![International Labour Organization logo]

Understanding informality and child labour in sub-Saharan Africa

▶ Understanding informality and child labour in sub-Saharan Africa

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Introduction

The ILO Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204) (ILO Recommendation No. 204) has placed a renewed emphasis on informality as a barrier to quality employment, social protection and economic development. How a worker enters the labour force seems to play a fundamentally important role in the course of their working life (see Emerson and Souza 2011; Oreopoulos, von Wachter, and Heiss 2012). Hence, understanding the interaction of child labour and informality is an important input into the discussion of how to achieve the goals envisioned in Recommendation No. 204.

Recent global employment trends imply the timeliness of a study considering the interaction of child labour and informality in sub-Saharan Africa. The latest global estimates of child labour imply that there were 160 million children in child labour in 2020, an increase of 8.4 million children relative to 2016 (ILO and UNICEF 2021). This is the first global increase in child labour since such statistics have been collected. The growth is concentrated in sub-Saharan Africa where informal employment is dominant (ILO 2023). The purpose of this study is to better understand the interrelationship of child labour and informality in sub-Saharan Africa.

Methodologically, this study examines patterns in child labour, child employment and informality for 22 sub-Saharan countries using household survey data that interviews 197,418 children aged 10–17 and represents 78.2 million children. It attempts to understand descriptively the patterns in child labour, child employment and informality that are present in the raw survey data. This type of descriptive analysis appears missing in the literature, and it is hoped that the study will help frame the subsequent causal studies that will examine different ways to alter the patterns documented herein.

Eight key facts about informality and child labour in sub-Saharan Africa are documented:

1. 99.1 per cent of working children aged 10–14 are in informal employment in the informal sector, including households, and 99.7 per cent overall in informal employment (with 0.6 per cent in informal employment in the formal sector). In 11 of the 22 countries examined herein, 100 per cent of employed children aged 10–14 are in informal employment. While agricultural employment is a large share of child employment, and agricultural employment is largely informal, children working in services and manufacturing are also largely in the informal economy with 99.9 per cent of 10–14-year-olds in manufacturing and 99.7 per cent in services.

2. Older working children aged 15–17 are less likely to be in informal employment, but the
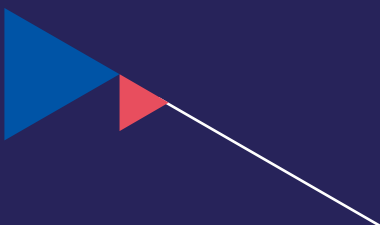
prevalence in informal employment is still overwhelming: 98 per cent of working children in that age group are in informal employment in the informal sector and 1.3 per cent are in informal employment in the formal sector. Hence, 99.3 per cent of working children aged 15–17 are in informal employment. Across sectors, 99.3 per cent in agriculture, 98.8 per cent in manufacturing, and 99.1 per cent in services are in informal employment.
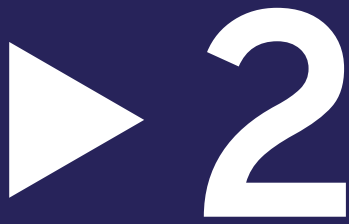
3. The dominance of informal employment for working children does not seem to vary meaningfully between urban or rural areas. It does not vary by gender.

4. Child labour is not a meaningful share of formal employment in any country studied, constituting more than 1 per cent of formal employment in only two countries (1.2 per cent in Liberia, 1.1 per cent in Uganda).

5. The minimum age in employment regulations does not appear to be responsible for the fact that nearly all child employment is informal: 99 per cent of working children are in the informal economy at the minimum age of employment and that changes (increases, not declines as would be expected with regulatory avoidance) by less than half of 1 per cent with the relaxation of minimum age in employment laws. Hence, increases or decreases in the minimum age of employment are unlikely to change the fact that nearly all child employment is informal.

6. The share of employment that is informal is greater in populations with higher adult unemployment. In addition to children, adult women are more likely to be in informal employment than men. The elderly are more likely to be in informal employment. While neither demographic category is as uniformly informal as children, a common factor might be that these are all groups that might need or desire more flexibility in hours. However, substantive differences are not observed in hours or schooling across working children that differ in whether their work is informal or formal.

7. Children work with family or household members: 83.4 per cent of working children aged 10–14 and 76.0 per cent aged 15–17 have a co-resident co-worker. Households with family members in the informal economy are more likely to have working children. Hence, more working children are in the informal economy.

8. Children who are not working with a co-resident household member seem especially vulnerable. They are less likely to attend school and more likely to work long hours than children in the same job-type but working with a co-resident household member. Vulnerability seems especially high for children who are working informally in the formal sector without a co-resident household member. Children aged 10–14 are half as likely to attend school as non-working children, and children aged 15–17 are only 11 per cent as likely to attend school. The latter age group is also three times as likely to work long hours.

The remainder of this paper is organized as follows: the next section reviews the data used in this study and defines the concepts of child employment, child labour and informality used in this discussion. Section 3 subsequently documents the basic patterns in child employment and informality observed in this data. Section 4 attempts to understand the patterns observed in section 3, and section 5 summarizes.

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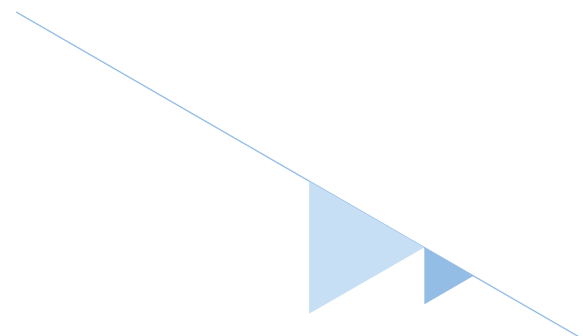
Data and definitions

This paper's analysis is limited to sub-Saharan African countries that have nationally representative household surveys where informality and child labour since 2008 can be defined.

