The nature of youth employment in Cambodia: informal activity continues to dominate despite consistent economic growth

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Abstract

Data on Cambodian economy suggest that many young people might be continuing to work in the informal sector, despite the presence of some expanding sectors at the national level. We aim to identify those factors that keep youth, especially girls, working in the informal sector in Cambodian labour market, using data from the ILO School to Work Transition Surveys. We found that education plays an important role; higher levels of education are positively correlated to wage job in the formal sector and strongly negatively associated with having an informal wage job. Financial situation of the household also matters, being poor reduces the probability of having a wage job in the formal sector but increase the likelihood of having a wage job in the informal one. Overall, we found barriers that continue to limit the access of young people to formal wage jobs.

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1. Introduction

Cambodia has experienced consistent economic growth over the past 20 years, increasing its level of per capita GDP by a factor of three between 1993 and 2014, an average growth rate in per capita GDP of 5.5% per year. Economic growth was positive in every year, except for a slight decline in 2009 following the global financial crisis. Traditionally an agricultural economy, but other important contributors to recent growth have included construction, garments, tourism and service sectors, leading to a more diversified economy compared to 1993 (World Bank, 2016). Poverty has fallen significantly over this period, with the poverty headcount relative to the World Bank $3.10 poverty line falling from 77.2 in 1994 to 37.0% in 2012, though the rate of poverty reduction has slowed recently. Education at primary level at least has improved significantly over recent years, such that the primary net enrolment rate in 2014 was 95.2% (World Bank, 2016).

This paper seeks to examine the nature of the work opportunities available for young people in this successful growth environment. This is particularly important given the large size of the youth population in Cambodia, with UNFPA reporting in 2013 that one third of the population was between 15 and 29 years of age. To what extent have young people been able to obtain employment opportunities in some of the expanding sectors identified above? And how does this differ between males and females? In this paper we examine this question, taking advantage of the School to Work Transition Survey data collected in conjunction with the ILO in Cambodia in 2012 and 2014.

Without doubt the share of the industrial sector has grown significantly in Cambodia over the past 20 years, almost doubling as a share of GDP between 1994 and 2014. However in 2010 it only accounted for around 16% of employment in the country. It is important to recognize that the agricultural sector is still very important in Cambodia, accounting for over 30% of GDP in 2014 and having accounted for 54% of employment in 2010, the most recent year for which data are available in World Development Indicators. Further much of the activity in the services sector is undertaken in the informal sector. These realities may mean that many young people may not have been able to obtain employment in the industrial sector.

Turning to the gender dimension, aggregate ILO data show quite high rates of employment for males aged 15 and above (Figure 1), though lower rates for females in this age range, with gap between males and females (almost 8 percentage points) persisting over most of the period since 2000. World Development Indicators data show that women are slightly more likely to work in agriculture and slightly less likely to work in industry compared to men; the proportions working in the service sector are similar.

[Figure 1 around here]

These data suggest that many young people might be continuing to work in the informal sector in Cambodia, despite the presence of some expanding sectors at the national level. This is something we investigate in more detail in this paper, including examining whether there are gender dimensions to this. We aim to identify factors that keep youth in particular girls working in the informal sector and investigate whether there are any barriers or constraints limiting the opportunity for young women to work outside the household.

The paper proceeds as follows. Section 2 provides a literature review, while section 3 discusses the data used. A descriptive analysis of the youth labour market in Cambodia based on this data is presented in section 4, while section 5 describes the framework and model, and then presents and discusses the empirical results of estimated models. Section 6 concludes.

2. Review of literature

In many developing countries, youth employment faces various challenges. First, economic growth in past years has not translated into enough jobs for young workers. Second, youth population has continued to increase putting pressure on labour markets. Third, young individuals tend to work in low quality jobs in the informal sector, being the main source of youth employment. Fourth, women fare much worse than men in vulnerable employment due to potential barriers in accessing the labour markets. South Asia and in particular Sub-Saharan Africa are characterised of having the highest youth employment shares (of self-employment and unpaid work) among low income countries. Also these regions have many young workers with no or little education living in rural areas and working in very low paid jobs. Even in paid employment, a high proportion of jobs are in the informal sector, which are associated with low paid and not productive jobs, (Pieters, 2013).

Since wages in the informal sector are low, individuals working in the informal sector are more likely to be poor. But also poor people, with not education levels might not have a choice, but to participate in the informal sector.

Various studies have found a positive relationship between participating in the informal sector and poverty in different developing countries. Canelas (2015) found a double causality between informality and poverty, when estimated a simultaneous probit models for salaried employees in Ecuador. This study looked at also at self-employed as a separate group. Also she identified that the Ecuadorian labour informal market is heterogeneous and informal salary employment appears more

frequent in low productivity jobs. Her main findings suggest that informal employment, whether salaried work or self-employment, represent a last resource option for low-skilled workers and a voluntary choice for the more educated.

Rahman et al. (2012) examined the factors that influence female labour force participation in Bangladesh for salaried and self-employed including unpaid workers. They included various socioeconomic and demographic variables including land ownership which was used as proxy of poverty. Being poor (with no land) made more likely for women to participate in the labour market.

The authors estimated separated logit models for all female salaried workers and self-employed, finding notable differences. For instance, women being married made them more likely to work as self-employed or in unpaid jobs, but less likely to work in salaried jobs. Also having assets (including land plot) made women more likely to work as self-employed or on unpaid work, versus less likely to work in salaried employment. But, women being head of households appeared to be less likely to work as self-employed and more likely to work in a paid job.

