the right side of the equation (1) captures differences in observed characteristics of male and female workers that affect the wage gap (e.g. education and experience).

The second term $X_f(\beta_m - \beta_f)$ on the right side represents the wage difference, although male and female workers have the same characteristics. This term, referred to as the unexplained parts (unobserved, residual), represents the difference in market return to observed characteristics such as observed skills, education, and experiences. It was originally interpreted as representing discrimination among groups. However, the residual parts could also be explained by differences in unobserved skills or return to unobserved skills (Daczo, 2012). The third term $(\varepsilon_m - \varepsilon_f)$ represents the error term and zero if evaluated by expected value.

To ensure a robust analysis, this study addresses several statistical issues including sample selection bias through the application of the Heckman Technique (1976)[6], challenges related to the index through the use of the Oaxaca and Ransom Method (1994), and sensitivity of the dummy variable's reference group through the application of Yun's Contrast Transform Technique (2005).

3.2 Cambodia Socio-Economic Survey Data

Findings from this study are predominantly derived from quantitative analysis drawn from readily available secondary data. The Cambodia Socio-Economic Survey (CSES), conducted by the National Institute of Statistics (NIS), Ministry of Planning (MoP), served as the primary and most important data source for this study.[3] The findings from the study are anchored around the CSES 2014, 2017 and 2019-20.

The following details and definitions provide key background information and context for understanding the study's findings:

Employees (wage workers): are defined as workers who report their employment status as employees. They are entitled to receive wage payments from their employer and may or may not have a contract job. Self-employed workers (own account workers and unpaid family workers) are not included in the OB analysis, since reliable data on wages are not available. Information on earnings collected by the CSES is currently only available for individuals working as employees. Data on earnings for unpaid family workers and those who are self-employed is therefore not available. Wage workers are defined as individuals aged 15 to 64. This age range is consistent with the CSES' definition of the working age population.

Employment: Data on employment by economic sector is based on workers' primary economic sector as reported in the CSES using International Standard Industrial Classification (ISIC). ISIC uses four digits to denote various industrial sectors. At the one-digit level, the letter represents 21 economic sectors. The CSES groups these economic sectors into three sectors: agriculture, manufacturing, and services. At the two-digit level, the CSES includes 21 industrial sectors which are subdivisions of the one-digit level. ISIC has undergone several revisions, particularly at the two, three and four-digit levels due to the addition of new economic sectors such as e-commerce and the merging of existing sectors. While adjustments at the one-digit level are relatively simple and straightforward, it is difficult to adjust for consistency at the two-digit and higher levels. The present study's analysis of economic sectors is therefore focused on the one-digit classification level and divides the economic sector into the above three sectors: agriculture, manufacturing, and services (see United Nations, 2008, NIS, 2018 for further details).

Occupations: of workers in the CSES are based on the International Standard Classification of Occupations (ISCO). The CSES data

[5] The Oaxaca-Blinder technique was originally used in labour economics to decompose earnings gaps and to estimate the level of discrimination. It divides the wage differential between two groups: a part that is "explained" by group differences in productivity characteristics, such as education or work experience, and a residual part that cannot be accounted for by such differences in wage determinants. This "unexplained" part is often used as a measure for discrimination, but it also includes the effects of group differences in unobserved predictors.

[6] The Heckman technique is a statistical method used to control for sample selection bias due to the self-selection problem. It happens when the individual or data unit are not randomly collected (some decide not to participate in the labor market due to low offered wage). Therefore, the outcome variable (observed wage) cannot be used as a good estimation of the population mean (wage). The method corrects this bias by including into the sample estimations for those individuals whose outcomes (wage) are not observable.

is primarily derived from the ISCO-88, which was adopted in 1988 and uses four digits to represent various types of occupations. It should be noted that the present study's analysis is centred around the one-digit classification system. As a result, 10 occupations (note: there are more than 10 listed) were included: the armed forces, managers, professionals, associate professionals, technicians, clerical support workers, service and sales workers, skilled agricultural workers, forestry and fishery workers, craft and related trade workers, plant and machine operators, assemblers, and elementary occupations. The armed forces were, however, excluded from this study (NIS, 2018).

Workplaces: The CSES is mostly comprised of supply-side information obtained from workers. However, detailed information from the demand-side, for example, information on workplaces, is not currently available. To control for the demand-side, the types of workplaces reported by workers are included in the study's analysis. Workplaces are divided into four groups: public organizations (government and government enterprises), domestic firms (domestic and household firms), foreign firms, and others (NGOs, international organisations, and others).

Wage: is defined as monthly earnings or salary received by wage workers from both primary and secondary jobs, reported in monetary value (Cambodian Riels) in the survey. The wage used in the calculation of wage and wage gap's decomposition is the real wage obtained by deflating the nominal reported wage by its Consumer Price Index (CPI) based on the year 2010 for each corresponding year. The World Bank Indicators serve as the source of the CPI. Wage outliers (for monthly wages below 80,000 Riels, approximately 2,500 Riels or USD 0.50 per day; above 12,000,000 Riels, approximately 400,000 Riels or USD 100 per day) were excluded from the analysis. The minimum threshold was set to include individuals who earn wages below the minimum wage, since wages tend to have a positive skew and most wages are concentrated below the mean wage.

Demographic information: such as gender (male and female) and ethnicity are derived from information provided by individuals in the CSES survey. Ethnicity is comprised of Khmer, Cham, Chinese, Vietnamese, Thai, Lao, local ethnic groups (e.g. Kuy and Tampaun), and others. Khmer comprise Cambodia's ethnic majority while remaining groups are minorities.

Location: is classified as either rural or urban. The CSES defines urban communities as areas with a population density exceeding 200 people per square kilometre, a total population of more than 2,000 people, or areas where less than 5% of the male labour force is engaged in agriculture.

Marital status: is not directly linked to workers' earnings, according to past studies. It may however, influence labour force participation rates especially for female workers. Marital status is divided into two groups: those living with partners and those who are single, living separately, divorced, or widowed. The rationale for this distinction revolves around the idea that living with a partner influences participation in the labour market.

Family size: is defined as the number of people living with workers as family members, including workers themselves. Family size is also considered a variable that affects the likelihood of becoming a wage worker. Women with large families tend to opt into part-time work, leading to lower wages compared to men.

Education: of heads of households also influences labour force participation rates. Traditionally, Cambodian female workers shoulder most of the responsibility for household duties such as taking care of children along with undertaking other non-paid jobs. It is also hypothesised, that the impact of factors such as cultural discrimination diminishes as heads of households attain higher levels of education (higher number of completed years of education). Following Cheng et al. (2019), it is assumed that this variable captures how culture impacts labour market participation.

Similar patterns influencing women's employment have been documented in other developing countries, attributed to gender-based social norms particularly for married women, that inhibit women's job market opportunities and upward job mobility as discussed by Seneviratne (Seneviratne, 2019). It has also been observed that when men are the primary breadwinners, employed wives are sometimes perceived as a threat to the family's social standing in highly patriarchal societies.

Workers' education is derived from the CSES' education module, which documents the education level of household members. While Cheng et al. (2019) conducted their analysis based on the highest school grade completed, the present study is based on the number of years of education completed as an independent variable.

Foreign language proficiency: is also recognized as an important requirement for most jobs, especially those offered by international companies and organisations. A dummy variable is therefore included to indicate whether a worker can speak one of the following languages: English, French, Chinese, or Thai.

Work experience: is recorded as a variable, based on workers' age and education. Age is drawn from information recorded in the CSES survey. Following literature that extrapolates experience from age, the study calculated experience using the following formula: Experience = Age – Education – 5. This formula captures the potential experience of workers since leaving school. This analysis is restricted to workers aged 15 to 64, without considering child workers and old-age workers, due to the lack of required data. Since information related to actual work experience is not available, potential experience serves as valid proxy data for the objectives of this study (See Mincer, 1974; Miller, 1993 for details on measurement of potential experience).

Land ownership: is household-level information. This variable is the reported total land in square metres owned by a household. It includes all household land that is owned, purchased, inherited, rented to, or rented by households. Although asset ownership does not directly affect workers' wages, it influences decisions related to the timing of participation in the labour market with direct implications on the employment status of wage, self-employed, and unpaid family workers.

A descriptive summary of key variables for men and women in Cambodia is provided in Table 1 below, noting characteristics of mean differences between men and women for the years 2014, 2017 and 2019. Men generally have higher mean values than women across most variables for the three sample years. These differences may have implications for wages, the main focus of this study. Results from a rigorous empirical analysis will be presented in the next section.

