



Measuring child labour:

Discussion note for country consultation
in Cambodia

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WORKING DRAFT



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1. INTRODUCTION

1. Since the international labour standards contain several elements of flexibility left to the countries that ratify them as regards the detailed definition of what is child labour to be eliminated, it is not an easy task to decide what should be measured statistically as child labour. This complicates the development of comparable and unambiguous estimates of child labour in countries where it is commonly known that children are at work, and also detracts from the credibility of numbers published. Accordingly, at the 17th International Conference of Labour Statisticians (ICLS), there was unanimous demand by participants for an agenda item on child labour statistics at the 18th ICLS, which is likely to meet in the last quarter of 2008.
2. In this context, a draft resolution on child labour (CL) statistics is currently under development for submission to the 18th ICLS. The resolution would bring out the 'conceptual' issues in clarifying what constitutes child labour and what should be excluded in accordance with existing international labour standards. In the light of what is feasible in practice, the draft resolution would suggest an 'operational' statistical definition of child labour that may be applied for measurement purposes in the field. In addition, the draft resolution would provide guidelines in terms of statistical tools on how child labour statistics may be verified and measured. The resolution may also indicate the parameters within which countries may have flexibility to adapt and apply the contents of the resolution to suit their national requirements. In turn, all such efforts and resulting information would facilitate the monitoring by ILO member states of their compliance with international labour standards in a transparent manner.
3. In specific terms, the draft resolution for consideration by the 18th ICLS is designed to: (a) encompass all forms of child labour, including hazardous work and children in other worst forms of child labour (WFCL) activities; (b) provide methodological guidelines to ensure comparability of child labour statistics across countries and over time; and (c) assist in improving the gathering of statistical information that would help monitoring by countries of their compliance to international child labour standards.
4. This note discusses some of the issues arising when attempting to define a statistical standard for child labour in the specific context of Cambodia. It aims to give an overview of the measurement challenges encountered, of the empirical and other evidence that can be used to address such challenges and of the implications in terms of child labour estimates. The note is intended also to provide a technical background for the country consultations that UCW is carrying out to promote the discussion child labour measurement and to get feedback from national governments on the open questions. This feedback will constitute a relevant part of the process leading to the draft resolution on child labour statistics that ILO will submit to the 18th ICLS in 2008.
5. The paper is structured as follows. The next section sets out general challenges and possible ways forward in developing a statistical measure of child labour. Section 3 then looks in detail at children's productive activity, and specifically at how the broad distinctions between family/non-family and economic/non-economic work reflect underlying differences in the nature, intensity and impact of work performed by children. Section 4, building on this discussion, then returns to the question of child labour measurement, looking specifically at how the three main international legal standards for child labour (C138, C182 and CRC) might translate into statistical terms for the 6-11 years, 12-14 years and 15-17 years age groups. Simulated child labour estimates are presented for each of these groups based under different underlying statistical definitions.

2. TOWARDS A STATISTICAL MEASURE OF CHILD LABOUR: GENERAL CONSIDERATIONS

6. How many Cambodian children are involved in child labour? This question, while vital for the purposes of policy design and monitoring, is by no means straightforward. A number of underlying questions need to be addressed first: what types of children's productive activity should be considered, in what settings and performed beyond what level of intensity. While international child labour norms provide a broad legal definition of child labour (see Box 1), there is at present no internationally agreed statistical measurement standard of child labour to provide guidance on these issues.

7. ILO Convention No. 138 (C138) on minimum age covers "employment or work", and the common practice in published child labour statistics has been to use "economically active" as proxy for this concept of "employment or work." Two main questions, however, have been raised concerning this approach, the first relating to work

Box 1. International legal standards relating to child labour

Three main international conventions – the UN Convention on the Rights of the Child (CRC), ILO Convention No. 182 (Worst Forms) and ILO Convention No. 138 (Minimum Age) – define child labour in legal terms and provide a framework for efforts against it.

ILO Convention No. 138 (Minimum Age) targets as child labour 1) all forms of "employment or work" carried out by children below a minimum cut-off age (at least 12 years in less developed countries); 2) all forms except "light" employment or work carried out by children below a second higher cut-off age (at least 14 years in less developed countries); and 3) any type of employment or work which by its nature or the circumstances in which it is carried out is likely to jeopardise the health, safety or morals of young persons below the age of 18 years.

ILO Convention No. 182 (Worst Forms) targets as worst forms of child labour (a) All forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict; (b) The use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances; (c) The use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in the relevant international treaties; (d) Work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children.

The *UN Convention on the Rights of the Child (CRC)* recognises the child's right to be protected from forms of work that are likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development. In order to achieve this goal, the CRC calls on States Parties to set minimum ages for admission to employment, having regard to other international instruments.

in family settings and second relating to work outside the System of National Accounts (SNA) production boundary (see Box 2 for explanation of terminology).

8. While children's family-based economic activity is included in most published estimates of child labour, family-based work (work by unpaid family members) is often excluded from labour legislation at the country level and therefore not covered by minimum age rules.¹ This suggests that many countries perceive work performed by children within the family unit as different from children's productive activities performed outside the family, and raises the question of whether this perceived difference should also be reflected in any statistical measure of child labour.

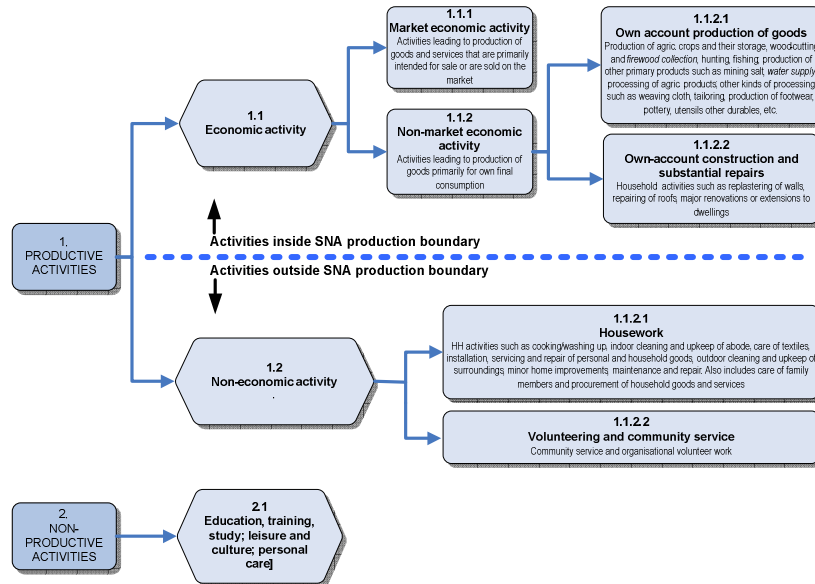
9. Separately, there has been concern expressed among some actors against child labour, including UNICEF, that non-economic activities (principally household chores within the child's own family) – currently excluded from most statistical measures of child labour – might in some cases involve safety and health hazards or hinder schooling in a similar way to economic activity. Hence there is also question as to whether non-economic activity should be considered in child labour measurement and, if so, under what conditions or beyond what time threshold.

¹ Unlike some earlier ILO Conventions on minimum age, C138 does not explicitly exclude family undertakings from its scope, but allows a State to exclude specific categories (such as family undertakings) from its scope of application as long as the work done is not hazardous (Article 4 of C138). However, "home work" as such is covered by national legislation in some countries (not necessarily the general labour law) and is subject of a special ILO Convention (No.177).

Box 2. A note on terminology

In this study, productive activities are defined as all activities falling within the general production boundary, i.e., all activities whose performance can be delegated to another person with the same desired results. This includes production of all goods and the provision of services to others within or outside the individual's household.

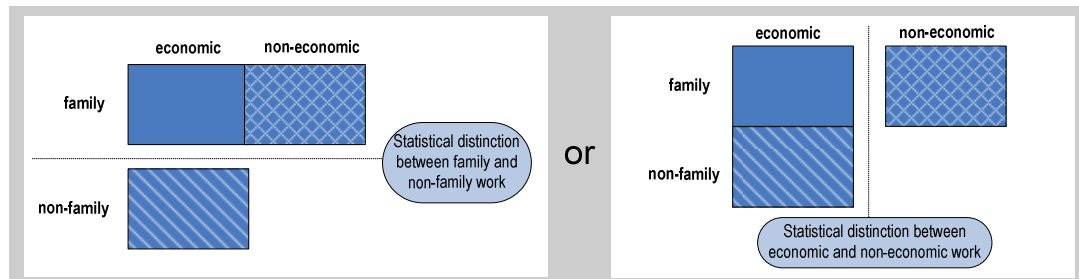
The study distinguishes between two broad categories of productive activity— economic activity and non-economic activity. The definition of **economic activity** used in the study derives from the System of National Accounts (SNA) (rev. 1993), the conceptual framework that sets the international statistical standards for the measurement of the market economy. It covers all market production and certain types of non-market production, including production of goods for own use. **Non-economic activity** is defined as any productive activity falling outside the SNA production boundary. It consists mainly of work activities performed by household members in service to the household and its members.



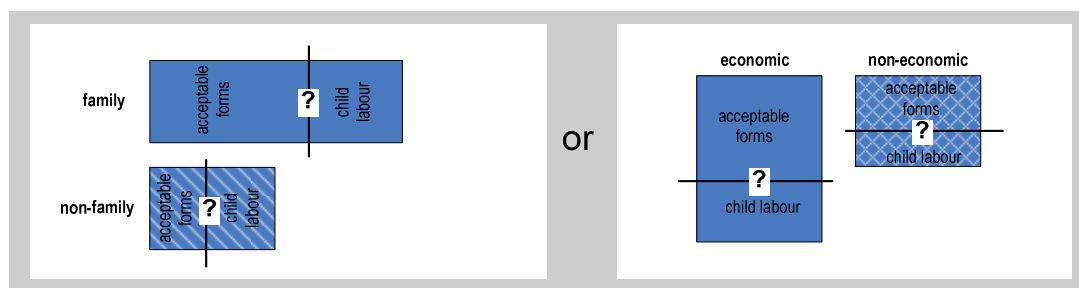
A distinction is also drawn between **family** and **non-family** productive activity. The former refers to all forms of productive activity that takes place within a family setting, independent of whether it is economic or non-economic in nature. The latter refers to productive activity located outside the family, and is economic in nature.