The author's main contribution is the inclusion of variables that capture potential barriers for women to participate in the labour market. The authors argued that the neoclassical theory will not hold to explain why women do not participate in the labour market in societies that are patriarchal such as Bangladesh, which establish structural constraints on gaining education and working outside the household. They argued that the presence of a male head may discourage women's labour force participation. Using the number of male earners in the household, as proxy of social norms, Rahman et al. found a negative sign for the female paid employees but a positive sign for the self-employed female.

Kabeer (2012) pointed out that men's higher labour force participation relative to women in most regions of the world reflects the breadwinning responsibilities in most cultures. In some countries, women are expected to share in breadwinning responsibilities, but in others they take primary responsibilities for unpaid work in the household or care work. She noted that also girls are excluded from education more often than boys, particular in South Asia. Constraints to education and labour participation are intensified with poverty and other forms of inequality. On the other hand, those countries that pursued labour intensive export oriented activities such as the garments in South Asia, have created more jobs attracting women.

There are gender inequalities regarding education and employment outcomes. Girls tend to be excluded from education more often than boys, particularly in South Asia. Moreover, some societies

ascribe primary responsibilities for unpaid work within domestic domain to women and girls. It is known that there are structural constraints such as social norms and attitudes that can suppress choice for women and girls to participate in education and the labour market. Poverty itself imposes similar constraints. For example women from poorer household enter the labour market with no education or low levels of education, and so will be more restricted to have access to paid employment.

Elder (2014) provided rich descriptive analysis on the youth employment in Asia and Pacific region from the School to Work Transition Survey 2012. The author noted that a majority of young individuals work in vulnerable employment and informality in this region. Agriculture and services sectors are important sources of youth employment, particularly in Cambodia, where half of the youth work in agriculture and about a third work in services. Youth living in rural areas are also more likely to be engaged in informal employment than youth in urban areas. She argued that the type of employment status is important to identify the different economic risks faced by youth individuals. For instance, salaried workers will receive a regular wage and hence face relatively low economic risk compared to the self-employed and unpaid family workers. This latter group receives remunerations that are dependent of what is being sold, dependent on weather, so their incomes might fluctuate with seasons. Own-account workers and contributing family workers are classified as vulnerable employment by the ILO. Cambodia has the highest shares of young vulnerable employment (68% for females and 64% for males) compared to other economies in the regions. Salaried young employees in Cambodia represent roughly a third of total employment.

Dalis (2014) estimated a probit model where the dependent variable is poverty taking into account different characteristics of individuals. His main findings indicate that households engaged in agriculture have a higher chance of being in poverty compared to those engaged in industry. In addition, he found that those in paid employment are more likely to be poor in Cambodia than among the self-employed or those in unpaid family work. Other findings were that education of the household head and the size of household land reduce household poverty.

Although this study offered important insights to understand the link between poverty and type of employment status, it did not focus on youth employment. Equally, we are not aware of recent studies that explore vulnerable employment in Cambodia among youth. Available evidence though suggests that most young workers starting their career in low-paying jobs in agriculture or family business instead of accessing more productive jobs. These are usually low paid activities and the ones which do not require sophisticated skills. As they grow older, workers of unpaid family businesses remain self-employed in low paid and low-skilled informal sector jobs, (ILO, 2015).

This paper aims to better understand the labour outcomes of youth in Cambodia, and to see how young women employment fared in the past recent years and what factors influenced their participation in the labour force. We aim to shed more insights on the barriers that constrain young women to gain better employment opportunities and identify those that keep young women in the informal sector. This is important for a policy perspective because a lack of a decent job at an early age can threaten future employment prospects for workers, leading to unfavourable labour market outcomes over their careers (ILO, 2012). Therefore, not able to access quality jobs represent potential losses of human resources.

3. Data source

We use the School to Work Transition Survey (SWTS),[2] conducted in 2012 as part of the Work4Youth Programme (coordinated by the International Labour Office and Mastercard Foundation), by the ILO. The ILO SWTS provide comparable information for several countries on the reasons why young people, aged from 15 to 29, did not attend school or left before completion. They also provide information on employment status and job related characteristics, as well as other individual and household information. The SWTS were carried out in more than 30 countries between 2012 and 2015 and currently comparable microdata are available for 28 countries.[3] In almost all countries, the SWTS is being implemented through the National Statistics Offices, thus offering an important opportunity for building national capacity on the area of labour market information on youth and attempting to ensure some sustainability of the survey within the national statistical agenda.

The SWTS serves a number of purposes. First, it detects the individual characteristics of young people that determine labour market disadvantage. This, in turn, is instrumental to the development of policy response to prevent the emergence of risk factors, i.e., school dropout, social exclusion, as well as measures to remedy those factors that negatively affect the transition to decent work.

Second, it identifies the features of youth labour demand, which help determine mismatches that can be addressed by policy interventions. Third, in countries where the labour market information system is not developed, it helps to generate reliable data for policy-making. In countries with a reasonably developed labour market information system, instead, the survey sheds light on areas usually not captured by household-based surveys, such as youth school dropouts, labour market outcomes, such

[2] For details on the SWTS, see http://www.ilo.org/employment/areas/youth-employment/work-for-youth/WCMS_191853/lang--en/index.htm.