Table 1 provides background on the 22 countries with microdata used in this study. An additional 17 countries were considered for inclusion but lacked appropriate data (Annex 1 explains the basis for exclusion of some countries without adequate data). Altogether 954,504 people were interviewed about their employment status in the data used in this study. Surveys are either integrated, multi-purpose household surveys (IHS) or labour force surveys (LFS). Thirteen of the 22 countries used in this study have labour supply information for children below the age of 10, but the focus will be on ages 10–17. The ILO Worst Forms of Child Labour Convention, 1999 (No. 182) emphasizes the importance of adapting discussions about child labour to the appropriate context for each country, but as cross-country comparison is one of the goals of the study, children aged 10–14 and 15–17 are separated in the analysis, as 16 of the 22 countries examined here have a minimum age of employment of 15 or greater. These survey data represent over 78.2 million children, 99 per cent of whom work in informal employment when they work.
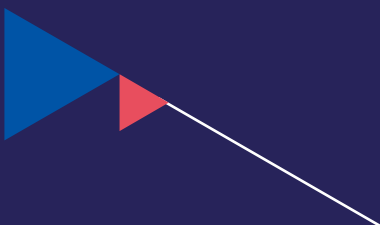
▶ **Table 1. Data description**

			Sample size			Background						
Country	Year	Survey type	Full sample	Children aged 10–14	Children aged 15–17	Youngest age with employment data in survey	Official entrance age -primary[1]	Official entrance age - lower secondary[1]	Official entrance age - upper secondary[1]	% Rural[1]	Poverty headcount rate[2]	Minimum age of employment[3]
Burkina Faso	2014	IHS	83 190	10 611	4 715	10	6	12	16	71.3	63.1	16
Burundi	2014	IHS	22 245	4 532	2 687	10	7	13	17	87.3	86.7	16
Cameroon	2014	IHS	38 961	5 734	2 743	5	6	12	16	44.2	47.0	14
Chad	2018	IHS	41 096	5 503	2 487	6	6	12	16	77.1	64.6	14
DRC	2012	IHS	111 679	14 191	6 457	5	6	12	16	33.5	87.8	16
Gambia	2018	LFS	57 799	7 357	3 936	7	7	13	16	39.4	47.0	16
Ghana	2013	LFS	62 789	9 504	4 850	5	6	12	15	47	48.8	15
Lesotho	2019	LFS	41 312	4 770	2 584	10	6	13	16	72.3	54.7	15
Liberia	2010	LFS	31 809	3 969	1 944	5	6	12	15	49.3	60.6	16
Madagascar	2015	IHS	15 641	2 784	1 429	5	6	11	15	63.5	92.4	16
Malawi	2013	LFS	29 978	5 775	2 645	10	6	12	16	83.3	89.1	14
Mali	2018	IHS	47 771	6 345	2 948	6	7	13	16	58.4	48.2	15
Mauritania	2017	IHS	47 085	6 493	3 218	10	6	12	16	47.2	26.2	16
Namibia	2018	LFS	40 993	4 653	2 213	8	7	14	17	51	33.3	14
Niger	2017	IHS	39 506	5 122	2 407	10	7	13	17	83.7	81.2	14
Senegal	2015	IHS	36 446	6 297	3 899	10	6	12	16	52.3	37.6	15
Sierra Leone	2014	LFS	25 641	3 313	1 952	5	6	12	15	58.4	64.3	15
Tanzania	2014	LFS	47 199	5 400	2 582	5	7	14	18	66.9	74.3	14
Togo	2017	IHS	22 205	4 688	2 421	10	6	12	16	58.8	56.9	15
Uganda	2017	LFS	22 482	2 979	1 448	5	6	13	17	76.8	71.9	16
Zambia	2018	LFS	49 551	7 098	3 252	5	7	14	16	57	78	15
Zimbabwe	2019	LFS	39 126	5 004	2 479	5	6	13	15	67.8	64.5	16

Notes: Minimum age of employment for Zanzibar, Tanzania, is 15 but 14 on the mainland. IHS – Multipurpose (integrated) household survey; LFS – labour force survey.

Sources: 1 http://uis.unesco.org. 2 USDOL/ILAB, n.d. 3 World Bank 2022.

2.1 Definitions of child labour

Three concepts related to child labour are used in this study. "Child employment" refers to children who have been engaged in economic activity for at least one hour in the last seven days. Employment encompasses any form of market production and certain types of non-market production (principally that of goods such as agricultural produce for own use). Employment includes work in both the formal and informal economy, inside and outside family settings, for pay or profit (cash or in kind, part-time or full-time) and domestic work outside the child's own household for an employer (paid or unpaid). Employment is distinct from "economically active" in that the unemployed are economically active but not employed. "Child labour" is referred to as child employment that is illegal or hazardous by its nature or circumstances. Also included is a definition of child labour that includes children working intensively in unpaid household services within the child's own household. This "child labour including chores" lacks adequate data in nine of the countries included. Hence, the study does not generally focus on that definition despite it being more in line with international Conventions. Table A2.1 summarizes the related questions that feed into these employment definitions.

Table 2 summarizes the prevalence of employment and child labour for each country in the sample. The definition of child labour in this table does not include time in unpaid household services (as will every reference to child labour hereafter unless explicitly "including chores" is stipulated).