Table 1

Descriptive Statistics for Main Variables

	2014		2017		2019	
	Men	Women	Men	Women	Men	Women
Nominal monthly earning	674,821	562,544	890,364	778,834	1,142,265	961,748
Real monthly earning	581,342	484,617	714,578	625,067	895,366	753,517
Log(real wage)	13.09	12.94	13.32	13.19	13.54	13.39
Age	30.90	28.78	31.18	29.32	32.84	30.47
Marital status	0.55	0.40	0.53	0.43	0.63	0.54
Family size	5.29	5.20	5.17	5.11	5.17	5.06
Household head education	7.01	6.59	6.78	6.49	7.05	6.74
Individual completed education	8.46	7.79	8.60	8.10	8.54	8.15
Years of working experiences	17.23	14.99	17.37	15.38	19.01	16.50
Language Skill (dummy)	0.14	0.11	0.13	0.09	0.17	0.16
Log(size of land owned)	4.60	4.57	4.66	4.51	4.70	4.64
Agriculture	0.15	0.17	0.13	0.14	0.10	0.11
Manufacturing	0.44	0.53	0.43	0.49	0.46	0.51
Services	0.41	0.30	0.44	0.37	0.44	0.38
Manager	0.05	0.01	0.05	0.01	0.06	0.02
Professional	0.05	0.06	0.06	0.08	0.07	0.09
Technicians	0.02	0.02	0.03	0.02	0.05	0.03
Clerical work	0.09	0.08	0.10	0.09	0.07	0.07
Services and sale work	0.10	0.09	0.10	0.11	0.09	0.11
Skilled agriculture	0.01	0.01	0.02	0.01	0.01	0.01
Craft and trade work	0.33	0.47	0.38	0.44	0.38	0.45
Machine operators and assemblers	0.06	0.01	0.07	0.01	0.07	0.01
Elementary occupation	0.29	0.25	0.21	0.23	0.22	0.21
Public organization	0.15	0.07	0.14	0.08	0.14	0.08
Domestic firms	0.59	0.42	0.65	0.48	0.63	0.41
Foreign firms	0.25	0.51	0.21	0.44	0.22	0.51
International organization and others	0.01	0.01	0.00	0.00	0.00	0.00
Urban (dummy)	0.32	0.32	0.30	0.29	0.50	0.52
Ethnicity (dummy)	0.98	0.98	0.97	0.97	0.97	0.97
Part-time (dummy)	0.04	0.05	0.03	0.05	0.01	0.01

Source: Author's estimate from CSES data


RINA
A+

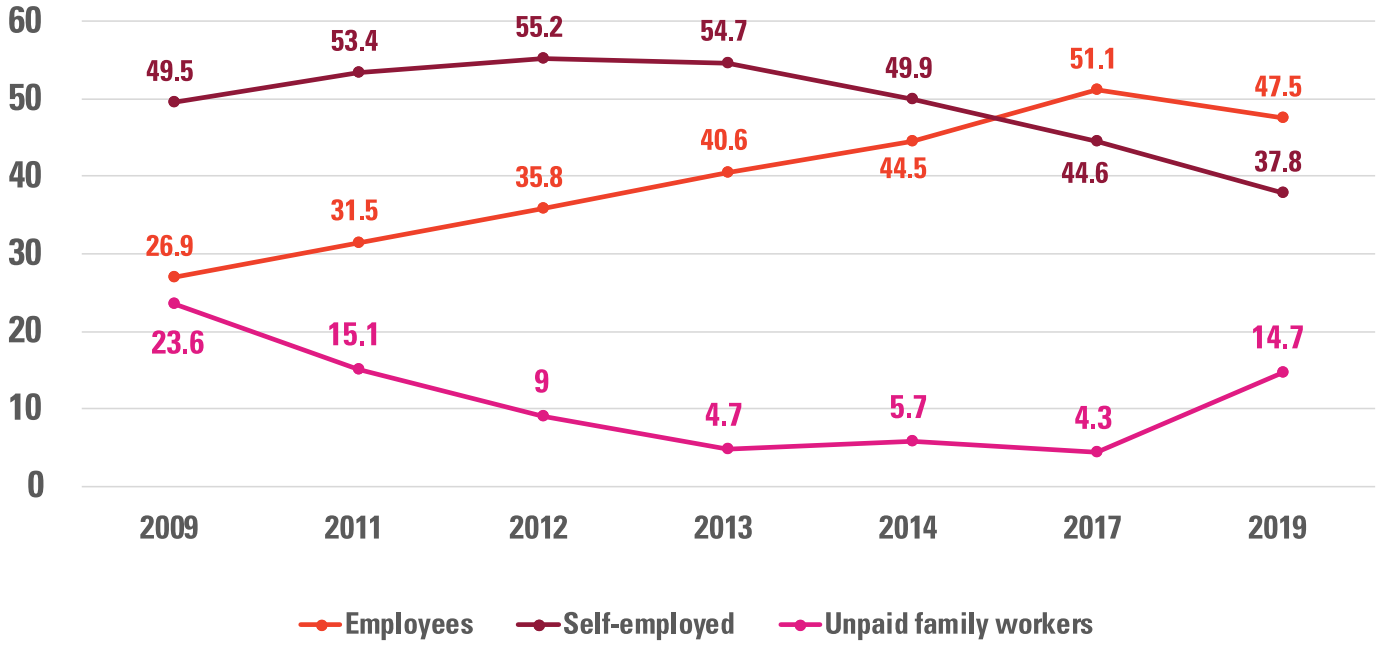
4. EMPIRICAL RESULTS AND DISCUSSION

4.1 Overview of the Cambodian Labour Market

Figure 1 shows the estimated percentage of employment, which consists mainly of employees, self-employed and unpaid family workers, and other workers. The number of wage workers (employees) increased steadily from 2009 to 2017 with a significant reduction in unpaid family workers and slight reduction in self-employed workers. However, the share of employees decreases from 51.1% in 2017 to 47.5% of the total in 2019, while the share of self-employed workers is also down from 44.6% to 37.8%, and the share of unpaid family workers increases from 4.3% in 2017 to 14.7% in 2019[7]. The total number of employed Cambodian citizens is estimated to be approximately 8.8 million in 2019.

Figure 1

Estimated Employment Status (%) Age 15-64



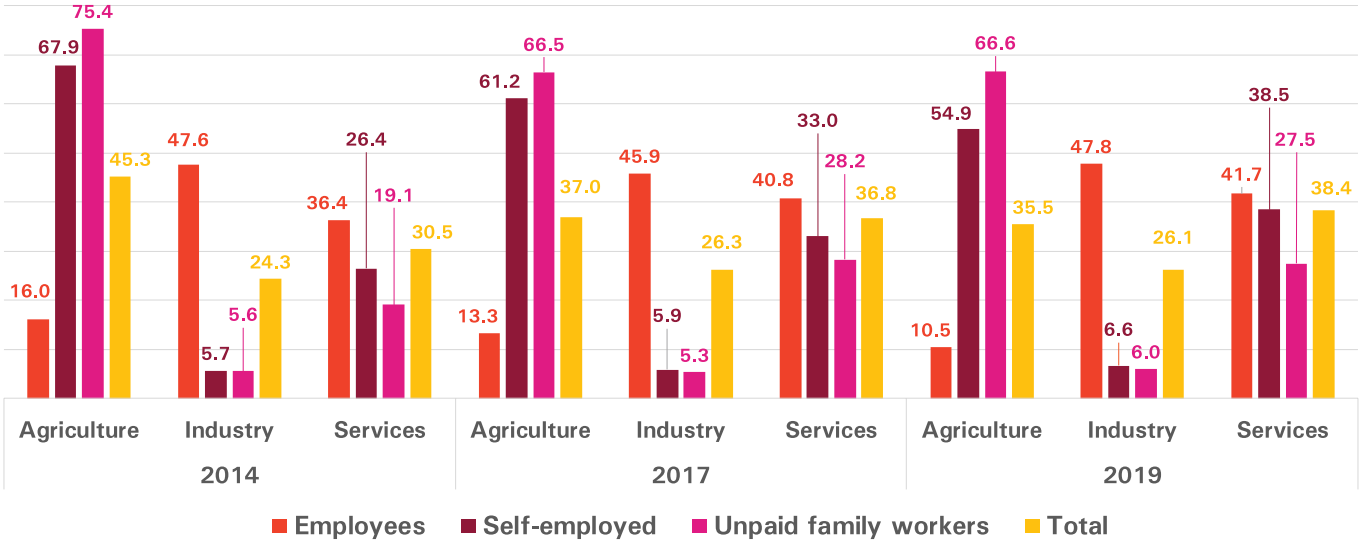
Source: Author's estimate from CSES data

Figure 2 shows the distribution of employment status by economic sector. There is a movement of employment from agriculture to industry and services. The share of employment in agriculture drops from 45.3% in 2014 to 35.5% in 2019, whereas the share of employment in industry and services increases from 24.3% and 30.5% to 26.1% and 38.4%, respectively. While the distribution of employment status is similar between 2014 and 2017, there are shifts from paid employees and self-employed workers to unpaid family workers in the agriculture to service sectors between 2017 and 2019. The share of self-employed workers in agriculture decreases from 61% to 55%, and that of employees decreases from 13.3% to 10.5% during the 2017 and 2019 period. The share of employees and self-employed workers in services increase from 41% to 42%, and that of self-employed workers increases from 33% to 38.5%. The share of paid employees in industry increases from 45.9% to 47.8% during the same period.