[3] The first/pioneer SWTS questionnaires were developed in 2003 by the ILO to conduct structured surveys on the question of gender equality in youth employment. The first surveys were implemented in Indonesia, Sri Lanka and Viet Nam to inform the preparation of youth national action plans. In 2004, the ILO developed the analytical framework underpinning the concept of transition to decent work and reshaped the data collection instruments. The new framework was applied between 2004 and 2006 to conduct surveys in ten countries – Azerbaijan, China, Egypt, Islamic Republic of Iran, Jordan, Kosovo, Kyrgyzstan, Mongolia, Nepal and Syrian Arab Republic.

as conditions of work, wages and earnings, engagement in the informal economy, e.g., formal or informal employment contractual arrangements.[4]

Our analysis focuses on Cambodia and uses ILO SWTS data from the 2012 and 2014 waves.[5]

4. Descriptive analysis of job types of youth in Cambodia

The SWTS data provides a large amount of information on the skills and nature of work of young people in Cambodia. To begin with we consider the extent to which 15 to 29 year olds Cambodians are working as opposed to being in school.

Table 1 reports the numbers of males and females in different age ranges who go to school (or training), work, do both or neither. Around 30% of both males and females in the 15 to 19 year old age range go to school full time, but another around 29% in each case work at the same time as going to school. Slightly more females than males work in this age range but the difference is small. In the age groups of 20-24 and above though, many more females than males neither work though go to school (16.3% of female compared to 5.6% of males), and fewer females than males go to school in this period of their lives (9.8% of females with respect to15.3% of males). Males are more likely to work in these age ranges. But by age 25 few are still attending school or training; 90% or males work compared to 80% of females. In the overall 15-29 age range, 76% of men work and 72% of women.

[Table 1 around here]

The level of education attained by males and females is shown in Table 2, where information is reported both for those who have left school and for those who currently attend. The large majority of the sampled individuals have attended school, but only around one third of those who have left school completed secondary school or above; in both respects males have a slightly better outcome than females though the differences are not dramatic (30% for males and 29% for females). Among those currently attending school, unsurprisingly given the age range, for both males and females, most are at the secondary level or above; but more males than females are studying at university level (19% of males compared to 15% of females).

[Table 2 around here]

The weighed numbers of men and women engaged in different types of employment are reported in Figure 2 (which disaggregates by age group) and in Table A.1 (in Appendix), which also reports

[4] For methodological details, see Elder (2009).

[5] The waves for Cambodia are implemented by the ILO together with the National Institute of Statistics and they are representative of 10 provinces.

whether these activities are undertaken in the formal or informal sector (defined based on whether the work is undertaken in a registered enterprise or not). Only about a third of the work is in waged jobs, while nearly half of the work undertaken takes the form of helping without pay. Also around 12% of the work is undertaken in the formal sector, and these are predominantly waged jobs, but the majority of waged jobs are in the informal sector. Own account work and working without pay is almost exclusively undertaken in the informal sector; there are very few.

The types of occupation men and women do are reported in Table 3. Own account and unpaid family work is predominantly in agriculture or personal care, personal care being more important for women and agriculture for men. Smaller numbers of men and women are engaged in own account activities in food processing, wood working or garments, and in personal services in the case of women. Wage jobs cover a wider range of occupations, including in both cases a large miscellaneous category (made up of many small individual activities). But for both men and women a large proportion work as labourers in agriculture, forestry or fishery activities. These are generally badly paid activities undertaken by poorer people. Many women work as stationary plant operators and many men as construction labourers; which are well paid activities. There are some better wage jobs as well, mostly included here under the miscellaneous category (e.g. teachers or other public sector workers), but it is quite clear from these results that many wage jobs may be undertaken by quite poor people.

[Table 3 around here]

An analysis of the distribution across working as an employee, own account worker and unpaid family worker by the level of education of the worker (Table A.1) shows little difference, except that those with a university education are more likely to have a wage job; but those with university education are only 8% of the wage workers.

5. Framework and model estimated

5.1 Framework

We analyse the participation of youth to labour markets in Cambodia. Our sample includes youth from the age of 15 to the age of 29. We focus especially on employment by analysing the probability of being employed and its determinants both for the overall sample of youth and separately by men and women. Employment rates among women, are lower than those of men and the gender gap currently persists. In addition, among the sample of employed, we examine the probability of getting a wage work and the one of working in the informal sector which is an important source of employment in developing countries and predominant in Cambodia. All the analyses deal with both the overall sample and separately by gender, given the relevant gender inequalities in education and employment outcomes (Kabeer, 2012).

The main factors to account to explain the likelihood of youth to participate pertain mainly to three categories, demographic factors, economic factors, and attitude and social factors or norms. The data we use,[6] indeed, allow considering a rich arrays of variables affecting employment participation.

The demographic factors and/or individual characteristics include age, marital status and the number of children. In the estimates for the overall sample we also control for gender by using a specific dummy variable. The gender dimension is then considered in the estimations separate by gender. We also control for the presence of health problems. The data, indeed, offer detailed information for the presence of any difficulty in seeing, hearing, walking, remembering or concentrating, dressing, and communicating.

Regarding the economic factors, we control for education by considering three educational categories, i.e., completed primary education, completed secondary education, and completed post-secondary (or tertiary) education. The disaggregation by educational categories helps understanding the specific impact of each educational attainment level on the employment probabilities of the overall sample of youth and separately by gender. The overall financial household's situation and living in urban or rural area are also accounted for.[7] Given that the model is estimated on two waves, a yearly dummy variable (for 2014) is also included in our set of covariates.

[6] For a detailed description of the data used, see Section 3.
[7] There is a specific question asking details about the household's financial situation. The range of answers goes from well off to poor. In our set of covariates we use a dummy variable for poor household's financial situation.

5.2 Model estimated

We estimate the probability of being employed (on the overall sample of youth) and, for those employed (sample of employed), the probability of working as wage workers or in the informal sector using pooled probit regression models[8] for the waves 2012 and 2014. The choice of a binary regression model reflects the need to obtain a simplified representation of labour market participation of youth to employment. With a binary representation we can split our samples in a more convenient and simple manner.