Figure 1. Children's productive activities and child labour measurement

(a) Categorising children's productive activities for the purposes of child labour measurement



(b) Drawing statistical distinctions between acceptable forms of work and child labour within categories of children's productive activities



10. Underlying these questions are two alternative ways forward in terms of developing a child labour measure – one based on a statistical distinction between productive activity located inside and outside the family (as is common in national legislation relating to child labour), and the other based on a statistical distinction between economic and non-economic productive activity (as is common in published statistics on child labour) (Figure 1a). Whichever approach is selected, child labour measurement requires drawing

a second statistical distinction between acceptable forms of work and child labour *within* each category of children’s productive activity (Figure 1b). As explained in further detail in Section 4 of this report, the first approach would entail applying different criteria to family and non-family productive activities in distinguishing acceptable work by children from child labour, while the second approach would entail applying different criteria to economic and non-economic productive activities in distinguishing acceptable child work from child labour.

11. Which of the two approaches are most relevant for child labour measurement? The answer depends in large part on the extent to which the broad distinctions between family/non-family or economic/non-economic work reflect underlying differences in the nature, intensity and impact of work performed by children. If, for example, it could be shown that non-family work is significantly more harmful to health and/or education than family work, a case could be made for treating the two work settings differently for the purposes of child labour measurement. Likewise for economic and non-economic activity. The next section looks in detail at children’s productive activity in an attempt to address these issues.

3. CHILDREN’S PRODUCTIVE ACTIVITY

3.1 Level of child involvement in productive activity

12. Table 1 illustrates the wide variety of possible estimates of child involvement in productive activity depending on the criteria applied. Looking only at child involvement in economic activity for at least one hour per week – the most commonly-used measure of children’s work – yields an estimate of 52 percent. But if children performing non-economic activity are also considered, the estimate rises to 81 percent. Restricting our focus only to productive activity performed outside the household (and staying with the one-hour threshold) would yield an estimate of only 5 percent. Applying a slightly higher hours threshold, e.g., of one hour per day rather than one hour per week, would yield sharply lower estimates of children’s work in some categories (non-economic and family activity) but have little effect on estimates in others (economic and non-family activity). Only about one-fifth of children can be considered non-working, i.e., performing less than one hour of work per week in any category (Table 3).

Table 1. Measuring child involvement in productive activity (% children aged 7-14), by hours thresholds

Hours threshold	Distinction by technical nature			Distinction by work setting		
	Economic	Non-economic	Total ^(a)	Family ^(a)	Non-family	Total ^(b)
≥1	52.3	79.3	81.3	76.2	5.1	80.8
≥7	50.3	56.2	69.7	65.4	4.8	68.5
≥14	40.7	16.7	45.9	47.8	3.9	48.6
≥21	23.4	3.0	25.2	36.9	2.9	37.0
≥28	16.5	1.0	17.1	25.4	2.2	25.5

Notes: (a) "Total" refers to the % of children performing economic and/or non-economic activity for each hours threshold; (b) "Total" refers to the % of children performing family and/or non-family activity for each hours threshold.

Source: UCW calculations based on *Cambodia Child Labour Survey, 2001*

13. But the divisions between economic/non-economic productive activity or alternatively between family/non-family productive activity are not clear cut, as children can be involved in different categories of productive activity at the same time. Of all children performing economic activity, for example, 95 percent are also spending at least some time each week performing non-economic activities. Similarly, of all children performing non-family work, 90 percent are also involved in some work activities each week within their families. This introduces another question in terms of measurement – the combinations of work intensity that should be selected when measuring the work involvement of children whose work crosses the economic/non-economic or family/non-

family boundaries. Children’s involvement in productive activity by different hours combinations is shown in Table 2.

Table 2. Measuring child involvement in productive activity (% children aged 7-14), by combinations of hours in economic/non-economic activity and in family/non-family activity

		Distinction by technical nature of work						Distinction by work setting							
		0	≥1	≥7	≥14	≥21	≥28	Family	0	≥1	≥7	≥14	≥21	≥28	
Eco.	Non-eco							Non-family							
	0	18.7	29.1	18.7	4.5	1.1	0.4		0	18.7	76.2	65.4	47.7	36.8	25.4
	≥1	2.0	50.2	37.5	12.2	2.0	0.6		≥1	5.1	4.6	3.1	0.8	0.1	0.1
	≥7	1.9	48.3	36.7	12.1	1.9	0.6		≥7	4.7	4.2	2.9	0.8	0.1	0.05
	≥14	1.5	39.2	31.1	11.5	1.8	0.6		≥14	3.8	3.4	2.5	0.8	0.1	0.05
	≥21	1.0	22.4	18.3	7.9	1.2	0.4		≥21	2.8	2.5	1.9	0.6	0.1	0.03
	≥28	0.7	15.8	12.8	6.0	0.9	0.4		≥28	2.1	1.8	1.5	0.5	0.1	0.03

Source: UCW calculations based on Cambodia Child Labour Survey, 2001

14. This brief discussion illustrates that the measurement of children’s involvement in productive activity also depends on decisions relating to which categories (or combinations of categories) of productive activity and which hours thresholds are considered. On what basis should such decisions be made? The answer of course depends on what specifically one is attempting to measure. If the objective, for example, is to measure children’s contribution to national output, then the estimate could be limited to children’s involvement in activities falling within the SNA production boundary, regardless of the setting of these activities. Similarly, if the objective is to measure children’s participation in the formal labour force, the estimate could centre on children’s involvement in economic activities falling within the formal sector. But the purpose here is quite different – to measure children’s involvement in the subset of productive activities that is injurious, negative or undesirable, i.e., children’s involvement in productive activities constituting child labour according to the international conventions and to national legislation. For this purpose, additional information is needed on the nature, intensity and above all the impact of children’s work.

3.2 Family and non-family work

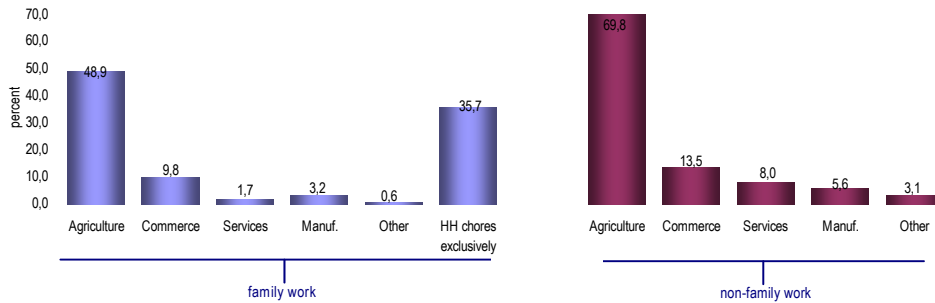
15. The distinction between family and non-family productive activity comes up frequently in national labour legislation, and in discussions surrounding the concept of child labour. While children’s family-based economic activity is included in most published estimates of child labour, family-based work is not always included in child labour legislation at the country level. This section examines differences between family and non-family work in terms of nature, intensity and impact in attempt to address whether the family/non-family distinction is relevant for the purposes of child labour measurement.

16. Figure 2 breaks down family and non-family work by specific work sector/type. At first glance, it suggests important differences in the composition of children’s work in the two settings. Work within the family setting is concentrated mainly in two areas – household chores and agriculture – while work outside the family is mainly in agriculture. But when looking at family work, an additional sub-distinction between economic work and non-economic work (i.e., household chores) is also important.² When household chores are excluded from consideration, the composition of family and

² As explained in Box 2, family work cuts across the SNA production boundary, consisting of both productive activity that is economic in nature and productive activity that is non-economic in nature. Non-family work, on the other hand, falls only within the SNA production boundary, i.e., is only economic in nature.

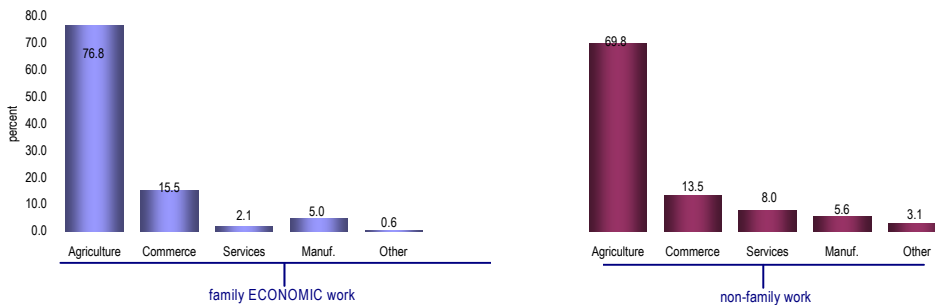
non-family work is surprisingly similar (Figure 3). This suggests that in terms of the composition of children’s work, the most relevant distinction is not between family and non-family work, but rather between economic (regardless of its setting) and non-economic work.

Figure 2. Main types of family and non-family work performed by children



Source: UCW calculations based on Cambodia Child Labour Survey 2001.

Figure 3. Main types of family and non-family ECONOMIC activities performed by children



Source: UCW calculations based on Cambodia Child Labour Survey 2001.

17. Work intensity is important as an indirect measure of work impact, as longer hours mean less time for school and greater total exposure to any hazards or health threats in the workplace. How does family and non-family work differ in terms of work intensity? Children performing family-based work activities put in an average of 21 hours per week on these activities, while children involved in non-family work activities spend an average of 25 hours performing them. The distribution of family and non-family work by working hours is shown in Figure 4. But it should be kept in mind that these time estimates reflect differences in hours spent in the two work settings, not differences in the working hours of individual children, some of whom work in both settings.

18. Another way of looking at work intensity is to divide children into those performing only family work, those performing only non-family work and those performing both. Looked at this way, differences in the intensity of family work and non-family work are sharper: children performing only non-family work log 7 more hours of work each week than their counterparts performing only family work (Table 3).