Among children aged 10–14, 21 per cent are employed and 14.8 per cent are in child labour. That is, 70.6 per cent of employed children aged 10–14 are in child labour. Child labour is most prevalent for ages 10–14 in Burkina Faso and Tanzania in the study data, with approximately a third of children in child labour in both countries.

Children aged 15–17 are more likely to be employed, but less likely to be in child labour: 32.9 per cent of children in this age group are employed and 9.8 per cent are in child labour, so that overall, 30 per cent of employed children are in child labour. This larger gap between child employment and child labour in the older age group is because of a much narrower definition of child labour when the child is above the legal working age. The highest prevalence of child labour in ages 15–17 are still in Burkina Faso and Tanzania.
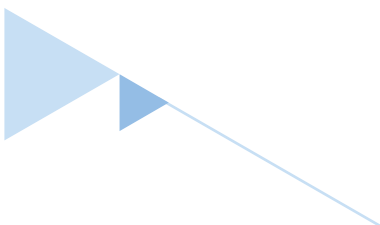
▶ **Table 2. Prevalence of child employment and child labour, by age group**

Country	Children aged 10–14				Children aged 15–17			
	Sample size	Population[1]	Employment	Child labour	Sample size	Population	Employment	Child labour
Burkina Faso	10 611	2 383 534	35.7	34.7	4 715	1 049 966	36.8	23.1
Burundi	4 532	1 258 530	5.9	5.7	2 687	696 884	31.1	12.0
Cameroon	5 734	2 654 613	21.9	18.0	2 743	1 232 678	35.1	11.3
Chad	5 503	2 025 111	18.6	16.0	2 487	871 242	26.6	5.5
DRC	14 191	9 893 097	5.3	4.6	6 457	4 502 075	15.7	10.2
Gambia	7 357	285 139	29.8	23.3	3 936	162 444	26.8	2.3
Ghana	9 504	3 465 924	32.0	23.0	4 850	1 758 124	39.0	9.0
Lesotho	4 770	232 268	4.4	2.1	2 584	126 822	13.8	5.3
Liberia	3 969	416 009	19.0	15.8	1 944	206 685	21.6	4.2
Madagascar	2 784	3 503 711	31.3	22.4	1 429	1 810 304	62.6	9.8
Malawi	5 775	2 026 390	34.0	16.0	2 645	906 468	53.4	4.3
Mali	6 345	2 447 526	15.1	14.9	2 948	1 132 376	37.0	14.6
Mauritania	6 493	521 233	2.3	1.6	3 218	255 921	8.9	3.2
Namibia	4 653	251 316	0.7	0.5	2 213	142 746	2.4	0.8
Niger	5 122	2 662 708	10.3	6.1	2 407	1 233 391	13.3	3.3
Senegal	6 297	1 577 643	10.4	6.8	3 899	945 962	19.0	6.5
Sierra Leone	3 313	628 922	7.7	7.0	1 952	364 921	13.4	6.4
Tanzania	5 400	5 896 907	42.3	32.9	2 582	2 464 517	59.9	18.7
Togo	4 688	936 883	1.9	1.8	2 421	490 598	9.2	4.8
Uganda	2 979	5 744 177	27.8	13.2	1 448	2 704 622	36.1	9.4
Zambia	7 098	2 382 384	11.4	4.1	3 252	1 106 772	20.1	2.0
Zimbabwe	5 004	1 902 745	22.7	8.8	2 479	943 051	33.6	3.3
Full sample	**132 122**	**53 100 000**	**21.0**	**14.8**	**65 296**	**25 100 000**	**32.9**	**9.8**

Note: 1 Weighted sample size.

2.2 Definitions of informality

In this study the focus is on employment: informal employment and employment in the informal sector. Employment in the informal sector is defined based on the characteristics of the production unit. If employment takes place within a unit of production that is unlikely to be registered with the government, it is defined as employment in the informal sector. The definition of informal employment depends on status in employment (see box 1). Table A2.2 summarizes the data available to construct measures of informality in each available survey.

Table 3 reports the prevalence of adult employment and the nature of that employment for adults aged 25–50. Overall, 75.5 per cent of adults in that age group are employed, and 90.6 per cent of those employed are in informal employment. Of those in informal employment, 7 per cent are in informal employment in the formal sector (or 6.3 per cent of the employed sample) and 93 per cent of workers in informal employment are in the informal sector, while 9.3 per cent of adults aged 25–50 are in formal employment. In the data, formal employment is most common in Gambia and Namibia. Informal employment is most common in Burundi and the Democratic Republic of Congo (DRC) with more than 97 per cent of the employed workforce in either informal employment in informal enterprises or informal employment in formal enterprises.
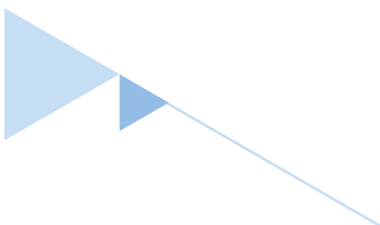
▶ **Table 3. Employment status, by country**