In terms of employment, our dependent variable is 1 if the youth is employed and 0 otherwise. In terms of kind of employment we have two sets of estimates, as explained above. In the first, the variable is 1 if the youth is a wage worker and 0 otherwise. In the second, the dependent variable is 1 if the youth works in the informal sector and 0 otherwise.

A concise description of these models and our estimation strategy follow. The estimates are carried out both for the overall sample of youth and separately by gender.

For binary outcome data the dependent variable y takes one of two values. We let y = 1 with probability p, and y = 0 with probability 1 − p. In our investigations y equals 1 if a youth employed and 0 otherwise in the first set, whilst y equals 1 if the youth is employed as wage worker and in the informal sector in the second and third sets.

A probit model is formed by parameterizing the probability p to depend on a regressor vector x and a K × 1 parameter vector β. It is a single-index form model with conditional probability given by

$$p_i \equiv Pr[y_i \quad = 1|x] = F(x_i'\beta) \tag{1}$$

where F(.) is a specified function. To ensure that $0 \leq y \leq 1$ it is natural to specify F(.) to be a cumulative distribution function. The probit model assumes that F(.) in eq. (1) is the standard normal cumulative distribution function (such as for the error, which is standard normal distributed) and specifies the conditional probability as

$$p = \Phi(x_i'\beta) = \int_{-\infty}^{x_i'\beta} \phi\,(z)dz, \tag{2}$$

[8] We also estimated models for the probability of being self-employed or not and unpaid worker or not, respectively (see Table 3 in Appendix 2).

where Φ(.) is the standard normal cumulative distribution function. Model parameters are estimated using Maximum Likelihood.[9] For all our set of estimates we calculated the marginal effects, which will be commented later in the paper.

5.3 Results of estimated models

As already seen above many of these young people work. To begin with we consider the factors associated with a young person being employed, for males and females together and separately (Table 4). Unsurprisingly those currently in education have lower probabilities of working, even if many do try to combine working and studying. This result is clear for both males and females to similar extents. Unsurprisingly too, older people have a higher probability of being employed, especially for males. Having health difficulties reduced the probability of working, as expected, while married females have lower employment probabilities compared to males (being married slightly increases employment probabilities of males). The presence of children, instead, does not exert a significant role on employment probabilities of both genders. For both genders those in an urban area are less likely to work compared to those in rural areas

[Table 4 around here]

It seems that the father's level of education does not affect employment probabilities, but the mother's education is important especially for males, i.e., low educated mother (not educated or with only primary education) negatively affect the employment probabilities of the son. Having completed post-secondary education has a strong negative effect on the employment probability, especially for males. There is no significant association between the employment probability and coming from a poor household.

We now turn to consider specific forms of employment, focusing first in Table 5 on wage employment, and on whether the individual works in the formal or informal sector (irrespective of whether they are a wage worker or not). Formality status is defined here based on whether the employer of an individual is registered or not; in fact the majority of wage jobs in Cambodia are in the informal sector.

[Table 5 around here]

[9] A detailed technical description of the Maximum Likelihood method in this context can be found in Cameron - Trivedi (2005, ch. 15).

The first three columns of results examine the correlates of having a waged job. Age is significant and relatively older youth (age range [25, 29]) have a strongly positive association with the probability of having a wage job. Being currently in education, instead, has a strong negative association with the likelihood of having a wage job. Married women, as well as those having children, are also significantly less likely to work in wage jobs. Having completed post-secondary education has a strong positive effect on the likelihood of having a wage job, especially for males. This higher level of education may be a required qualification for some wage jobs, but it might also be used as a mechanism for allocating available (and probably scarce) wage jobs. Coming from a poor household is positively associated with having a wage job, the effect being larger for males.

In modelling formality status, it is important to remember (from Table A.1) that the vast majority of non-wage employment categories are informal while the vast majority of those in the formal sector are wage workers. So in some respects the results in the last three columns of results in Table 5 might be expected to be the opposite of those in the first three set of columns.
This is clear for example in relation to being currently in education, to having completed higher levels of education and for being married. Those currently in education – and especially girls – are more likely to work in the informal sector (for boys it is not significant). For females, indeed, it may be easier to combine such activities with education. But those with completed secondary – and especially post-secondary education are less likely to work in the informal sector. Being married is positively and significantly associated with the female likelihood of working in the informal sector (for males it is not significant), probably because of the greater flexibility that offers.

Other effects though are different. Older males and females are significantly less likely to work in the informal sector. Males from poorer households are more likely to work in the informal sector, suggesting that the waged jobs they were more likely to do were informal. Being in an urban area reduces the likelihood of working in informal activities. The number of children is always a positive significant factor.

In terms of sectors, personal care workers, market-oriented skilled agricultural workers, food processing, wood working, garment and other craft and relate are less likely to be working as wage employees and more likely in the informal sector.

[Table 6 around here]

A similar analysis for the likelihood of being in self-employment or working as an unpaid family worker is presented in Table 6. Being currently in education is strongly negatively associated with the

likelihood of being self-employed but strongly positively associated with the probability of being an unpaid family worker. Likewise sons or daughters of the household head are much more likely to be unpaid family workers and much less likely to be self-employed. Being married and having children are both strongly positively associated with the probability of being self-employed, but negatively associated with the likelihood of being an unpaid family worker for men only. Higher levels of education have a negative correlation with the probability of being self-employed for men (only) and the probability of being an unpaid family worker for both genders. Men are more likely to be self-employed than women. Men and women from poor households are less likely to be both self-employed and be unpaid family workers. Thus these activities are strongly associated with poverty. It in fact appears more likely that those from poor households do not tend to take self-employment and informal wage jobs.