Figure 4. Distribution of working hours by working setting^(a)



Notes: (a) Density distribution of the variable "hours", calculated through a kernel density estimator $\hat{f}(x) = \frac{1}{n} \sum_{i=1}^n K\left(\frac{x-x(i)}{h}\right)$ where K is a Gaussian Kernel

Source: UCW calculations based on Cambodia Child Labour Survey, 2001

Table 3. Average weekly working hours by work setting, age and sex

Child age in years	Children working only in family work			Children only in non-family work			Children working in family <u>and</u> non- family work		
	male	female	Total	male	female	Total	male	female	Total
7	15.7	14.2	14.9	7	7	7	27	24.7	25.9
8	16.4	16.5	16.4	8.4	6.3	7.7	25.5	27.4	26.4
9	17.3	17.6	17.5	41.3	25.5	31.9	26.8	26.1	26.5
10	21	19.5	20.2	26.6	20.3	23.7	29	28.4	28.7
11	22.2	22.4	22.3	54.6	24.7	51.6	30.2	31	30.6
12	24.1	25	24.6	20.6	36.1	33.4	32	31.2	31.6
13	27.7	25.1	26.4	32.9	62.5	35.4	34	33.1	33.5
14	27.8	30.4	29	34.8	57.4	46	34.6	37.8	36.1
Total	22	21.7	21.8	29.1	34.4	31.3	30.7	30.9	30.8

Source: UCW calculations based on Cambodia Child Labour Survey, 2001

19. But the total time spent in family work masks large differences in work intensity between family economic activity and household chores. The former is performed for an average of 21.2 hours per week and latter for only 9.5 hours. The difference in work intensity between family and non-family work falls to about 4 hours per week, or about 34 minutes per day, when household chores are eliminated from consideration (Table 4). In terms of work intensity, therefore, the most relevant difference appears to again be between economic activity (regardless of its setting) and household chores. The work load of a child performing economic activities seems to be very similar whether it is performed within or outside the family. This is not surprising if we think that children performing economic activities in a family setting are involved in activities similar to those of the children working outside of the family (see above).

Table 4. Average weekly working hours in economic activity, by work setting

Child age in years	Children in family economic activity			Children in non family economic activity		
	Male	female	Total	male	female	Total
7	17.7	16.7	17.3	20.7	10.4	17.7
8	18.1	18.6	18.4	12.4	18.1	14.5
9	19.5	17.5	18.5	19.7	17.2	18.5
10	19.9	19.5	19.7	22.3	17.9	20.2
11	20.7	21.0	20.9	30.4	29.5	30.1
12	23.0	21.3	22.1	23.3	22.1	22.6
13	24.3	22.1	23.3	29.2	31.8	30.6
14	24.3	25.8	25.0	29.4	38.8	33.3
Total	21.5	20.9	21.2	24.7	26.2	25.4

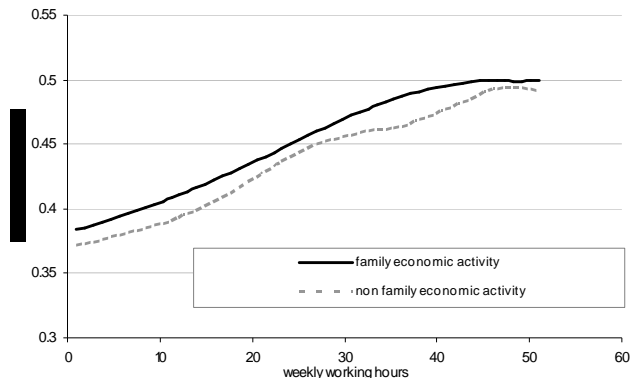
Source: UCW calculations based on Cambodia Child Labour Survey, 2001

20. Of greatest significance for child labour measurement purposes is the question of whether there are differences between family and non-family work in terms of *impact* on health and education outcomes. Rather than looking at indirect measures (like type of work and intensity), it would in principle be better to directly assess the impact of child labour on education outcomes and health. Unfortunately, it is difficult to definitively address the issue of impact in the absence of additional data. In what follows, we present the evidence that can be extracted from the existing available information.

21. Looking first at health, a complete examination of differences in the health impact of family and non-family work is not possible because, among other things, there are no data concerning the health impact of work for one important category of family workers – those only performing non-economic activity (i.e., only household chores). But data do permit an examination of the correlation between health status and family and non-family *economic* activity. These data do not support the conventional wisdom that the family is a safer work setting. Indeed, the incidence density³ of work-related ill-health or injury is considerably higher for children in family economic activity (2.1) compared to children in non-family economic activity (1.3) in Cambodia.

22. Simple kernel regressions offer another tool for looking at the differences in the health impact of economic activity conducted within and outside the family. Although kernel regressions essentially constitute reduced form estimates, subject to change if the underlying structure changes, in a separate empirical paper it is shown that in the case of Cambodia they are consistent with more complex causal estimates (UCW, 2004). Results of the kernel regression estimates, shown in Figure 5, also suggest that children in family economic activity face a greater risk of ill-health/injury than their counterparts in non-family economic activity at any given level of work intensity.

Figure 5. Probability of work-related ill-health/injury, by hours in family and non-family economic activity



Source: UCW calculations based on *Cambodia Child Labour Survey, 2001*

23. But these results do not necessarily imply that children in family economic work face a greater *absolute* risk of work-related ill-health or injury, for two reasons. First, while family work appears by its nature to be riskier, this risk is to some degree offset by the fact that children in family work are less exposed to risk, i.e., that family economic work is performed for fewer hours on average each week than non-family economic work, as seen above. Second, in a separate empirical paper, evidence is presented suggesting that

³ To take occurrence as well as exposure into consideration, a standard *incidence density* is computed as follows:

$$\text{Incidence Density} = \frac{\text{children injured during a specified period of time}}{\text{total person time}}$$

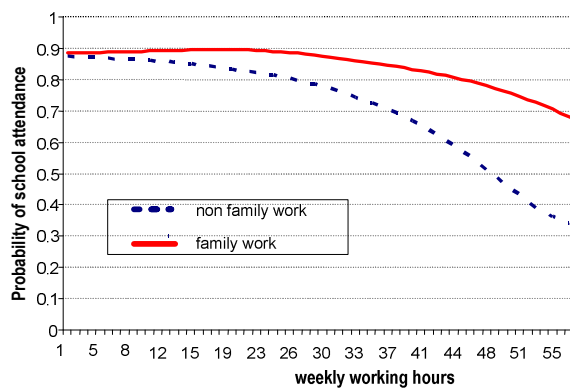
where “total person-time” is cumulated exposure for all the individuals considered. In our case, it is defined as average weekly working hours multiplied by the number of weeks worked during the reference period (assumed to be one year).

the nature of injuries and/or ill-health associated with family economic work are less severe than those associated with non-family economic work (UCW, 2004). Nonetheless, the empirical evidence offers no basis for concluding that family-based workers enjoy greater work protection or safety. This finding is relevant in light of the fact that family work is excluded from consideration in child labour legislation in Cambodia (and in many other national contexts) at least in part because work in the family environment is thought of as being less hazardous.

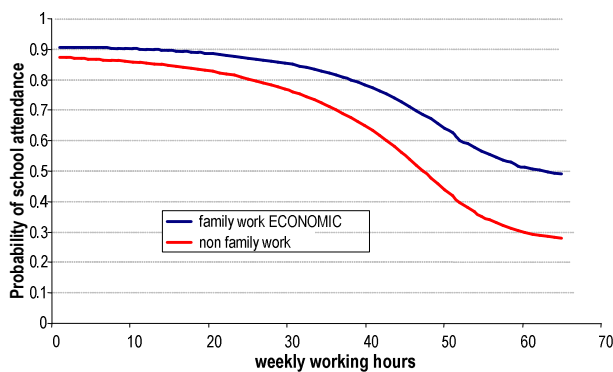
24. Turning to education, establishing a strict *causal* relationship between work and school attendance is not possible because of the absence of panel or retrospective data for Cambodia.⁴ But again kernel regressions can be used as a synthetic tool to examine the probabilistic link between work and school attendance.⁵ Empirical evidence based on kernel regressions indicates that non-family work is associated with a lower likelihood of school attendance than family work at every level at any given level of work intensity, and that the difference increases with working hours (Figure 6a). They also show that additional hours of family work appear to have no impact on school attendance up to about the 25 hours threshold, while additional time in non-family work affects school attendance even at very low hours levels.

Figure 6. Probability of school attendance by working hours, kernel regression results

a. Family and non-family work



b. Family economic and non-family work



Source: UCW calculations based on Cambodia Child Labour Survey, 2001

⁴ Establishing causality is complicated by the fact that child labour and school attendance are usually the result of a joint decision on the part of the household, and by the fact that this decision may be influenced by possibly unobserved factors such as innate talent, family behaviour and or family preferences. This means that on the basis of cross-sectional data alone it is difficult to know, for example, if it is low talent that induces a child not to go to school and hence start to work, or if it is the preference or need to work that then induces a child to drop out of school. The use of panel data can help to address at least some of these issues and to get firmer results in terms of causality. For further details, refer to UCW Project, *Child Labour and Education For All: An issues paper*, draft discussion paper, Rome, October 2006.

⁵ Again, however, it should be kept in mind that kernel regressions are suitable for describing the probabilistic link between variables, but cannot be used to derive strict causal relationships and must therefore be interpreted with care.

25. However, if we look at the economic activities only (Fig. 5b), the difference between family and non family based work becomes smaller, again suggesting that the nature of the work might be more relevant than the setting. Unfortunately, the available data do not allow us to draw any more precise conclusion.

26. What then can be concluded concerning the relevance of a measurement approach based on the family/non-family distinction? Such an approach would stress that it is the setting of work, rather than its nature that is relevant for identifying activities harmful to children. It is intuitively appealing to assume that working with parents or relatives is less “damaging” than working outside the family. This possible effect, however, even if it were present, seems to be outweighed by the effects of the nature of the work. In fact, the empirical evidence presented above concerning work composition, intensity and impact does not, on balance, indicate the family/non-family distinction is relevant for the purposes of child labour measurement.

27. The differences in the composition and the intensity of family and non-family work primarily reflect underlying differences between economic activity and household chores performed *within* the family. And, while there is some evidence suggesting that family poses a lesser obstacle to school attendance, there is no evidence that work within the family is less hazardous than work outside it. Indeed, if anything, the evidence points in the opposite direction. It is also worth noting that the technical distinction between family and non-family work is not as clear-cut as it at first seems. Many forms of work common among children fall in a grey area between the family and non-family categories. Consider, for example, production of goods outsourced to the family or work in small business, even if carried out under the supervision of parents or relatives, it is difficult to imagine that they are carried out with modalities substantially different than if the child were working under the supervision of non family members.

3.3 Economic and non-economic productive activity

28. A statistical distinction between work that is economic and non-economic in nature offers an alternative way forward in terms of child labour measurement. This distinction has been used in most estimates of child labour produced by international agencies, governments and individual researchers. For example, ILO has included in the global estimates only children economically active, UNICEF includes in child labour estimates children economically active plus children involved beyond a certain number of hours in non economic activities. Again, the relevance of such a distinction for measuring child labour rests on the degree to which it reflects underlying differences between economic and non-economic work in terms of their specific nature, intensity and impact. The distinction also rest on the implicit, but consolidated, interpretation of the international and national legislation concerning child labour. The current section looks at how economic and non-economic activity differ in the areas indicated above, in order to provide evidence on the nature and relevance of the distinction between economic and non economic activities.