[7] The sharp increase in the share of unpaid family workers could be due to the change in methodology by the National Institute of Statistics (NIS).

Figure 2

Employment Status of Labour Force by Economic Sector (%)

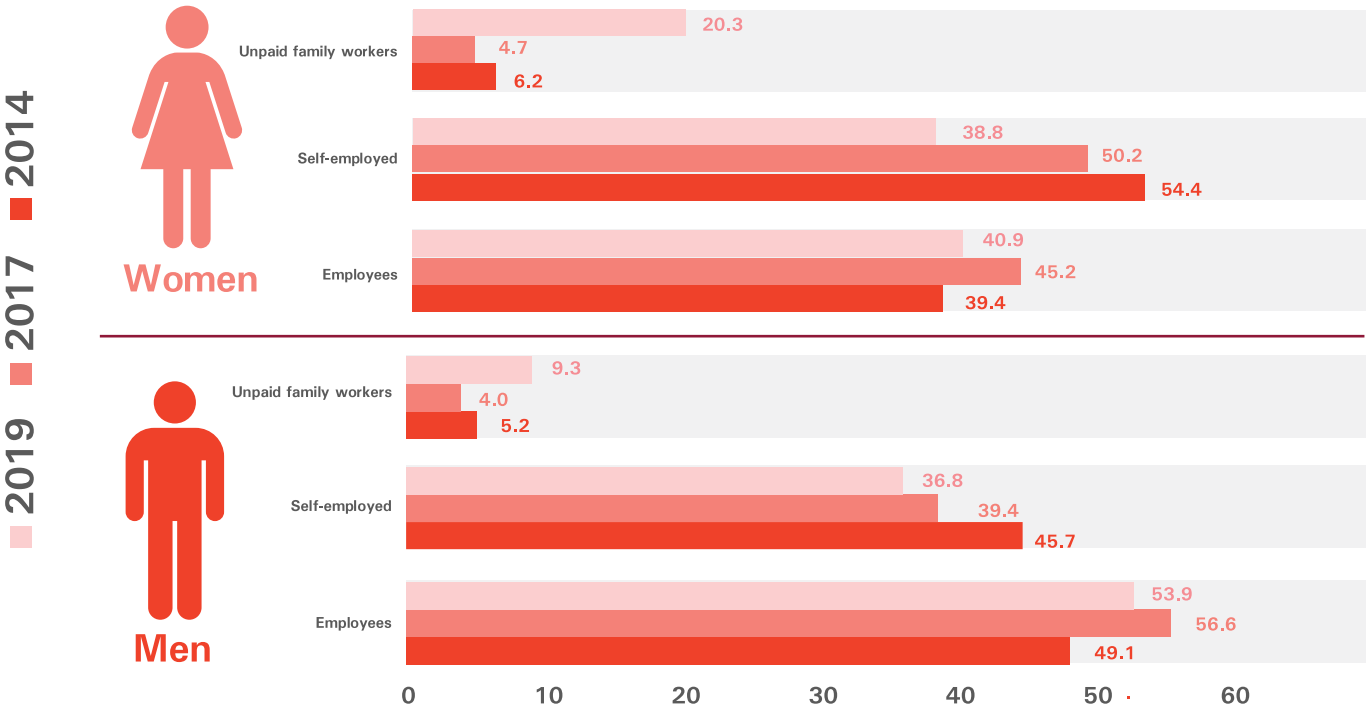


Source: Author's estimate from CSES data

Figure 3 shows employment status by gender from 2014 to 2019. In 2019, the percentage of female employees is lower than male (40.9% compared to 53.9% respectively) but the percentage of self-employed women (employer and own-account workers) is slightly higher (38.8% versus 36.8% respectively), indicating that women are more likely to become self-employed than men. The share of unpaid family workers is relatively the same in 2014 and 2017. However, the share of women as unpaid family workers increases from 4.7% to more than 20.3% as compared to an increase from 4.0% to 9.3% of men from 2017 to 2019.

Figure 3

Employment Status of Labour Force by Gender (%)

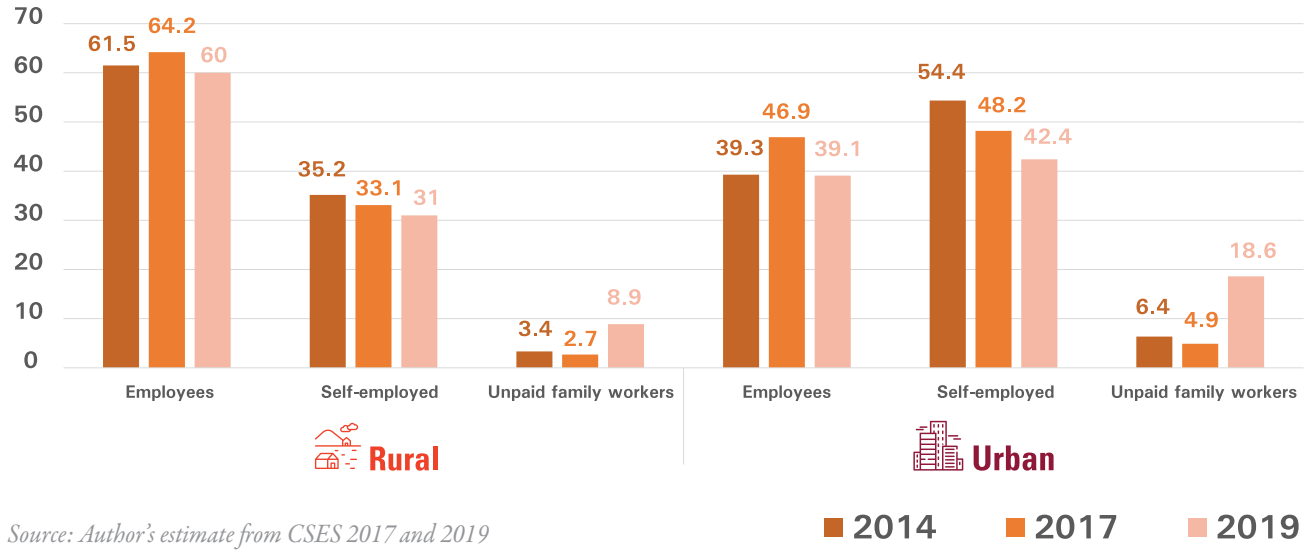


Source: Author's estimate from CSES data

Compared to rural areas, the percentage of employees is larger in urban areas (60.0% versus 39.1%, respectively) in 2019, while the percentage of those who are self-employed is larger in rural areas (42.4% versus 31.0%, respectively), as shown in Figure 4 below.

Figure 4

Employment Status by Region (%)



Source: Author's estimate from CSES 2017 and 2019

Table 2 below, shows the likelihood of workers becoming part-time wage workers based on the ILO definition of 35 hours as the global standard for hours of work. The table also reveals that the likelihood of becoming a part-time worker is higher for women than men. Conversely, the likelihood of becoming a full-time worker is higher for men than women.