What is clear from this is that there is a distinct group of people who are more likely to be self-employed and a different distinct group of people likely to be unpaid family workers. In both cases they are less educated than average but are also less likely to come from poorer households. Those married and those with children appear to be more likely to be self-employed, while men who are married and men and women with children are less likely to be unpaid family workers. Unpaid family workers are disproportionately those currently in education and those who are sons or daughters of the household head, suggesting that this might be a temporary employment state in some cases.

Finally Table 7 presents two additional models for the probabilities of being a wage worker in the formal or in the informal sector. Again, we estimate the models on the overall sample of youth and separately by gender. The aim of this exercise is to understand if there are differences in the determinants of working in wages jobs formally or informally. The most striking finding here relates to being from a poor household: coming from a poor household reduces the probability of having a wage job in the formal sector but increase the probability of having a wage job in the informal sector. This confirms what was suggested above; those from poor households having waged jobs disproportionately work in the informal sector. In additional higher levels of education are strongly positively correlated with being able to access a formal sector wage job, and are not associated with having an informal wage job.

[Table 7 around here]

In addition to this, the probability of being a wage workers in the formal sector increases with age especially for men. For the wage workers informal sector age does not exert a role. There are gender

differences in those probabilities. Males have lower probabilities of being wage workers in the formal sector, whilst they have higher probabilities of being informal wage workers. it is also for these gender differences that we decided to estimate our models also separately by gender. Being currently in education reduces the probability of working as wage worker in the formal sector, whilst it does not affect the employment opportunities in the informal sector.[10]

Living in urban areas increases the opportunities to work in the formal sector whilst it does not exert a role on probability of working in the informal one, especially for males. Relevance of the area of residence for obtaining formal sector work's opportunities

Parental education does not affect those kinds of employment probability. This puts additional relevance on youth education as an investment useful to get a good job. There is a negative role of marriage on employment in the formal sector for female (expected gender difference), whereas it does not matter for informal employment. The number of children also negatively affect the probability of working in the formal sector, especially for young men. Having household financial difficulties reduces the opportunities to work in the formal sector, whereas it increases those of working in the informal one.

To sum up, this additional exercise was very useful to understand the differences in the determinants of employment probabilities in the formal and in the informal sector. The estimates separated by gender further helps to shed lights on the gender differences in those probabilities. We indeed find gender differences in the role of individual age, area of residence and marriage. These latter determinants are all relevant but with different impacts among genders. Finally, we confirm the role of education which instead is important/the most relevant determinant for both genders and exerts a significant role on employment probabilities. Education, more precisely, high education, improves (and increases) the labour market opportunities of youth in Cambodia.

[10] With the partial exception of women currently in education, i.e., lower probability of being wage workers in the informal sector by around 24.6 p.p.

6. Conclusions

What is presented here is an initial analysis of the 2012 and 2014 waves of the SWTS database for Cambodia. It shows some important characteristics of the employment possibilties for youth in Cambodia. First, non-wage forms of employment, whether self employment or unpaid family work, are the most important forms of work in these age groups. Choosing to be self employed is often associated with family circumstances while being an unpaid family worker may sometimes be seen as a temporary state more associated with younger people, those still in education and those who have not yet formed a household of their own. In both cases these appear to not be choices associated with poverty.

Second, significant numbers of young people in Cambodia are engaged in wage work, but with the majority of these being in the informal sector. It is this informal wage work that especially seems to be the choice of those coming from poor households. By contrast, those who are more educated, and come from less poor households, are the ones have access to the preferred formal sector wage jobs. Overall though young people would appear to continue to have limited access to these formal wage jobs.

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Appendix: Additional Tables

Table A.1: Nature of work undertaken by young people in Cambodia

	formal	informal	Total
employee	288.1	621.3	909.4
own account worker	11.2	488.1	499.2
helping without pay	22.7	1214.7	1237.4
Total	321.9	2324.1	2646.0

Source: Our calculations on ILO SWTS data

Table A.2: Nature of work by education level

	employee	own account worker	helping with family business	Total
None	3.9	5.1	2.7	3.7
uncompleted primary level	8.9	12.4	11.0	10.5
elementary level (primary)	46.7	49.4	50.9	49.0
vocational school (secondary)	4.1	1.9	2.0	2.8
secondary level	26.7	30.6	31.6	29.5
vocational school (post-secondary)	1.5	0.0	0.1	0.6
University	8.2	0.5	1.6	3.9
Total	100	100	100	100