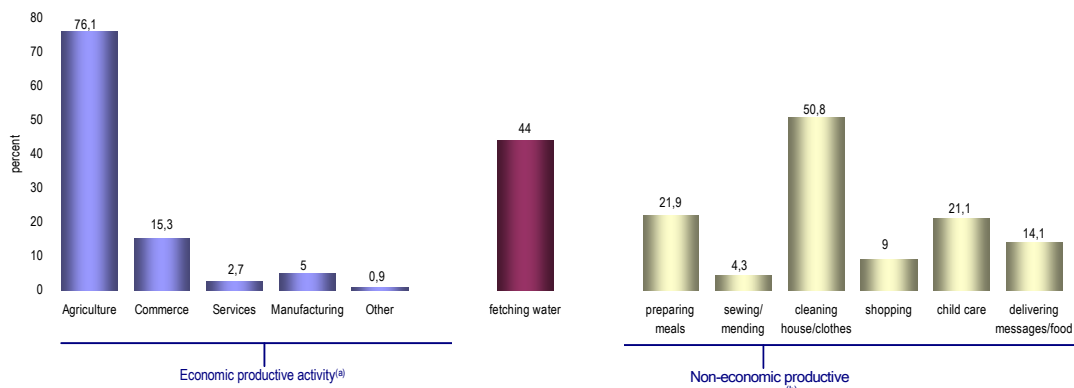
29. Household chores are part of the normal activities of family members and hence also of children. Participation to household chores is in fact often seen as beneficial for children’s upbringing. However, evidence in Cambodia and in other countries indicates that if performed for long hours such activities are detrimental to children education⁶ especially for girls. This offer a strong rationale (based also on the CRC convention) to

⁶ - For a detailed discussion refer to UCW (2005) <http://www.ucw-project.org/pdf/publications/noneconomicactivities2.pdf>

include in the statistical standard of child labour also children performing household chores to an extent that is damaging for their education. Of course, household chores that are harmful to children’s health should also be included, but unfortunately we have at present too little information to go beyond a statement of principle.

30. The technical distinction between economic and non-economic activities was described in detail in Box 2. Economic activities involve the production of goods and services for sale on the market and the production of goods for own consumption, and can be located either inside or outside the family. Non-economic activities refer to the production of *services* for own consumption, and comprise primarily household chores performed one’s own household.⁷ Figure 7 illustrates the composition of children’s economic and non-economic productive activity in Cambodia. Agriculture constitutes by far the most important form of economic activity, while common non-economic activities include cleaning, meal preparation and child care.

Figure 7. Main types of economic and non-economic productive activities performed by children



Notes: (a) Categories are distinct; (b) Categories are not distinct.

Source: UCW calculations based on Cambodia Child Labour Survey 2001

31. One grey area in terms of the distinction of between economic and non-economic activity lies in the categorisation of water fetching (and fuel wood collection⁸). These activities constitute production for own household consumption and technically fall within the SNA production boundary (see Box 2), meaning that they are economic rather non-economic in nature. But the dividing line between economic and non-economic in cases such as this is thin. Water supply and fuel wood collection are rarely reflected in published estimates of child economic activity and are typically excluded from mention in national child labour legislation. The Cambodia Child Labour Survey (CCLS 2001), like most national household surveys covering child labour, collected information on water supply as part of non-economic activity.

32. The classification of water fetching and fuel wood collection has important implications for child labour measurement, and the issue is discussed in detail in Section 4 of this report, where different estimates of child labour are presented according to different classification of water collection.

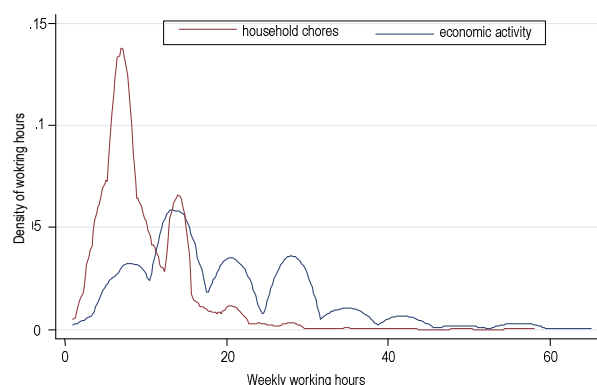
33. The level of work intensity, again an important indirect measure of work impact, is very different for economic and non-economic activities. Children performing economic activities put in an average of 22 hours per week on these activities, while children involved in non-economic activities spend an average of only 9 hours performing them.

⁷ The terms “household chores” and “non-economic activity” are used interchangeably in the remainder of this study.

⁸ But information on the latter is not available for Cambodia.

As shown in Figure 8, the largest cluster of non-economic work is around 7 weekly hours, while the largest cluster of economic activity is around 17 weekly hours. The differences in work intensity are even starker when comparing children performing only economic activity, those performing only non-economic activity and those performing both.⁹ The first group works an average of 25 hours per week and the second only an average of 8 weekly hours (Table 5). The third group, i.e., those combining both work activities, logs an average of almost 31 weekly hours, of which economic activity accounts for 21.4 of the total hours and non-economic activity the remaining 9.4 hours.

Figure 8. Distribution of weekly hours of economic and non-economic activity



Source : UCW calculation based on *Cambodia Child Labour Survey, 2001*

Table 5. Average weekly working hours by work category, age and sex

Child age in years	Children working only in economic activity			Children only in non-economic activity			Children working in both economic and non-economic activity		
	Male	female	Total	male	female	Total	male	female	Total
7	14.7	18.3	16.1	6.7	7.2	7.0	27.0	24.7	25.9
8	15.5	13.8	14.8	7.3	7.1	7.2	25.5	27.4	26.4
9	27.0	16.1	22.1	7.0	7.5	7.2	26.8	26.1	26.5
10	22.5	16.2	20.2	7.6	8.1	7.9	29.0	28.4	28.7
11	27.1	13.9	22.8	8.2	8.4	8.3	30.2	31.0	30.6
12	24.2	33.9	28.6	8.9	9.5	9.2	32.0	31.2	31.6
13	36.2	31.9	35.2	9.6	9.9	9.7	34.0	33.1	33.5
14	35.3	55.1	40.7	9.7	11.3	10.5	34.6	37.8	36.1
Total	26.0	23.5	25.1	8.0	8.4	8.2	30.7	30.9	30.8

Source: UCW calculations based on *Cambodia Child Labour Survey, 2001*

34. Of most relevance for the purposes of child labour measurement is again the question of whether there are differences between economic and non-economic activity in terms of their *impact* on children's health and education outcomes. Looking first at health, questions concerning work-related injury/illness were addressed only to children involved in economic activity in ICLS 2001, meaning that there are no data on injury/illness for the group of children performing household chores only. It is nonetheless possible to assess whether time in household chores have a different impact on health than time in economic activity for the group of children that perform both activities. This question is looked at in Table 6 by means of a logistic regression. The results indicate that while hours in economic activity significantly affect the probability of ill health, hours logged in household chores do not.¹⁰

⁹ It should again be kept in mind that there are two ways of expressing work intensity. The first reflects differences in hours spent in the two work categories, not differences in the working hours of individual children, many of whom work in both economic and non-economic activity. Second looks at the working hours of children in the three mutually-exclusive categories – those performing economic activity only, those performing household chores only and those performing both.

¹⁰ Other more complex non-linear specifications yielded similar results. For further details, see UCW Project, *Towards statistical standards for children's non-economic work: A discussion based on household survey data*, UCW working paper, Rome (2005) available at www.ucw-project.org.

Table 6. Impact of hours in economic activity and household chores on work-related injury/illness, marginal effects after logistic regression

Variable	dy/dx	z
Child age	-.0271955	-1.28
Child age squared	.0013865	1.39
Female ^(a)	.0012855	0.12
Works in agriculture ^(b)	.0606149	1.60
Works in commerce ^(b)	-.1139253	-3.07 ^(c)
Works in services ^(b)	-.057564	-1.23
Works in manufacturing ^(a)	-.0674971	-1.61
Education level of household head	-.0152067	-1.87
Child education level	-.0100756	-0.70
Rural resident ^(a)	-.033081	-2.69 ^(c)
Household expenditure ^(b)	.0013407	0.17
Working hours in economic activity	.0034228	6.64^(c)
Working hours in non-economic activity	-.0008014	-0.72

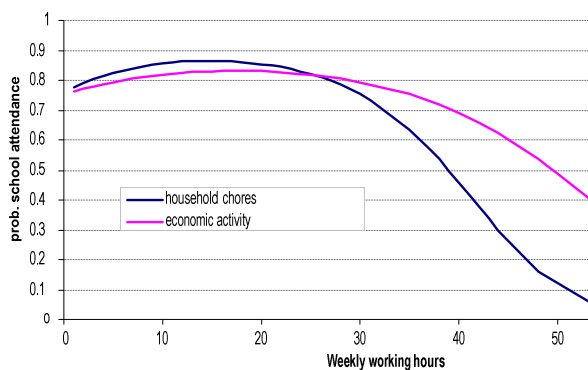
Notes: (a) dy/dx is for discrete change of dummy variable from 0 to 1; (b) Expressed as logarithm of household expenditure (c) Statistically significant at five percent level.

Source : UCW calculation based on Cambodia Child Labour Survey, 2001

35. There are several possible reasons for this outcome, two of which seem most relevant. The first is sample limitation. The question about the occurrence of injury/illness is asked only to children working in economic activity, and is formulated in a way that seems to refer to events linked to work performed in economic activity. This could obviously lead to underestimation of the effects of non-economic activity. The second reason is that children engage relatively few hours in non-economic activity - the vast majority of children less than 2 hours per day. It may not be possible therefore, to observe children working long enough hours in non-economic activity for health damage to result.

36. Turning to education, establishing a strict *causal* relationship between work and school attendance is also not possible because of the absence of panel or retrospective data for Cambodia, as discussed above. Empirical evidence based on kernel regressions is shown in Figure 9.¹¹ Regression results indicate that in the case of children performing only non-economic activity, there is apparently no link with school attendance below about 20 hours per week. Above this threshold, longer working time is associated with reduced school attendance. Similar results are obtained for children working only in economic activities. Again, no association with school attendance at low levels of working time is observed, and a negative association only appears above 30 working hours per week.