Table 2

Estimated Likelihood of Being a Part-Time Wage Worker by Gender (%)

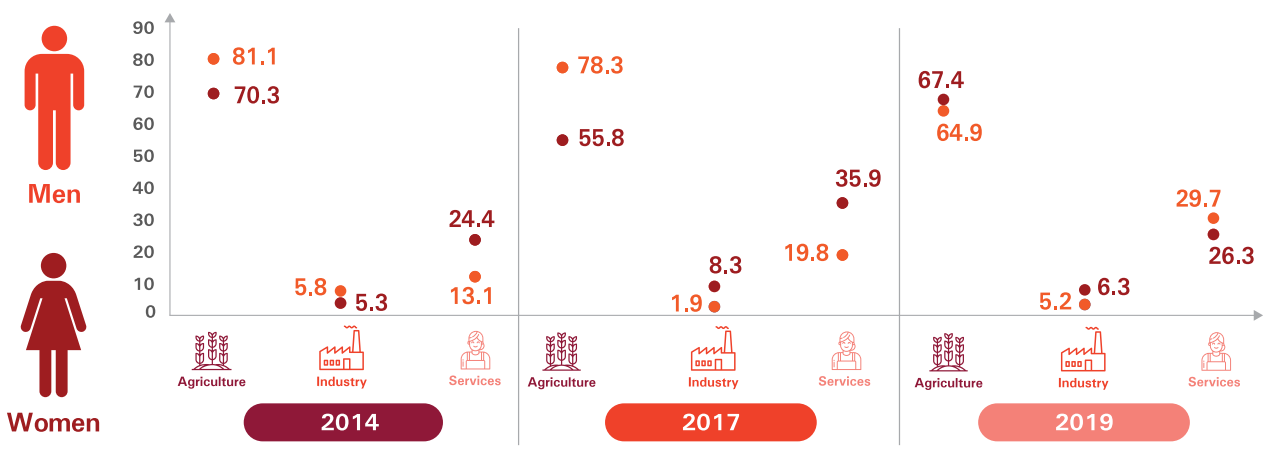
Worker	2014			2017			2019		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Full time	95.9	99.2	95.2	96.7	95.4	96.1	99.4	99.2	99.3
Part time	4.1	0.8	4.8	3.3	4.6	3.9	0.6	0.8	0.7

Source: Author's estimate from CSES data

Among unpaid family workers, women are more likely to work in agriculture (67.4% women compared to 64.9% men) in 2019 and manufacturing sectors (6.3% women versus 5.2% men), while men are more likely to work in services (29.9% men versus 26.3% women) as shown in Figure 4.

Figure 5

Percentage of Unpaid Family Workers by Economic Sector and Gender (%)



Source: Author's estimate from CSES data

Table 3 shows that unpaid family workers tend to be concentrated in skilled agricultural work, services and sales, and craft and related trades work. In 2019, women account for a large percentage of skilled agricultural workers (66.1% women versus 63.4% men) and managers (0.38% versus 0.27% men), while men account for a larger share of those in all other occupations.

Table 3

Percentage of Unpaid Family Workers by Occupation

	2014			2017			2019		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Managers	0.26	0.08	0.16	0	0	0	0.27	0.38	0.35
Professionals	0.22	0.23	0.23	0.35	0	0.17	0.25	0.18	0.2
Technicians & associated professionals	0.09	0.08	0.08	0.28	0	0.13	0.43	0.29	0.34
Clerical support work	0.29	0.17	0.23	0	0	0	0.13	0.04	0.07
Service and sales work	10.91	22.61	17.06	17.61	34.79	26.61	23.66	22.84	23.1
Skilled agricultural work	79.12	67.71	73.12	73.14	54.79	63.53	63.37	66.12	65.23
Craft & related trades workers	5.02	4.62	4.81	3.81	9.01	6.53	6.19	6.15	6.17
Plant and machine operator and assembler	1.29	0.37	0.81	0	0	0	1.13	0.68	0.82
Elementary occupation	2.79	4.13	3.49	4.81	1.41	3.03	4.56	3.32	3.72
Total Percentage	100	100	100	100	100	100	100	100	100
Total Estimated Numbers	221,224	245,030	466,254	181,271	199,468	380,739	418,122	874,876	1,292,998

Source: Author's estimate from CSES data

Table 4 shows the distribution of wage employment by region, economic sector, occupation, and type of workplace. The percentage of wage employment among men and women was nearly the same in urban and rural areas. Women's share of wage employment in agriculture and manufacturing exceeds that of men, while the percentage of women employed in service sectors is less than the percentage of men. This suggests that the manufacturing and agriculture sectors tend to employ more women than men, while the service sector tends to employ more men than women.

In 2019, the few occupations that appear to employ more women than men include work as professionals, service and sales workers, and craft and related trades workers. For most other occupations, the share of women in employment is less than that of men. The statistics indicate that women tend to be employed in low-paid and low-skill occupations.

Table 4

Percentage of Employment of Wage Workers

Characteristics		2014		2017		2019	
		Men (%)	Women (%)	Men (%)	Women (%)	Men (%)	Women (%)
Region	Urban	32.0	32.4	30.3	29.3	49.8	52.2
	Rural	68.0	67.6	69.8	70.7	50.2	47.8
Sectors	Agriculture	15.3	17.0	12.6	14.2	10.1	11.0
	Manufacturing	43.8	52.8	43.3	49.2	45.7	50.7
	Services	41.0	30.3	44.1	36.6	44.2	38.3

Characteristics		2014		2017		2019	
		Men (%)	Women (%)	Men (%)	Women (%)	Men (%)	Women (%)
Occupation	Managers	5.3	1.2	4.8	0.9	5.9	2.0
	Professionals	5.3	5.9	5.5	8.0	6.6	8.7
	Technicians and associate professionals	2.2	1.5	2.5	2.0	4.7	3.4
	Clerical support workers	8.9	7.9	9.7	9.0	7.3	7.2
	Service and sales workers	9.5	9.4	9.8	11.2	8.7	10.9
	Skilled agricultural, forestry and fishery workers	0.9	0.8	2.0	1.1	0.8	0.6
	Crafts and related trades workers	32.6	46.9	37.6	44.4	37.7	44.8
	Plant and machine operators, and assemblers	6.5	1.5	6.6	0.7	6.6	1.3
	Elementary occupations	28.9	24.8	21.4	22.7	21.7	21.0
Workplace	Public organizations	14.7	6.7	14.1	8.0	14.3	8.2
	Domestic and household	59.5	41.6	64.9	47.7	63.3	40.6
	Foreign firms	25.1	51.0	20.7	43.9	22.3	50.9
	NGOs/IOs and others	0.8	0.6	0.4	0.5	0.2	0.2
Ethnicity	Majority group	98.2	98.3	97.2	96.9	97.0	97.2
	Minority group	1.9	1.7	2.8	3.1	3.0	2.8
Language Skills	No	85.7	89.0	86.9	90.7	83.0	84.5
	Yes	14.3	11.0	13.1	9.3	17.0	15.5
Part-time	Fulltime	95.9	94.5	96.7	95.4	99.4	99.2
	Part-time	4.1	5.5	3.3	4.6	0.6	0.8

Source: Author's estimate from CSES data

Nonetheless, from 2017 to 2019, there were some improvements in the gender gap in employment by occupation. For instance, women's employment as managers, professionals and technicians increases from 2017 to 2019. This change may be due to increased career opportunities that have allowed women to move away from elementary occupations.

Analysis of the type of workplace shows that with the exception of foreign firms and international NGOs, the public sector, domestic and household firms, and private firms tend to employ fewer women than men.

Table 5 shows that the reported average number of working hours for women per week is less than it is for men. In 2019, among employees, the average working hours for women is shown to be 58.3 hours, compared to 62.5 for men. The situation is similar for the reported working hours of self-employed and unpaid family workers.

Table 5

Average Working Hours per Week by Employment Status

Years	Employees		Self-employed		Unpaid Family Worker and Others	
	Men	Women	Men	Women	Men	Women
2014	53.7	52.8	48.5	42.0	40.0	39.1
2017	54.2	52.6	50.4	43.3	39.3	37.1
2019	62.5	58.3	54.3	47.9	51.3	47.3

Source: Author's estimate from CSES data

4.2 Average Headline Wage and Gender Wage Ratio

Cambodian women consistently earn less than Cambodian men, as represented in the headline wages detailed in Table 6. Women on average earn about 84% of men's wages in 2019, showing a slight decrease from 87% in 2017. The wage gaps are persistently high across sectors and occupations.