Adults aged 25–50				
	Employed (%)	**Informal employment in the informal sector (%)**	**Informal employment in the formal sector (%)**	**Formal employment (%)**
Burkina Faso	70.2	91.4	2.2	6.3
Burundi	92.6	93.4	4.2	2.5
Cameroon	83.6	75.4	11.1	13.5
Chad	69.0	94.6	1.4	4.0
DRC	75.5	85.1	12.4	2.6
Gambia	75.2	59.8	2.8	37.4
Ghana	84.1	87.3	2.5	10.2
Lesotho	63.0	69.2	4.1	26.7
Liberia	69.4	80.3	6.5	13.2
Madagascar	91.6	87.8	5.8	6.3
Malawi	86.4	77.7	3.0	19.3
Mali	73.6	87.4	6.7	5.9
Mauritania	53.4	83.6	8.2	8.2
Namibia	61.4	49.9	0.8	49.2
Niger	37.6	86.8	5.8	7.4
Senegal	52.5	80.5	9.7	9.7
Sierra Leone	72.3	91.1	1.6	7.3
Tanzania	83.4	82.3	4.5	13.3
Togo	69.3	90.1	0.3	9.7
Uganda	78.6	87.7	4.5	7.8
Zambia	69.2	76.1	4.3	19.6
Zimbabwe	69.9	78.6	4.6	16.8
Full sample	**75.5**	**84.3**	**6.3**	**9.3**

Note: 1=1 percent. All cells weighted to be nationally representative.

▶ 3

Documenting informal employment of children

3.1 Overview of child employment and informality

In the data from 22 countries, representing 78 million children aged 10–17, 21.0 per cent aged 10–14 and 32.9 per cent aged 15–17 are employed. Table 4 shows whether informal employment for children is in or outside the formal sector. It shows that 99.1 per cent of children aged 10–14 are in informal employment in the informal sector and households, 0.6 per cent are in informal employment in the formal sector, and 0.3 per cent are in formal employment. In 11 of the 22 countries examined herein, 100.0 per cent of children aged 10–14 are in informal employment.
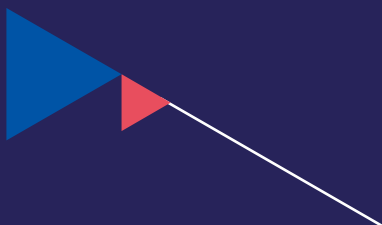
▶ **Table 4. Child employment status, by country and age group**

	Children aged 10–14				Children aged 15–17			
		Conditional on being employed				Conditional on being employed		
	Employed	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)	Employed (%)	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)
Burkina Faso	35.7	99.5	0.4	0.0	36.8	98.7	1.2	0.1
Burundi	5.9	98.6	1.4	0.0	31.1	99.4	0.5	0.1
Cameroon	21.9	98.1	1.9	0.0	35.1	96.1	3.7	0.2
Chad	18.6	99.9	0.0	0.1	26.6	99.9	0.1	0.0
DRC	5.3	99.2	0.7	0.1	15.7	98.7	1.1	0.2
Gambia	29.8	100.0	0.0	0.0	26.8	85.7	0.3	14.0
Ghana	32.0	99.5	0.5	0.0	39.0	99.4	0.5	0.1
Lesotho	4.4	100.0	0.0	0.0	13.8	98.1	0.8	1.1
Liberia	19.0	94.9	3.7	1.5	21.6	91.7	5.4	2.9
Madagascar	31.3	100.0	0.0	0.0	62.6	99.0	0.7	0.3
Malawi	34.0	98.6	1.0	0.4	53.4	94.8	2.6	2.6
Mali	15.1	99.7	0.2	0.0	37.0	97.9	1.8	0.3
Mauritania	2.3	98.6	0.0	1.4	8.9	98.5	1.4	0.1
Namibia	0.7	100.0	0.0	0.0	2.4	98.9	0.0	1.1
Niger	10.3	99.6	0.3	0.1	13.3	97.4	0.3	2.3
Senegal	10.4	99.5	0.3	0.3	19.0	98.5	1.4	0.1
Sierra Leone	7.7	99.7	0.1	0.2	13.4	99.7	0.1	0.2
Tanzania	42.3	99.8	0.1	0.1	59.9	99.1	0.9	0.1
Togo	1.9	100.0	0.0	0.0	9.2	98.7	1.3	0.0
Uganda	27.8	96.9	1.4	1.7	36.1	95.2	1.7	3.0
Zambia	11.4	99.9	0.1	0.0	20.1	99.1	0.9	0.0
Zimbabwe	22.7	99.4	0.3	0.3	33.6	98.1	1.3	0.6
Full sample	**21.0**	**99.1**	**0.6**	**0.3**	**32.9**	**98.0**	**1.3**	**0.7**

Note: 1=1 per cent. All cells weighted to be nationally representative.

While this might seem an almost inconsequential prevalence of formal employment, it is worth bearing in mind that this translates into an estimate of 38,168 children aged 10–14 in the 22 countries examined herein with the largest fraction of them, an estimated 27,370, being in Uganda. Nine of the 22 countries have no children aged 10–14 in formal employment.

For older children aged 15–17, formal employment is more common although still rare, with 0.7 per cent of children aged 15–17 in formal employment (this contrasts with 9.3 per cent of adults aged 15–50 in formal employment as shown in table 3). In terms of numbers of children, this is a total of 58,526 children aged 15,17 in formal employment in the study data with Uganda and Malawi having the largest totals at 29,468 and 12,682 respectively. Only two countries (Togo and Zambia) have no children aged 15–17 in formal employment; they also had no children aged 10–14 in the formal employment.

Given how rare child formal employment is, there is little meaningful difference between child employment and child labour in their relationship to informality. Figure 1 contains the plot of informal employment prevalence for children in employment (blue bar) and in child labour (light blue bar). Panel A depicts children aged 10–14 and panel B is for aged 15–17.

Informal employment is equally prevalent for child employment and child labour among children aged 10–14 in all but three countries. For those countries, the differences are extremely small in panel A of figure 1. In one of the three, informality is more prevalent with employment in one country and less prevalent with employment in two others.