Source: Our calculations on ILO SWTS data

Tables and Figures

Figure 1: employment to population ratios for Cambodia, 2000 to 2014

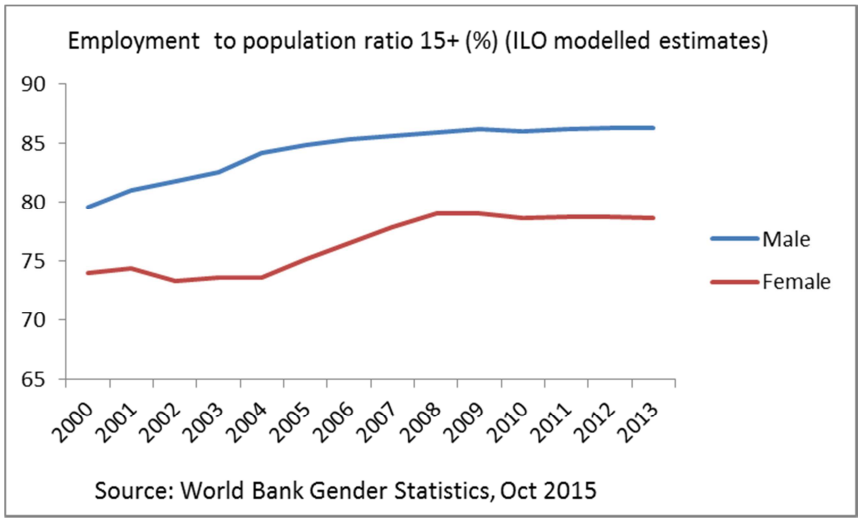
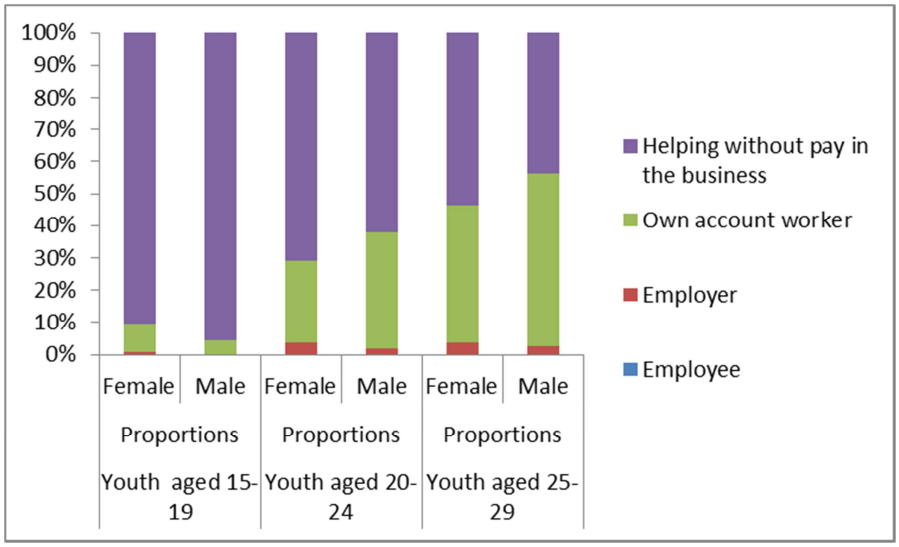


Figure 2. Distribution of employed youth by labour status and age group



Source: authors' computation from SWTS data

Table 1: Extent to which Cambodian youth are working or at school

work/school status	15 to 19	20 to 24	25 to 29	Total
male				
neither school nor work	4.3	5.6	4.8	4.8
school, not working	32.4	15.3	1.6	19.0
school and work	29.2	10.8	3.4	16.7
working, not at school	34.1	68.4	90.3	59.5
Total	100	100	100	100
female				
neither school nor work	5.1	16.3	17.1	11.9
school, not working	29.8	9.8	1.0	15.7
school and work	29.5	9.1	1.8	15.6
working, not at school	35.6	64.9	80.2	56.8
Total	100	100	100	100

Source: Our calculations using ILO SWTS data

Table 2: Education levels (achieved or current) of youth in Cambodia

	Female	Male	Total
Level for those with completed education			
None	4.3	3.2	3.9
uncompleted primary level	10.5	11.3	10.9
elementary level (primary)	50.4	47.3	49.1
vocational school (secondary)	2.7	2.3	2.5
secondary level	29.1	30.0	29.5
vocational school (post-secondary)	0.3	0.8	0.5
University	2.7	5.0	3.7
Total	100	100	100
Number of observations	1331	1037	2368
Level for those currently studying/learning			
studying at elementary level	11.2	12.5	11.8
studying at vocational school (secondary)	0.9	1.7	1.3
studying at secondary	70.5	65.3	68.0
studying at vocational (post-secondary)	2.0	1.1	1.6
studying at university	15.4	19.2	17.2
learning in a formal apprenticeship	0.0	0.2	0.1
Total	100	100	100
Number of observations	608	576	1184

Source: Our calculations using ILO SWTS data

Table 3: occupation of young females and males by type of work

	females			males		
	employee	own account worker	unpaid family worker	employee	own account worker	unpaid family worker
market oriented skilled agriculture work	7.1	34.9	59.3	3.6	53.1	66.9
personal care workers	5.4	44.7	28.3	2.4	14.1	17.4
food processing, wood working, garments	13.0	6.7	2.9	3.2	5.7	1.5
stationary plant and machine operators	18.4	0.0	0.5	4.4	1.0	0.2
agricultural, forestry and fishery labourers	21.8	0.0	0.0	19.2	0.0	0.0
labourers in mining, construction, manufacturing	4.3	0.0	0.5	18.8	2.1	1.5
personal service workers	5.8	6.0	0.3	3.8	0.5	0.6
subsistence farmers, fishers, hunters	0.2	3.9	2.4	0.4	2.1	4.3
building and related trades workers	0.9	0.0	0.5	10.1	1.0	0.6
drivers and mobile plant operators	0.2	0.0	0.0	7.9	5.2	1.7
Other	22.9	3.9	5.4	26.2	15.1	5.5
All	100	100	100	100	100	100

Source: Our calculations using ILO SWTS data

Table 4: Determinants of the employment probability, youth 15-29, overall sampel and by gender