Table 6

Average Headline Wage and Gender Wage Ratio (in Riels)

		2014			2017			2019		
		(1)	(2)	(2)/(1)	(3)	(4)	(4)/(3)	(5)	(6)	(6)/(5)
		Men	Women	Ratio	Men	Women	Ratio	Men	Women	Ratio
Region	Urban	837,760	669,159	0.80	1,022,696	871,955	0.85	1,309,749	1,065,725	0.81
	Rural	597,514	510,616	0.85	832,733	740,167	0.89	974,759	846,859	0.87
Married Status	Single	633,516	564,870	0.89	851,503	763,688	0.90	1,024,856	950,565	0.93
	Married	708,693	558,978	0.79	923,966	798,617	0.86	1,210,477	971,587	0.80
Sectors	Agriculture	487,317	368,734	0.76	618,561	541,058	0.87	711,139	532,635	0.75
	Manufacturing	661,924	572,779	0.87	872,439	792,119	0.91	1,058,726	972,383	0.92
	Services	758,167	648,226	0.85	982,981	851,494	0.87	1,324,510	1,064,645	0.80
Occupation	Managers	710,820	521,864	0.73	1,121,038	954,137	0.85	1,580,851	1,249,623	0.79
	Professionals	833,168	762,337	0.91	1,160,618	1,027,431	0.89	1,692,881	1,333,531	0.79
	Technicians and associate professionals	1,048,334	738,399	0.70	1,303,128	874,784	0.67	1,716,933	1,419,683	0.83
	Clerical support workers	1,006,304	884,559	0.88	1,193,090	1,136,209	0.95	1,429,962	1,212,423	0.85
	Service and sales workers	609,247	479,325	0.79	813,645	646,260	0.79	1,066,867	798,051	0.75
	Skilled agricultural, forestry and fishery workers	590,808	342,670	0.58	584,927	490,575	0.84	915,256	778,794	0.85
	Crafts and related trades workers	651,673	559,527	0.86	857,378	799,597	0.93	1,056,047	990,421	0.94
	Plant and machine operators, and assemblers	778,247	624,529	0.80	894,088	630,787	0.71	1,123,169	836,150	0.74
	Elementary occupations	534,812	439,952	0.82	699,639	572,111	0.82	821,646	639,863	0.78
Workplace	Public organizations	682,996	594,032	0.87	1,022,880	863,798	0.84	1,434,662	1,229,441	0.86
	Domestic and household	613,380	481,424	0.78	812,524	668,022	0.82	1,042,780	781,307	0.75
	Foreign firms	794,660	620,141	0.78	1,030,264	877,661	0.85	1,232,144	1,056,976	0.86
	NGOs/IOs and others	1,338,036	808,134	0.60	1,654,590	1,281,779	0.77	1,349,581	1,344,525	1.00
Ethnicity	Majority group	675,520	564,724	0.84	895,109	780,611	0.87	1,146,430	966,784	0.84
	Minority group	637,059	438,647	0.69	722,770	724,455	1.00	1,007,803	784,770	0.78
Language Skills	No	615,505	520,195	0.85	826,283	732,068	0.89	1,014,916	886,975	0.87
	Yes	1,027,509	902,830	0.88	1,312,195	1,232,547	0.94	1,761,494	1,366,180	0.78

		2014			2017			2019		
		(1)	(2)	(2)/(1)	(3)	(4)	(4)/(3)	(5)	(6)	(6)/(5)
		Men	Women	Ratio	Men	Women	Ratio	Men	Women	Ratio
Fulltime Work	Fulltime	681,625	571,658	0.84	896,716	786,877	0.88	1,144,219	964,150	0.84
	Part-time	508,617	390,684	0.77	693,544	598,369	0.86	738,002	625,966	0.85
	Part-time	674,821	562,544	0.83	890,364	778,834	0.87	1,142,265	961,748	0.84

Source: Author's calculation from CSES 2014 and 2019

Table 6 also highlights that from 2017 to 2019 a few occupations have seen a noticeable downwards trend in the gender wage gap. These include wages for technicians and associate professionals where the wage ratio narrows from 63% to 83%. Slight improvements were also seen in the manufacturing sector and for the following occupations: skilled agricultural, forestry and fishery workers, craft and related trades workers, plant and machine operators, and assemblers. Public organisations, foreign firms and international organisations show improvements in the gender wage gap from 2017 to 2019.

4.3 Oaxaca-Blinder Decomposition of Gender Wage Gap

Results detailed in Table 6 show that women earn on average 13% less than men in 2017 and 16% less than men in 2019. This is in line with the 15.8% average for lower-middle income countries and 20.5% for the world, based on the International Labour Organization's Global Wage Report 2018-19.

Table 7 represents the Oaxaca-Blinder decomposition of the gender wage gap adjusted for sample selection bias. The wage gap between men and women in 2019 is about 19%. For a robustness check, the decomposition is conducted for both monthly and hourly wage rates. While only results for the monthly wage gaps are reported here, those for hourly wages are provided in the appendix.

Table 7

Oaxaca-Blinder Decomposition of Gender Wage Gap

	2014	2017	2019
	Ln (wage)	Ln (wage)	Ln (wage)
Differential			
Estimated Average wage for men	13.135***	13.350***	13.585***
Estimated Average wage for women	13.004***	13.253***	13.456***
Difference in estimated average wage	0.131***	0.097***	0.129***
Difference in inverse mill ratio (decision to work as employees)	0.024***	0.144***	0.064***
Adjusted for selection bias	0.155***	0.241***	0.193***
Difference in observable endowment			
Total Explained (Difference in observable factors)	-0.014**	-0.005	-0.010
Total Unexplained (Difference in unobservable factors)	0.169***	0.246***	0.202***
Sample Size	29,313	9,444	24,511

*Source: Author's estimate from CSES data, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$*

Unexplained factors largely contributed to the gender wage gap, accounting for approximately 105% of the gap in 2019, whereas explained factors narrows the gender wage gap by 5%. On average, observable endowment factors contributed to narrow the gender wage gap in 2019 more than in 2017.

Since most of the gender wage gap is explained by unobserved endowments, this suggests that gender discrimination and other unobservable barriers preventing women from obtaining high paid jobs, still dominate the reasons behind the gender wage gap. Results are attributable to unmeasured characteristics such as access to quality education, unobserved skills (soft skills, teamwork, etc.), and unobserved characteristics (work ethics, attitude, etc.) as discussed earlier.

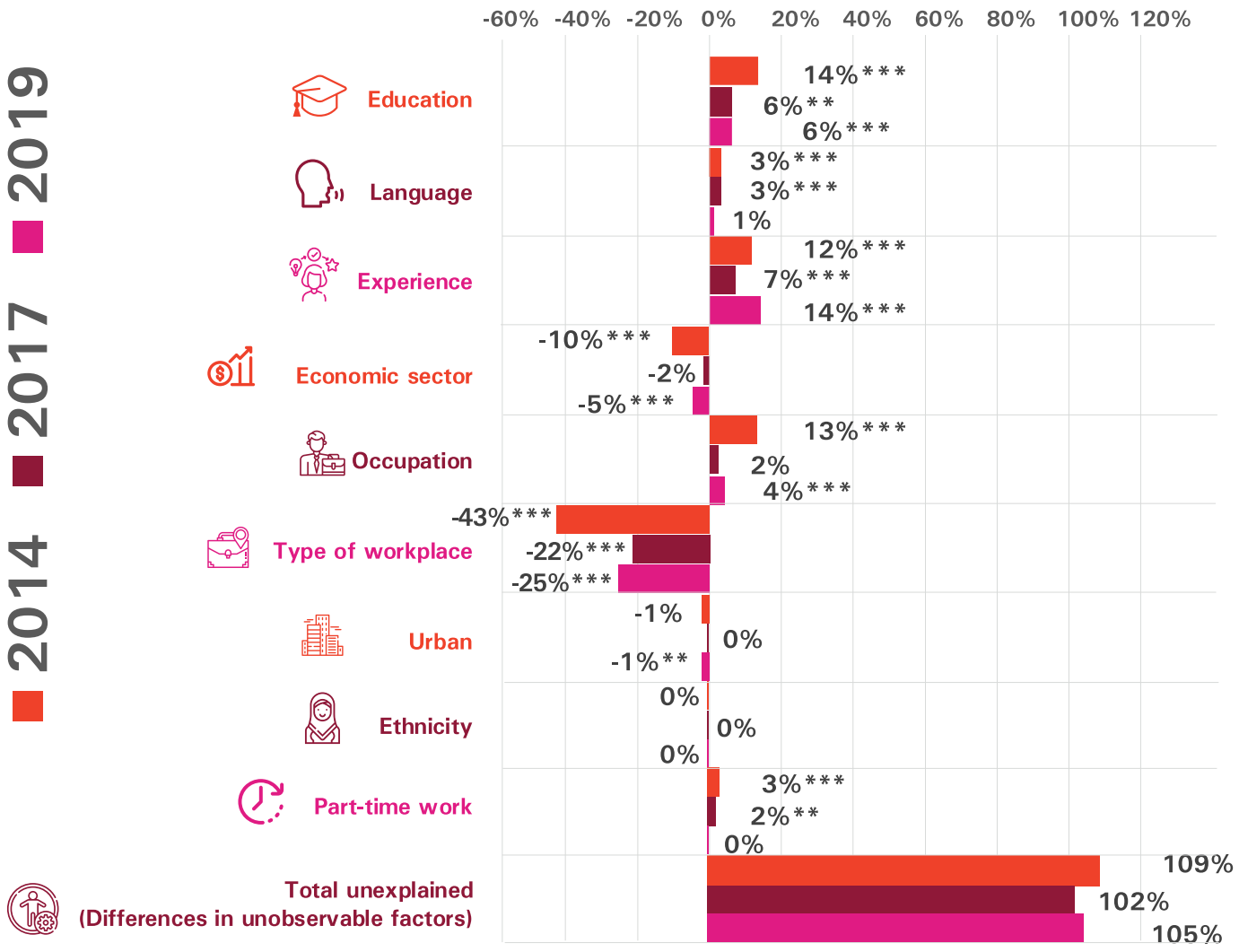
A historical example for a high percentage of unexplained and discriminatory components accounting for wage differential and gap was identified in Bangladesh. Shahina, Shakil and Imam (2015) found approximately 60% of the wage differential to have been unexplained in 1995 and 2000 for Bangladesh. Ahmed and Maitra (2010) found the discriminatory component of the wage gap was 72% for Bangladesh in 2000 and large unexplained wage gaps ranged from 43% to 209% in rural areas, and from 73% to 89% in urban areas.