▶ **Figure 1. Prevalence of informal employment conditional on participation in employment and child labour, by country**

A. Children aged 10–14

B. Children aged 15–17

Informal employment   Informal child labour
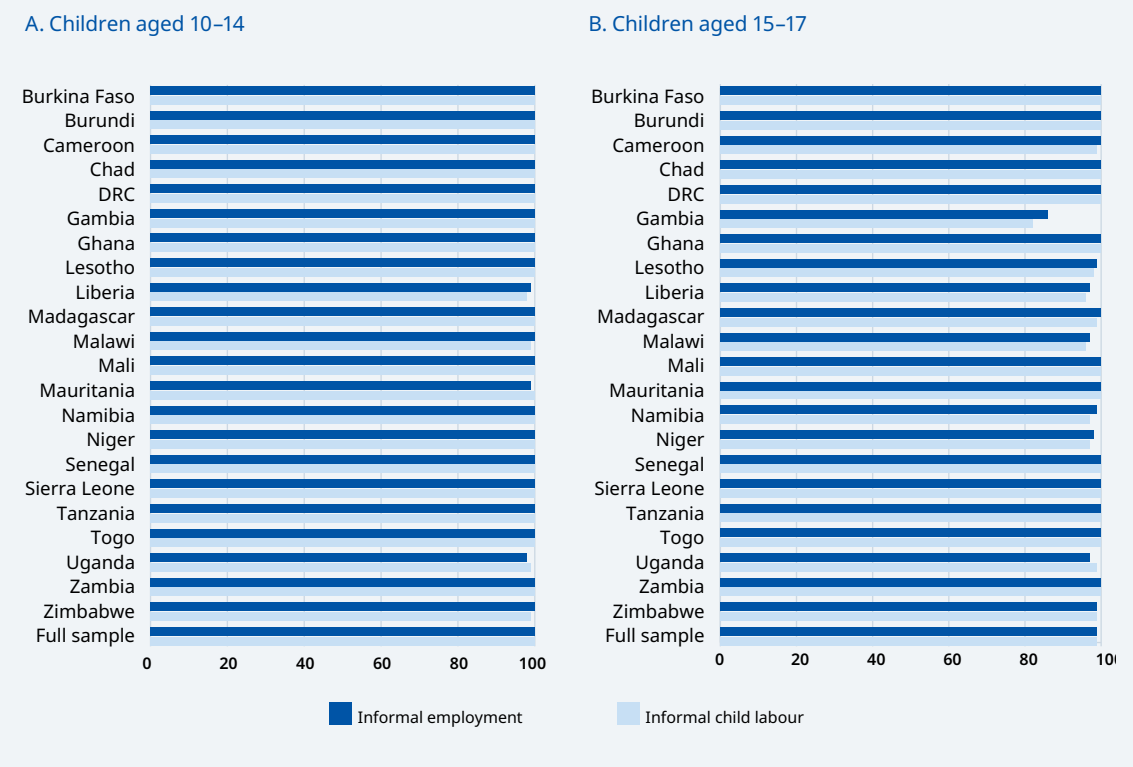
Differences in informality for employment and child labour are more visible for older children (panel B of figure 1). Because participation rates in employment are higher for older children, there is less selection in panel B and hence more scope for differences to appear. The largest difference in panel B is for Gambia, where informality is more prevalent with employment than child labour. One country goes in the other direction; in Uganda there is more informality among child labour than employment overall.

3.2 The industrial sector

Figure 2 contains the plot of the sectoral distribution of employment by country in the data analysed herein. Panel A includes children aged 10–14 and panel B includes those aged 15–17. Countries differ in whether they include an industry code for "Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use". This category, which includes domestic workers and subsistence farming, is especially relevant for children, and in countries such as Gambia, Lesotho, Niger, Zambia and Zimbabwe that use this code, it is seen as the dominant sector of employment. Based on how prevalent agriculture is in other countries relative to these five, it seems reasonable to speculate that this category largely trades off with agriculture as an industry classification. Engagement in agriculture for own-family consumption is an extremely common economic activity (Guarcello, Lyon, and Rosati 2005).

Conditional on employment, informality rates do not appear to differ substantively across sectors of employment. This is documented in table 5 which shows informal employment rates overall and by sector of employment for ages 10–14 and 15–17.