	Employed or not all		Employed or not male		Employed or not female	
	coef	**se**	**coef**	**se**	**coef**	**se**
age [20,24]	0,051	0,051	0,084	0,080	0,047	0,067
age [25,29]	0,293***	0,065	0,334***	0,119	0,247***	0,082
b4. sex	0,255***	0,039				
current_in_edu	-1,148***	0,049	-1,154***	0,071	-1,162***	0,069
sondaughter	-0,025	0,051	-0,105	0,108	0,055	0,061
diff	-0,236***	0,049	-0,494***	0,111	-0,124*	0,068
married	-0,484***	0,060	0,305*	0,167	-0,723***	0,074
nchildren	-0,020	0,014	0,044	0,124	-0,013	0,017
f_educ1	0,001	0,044	0,078	0,073	-0,039	0,056
m_educ1	-0,097*	0,050	-0,249***	0,083	0,003	0,064
a6. area (urban = 1, rural = 2)	-0,319***	0,043	-0,401***	0,070	-0,284***	0,057
csecondaryall	-0,029	0,044	-0,003	0,071	-0,053	0,059
psecondaryall	-0,169***	0,051	-0,226**	0,088	-0,135**	0,065
poor	-0,021	0,043	-0,034	0,073	-0,031	0,055
year2014	0,404***	0,045	0,578***	0,072	0,329***	0,059
_cons	1,309***	0,087	1,546***	0,151	1,343***	0,109
Number of observations	6.948		3.114		3.834	

note: *** p<0.01, ** p<0.05, * p<0.1

	Wage or not all		Wage or not male		Wage or not female		Informal or not all		Informal or not male		Informal or not female	
	coef	**se**	**coef**	**se**	**coef**	**se**	**coef**	**se**	**coef**	**se**	**coef**	**se**
age [20,24]	0,188***	0,053	0,352***	0,079	0,067	0,072	-0,279***	0,062	-0,489***	0,103	-0,168**	0,080
age [25,29]	0,247***	0,063	0,299***	0,093	0,201**	0,088	-0,426***	0,074	-0,679***	0,119	-0,267***	0,099
b4. sex	0,023	0,041					0,302***	0,049				
current_in_edu	-0,693***	0,060	-0,614***	0,086	-0,793***	0,085	0,213***	0,071	-0,082	0,109	0,531***	0,100
sondaughter	0,062	0,054	0,119	0,088	0,076	0,072	-0,074	0,065	-0,066	0,108	-0,112	0,083
diff	-0,086	0,072	-0,323***	0,123	0,005	0,074	0,249**	0,104	0,391**	0,188	0,166	0,127
married	-0,262***	0,064	-0,112	0,104	-0,379***	0,083	0,164**	0,076	-0,019	0,130	0,284***	0,096
nchildren	-0,124***	0,039	-0,060	0,064	-0,143***	0,051	0,197***	0,052	0,274***	0,097	0,143**	0,063
f_educ1	-0,073	0,048	-0,019	0,072	-0,127*	0,065	0,021	0,055	0,006	0,087	0,042	0,073
m_educ1	-0,006	0,055	0,073	0,082	-0,078	0,076	0,008	0,064	-0,062	0,098	0,070	0,086
isco_occ_main==personal care workers	-1,983***	0,099	-1,868***	0,170	-2,087***	0,126	0,954***	0,100	0,501***	0,164	1,220***	0,134
isco_occ_main==market-oriented skilled agricultural workers	-2,088***	0,078	-2,153***	0,114	-2,048***	0,111	1,663***	0,154	1,499***	0,224	1,822***	0,213
isco_occ_main==food processing, wood working, garment and other craft and relate	-0,179	0,112	-0,126	0,190	-0,282**	0,144	0,184	0,125	-0,003	0,220	0,355**	0,156
a6. area (urban = 1, rural = 2)	0,298***	0,051	0,389***	0,076	0,239***	0,069	-0,487***	0,054	-0,600***	0,082	-0,414***	0,073
csecondaryall	-0,102*	0,054	-0,162**	0,078	-0,057	0,076	-0,131**	0,064	-0,018	0,095	-0,244***	0,088
psecondaryall	0,354***	0,050	0,440***	0,074	0,244***	0,069	-0,495***	0,058	-0,587***	0,092	-0,365***	0,077
poor	0,356***	0,047	0,414***	0,070	0,297***	0,065	0,208***	0,060	0,384***	0,098	0,111	0,078
year2014	-1,045***	0,060	-0,934***	0,085	-1,132***	0,087	0,675***	0,068	0,639***	0,104	0,736***	0,094
_cons	0,538***	0,099	0,192	0,142	0,838***	0,133	0,794***	0,116	1,415***	0,181	0,578***	0,150
Number of observations	5.506		2.558		2.948		5.506		2.558		2.948	

note: *** p<0.01, ** p<0.05, * p<0.1

Table 5: Estimates for wage workers and workers in the informal sector, youth 15-29, overall sample and by gender

Table 6: Estimates for self-employed and unpaid workers, youth 15-29, overall sample and by gender