Similar dynamics are still relevant throughout Asia, as recent research by Huynh (2016) on the gender pay gap in the garment, textile and footwear industry in Asia, indicates. Huynh's research (Huynh, 2016) noted that unexplained factors accounted for approximately 137% of the gender wage gap for Bangladesh in 2013 and explained factors decreased by -37%; explained and unexplained factors for the gender wage gap in Cambodia were 24% and 76% respectively in 2012; -13% explained and 113% unexplained in India in 2012; 25% explained and 75% unexplained in Pakistan in 2012/2013; 44% explained and 56% unexplained in the Philippines in 2013; 72% explained and 28% unexplained in Thailand in 2013; and 43% explained and 57% unexplained in Vietnam in 2013.

A closer examination of each observable endowment factor driving the gender wage gap reveals some improvement for specific endowment factors from 2014 to 2019 (Figure 6). For instance, women still have a lower average in education levels than men as of 2019, with the gender gap in education contributing to approximately 6% of the gender wage gap in 2017 and 2019, down from 14% in 2014. The mean number of completed years of education by women increased from 7.8 years in 2014 to 8.1 years in 2017, and to 8.15 years in 2019 as compared to men from 8.46 years in 2014 to 8.60 years, and to 8.54 years during the same period (see Table 1).

Figure 6

Oaxaca Result of Differences in Observable Factors between Men and Women



*Source: Author's estimate from CSES data, *p < 0.10, **p < 0.05, ***p < 0.01*

In addition, women also tend to have less opportunity to build relevant working experience than men and the gender gap in work experience continues to widen the gender wage gap by approximately 14% for 2019. The trend has been widening, with the gender gap in work experience increasing from 7% in 2017 to 14% in 2019.

Increasing numbers of women employed in high wage economic and manufacturing sectors have resulted in a narrowing of the gender wage gap in 2014 and 2019, but this improvement is not statistically significant in 2017.

Women's employment remains concentrated in low-paid, low-skilled occupations. High-paid, high-skilled occupations, such as management and technical positions, continue to be dominated by men. If this persists, it will further widen the gender wage gap. The gap in women's employment across various occupations accounted for approximately 4% of the gender wage gap in 2019, down from 13% in 2014.

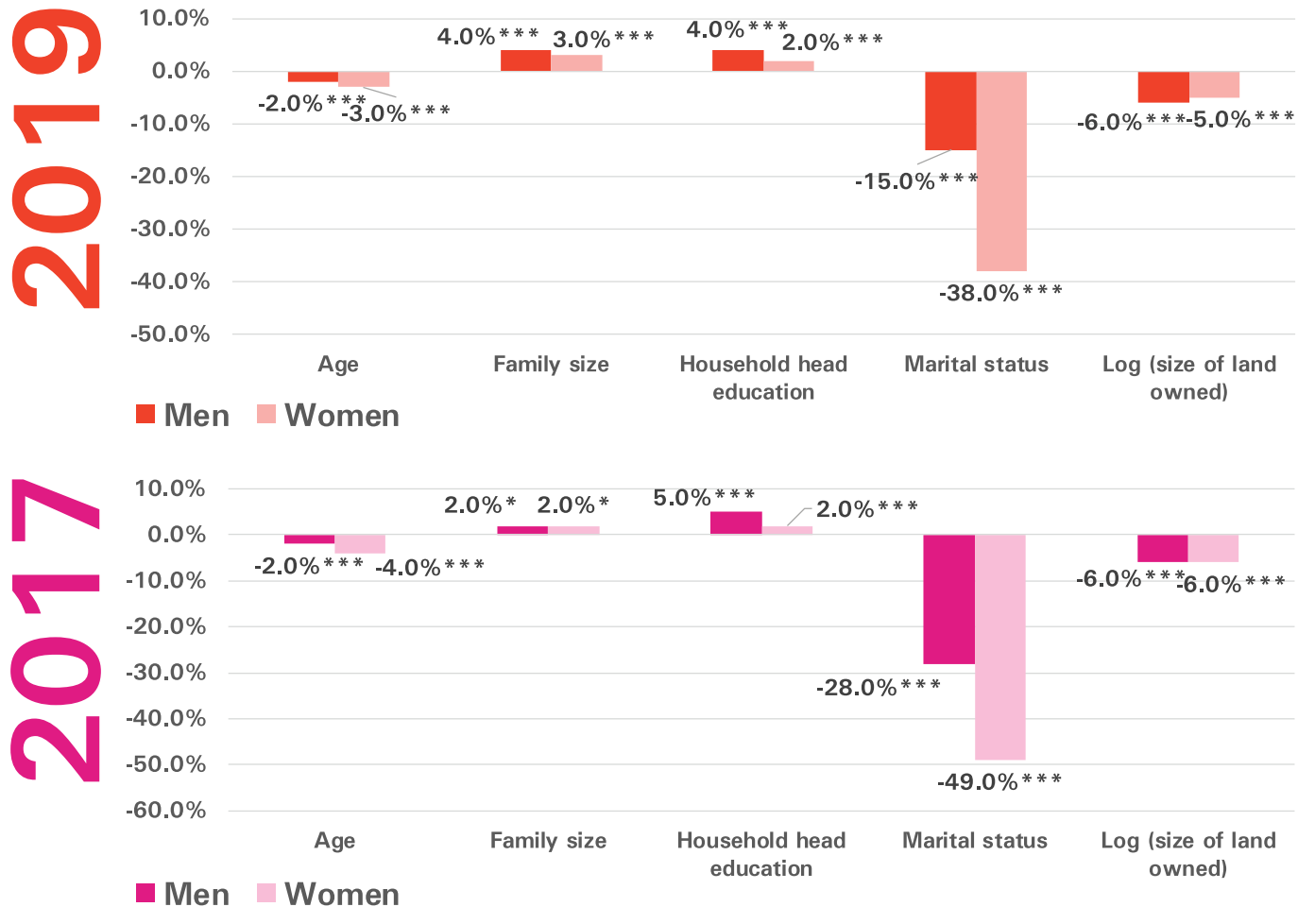
From 2017 to 2019, the type of workplace continues to play an important role in narrowing the gender wage gap. The type of workplace contributes to closing the gender wage gap by about 22% in 2017 and 25% in 2019. This indicates that the number of women employed in high-paid workplaces such as foreign firms and international organisations, contributes to narrowing the gender wage gap.