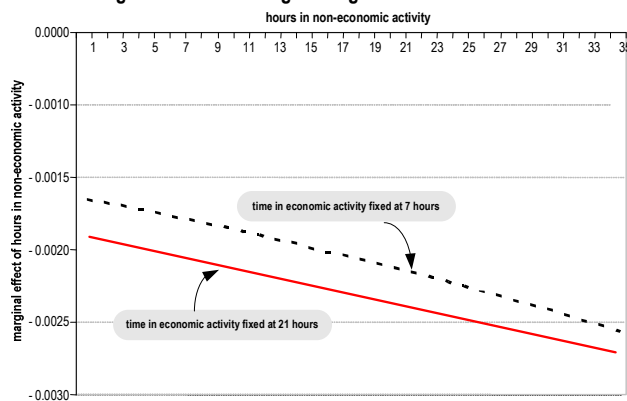
Figure 9. Probability of school attendance by hours in non-economic activity and economic activity only, kernel regression results



¹¹ It should be recalled that kernel regressions can be used as a synthetic tool to examine the probabilistic link between work and school attendance, but cannot be used to derive strict causal relationships. Kernel regression results must therefore be interpreted with care.

37. But isolating the impact of economic activity on school attendance is complicated by the fact that most economically-active children also perform household chores (although the latter activities account for only a small part of their total work time). This means that for the group of children in economic activity, it is important to look at the *composition* as well as the intensity of work. This issue is addressed in Figure 9, which shows the impact of additional time in household chores at any given level of economic activity, making use of a logistic regression. It appears that hours spent in non-economic activity add little to the probability of not attending school with respect to hours spent in economic activities, regardless of the intensity with which economic activity is performed. For economically-active children, therefore, it is their time in economic activity rather than their time in household chores that is relevant in terms of school attendance.

Figure 10. Impact of additional time in non-economic activity at any given level of time in economic activity,^(a) marginal effects after logistic regression



Notes: (a) Weekly time levels in economic activity depicted here are 7 and 21 hours; however, estimations at other weekly time levels (i.e., 1 hour, 14 hours, 28 hours and 35 hours) yielded similar results.

Source: UCW calculations based on *Cambodia Child Labour Survey, 2001*

38. What can be concluded from the preceding discussion concerning the relevance of a measurement approach based on the distinction between economic and non-economic activity? The limited available empirical evidence relating to work composition, intensity and impact offer a number of grounds for proceeding on the basis of this distinction. Non economic activities (household chores), if performed beyond a certain limit, are detrimental to children's education. Economic and non-economic activities, however, vary considerably in terms of the actual work tasks they entail for children. They also differ dramatically in terms of the time burden they place on children – children spend on average over twice as much time in economic activity than in household chores each week. Empirical evidence on impact, though limited, also points to important differences between the two types of work. Time in household chores appears to have little additional impact on either injury/illness or school attendance vis-à-vis time in economic activity among (the majority of) working children performing both work types. There is also an important non-empirical motive for drawing this distinction: household chores are much more commonly perceived as a normal and even beneficial part of childhood in the Cambodian cultural context.

4. MEASURING CHILD LABOUR

39. Three international conventions are of particular relevance as a guide to the statistical measurement of child labour: ILO convention No. 138, ILO Convention No. 182 and the United Nations Convention on the Rights of the Child (CRC) (see Box 1). In what follows, we try to clarify how these international conventions can help defining statistical criteria for the measurement of child labour for three separate age groups: 5-11 year-olds; 12-13 year-olds; and 14-17 year-olds.

4.1 Measuring child labour among 6-11 year-olds¹²

40. ILO Convention No. 138 (C138) is a good starting point for a discussion on the quantification of child labour in the Cambodian context. C138 calls on State Parties to set a minimum age for admission to “work or employment”; it does not rule out *a priori* any specific form of productive activity from consideration. The general minimum age in Cambodia is set at 14 years and the absolute minimum working age at 12 years.¹³

41. How could child labour be measured in accordance with C138 for children under the absolute minimum working age of 12 years? The most obvious answer would be to simply include all children spending non-negligible amounts of time each week in any form of productive activity.¹⁴ But such a broad definition would lead to the inclusion of forms of work that are not damaging to children and that could even be beneficial to them. This would in turn translate into an estimate of child labour that would not constitute a relevant policy target. Indeed, almost all Cambodia children aged 6-11 years would be counted as child labourers were such an expansive definition used (see Table 7). In measuring child labour, decisions are therefore first needed concerning the work categories that should fall within the minimum age rules contained in C138. (It should be again recalled that *legal* decisions in this regard rest largely with Member States within the parameters set out in C138 and are beyond the scope of this paper.)

42. But C138 is not of course the only international labour standard relating to child labour. Two others – ILO Convention No. 182 (C182) and the United Nations Convention on the Rights of the Child (CRC) – are of particular relevance. These standards contain two important additional elements pertinent to measurement. First, in C182, the definition of “worst forms of child labour,” includes activities such as child trafficking, child soldiering, commercial sexual exploitation or use in illicit activities that extend beyond the realm of traditional productive activity captured in C138. But forms of activities such as these present special measurement challenges, and are beyond the scope of the current paper.¹⁵ Second, and of particular significance for measurement, the notion is introduced in CRC of educational harm as a criterion for child labour. Specifically, CRC requires a child to be protected from performing any work that, *inter alia*, is “likely to be hazardous or to interfere with the child’s education.”¹⁶ These

¹² The lower age limit of six years to coincide with the school starting age and because of limited observations for five year-olds.

¹³ Cambodia set the minimum age at 14 years, using the option for developing countries; “light work”, which is not harmful and does not hinder education, could be allowed as from 12 years of age.

¹⁴ Set here at one hour per week, in line with the international definition of adult employment.

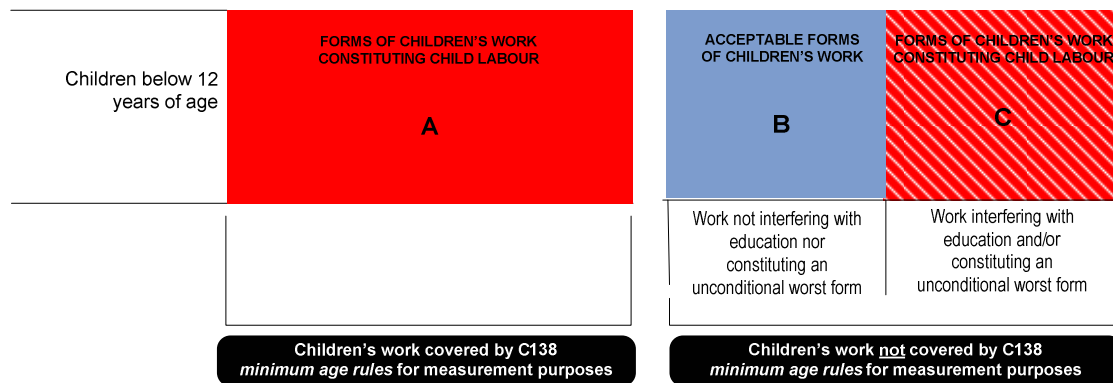
¹⁵ The term “unconditional worst forms of child labour” is sometimes used to refer to those listed in Convention No. 182, Article 3(a) to (c), which do not require any further national determination of whether or not to include them in worst forms of child labour. As such, they do not pose a problem of definition but rather one of measurement. This measurement issue is not addressed in the paper.

¹⁶ C182 targets as a worst forms of child labour, *inter alia*, productive activity “which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children” (C182, Art. 3 (d)) It is for each country to determine nationally the exact list of what to be prohibited for under-18 as this so-called “hazardous work”. This is also a question of fixing the minimum age of 18 years for hazardous work under C138. The CRC recognizes the right of the child to be protected from performing any work that is “likely to be hazardous or to interfere with the child’s education, or to be harmful to the child’s health or physical, mental, spiritual, moral or social development” (CRC, Art. 32.1).

stipulations mean that even if a particular category of children’s productive activity were excluded from the minimum age rules of C138, it could still constitute child labour if it were impermissible in accordance with C182 and CRC.

43. In order *not* to be considered child labour for measurement purposes, in other words, children’s work must pass a double screening: first it must be excluded from minimum age rules (C138) and second it must not be harmful to education or constitute an unconditional worst form (CRC and C182). Referring to Figure 11, the first screen involves identifying which categories of children’s work fall within area A, while the second screen involves identifying other impermissible work from among the work categories activities excluded from area A, i.e. distinguishing area B from area C.

Figure 11. Distinguishing child labour from other categories of children’s work, children aged less than 12 years



44. The first screen relates directly back to the discussion in the previous sections in terms of which broad categorisations of children’s productive activity make most sense for the purposes of child labour measurement. Specifically, the question of whether a statistical distinction should be made between economic/non-economic work, or alternatively between family/non-family work, is essentially a question of which work categories should be measured using the C138 minimum age rules, and which work (or activity) categories should be measured only in the light of the additional elements contained in CRC and C182 (again, the scope of application of *legal* provisions in this regard is a separate discussion).

45. The discussion presented in the previous sections suggest that an approach based on a statistical distinction between economic and non-economic activity is easiest to justify, as underlying this distinction are important differences in terms of the composition, intensity and impact of work. Children’s involvement in economic activity is less common than non-economic activity, but this work is performed more intensely and with greater apparent consequences for children’s health and safety, arguing for its inclusion under C138 minimum age rules for measurement purposes. Child involvement in non-economic activity, on the other hand, is much more common (indeed, almost universal), but generally performed much less intensely and with fewer apparent adverse effects on health and safety, arguing for its exclusion from C138 minimum age rules for measurement purposes. Applying the stipulations of CRC, however, would mean that children in this latter group would still be in child labour if this non-economic activity interfered with education (i.e., area C in Figure 11).¹⁷

46. Another issue that must be dealt with in measuring child labour is the categorisation of water fetching (and fuel wood collection¹⁸). As noted in Section 3, while these

¹⁷ Or in the unlikely event it constituted an unconditional worst form, as set out in C182.

¹⁸ Information on the latter activity, as mentioned earlier, was not collected in the Cambodia Child Labour Survey (2001) and therefore is not considered in the calculations presented in this section.

activities are technically economic in nature, they are categorised as non-economic activities in most household surveys and in most published estimates of child involvement in economic activity. The implications of water collection categorisation for child labour measurement are clear: following from the above discussion, including water collection as an economic activity means also including it within C138 minimum age rules (i.e., under area A in Figure 11), which in turn means a higher overall number of children in child labour.