▶ **Figure 2. Sectoral distribution of employed children, by country**

A. Children aged 10–14

B. Children aged 15–17

■ Agriculture   ■ Manufacturing   ■ Services   ■ Undifferentiated goods and services n.e.c.
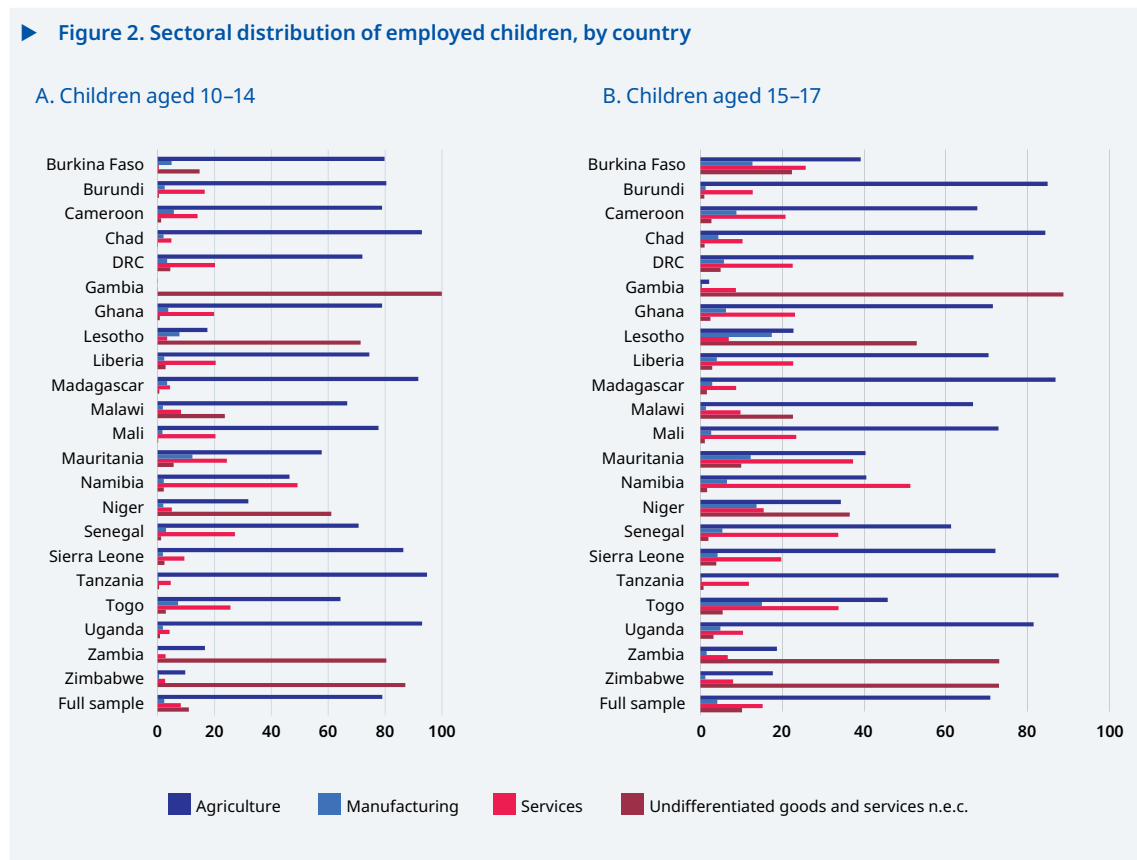
▶ **Table 5. Child informal employment rates, by sector of employment, country and age group**

	Children aged 10–14					Children aged 15–17				
	Overall (%)	Agriculture (%)	Manufacturing (%)	Services (%)	NEC (%)	Overall (%)	Agriculture (%)	Manufacturing (%)	Services (%)	NEC (%)
Burkina Faso	100.0	99.9	100.0	100.0	100.0	99.9	100.0	100.0	99.6	100.0
Burundi	100.0	100.0	100.0	100.0	100.0	99.9	99.9	100.0	100.0	100.0
Cameroon	100.0	100.0	100.0	100.0	100.0	99.8	100.0	100.0	99.0	100.0
Chad	99.9	100.0	100.0	98.8	100.0	100.0	100.0	100.0	99.7	100.0
DRC	99.9	100.0	100.0	99.6	100.0	99.8	100.0	100.0	99.2	100.0
Gambia	100.0	100.0		100.0	100.0	86.0	97.2	7.7	84.1	97.6
Ghana	100.0	100.0	100.0	100.0	100.0	99.9	100.0	98.8	100.0	100.0
Lesotho	100.0	100.0	100.0	100.0	100.0	98.9	95.9	98.7	100.0	100.0
Liberia	98.5	98.7	100.0	97.8	100.0	97.1	98.5	93.9	92.9	100.0
Madagascar	100.0	100.0	100.0	100.0	100.0	99.7	99.8	100.0	100.0	92.6
Malawi	99.6	99.7	100.0	98.0	100.0	97.4	98.1	83.4	92.5	99.0
Mali	100.0	100.0	100.0	99.8	100.0	99.7	99.7	100.0	100.0	93.8
Mauritania	98.6	98.4	100.0	98.1	100.0	99.9	100.0	100.0	99.7	100.0
Namibia	100.0	100.0	100.0	100.0	100.0	98.9	100.0	100.0	97.9	100.0
Niger	99.9	100.0	96.2	100.0	100.0	97.7	99.1	91.0	95.0	100.0
Senegal	99.7	99.6	100.0	100.0	100.0	99.9	100.0	100.0	99.8	100.0
Sierra Leone	99.8	99.8	100.0	100.0	100.0	99.8	99.7	100.0	100.0	100.0
Tanzania	99.9	99.9	100.0	99.9	100.0	99.9	100.0	100.0	99.3	100.0
Togo	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Uganda	98.3	98.2	100.0	100.0	100.0	97.0	96.5	100.0	98.8	100.0
Zambia	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Zimbabwe	99.7	96.8	100.0	100.0	100.0	99.4	98.1	100.0	98.1	99.9
Full sample	**99.7**	**99.6**	**99.9**	**99.7**	**100.0**	**99.3**	**99.3**	**98.8**	**99.1**	**99.7**

Notes: 1=1 per cent. All cells weighted to be nationally representative. All cells are conditional on being employed. There are no children employed in manufacturing in the Gambian sample. NEC= Not elsewhere classified.

3.3 Urbanity

Industry mixes differ with geography. Given that no substantive differences are seen in the dominance of informality for child employment across industries, it is reasonable to anticipate that there are not differences in informality across geography.

Table 6 examines this explicitly, splitting each age group by whether the child is located in urban or rural areas. The first four columns of table 6 focus on children aged 10–14; the last four are on children aged 15–17. Within each age group, the first two columns are urban and the last two are rural. Within each age group and geography combination, the first column gives the share of children who are employed and the second column the share of employed who are in informal employment.