Locality (urban or rural) and ethnicity did not have an impact on the gender wage gap. Part-time employment has been associated with a gender wage gap of about 3% and 2% for 2014 and 2017 respectively. In contrast, for 2019 it does not have any significant impact.

A range of factors, including age, family size, household head's education, and marital status, influenced women's decisions on becoming wage workers. Marital status remains a key barrier for women's participation in the labour market as compared to men (Figure 7).

Figure 7

Factors Affecting Probability of Becoming Employees in 2017 and 2019



*Source: Author's estimation from CSES data, *p < 0.10, **p < 0.05, ***p < 0.01*

Being older, married, or owning land all reduce the probability of becoming a wage worker, with marriage as the strongest factor reducing a woman's likelihood of paid employment by 49% in 2017 and 38% in 2019. An increase in family size and head of household's education level, on the other hand, increases the likelihood of a woman becoming a wage worker.

Table 8 presents earnings regression results applying Heckman's selection model (see Appendices A2 and A3 for observable characteristics and check for robustness), showing that on average, an additional year of education increases earnings by approximately 3.5% for men and 3.5% for women, and that an additional year of working experience increases earnings by about 0.01% for men and for women, for the 2019 sample.

Earnings in the manufacturing and service sectors for men are on average 27% and 18% higher than for men in the agricultural sector, while respective earnings for women are 33% higher in manufacturing and 19% higher in services than for their peers in the agricultural sector.

Across occupations, men and women who work as managers, professionals, and technicians in the clerical, services, sales, skilled agricultural, craft and trade sectors, such as machine operators and assemblers, are able to earn higher wages than those who work in elementary occupations.

Table 8

Earnings Regression Results in 2017 and 2019 (Heckman's Selection Model)

Independent variables	2014		2019	
	Men	Women	Men	Women
Education	0.035***	0.037***	0.035***	0.035***
	(0.00)	(0.00)	(0.00)	(0.00)
Language skills	0.142***	0.179***	0.173***	0.151***
	(0.03)	(0.04)	(0.02)	(0.03)
Working experience	0.006***	0.002	0.010***	0.012***
	(0.00)	(0.00)	(0.00)	(0.00)
Manufacturing	0.295***	0.133*	0.273***	0.333***
	(0.06)	(0.08)	(0.03)	(0.04)
Services	0.230***	0.100*	0.187***	0.190***
	(0.06)	(0.06)	(0.03)	(0.04)
Managers	0.145**	0.207**	0.233***	0.224***
	(0.06)	(0.10)	(0.04)	(0.06)
Professionals	0.205***	0.366***	0.218***	0.352***
	(0.06)	(0.06)	(0.04)	(0.04)
Technicians	0.273***	0.361***	0.277***	0.220***
	(0.07)	(0.08)	(0.04)	(0.05)
Clerical work	0.109**	0.255***	0.088**	0.148***
	(0.05)	(0.05)	(0.04)	(0.04)
Services and sale work	0.030	0.021	0.039	0.023
	(0.05)	(0.05)	(0.03)	(0.03)
Skilled agriculture	0.186**	-0.046	0.264***	0.334**
	(0.09)	(0.11)	(0.08)	(0.15)

Independent variables	2014		2019	
	Men	Women	Men	Women
Craft and trade work	0.100**	0.147**	0.113***	0.031
	(0.04)	(0.07)	(0.02)	(0.03)
Machine operators and assemblers	0.161***	0.081	0.211***	-0.035
	(0.05)	(0.14)	(0.03)	(0.06)
Domestic firms	-0.017	0.066	-0.082***	-0.166***
	(0.03)	(0.04)	(0.03)	(0.03)
Foreign firms	0.167***	0.317***	0.088***	0.163***
	(0.04)	(0.05)	(0.03)	(0.03)
International workplaces	0.375***	0.306**	-0.164	0.059
	(0.13)	(0.13)	(0.14)	(0.17)
Urban dummy	0.076***	0.050**	0.007	0.030*
	(0.03)	(0.03)	(0.01)	(0.02)
Ethnic dummy	0.106	-0.034	0.084**	-0.092
	(0.07)	(0.07)	(0.04)	(0.06)
Part-time work dummy	-0.238***	-0.317***	-0.430***	-0.424***
	(0.06)	(0.05)	(0.08)	(0.08)
Constant	12.510***	12.468***	12.990***	12.992***
	(0.10)	(0.10)	(0.06)	(0.08)
N	4,008	3,800	10,236	9,588

*Note: Standard errors in parentheses | *p < 0.10, **p < 0.05, ***p < 0.01 | Source: Author's estimate from CSES data*

The earnings regression results indicate that both men and women working for foreign and international organisations earn higher wages on average than those working in public sectors; employees in urban areas (both men and women) earn higher wages on average, than those working in rural areas; and part-time workers on average earn 43% lower wages than full-time employees, while women with part-time jobs on average, earn 42% lower wages than women with full-time employment in the 2019 sample.

Assessing the robustness of the results, a decomposition of the wage gap is conducted using hourly real wages (see Appendix). Somewhat similar to monthly wages, unexplained factors accounted for about 174% of the gender wage gap in 2019, whereas the explained factors narrowed the gender wage gap by 74%. A notable observation is that hourly part-time jobs appear to narrow the hourly gender wage gap, though they widen the monthly wage gap.

The hourly earnings regression results are consistent with the monthly regressions, except for higher hourly wages for part-time female workers. The Heckman earnings regressions confirm that average earnings for men are higher than for women across industries and occupations.

5. CONCLUSIONS & POLICY IMPLICATIONS

The findings of this study indicate that the percentage of female wage earners has continued to rise over the past several years and that women's paid employment is rapidly becoming an important source of household income in Cambodia. However, significant wage gaps remain between women and men across industries and occupations.

Similar to previous studies, results presented in this report point to unobservable factors, most likely including gender discrimination, as the primary contributors fuelling the labour market's gender wage gap. However, the study also noted some improvements in gender gap reduction attributable to observable factors from 2017 to 2019 including improvements in bridging the gender gaps in education, work experience and type of occupation. These findings reinforce the call for policy measures aimed at further reducing the gender gap.

Recommended short-term policy measures include tax and other incentives to promote women's participation in formal work and reduction of their traditional domestic burdens, in order to create time and space for women to access more highly paid jobs. Legal protection for women should further be improved and expanded, along with increased awareness of gender discrimination to reduce social, cultural, and legal barriers which prevent women from obtaining fair pay. Employers should also be required to publish compensation reports, to document and report on their hiring practices, and to make these available for independent auditing.

Expanding participation of and protection for women in particular occupations should additionally be considered. Advocacy to employ more women in high value-added manufacturing and service sectors, multinational corporations and international organisations in high wage positions is critical to narrowing the gap. In light of the current COVID-19 pandemic and its potential negative impact on the gender wage gap, investing in care policies and other social security measures specifically designed to promote women's employment opportunities is important. Expanding social protection policies and coverage to address the needs of women, especially those in informal and vulnerable situations exacerbated by the pandemic should also be a priority. UNDP has proposed a temporary basic income for women in a recent global policy brief as an emergency measure of affirmative action. With an investment of 0.07% to 0.31% of developing countries' GDP, a Temporary Basic Income could protect as many as 2 billion women (Montoya-Aguirre et al., 2021). Other measures to be considered may include granting paternity leave to reduce employers' preference to hire men and to promote behavioural changes in favour of shared responsibilities for the care of newborns, as well as strengthening the legal mechanisms to prevent and protect women from sexual harassment and violation of women's labour rights..

In the medium to long term, the urgent and effective implementation of gender-focused measures defined in the NSDP 2019-2023, should be considered a critical prerequisite for reducing the gender wage gap to enhance women's economic empowerment. These measures include promoting the role of women in leadership positions at national and subnational levels, supporting women in entrepreneurship, education and vocational training, investing in gender equality, and preventing human trafficking and violence against women and children. Effective implementation of these measures will also require sufficient budget allocation along with effective policy and institutional coordination.

Gender disparity must further be tackled at all levels of education to reduce the gender gap. Efforts to ensure girls' completion of lower secondary education should continue and the number of secondary schools should be expanded by upgrading primary schools in rural areas. An expansion in available dormitories for girls is also required. Women's enrolment and retention rates in higher education need to be augmented and the number of scholarships available to students from poorer families in general, and girls in particular, should be increased. Finally, public infrastructure investments should target the improvement of access to educational and vocational opportunities for rural women, acknowledging their role and potential as active agents of economic and social change. Promoting education and public awareness to challenge and shift discriminatory social norms regarding the roles of women and men with respect to unpaid care work is also much needed.