47. Where should water collection be placed? For the purposes of an internationally-comparable statistical measure of child labour,¹⁹ it is difficult to come up with a convincing rationale for *not* treating water (and firewood) collection as an economic activity. Technically, this activity constitutes own account production similar to, for example, subsistence agriculture, and therefore falls within the SNA production boundary (see Box 2). More importantly, water collection is performed at a level of intensity and involves a degree of physical exertion that distinguishes it from common household chores such as child care, food preparation and cleaning. In the discussion below, however, child labour estimates are presented using both categorisations of water collection in order to illustrate the importance this issue on the estimates produced.

48. Following the approach set out above, identifying the main components of the child labour population among 6-11 year-olds is a relatively straightforward exercise. For the purposes of measurement, child labourers would comprise *all* children in economic activity (area A in Figure 11) in addition to children performing non-economic activity that interferes with their education (area C in Figure 11).²⁰ The main measurement challenge arising from this approach lies in identifying non-economic activity harmful to education (i.e., distinguishing areas B and C in Figure 11). Empirical evidence suggests that it is the intensity rather than the nature of household chores that is the main determinant of their impact, though this is an area requiring further investigation. Hours thresholds rather than specific work type can therefore be employed to distinguish harmful from benign non-economic activity for measurement purposes.

Table 7. Estimates of child labour among children aged 6-11 years, by measurement approach

Classification of water collection	(A) Child involvement in economic activity		(B) Child involvement in non-economic activity only, by hours thresholds ^(a)								(A)+(B) Child labour (by hours threshold considered for non-economic activity)							
	No.	%	≥ 7 hrs		≥ 14 hrs		≥ 21 hrs		≥ 28 hrs		≥ 7 hrs		≥ 14 hrs		≥ 21 hrs		≥ 28 hrs	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1 Water collection is classified as a <i>non-economic activity</i>	809030	38.0	357951	16.8	69032	3.2	14631	0.7	5829	0.3	116698 1	54.8	878063	41.2	823661	38.7	814860	38.3
2 Water collection is classified as an <i>economic activity</i> ^(a)	1102532	51.8	164194	7.7	33482	1.6	7494	0.4	3752	0.2	126672 6	59.5	113601 4	53.4	111002 6	52.2	114006 0	52.0

Notes: (a) Only children performing non-economic activity exclusive of economic activity are considered, as those also performing economic activity are already captured under column (A)
Source: UCW calculations based on Cambodia Child Labour Survey, 2001

49. Estimates of child labour for the 6-11 years age group following this approach are presented in Table 7. The results highlight the importance of both the threshold selected for non-economic activity and the categorisation of water collection. With water collection classed as a non-economic activity, child labour estimates vary greatly by time thresholds for non-economic activity, from 38 percent (28-hour threshold) to 55 percent (seven-hour threshold). But with water supply considered as an economic activity, the population of children performing non-economic activity is much smaller and this group therefore has a lesser impact on child labour estimates, particularly at the 7- and 14-hours thresholds (very few children perform non-economic activity beyond 14 hours, regardless of the classification of water collection). Child labour estimates range from 52

¹⁹ Again, *legal* decisions in this regard rest with Member States within the broad parameters set out in C138.

²⁰ Area H, unconditional worst forms, will be discussed separately below.

percent (28-hour threshold) to 60 percent (7-hour threshold) when water is classed as an economic activity.

50. Which of these results constitutes the most plausible child labour estimate?

Answering this question requires decisions regarding water classification and the time threshold for non-economic activity. Regarding water collection, classifying it as an economic activity is both more technically accurate and more reflective of the differences between this activity and common household chores. Regarding the time threshold, the empirical evidence presented in Section 3 suggests that only non-economic activity performed very intensively appears to affect school attendance (see Figure 9), arguing for employing a high weekly threshold of 28 hours beyond which non-economic activity would be considered child labour. Classifying water collection as an economic activity and considering only household chores performed beyond 28 hours yields a child labour estimate of 52 percent.

51. The identification of the more appropriate statistical definition of child labour (within the legal framework set by the international conventions) must balance two needs. On the one hand, to use too broad a definition might define too wide a target group for intervention, from both a political and a social point of view. On the other hand, too narrow a definition might contradict the Government objectives in terms of development strategy. Accumulation of human capital, a healthy and productive work force, promoting gender balance, for example, are all objectives whose achievements could be hampered by too narrow a definition. Sound statistical advice linked to country development strategy will help guiding the selection of the most relevant statistical definition of child labour.

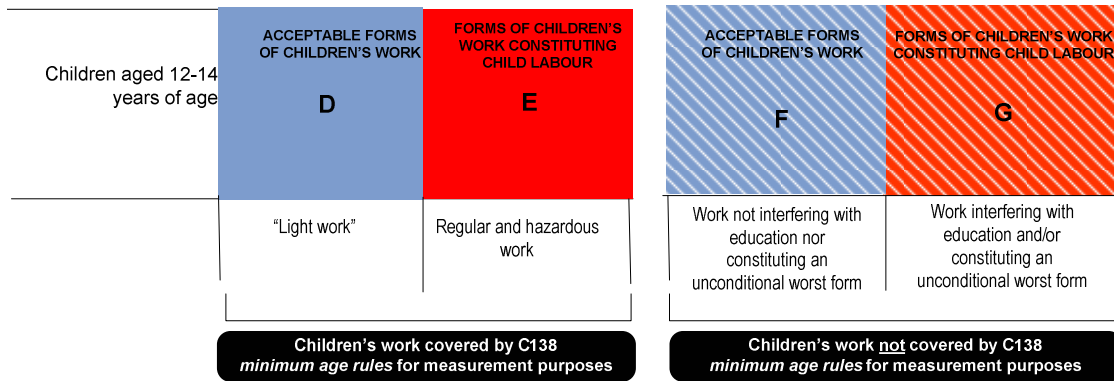
4.2 Measuring child labour among 12-14 year-olds (identifying “light work”)²¹

52. Thus far in the discussion only children below the age of 12 years have been considered. But international labour standards of course also extend to older, 12-14 and 15-17 year old children, although specific legal stipulations in C138 relating to these groups differ from those relating to younger children (Box 1). This sub-section looks at child labour measurement for 12-14 year olds, while the measurement of child labour among 15-17 years age cohort is addressed in the next sub-section.

53. In terms of C138, children under the minimum age cannot be employed or work except for in light work as from the age of 12.: “light work” is defined as “employment or work which is (a) not likely to be harmful to their health or development; and (b) not such as to prejudice their attendance at school ...or their capacity to benefit from the instruction received” (Art. 7). Applying this additional stipulation, and following from the discussion above, the main components of the 12-14 year old child labour population for measurement purposes become all children in “non-light” economic activity (area E in Figure 12) in addition to children performing non-economic activity that interferes with their education (area G in Figure 12).

²¹ According to Cambodian legislation, the general minimum age is 14 years but wage work can only start at 15 years. The age group 12-14 years is employed here to facilitate international comparisons.

Figure 12. Distinguishing child labour from other categories of children's work, children aged 12-14 years



54. Measuring child labour among 12-14 year-olds therefore firstly requires drawing a statistical distinction between “light” and “non-light” economic activity, i.e., distinguishing between areas D and E in Figure 12. As information from CCLS 2001 is insufficient to generate solid conclusions concerning the health consequences of work (see previous discussion), the educational impact of work will be used here as the main criterion for distinguishing light work. But even with this simplification, there are different possible ways forward. The most straightforward approach could be to define the group in non-light work as all children in economic activity *not* attending school, based on the implicit assumption that it is work that is interfering with their school attendance. This approach would yield a non-light work estimate of 12 or 14 percent, depending on the classification of water collection (see previous discussion) (Table 8, column A).

55. But the C138 definition of light work also excludes work that interferes with children’s ability to benefit from classroom instruction, suggesting that the economic activity performed by children attending school should not be overlooked altogether from consideration as non-light work. Indeed, research in Cambodia indicates that work involvement has a significant negative effect on student learning achievement.²² It is reasonable therefore to also consider working students performing work at a level of intensity likely to interfere with their school performance. Including students working beyond a threshold of 14 hours per week (see discussion below) would raise the proportion of 12-14 year-olds in non-light work considerably, to 61 or 64 percent, again depending on the classification of water collection (Table 8, column C).²³

²² World Bank, using test score data from a nationally representative survey of primary schools in Cambodia, reported that work had a significant detrimental effect on learning achievement, particularly among fourth-graders. Estimated models for literacy and numeracy test scores (including children, parental, household and schooling characteristics) indicated that working every day before going to school reduced literacy and numeracy test scores of Cambodian fourth-graders both by about nine percentage points. Source: World Bank (2005), *Cambodia: Quality Basic Education for All*.

²³ Unfortunately there is not empirical evidence in Cambodia on work intensity and school achievement to guide identification of a specific hours threshold. This is an area where further research is required.

Table 8. Estimates of child labour calculated on the basis of school attendance status and work intensity of working students, by classification of water collection

Classification of water collection	(A)		(B)		(C)=(A)+(B)	
	Children aged 12- 14 years involved in economic activity and <u>not</u> in school		Working students aged 12-14 years who are working for at least 14 hours per week		Children aged 12-14 years in non-light work	
	No.	%	No.	%	No.	%
Water collection is classified as a <u>non-economic</u> activity	114,799	11.9	478,500	49.4	593,299	61.3
Water collection is classified as an <u>economic</u> activity	135,063	14.0	480,334	49.7	615,397.0	63.7

Source: UCW calculations based on Cambodia Child Labour Survey, 2001

56. It could be argued that the approach discussed above is too expansive in classifying all non-student working children as child labourers, as clearly not all are out of school *because* of work. An alternative approach to measuring non-light economic activity among 12-14 year-olds would be to simply distinguish light from non-light economic activity on the basis of hours thresholds applied to all working children, regardless of their school attendance status. There are some empirical grounds for this approach in that research shows that work intensity affects both school attendance and performance, two of the key criteria for light work set out in C138.

57. At what level then could a threshold for light work be set? ILO/IPEC employed a weekly time threshold for light work of 14 hours in its global child labour estimates, citing another ILO Convention, No. 33 (Minimum Age, Non-Industrial Employment).²⁴ In terms of at least school attendance, such a threshold would be “safe” in the Cambodian context, as data show that the attendance of children working for less than this amount of time differs little from that of children not working in economic activity at all. The proportion of 12-14 year-olds in child labour based on a general threshold of 14 hours would be around 60 percent, in this case independent of the classification of water collection (Table 9).