	Self or not all		Self or not male		Self or not female		Unpaid or not all		Unpaid or not male		Unpaid or not female	
	coef	**se**	**coef**	**se**	**coef**	**se**	**coef**	**se**	**coef**	**se**	**coef**	**se**
age [20,24]	0,344***	0,072	0,426***	0,121	0,338***	0,090	-0,270***	0,051	-0,414***	0,077	-0,194***	0,069
age [25,29]	0,404***	0,079	0,637***	0,129	0,276***	0,102	-0,406***	0,062	-0,558***	0,094	-0,279***	0,083
b4. sex	0,112**	0,049					-0,147***	0,041				
current_in_edu	-0,683***	0,101	-0,662***	0,155	-0,673***	0,134	0,872***	0,058	0,798***	0,085	0,953***	0,081
sondaughter	-0,549***	0,056	-0,573***	0,092	-0,522***	0,071	0,426***	0,053	0,419***	0,093	0,377***	0,066
diff	0,106	0,070	0,218	0,150	0,070	0,085	0,018	0,065	0,202*	0,123	-0,031	0,071
married	0,584***	0,068	0,681***	0,110	0,469***	0,088	-0,168***	0,062	-0,431***	0,110	0,052	0,078
nchildren	0,191***	0,036	0,201***	0,060	0,218***	0,045	-0,130***	0,037	-0,328***	0,076	-0,123***	0,045
f_educ1	0,001	0,057	-0,041	0,090	0,027	0,073	0,078*	0,047	0,045	0,074	0,110*	0,061
m_educ1	-0,000	0,065	0,110	0,103	-0,080	0,085	0,002	0,054	-0,138*	0,083	0,111	0,072
isco_occ_main==personal care workers	1,083***	0,094	0,986***	0,176	1,094***	0,120	1,212***	0,083	1,439***	0,151	1,189***	0,107
isco_occ_main==market-oriented skilled agricultural workers	0,290***	0,079	0,445***	0,111	0,157	0,117	1,817***	0,070	1,858***	0,101	1,866***	0,102
isco_occ_main==food processing, wood working, garment and other craft and relate	0,432***	0,136	0,438*	0,225	0,403**	0,175	-0,004	0,131	-0,114	0,238	0,138	0,163
a6. area (urban = 1, rural = 2)	0,014	0,062	0,066	0,098	-0,027	0,080	-0,300***	0,052	-0,509***	0,082	-0,164**	0,068
csecondaryall	-0,091	0,063	-0,146	0,097	-0,066	0,083	0,146***	0,052	0,277***	0,080	0,087	0,070
psecondaryall	-0,032	0,062	-0,250**	0,097	0,107	0,082	-0,284***	0,050	-0,251***	0,078	-0,257***	0,067
poor	-0,268***	0,056	-0,354***	0,088	-0,227***	0,074	-0,160***	0,046	-0,202***	0,073	-0,108*	0,061
year2014	0,248***	0,078	0,385***	0,113	0,162	0,112	1,087***	0,064	0,897***	0,092	1,216***	0,093
_cons	-1,411***	0,120	-1,529***	0,185	-1,258***	0,155	-1,151***	0,099	-0,906***	0,149	-1,493***	0,134
Number of observations	5.506		2.558		2.948		5.506		2.558		2.948	

note: *** p<0.01, ** p<0.05, * p<0.1

Table 7: Estimates for formal and informal wage workers, youth 15-29, overall sample and by gender

	Formal wage or not		Formal wage or not male		Formal wage or not female		Informal wage or not		Informal wage or not male		Informal wage or not female	
	coef	**se**	**coef**	**se**	**coef**	**se**	**coef**	**se**	**coef**	**se**	**coef**	**se**
age [20,24]	0,314***	0,066	0,577***	0,112	0,178**	0,084	-0,005	0,054	0,080	0,079	-0,083	0,075
age [25,29]	0,479***	0,077	0,759***	0,127	0,305***	0,103	-0,083	0,065	-0,142	0,093	-0,040	0,092
b4. sex	-0,348***	0,053					0,239***	0,042				
current_in_edu	-0,374***	0,080	-0,094	0,123	-0,673***	0,112	-0,576***	0,063	-0,697***	0,090	-0,449***	0,089
sondaughter	0,077	0,069	0,136	0,114	0,079	0,089	0,013	0,057	0,029	0,088	0,032	0,076
diff	-0,192*	0,108	-0,343*	0,198	-0,108	0,126	-0,008	0,068	-0,210*	0,124	0,061	0,073
married	-0,212***	0,080	0,035	0,134	-0,372***	0,101	-0,101	0,065	-0,081	0,106	-0,114	0,088
nchildren	-0,216***	0,055	-0,256**	0,099	-0,171**	0,068	-0,025	0,037	0,048	0,064	-0,068	0,053
f_educ1	-0,017	0,059	0,026	0,092	-0,067	0,078	-0,064	0,050	-0,039	0,073	-0,097	0,068
m_educ1	0,032	0,069	0,034	0,104	0,035	0,093	-0,021	0,057	0,067	0,083	-0,107	0,079
isco_occ_main==personal care workers	-1,300***	0,124	-0,853***	0,198	-1,557***	0,167	-1,424***	0,111	-1,687***	0,223	-1,316***	0,133
isco_occ_main==market-oriented skilled agricultural workers	-2,038***	0,234	-1,872***	0,346	-2,194***	0,318	-1,516***	0,077	-1,750***	0,114	-1,292***	0,108
isco_occ_main==food processing, wood working, garment and other craft and relate	-0,157	0,126	0,063	0,220	-0,348**	0,157	0,003	0,110	-0,095	0,188	0,058	0,138
a6. area (urban = 1, rural = 2)	0,365***	0,057	0,483***	0,087	0,286***	0,078	0,019	0,052	0,028	0,077	0,025	0,073
csecondaryall	0,169**	0,068	0,047	0,102	0,290***	0,096	-0,241***	0,054	-0,217***	0,079	-0,272***	0,076
psecondaryall	0,524***	0,062	0,609***	0,099	0,403***	0,081	0,050	0,053	0,107	0,075	-0,020	0,075
poor	-0,154**	0,063	-0,311***	0,102	-0,057	0,082	0,442***	0,047	0,542***	0,068	0,345***	0,065
year2014	-0,795***	0,072	-0,735***	0,110	-0,870***	0,098	-0,524***	0,059	-0,512***	0,083	-0,501***	0,085
_cons	-0,834***	0,122	-1,571***	0,194	-0,612***	0,158	-0,082	0,099	0,007	0,142	0,041	0,132
Number of observations	5.506		2.558		2.948		5.506		2.558		2.948	

note: *** p<0.01, ** p<0.05, * p<0.1