▶ **Table 6. Child employment status, by country, urbanity and age group**

	Children aged 10–14				Children aged 15–17			
	Urban		Rural		Urban		Rural	
	Employed (%)	Informal employment share of employment (%)	Employed (%)	Informal employment share of employment (%)	Employed (%)	Informal employment share of employment (%)	Employed (%)	Informal employment share of employment (%)
Burkina Faso	12.6	100.0	41.4	100.0	23.9	100.0	41.1	99.9
Burundi	5.2	100.0	5.9	100.0	22.2	100.0	32.1	99.9
Cameroon	8.0	100.0	29.9	100.0	18.7	99.0	45.5	100.0
DRC	1.6	100.0	7.7	99.9	6.5	99.6	22.8	99.9
Gambia	21.8	100.0	38.6	100.0	19.4	80.6	35.6	92.1
Ghana	19.4	100.0	43.9	100.0	24.7	99.8	53.3	100.0
Lesotho	1.5	100.0	6.0	100.0	6.1	98.4	18.7	98.9
Liberia	8.0	98.3	31.9	98.6	10.9	93.4	36.0	98.6
Madagascar	14.7	100.0	35.2	100.0	36.6	98.6	68.4	99.9
Malawi	14.0	99.5	36.6	99.6	24.8	97.9	57.0	97.4
Mali	7.9	99.7	17.7	100.0	24.5	99.5	42.6	99.8
Mauritania	1.2	100.0	3.2	98.1	5.9	99.7	12.1	100.0
Namibia	0.2	100.0	0.9	100.0	1.0	93.0	3.3	100.0
Niger	8.3	99.4	10.7	100.0	12.7	96.5	13.5	98.0
Senegal	3.2	99.5	16.0	99.8	8.7	99.7	27.5	100.0
Sierra Leone	10.2	100.0	2.6	98.3	17.9	100.0	5.5	98.7
Tanzania	19.2	100.0	52.5	99.9	34.6	99.6	74.2	100.0
Togo	1.1	100.0	2.3	100.0	7.3	100.0	10.6	100.0
Uganda	15.4	99.7	30.9	98.1	23.4	98.7	39.7	96.7
Zambia	2.0	100.0	17.3	100.0	6.4	100.0	30.3	100.0
Zimbabwe	14.3	100.0	26.1	99.6	26.3	98.6	37.2	99.7
Full sample	**9.4**	**99.9**	**26.4**	**99.6**	**17.8**	**99.2**	**41.0**	**99.3**

Notes: 1=1 per cent. All cells weighted to be nationally representative. Urbanity not available for Chad.

Child employment is much greater in rural areas than urban areas, but the dominance of informality appears similar: 100 per cent of employed children aged 10–14 in urban areas are in informal employment in 15 of the 21 countries with data on urbanity available (Chad is missing such data). This is true for the rural areas of 12 countries too. Altogether 99.9 per cent of employed children aged 10–14 in urban areas are in informal employment and 99.6 per cent in rural areas. For the age group 15–17, informal employment is slightly higher in rural areas (99.2 versus 99.3), but in both age groups, these differences in informality should not be taken as meaningful.

However, because the number of employed children differs so much in data on urbanity and populations are so skewed in rural areas, there are very different numbers of children employed in informal employment between urban and rural areas. For example, across the 21 countries with data on urbanity, 2.0 million children aged 10–14 are employed in informal employment in urban areas and 7.9 million are employed in informal employment in rural areas. Hence, while there are no meaningful differences in informality rates of employed children across urban and rural areas, there are such large differences in population and employment rates than many more children in rural areas experience informal employment.

To better represent this point visually, figure 3 contains counts of the estimated number of children in informal employment (blue bar) and informal child labour (red bar) in 11 countries, separated by age and urbanity. In every country, there are more children in rural areas in informal employment and in child labour that is informal compared to urban children.

In the study sample, Tanzania stands out with 2.1 million children aged 10–14 in informal employment and 1.7 million children aged 10–14 in informal employment that would be considered child labour.
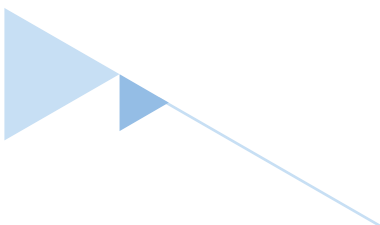
► **Figure 3. Number of children in informal employment and informal child labour, selected countries (100,000s)**