Table 9. Estimates of child labour for the 12-14 years age group based on a general threshold of 14 hours per week, by classification of water collection

	Children aged 12- 14 years in economic activity > 14 hrs per week	
	No.	%
Water collection is classified as a <u>non-economic</u> activity	581,721	60.1
Water collection is classified as an <u>economic</u> activity	588,696	60.8

Source: UCW calculations based on Cambodia Child Labour Survey, 2001

58. The other component of the 12-14 year old child labour population would consist of children in *non-economic* activity that interferes with schooling (i.e., area G in Figure 12). As discussed in the context of the previous sub-section on 6-11 year-olds, empirical evidence suggests that only non-economic activity performed very intensively appears to affect school attendance. To the estimates shown in the tables, therefore, one should also add the number of children performing non-economic activity beyond a relatively high hours threshold. Moreover, one should also consider whether the threshold set for 6-11 years old should also be applied to 12-14 year olds or whether a higher threshold should be selected. We do not discuss such details here, as they can be easily derived once the approach on whether or not, and if so, how to include non-economic activities in child labour estimates has been defined.

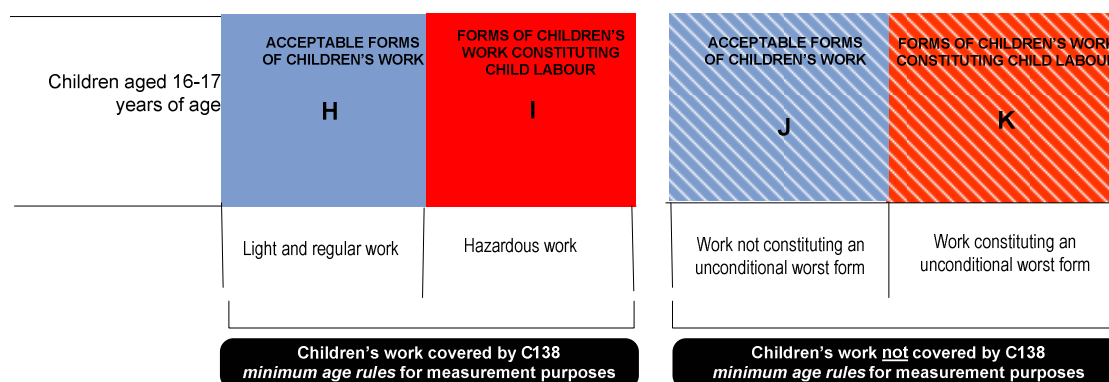
²⁴ Article 3.1 of the convention states that “Children over twelve years of age may, outside the hours fixed for school attendance, be employed on light work (a) which is not harmful to their health or normal development; (b) which is not such as to prejudice their attendance at school or their capacity to benefit from the instruction there given; and (c) the duration of which *does not exceed two hours per day on either school days or holidays*, the total number of hours spent at school and on light work in no case to exceed seven per day” (emphasis added).

4.3 Identifying hazardous work (measuring child labour among 15-17 year-olds)

59. Children aged 15-17 years are above the general minimum age for regular work or employment set out in C138. The Convention nonetheless proscribes the involvement of this group in “any type of employment or work which by its nature or the circumstances in which it is carried out is likely to jeopardise the health, safety or morals of young persons.” The stipulations contained in C182 and CRC relating to hazardous work, excessively long work hours and unconditional worst forms, also extend to children aged 15-17 years.

60. Identifying child labour for measurement purposes among this group therefore requires drawing a distinction between “regular” and “hazardous” economic activity, i.e. between areas H and I in Figure 13. Non-economic activity is less pertinent for child labour measurement purposes because 15-17 year-olds are above the minimum schooling leaving age. This means that interference with schooling, the primary criterion for categorising non-economic activity as child labour for measurement purposes (see previous sections), is not relevant. But unconditional worst forms that are non-economic in nature *are* relevant (i.e., area K in Figure 13); measuring these forms, however, is beyond the scope of the current paper.

Figure 13. Distinguishing child labour from other categories of children’s work, children aged 16-17 years



61. C182, following from C138, states that the types of work likely to harm the “health, safety or morals of children” shall be “determined by national laws or regulations or by the competent authority, after consultation with the organizations of employers and workers concerned, taking into consideration relevant international standards...”. The Government in Cambodia has developed a draft national list of three “unconditional” worst forms²⁵ of child labour and a further 16 “hazardous” forms²⁶ of particular relevance in the Cambodian context. But data limitations mean that the number of 15-17 year-olds in worst forms cannot be adequately measured, even with this national listing. Table 10 illustrates the large gaps in both qualitative and quantitative information on worst forms of child labour.

²⁵ Activities targeted by ILO Convention No. 182 as *unconditional worst forms* include: (a) all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labour, including forced or compulsory recruitment of children for use in armed conflict; (b) the use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances; and (c) the use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in the relevant international treaties.

²⁶ Activities targeted by ILO Convention No. 182 as *hazardous forms* include any activity or occupation which, by its nature or type has, or leads to, adverse effects on the child’s safety, health, or moral development.

Table 10. Availability of information on nationally-identified worst forms of child labour

"Worst forms" targeted in Cambodia National Plan of Action		National estimates Available from CCLS 2001?	Other quantitative or qualitative information available?
Hazardous forms	1. Portering	yes	no
	2. Domestic service (private home)	yes	yes ⁽¹⁾
	3. Waste scavenging or rubbish picking	yes	yes ^{(2),(3)}
	4. Work in rubber plantations	no	yes ⁽⁴⁾
	5. Work in tobacco plantations	no	no
	6. Fishing	yes	yes ⁽⁵⁾
	7. Work in semi-indust. agric. plantations	no	no
	8. Brick-making	no	yes ⁽⁶⁾
	9. Salt production and related enterprises	no	yes ⁽⁷⁾
	10. Handicrafts and related enterprises	yes	no
	11. Processing sea products	no	no
	12. Stone and granite breaking	no	no
	13. Rock/sand quarrying, stone collection	no	no
	14. Gem and coal mining	yes	no
	15. Restaurant work	yes	yes ^{(8),(9)}
	16. Begging	no	no
UWFCL	1. Child commercial sexual exploitation	no	yes ^{(10),(11)}
	2. Child trafficking	no	yes ^{(12),(13),(14)}
	3. Children used in drug production, sales and trafficking	no	no

Notes: (1) National Institute of Statistics (NIS), *Child Domestic Workers Survey in Phnom Penh*, Phnom Penh, 2003. (2) O'Leary, D., *A Socioeconomic Study of Waste Pickers in Phnom Penh*, Community Sanitation and Recycling Organization (CSARO) and the Center for Social Development, Phnom Penh, February 1998. (3) Chea Pyden, "Garbage Collection Children", *Child Workers in Asia*, vol. 16 no. 1, January-April, 2000. (4) ILO/IPEC, *Child labour on rubber plantations in Kampong Cham province*, Report on rapid assessment, 2004. (5) Centre for Advanced Studies, *Child labour in fishing sector - Kampot and Kep provinces*, Report on rapid assessment, ILO/IPEC, Phnom Penh, 2004. (6) LIDEE Khmer Research Center (LRC), *Child Labour in Brick Sectors, Kampong Cham and Siem Reap Provinces*, Report on rapid assessment, ILO-IPEC, Phnom Penh, 2004. (7) ILO/IPEC, *Child labour in the salt production industry in Kampot*, Report on rapid assessment, Phnom Penh, 2004. (8) jbj-Crossroads to Development, *Beer Promotion Girls in Phnom Penh*, Report on rapid assessment, Cambodia, ILO-IPEC, September 2004. (9) jbj-Crossroads to Development, *Child labour in hotels guesthouses and restaurants, Siem Reap*, Report on rapid assessment, ILO-IPEC, 2004. (10) jbj-Crossroads to Development, *Direct sex workers in Sihanoukville Municipality*, Report on rapid assessment, ILO/IPEC, 2004. (11) Cambodia National Assembly Commission on Human Rights and Receipt of Complaints, *Report on the Problem of Sexual Exploitation and Trafficking in Cambodia*, Phnom Penh, 1997. (12) United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), *Sexually abused and sexually exploited children and youth in Cambodia: A qualitative assessment of their health needs and available services in selected provinces*. Bangkok, 2000. (13) jbj-Crossroads to Development, *Demand-Side of Trafficking in Three Service Sectors in Cambodia*, draft report, ILO-IPEC, 2004. (14) Harrison S. & Somatheavy K., *Moving Forward: secondary data review of sending and receiving areas and employment sectors in prevention of trafficking children and women in Cambodia*, ILO/IPEC Program to Prevent the Trafficking of Children and Women (TICW), Bangkok, 2004. (15) Asia Regional Cooperation to Prevent People Trafficking, *Gender, Human Trafficking, and the Criminal Justice System in Cambodia*, December 2003

Table 11. Partial estimates of children in nationally-identified priority "worst forms"^(a) of child labour

"Worst forms" identified in Cambodia National Plan of Action		3-digit ISCO-88 number	15-17	7-14	7-17
			No.	No.	No.
Hazardous forms	1. Portering	Occup. no. 933 ^(b)	34,633	45,206	79,839
	2. Domestic worker (private home)	Occup. no. 913 ^(c)	3,751	2,153	5,904
	3. Waste scavenging or rubbish picking	Occup. no. 916 ^(d)	1,411	3,115	4,526
	4. Work in rubber plantations		?	?	?
	5. Work in tobacco plantations		?	?	?
	6. Fishing	Occup. no. 615 ^(e)	34,633	45,206	79,839
	7. Work in semi-indust. agric. plantations		?	?	?
	8. Brick-making		?	?	?
	9. Salt production and related enterprises		?	?	?
	10. Handicrafts and related enterprises	Occup. no. 733 ^(f)	1,161	1,364	2,525
	11. Processing sea products		?	?	?
	12. Stone and granite breaking		?	?	?
	13. Rock/sand quarrying, stone collection		?	?	?
	14. Gem and coal mining	Occup. no. 711/931 ^(g)	20,575	15,316	35,891
	15. Restaurant work	Occup. no. 512 ^(h)	9,464	13,533	22,997
	16. Begging		?	?	?
Uncond. WFC ⁽ⁱ⁾	1. Child commercial sexual exploitation		?	?	?
	2. Child trafficking		?	?	?
	3. Children used in drug production, sales and trafficking		?	?	?
Partial total in worst forms identified in National Plan of Action			105,628	125,893	231,521

Notes (a) Priority national hazardous sectors identified in the National Plan of Action match only imprecisely with the standard 3-digit ISCO industrial classifications used in CCLS 2001. Estimates, therefore, are indicative only. (b) ISCO occupation no. 933 refers to transport labourers and freight handlers; (c) ISCO occupation no. 913 refers to domestic and related helpers, cleaners and launderers; (d) ISCO occupation no. 916 refers to garbage collectors and related labourers; (e) ISCO occupation no. 615 refers to fishery workers, hunters and trappers (f) ISCO occupation no. 733 refers to handicraft workers in wood, textile, leather and related materials (g) ISCO occupation nos. 711 and 931 refer to miners, shotfirers, stone cutters and carvers (711) and mining and construction labourers (931); (h) ISCO occupation no. 512 refers to housekeeping and restaurant services workers; (i) UWFCL=Unconditional worst forms of child labour.