Additional policy measures to consider in the medium to long term include increasing Cambodia's minimum wage. Research shows that the less the overall wage inequality, the lower the penalties for those at the bottom of the wage hierarchy. As Cambodian women remain concentrated in low paying or lower status jobs, it is imperative for the minimum wage to be set at a decent standard in relation to both living costs and median wages. Furthermore, a minimum wage far below living costs negatively impacts quality of life, which in turn, determines labour productivity. Increasing the wage floor is consequently paramount to break this perpetuating cycle. Unionizing workplaces can also help narrow the gender pay gap through securing related benefits for women, like scheduling accommodations and paid leave. Expanding and increasing collectively financed maternity rights and protection, as well as parental and paternity leave and more family-friendly workplace policies, in line with international labour standards, should also be promoted.

Looking forward, more and better data to understand gender disparities is important for Cambodia. For example, while this study shows that on average women work less hours than men in wage employment, this does not take into account women's time to attend to household chores. A survey on the use of time is suggested to shed further light on this issue and to support gender-oriented policy development.

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APPENDIX

Table A1

Oaxaca-Blinder Decomposition of Gender Hourly Wage

	2014	2019	2017	2019
	Ln (wage)	Ln (wage)	Ln (wage)	Ln (wage)
Differential				
Estimated Average wage for men	7.999***	7.925***		
Estimated Average wage for women	7.940***	7.892***		
Difference in estimated average wage	0.058***	0.033		
Difference in inverse mill ratio				
Adjusted for selection bias	0.208***	0.122	100%	100%
Difference in observable endowment				
Education	0.014**	0.001	7%	1%
Language skills	0.008***	0	4%	0%
Experience	0.017***	0.021***	8%	17%
Economic sectors	-0.005	-0.001	-2%	-1%
Occupation	0.004	-0.028***	2%	-23%
Type of workplaces	-0.048***	-0.069***	-23%	-57%
Urban (dummy)	0	-0.004	0%	0%
Ethnicity (dummy)	0	-0.002	0%	0%
Part-time work (dummy)	-0.009**	-0.008	-4%	-7%
Total Explained (Difference in observable factors)	-0.02	-0.090***	-10%	-74%
Total Unexplained (Difference in unobservable factors)	0.227***	0.212	109%	174%
Sample Size	9,444	24,511	9,444	24,511

*Note: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ | Source: Author's estimate from CSES data*

Table A2

Hourly Wage Earnings Regression Results in 2017 and 2019 (Heckman's Selection Model)

	2017		2019	
	Ln (wage)	Ln (wage)	Ln (wage)	Ln (wage)
	Men	Women	Men	Women
education	0.035***	0.040***	0.036***	0.039***
	(0.00)	(0.00)	(0.00)	(0.01)
language skills	0.142***	0.184***	0.168***	-0.035
	(0.03)	(0.04)	(0.02)	(0.08)
working experience	0.006***	0.004*	0.009***	0.002
	(0.00)	(0.00)	(0.00)	(0.00)

	2017		2019	
	Ln (wage)	Ln (wage)	Ln (wage)	Ln (wage)
	Men	Women	Men	Women
manufacturing	0.297***	0.173**	0.272***	0.421***
	(0.06)	(0.08)	(0.03)	(0.11)
services	0.228***	0.129**	0.178***	0.163
	(0.06)	(0.06)	(0.03)	(0.10)
managers	0.145**	0.215**	0.233***	0.268
	(0.06)	(0.10)	(0.04)	(0.17)
professionals	0.202***	0.383***	0.208***	0.468***
	(0.06)	(0.06)	(0.04)	(0.13)
technicians	0.283***	0.330***	0.287***	0.098
	(0.07)	(0.09)	(0.04)	(0.16)
clerical work	0.107**	0.294***	0.090**	-0.209
	(0.05)	(0.06)	(0.04)	(0.13)
services and sales work	0.022	0.028	0.032	-0.067
	(0.05)	(0.05)	(0.03)	(0.11)
skilled agriculture	0.024	-0.059	-0.009	0.066
	(0.06)	(0.12)	(0.03)	(0.29)
craft and trade work	0.098**	0.151**	0.110***	-0.121
	(0.05)	(0.07)	(0.03)	(0.11)
machine operators and assemblers	0.139***	0.094	0.195***	-0.249
	(0.05)	(0.14)	(0.03)	(0.19)
domestic firms	-0.024	0.045	-0.094***	-0.314***
	(0.03)	(0.04)	(0.03)	(0.09)
foreign firms	0.163***	0.260***	0.079***	0.162
	(0.04)	(0.05)	(0.03)	(0.11)
international workplaces	0.373***	0.314**	-0.162	0.000
	(0.13)	(0.13)	(0.15)	(.)
urban dummy	0.073***	0.113***	0.021	0.161***
	(0.03)	(0.03)	(0.01)	(0.05)
ethnic dummy	0.091	-0.013	0.136***	-0.090
	(0.07)	(0.07)	(0.04)	(0.15)
part-time work dummy	-0.234***	0.539***	-0.385***	0.388***
	(0.06)	(0.05)	(0.07)	(0.10)
_cons	9.154***	7.034***	9.524***	7.129***
	(0.10)	(0.10)	(0.06)	(0.30)
N	4007	3800	10226	9733
P	0.000	0.000	0.000	0.000

*Note: Standard errors in parentheses | * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$ | Source: Author's estimate from CSES data*

Table A3

Earnings Regression, Heckman Using Gender Dummy by Economic Sectors

		Ln (wage)	Coef.	Std. Err	Z	P>|z |	[95% Conf. Interval]		Other Variables
2017	Agriculture	male	0.07	0.06	5.48	0.2	-0.05	0.2	Controlled
	Manufacturing	male	0.13	0.02	11.11	0	0.08	0.17	Controlled
	Services	male	0.1	0.02	8.12	0	0.06	0.15	Controlled
2019	Agriculture	male	0.22	0.04	5.1	0.27	0.14	0.31	Controlled
	Manufacturing	male	0.14	0.02	8.52	0	0.1	0.17	Controlled
	Services	male	0.16	0.02	9.33	0	0.12	0.19	Controlled

Source: Author's estimate from CSES data

Table A4

Earnings Regression by Occupations

		Ln (wage)	Coef.	Std. Err	Z	P>|z |	[95% Conf. Interval]		Other Variables
2017	Manager	male	0.33	0.13	2.57	0.01	0.08	0.59	Controlled
	Professional	male	0.08	0.04	1.87	0.06	0	0.17	Controlled
	Technicians	male	0.05	0.1	0.49	0.62	-0.15	0.25	Controlled
	Clerical workers	male	0.06	0.04	1.51	0.13	-0.02	0.16	Controlled
	Services and sales workers	male	0.07	0.03	1.93	0.05	0	0.15	Controlled
	Skilled agricultural workers	male	0.17	0.18	0.98	0.33	-0.18	0.53	Controlled
	Craft and related trades workers	male	0.11	0.02	4.86	0	0.06	0.15	Controlled
	Machine operators, assemblers	male	0.29	0.14	2.05	0.04	0.1	0.57	Controlled
	Elementary occupations	male	0.14	0.04	3.41	0	0.06	0.22	Controlled
2019	Manager	male	0.29	0.08	3.74	0.02	0.14	0.45	Controlled
	Professional	male	0.08	0.03	2.77	0.01	0.02	0.15	Controlled
	Technicians	male	0.18	0.06	3.18	0	0.03	0.18	Controlled
	Clerical workers	male	0.11	0.04	2.89	0	-0.01	0.18	Controlled
	Services and sales workers	male	0.1	0.03	3.09	0	0.04	0.17	Controlled
	Skilled agricultural workers	male	0.81	0.27	2.94	0	0.25	1.37	Controlled
	Craft and related trades workers	male	0.13	0.02	8	0	0.1	0.17	Controlled
	Machine operators, assemblers	male	0.25	0.07	3.74	0	0.12	0.38	Controlled
	Elementary occupations	male	0.19	0.02	7.9	0	0.14	0.24	Controlled

Source: Author's estimate from CSES data

United Nations Development Programme
53 Pasteur Street, Beung Keng Kong , Phnom Penh, Cambodia.

www.kh.undp.org