Source: UCW calculation based on Cambodia Child Labour Survey, 2001

62. Data from 2001 Child Labour Survey permit a partial estimate of some 232,000 children aged 7-17 years in the nationally-identified *hazardous* forms of work, of which 106,000 fall within the 15-17 years age group (Table 11). But it should be stressed that this constitutes a significant underestimate of total children in hazardous forms, not only because it includes only seven of the 16 nationally-identified priority hazardous sectors, but also because of likely under-reporting and difficulties in matching the national priority list with the standardised three-digit International Standard of Occupations

(ISCO-88) classifications used in the 2001 survey. According to the 2001 survey, for example, only 5,900 children aged 7-17 years fall into the category of “domestic and related helpers, cleaners and launderers” (ISCO-88 occupation no. 913), yet a separate dedicated study indicated that there were some 28,000 child domestic workers in Phnom Penh alone.²⁷ The largest omission in this hazardous work estimate, however, is undoubtedly children working in rubber, tobacco and other semi-industrial agricultural plantations. Data from the 2001 Child Labour Survey indicate that there are some 65,000²⁸ children working in non-family, non-subsistence agriculture, but it is not possible to specify how many of these work on plantations as opposed to in other forms of commercial agriculture.

5. CONCLUSION

63. The preceding sections have examined a number of key questions surrounding development of a statistical standard for child labour, drawing on empirical evidence from Cambodia. Five questions were of particular importance in this context; these questions and major conclusions relating to each summarised briefly below.

- (i) *Should family and non-family work be treated differently in child labour measurement?* While it is intuitively appealing to assume that working with parents or relatives is less “damaging” than working outside the family, the empirical evidence concerning work composition, intensity and impact did not, on balance, indicate the family/non-family distinction is relevant for the purposes of child labour measurement in the Cambodian context. The differences in the composition and the intensity of family and non-family work primarily reflected underlying differences between economic activity and household chores performed *within* the family. And, while there was some evidence suggesting that family work posed a lesser obstacle to school attendance, there was no evidence that work within the family was less hazardous than work outside it. Indeed, if anything, the evidence pointed in the opposite direction.
- (ii) *How should non-economic activity (i.e., household chores) be treated in child labour measurement?* The empirical evidence suggested that a distinction between economic and non-economic activity for the purposes child labour measurement is relevant, as underlying this distinction are important differences in terms of the composition, intensity and impact of work. Children’s involvement in economic activity is less common than non-economic activity in Cambodia, but this work is performed more intensely and with greater apparent consequences for children’s health and safety. Child involvement in non-economic activity, on the other hand, is much more common (indeed, almost universal) in the country, but is performed much less intensely and with fewer apparent adverse effects on health, safety and education. The empirical evidence did, however, indicate the household chores interfere with schooling when performed intensively, which, applying the stipulations of CRC, would argue for their inclusion in child labour measurement beyond a relatively high weekly hours threshold.
- (iii) *How should water collection (and other own-account production of goods) be classified for the purpose of child labour measurement?* The empirical evidence

²⁷ National Institute Of Statistics, *Child Domestic Worker Survey Phnom Penh 2003*, in collaboration with ILO-IPEC Cambodia, March 2004. The survey was based on a sample of 2,500 households, from which a total of 293 CDWs were identified and interviewed. The definition adopted in the survey considered CDWs as any child aged 7-17 years who works in the household of people other than their parents, regardless of the amount or kind of remuneration he/she receives.

²⁸ Excluding children already in other nationally-identified worst forms included in Table 8.

underscored the importance of the classification water collection in child labour estimates. Simulated estimates of child labour among 6-11 year-olds differed by almost 14 percentage points depending on whether water collection was classified as a non-economic activity (consistent common practice) or as an economic activity (consistent with the System of National Accounts (SNA) production boundary). Data did not allow a detailed analysis of the intensity and impact of water collection. The simulations nonetheless pointed to the need for consensus on how water collection should be categorised for child labour measurement within and across countries.

- (iv) *How should light work be measured?* The empirical evidence was insufficient to draw detailed conclusions concerning the health and educational consequences of different types of children's work. In the absence of this information it was necessary to explore other more general criteria for distinguishing light work from other forms of work. One approach looked at was to define the group in non-light work as all children in economic activity *not* attending school, based on the implicit assumption that it is work that is interfering with their school attendance. Another approach was to include out of school children *plus* working students performing work at a level of intensity likely to interfere with their school performance. A third approach was to simply distinguish light from non-light economic activity on the basis of hours thresholds applied to all working children, regardless of their school attendance status. Simulated estimates based on each of these approaches yielded very different estimates of 12-14 year-olds in light work, underscoring the need for a consensus in how light work should be measured.
- (v) *How should hazardous work be measured?* Data limitations mean that the number of 15-17 year-olds in hazardous work cannot be adequately measured in Cambodia, even with the national listing of 16 priority hazardous forms. This is largely the product of difficulties in matching the country's national listing with the standardised three-digit International Standard of Occupations (ISCO-88) classifications used in the 2001 child labour survey, underscoring the need to tailor survey instruments more closely to the specific forms of child labour identified as local priorities. Development of a standard statistical measure of hazardous work that can be applied globally is also complicated by the fact that international child labour norms allow countries considerable flexibility in terms of which forms of work are classified as hazardous. This issue, however, was beyond the scope of the current paper.

ANNEX FEEDBACK FROM COUNTRY-LEVEL DIALOGUE ON CHILD LABOUR MEASUREMENT

The dialogue on child labour measurement in Cambodia took place in December 2006 and comprised of three events. First, a technical workshop on child labour measurement for statisticians from the National Institute for Statistics; second, a discussion on identifying child labour with representatives of Cambodian civil society; and third; a formal seminar on the statistical definition of child labour involving members of the National Sub-Committee on Child Labour. Each is summarised below. The related questions of (a) whether household chores should be included in child labour measurement and (b) how water/fuelwood collection should be classified were particular areas of focus during the discussions.

1. **Consultation with the National Institute for Statistics:** The National Institute for Statistics is the government body responsible for the collection of statistics on child labour. Following an overview of the key issues surrounding child labour measurement (see Annex 2), a technical discussion on child labour measurement was held with statisticians from the National Institute for Statistics (NIS). Feedback on NIS statisticians on child labour measurement included the following:

- difficult to make a general statement regarding *fuelwood collection*, as the nature of the task differs according to region within the country. In some regions, children must climb trees in order to get branches for burning, risking of falling from heights; increasing deforestation means that branches must be often dragged long distances. In other regions, however, wood collection not a concern, as wood is simply bought in the market at low cost.
- *water collection* is generally NOT an issue in the Cambodian context, in light of progress in expanding access to water at the household level.
- in the case of both fuelwood and water collection, a distinction should be made between *market activity or own-account production*, i.e. whether water/wood are collected for sale on the market or for the use of the children's own household. In the former case, these activities could be considered child labour but in the latter case they generally should not be considered child labour.
- *household chores* performed by children are generally not child labour, as they constitute a normal part of childhood and an important part of children's socialisation. Children also attend school only for half-day, leaving time for performing tasks in the household. But it is important to have information on the intensity and impact of household chores to identify if there are instances in which chores could cross the line into child labour. There may be extreme cases, for example, in which chores are performed to the point where they interfere with children's ability to go to school and affect their health. In the case of out-of-school children, it also important to establish whether they are not attending school *because* of the exigencies of household chores. The survey reference period is important to consider in this context, i.e., whether or not the survey takes place during school holidays.

2. **Consultation with representatives from Cambodian civil society:** The Cambodian Civil Society Group on Child Labour meets regularly to exchange information and experiences relating to grassroots levels efforts against child labour. Following an introduction on child labour concepts and measurement, feedback was provided by

the Civil Society Group concerning their perceptions of child labour and how it should be identified:

- the incidence of child labour is closely related to a country's level of development, and therefore it might make sense to develop *different classifications/measures* of for low-, medium and high-income countries;
- important to consider that *child labour is a product of poverty*, and that the income or productivity of children forms an important part of the survival strategies of poor households;
- children have duty to help in household in Cambodia context, and therefore *household chores* should not generally be considered child labour. There may be extreme cases, however, when household chores compromise health or education, or are performed very intensely. Only in such instances, could a case be made for classifying household chores as child labour.
- very difficult to make general statements concerning what constitutes child labour and what does not in the absence of *specific information on work characteristics*. In the case of water collection, for example, information is needed concerning child age, time spent collecting water, size of container, method of transporting the water, etc.

3. **Consultation with the National Sub-Committee on Child Labour (NSC-CL):** The NSC-CL presides over strategic actions on child rights and child labour. It has the role of ensuring the implementation, monitoring, and evaluation of policies and programmes related to the commercial exploitation of children. The Sub-Committee is comprised of representatives from government institutions, business, trade unions, and NGOs. Following a brief introductory overview of child labour measurement challenges, the floor was opened for feedback from NSC-CL members:

- it is difficult to separate the question of child labour measurement from local *cultural perceptions of what constitutes child labour*. In particular, many forms of work can be a normal part of childhood, and critical to household survival strategies;
- it is also difficult to separate the question of child labour measurement from the established *legal definition of child labour* contained in Cambodia legislation. In particular, a statistical standard should be consistent with the definition of child labour contained in national legislation;
- it might make sense to consider the *socio-economic level of the country* when measuring/classifying child labour;
- it is difficult to make *general statements about what is child labour* and what is not in the absence of specific information on work type, workplace conditions, work intensity, work hazards, work impact etc.; and
- there is a need for *prior in-depth review* of the various technical dimensions of child labour measurement before providing input to the discussion on how it should be measured.