A. Urban children aged 10–14
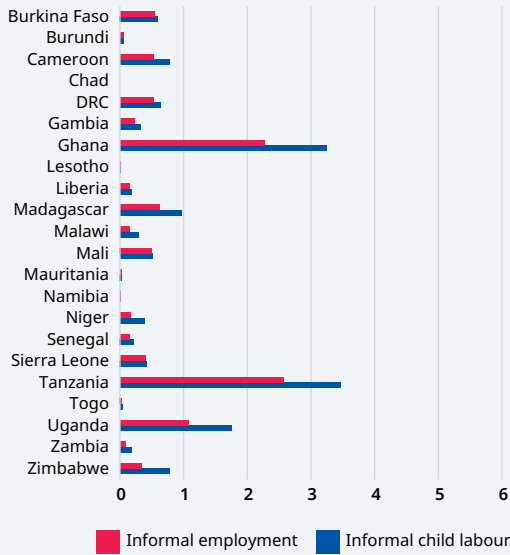
B. Rural children aged 10–14
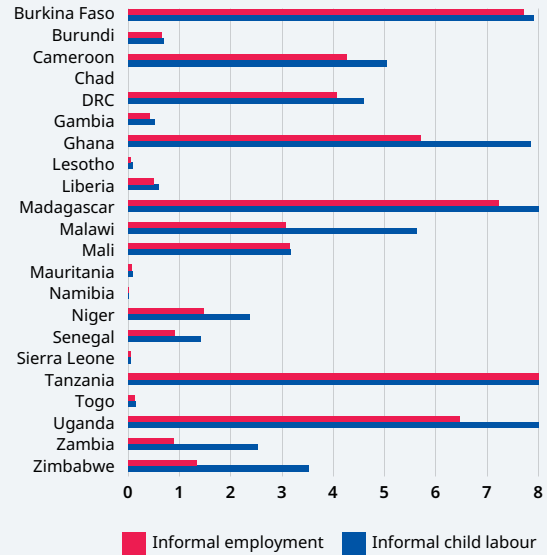
C. Urban children aged 15–17
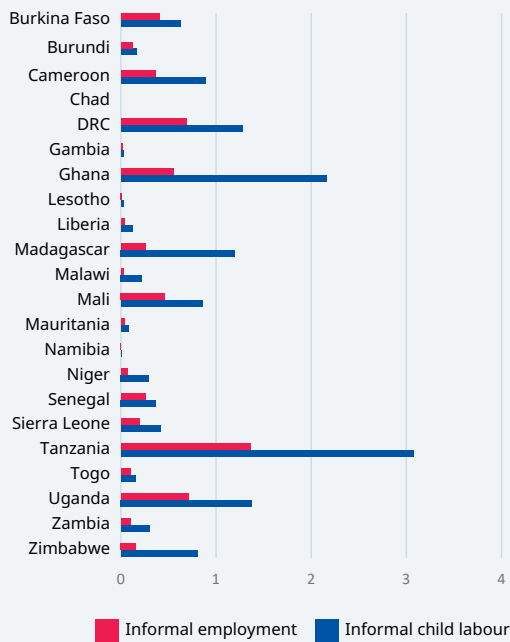
D. Rural children aged 15–17
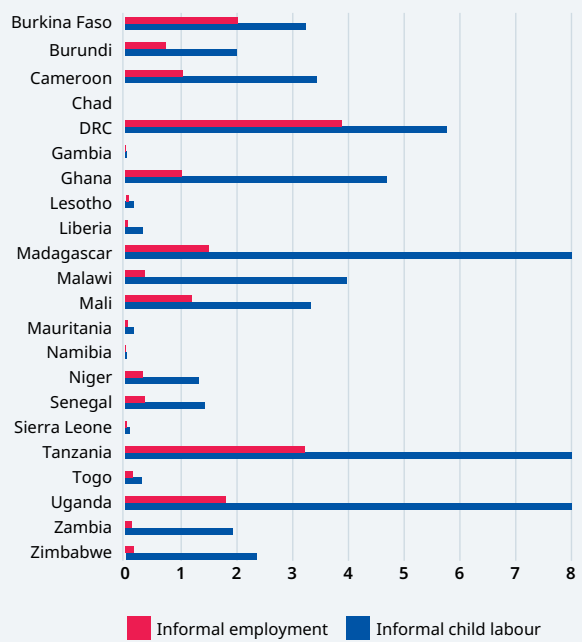
3.4 A labour force perspective

The previous summary statistics focus on child engagement in the informal economy through the lens of the child's experience: how likely is the child to work in the informal economy? An alternative gauge of the extent of child engagement with the informal economy is to examine how important children are in employment overall.

Children aged 10–14 make up 7.3 per cent of total employment in the countries studied herein; children aged 15–17 make up 5.4 per cent. Thus, the age group 10–17 accounts for 12.7 per cent of total employment, with 6.7 per cent in child labour. Table 7 includes these tabulations for each country. Column 1 is the share of employment that is a child in the age group 10–14. Column 2 is the same for ages 15–17. Hence, the sum of columns 1 and 2 is the share of employed aged 10–17. Column 3 is the share of the employed that

would be considered child labour. Not all working children are in child labour, so the sum of columns 1 and 2 should be greater than column 3. The importance of children in employment overall is largest in Burkina Faso where 20.1 per cent employment is made up of children aged 10–17 (the sum of columns 1 and 2).

Columns 4–6 and 7–9 contain the shares of the informally and formally employed respectively that are children aged 10–14, 15–17, or in child labour. In every country, the child and child labour share of employment is greater in the informal economy than in the formal economy. In fact, there are only two countries (Liberia and Uganda) where child labour is more than 1 per cent of formal employment. In the sample overall, the share of informal jobs in child labour is 26 times that of the share of formal jobs.
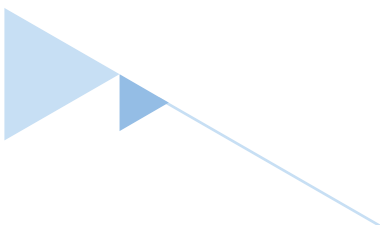
▶ **Table 7. Child shares of employment**

	Total employment (%)			Informal employment (%)			Formal employment (%)		
	Child employment aged 10–14	Child employment aged 15–17	Child labour aged 10–17	Child employment aged 10–14	Child employment aged 15–17	Child labour aged 10–17	Child employment aged 10–14	Child employment aged 15–17	Child labour aged 10–17
Burkina Faso	13.8	6.3	17.3	14.3	6.5	18.0	0.2	0.2	0.3
Burundi	2.0	5.9	4.2	2.0	6.0	4.3	0.0	0.4	0.0
Cameroon	6.3	4.7	6.7	7.0	5.2	7.4	0.0	0.1	0.1
Chad	7.9	4.9	7.8	8.1	5.0	8.0	0.2	0.1	0.1
DRC	1.9	2.6	3.4	2.0	2.7	3.5	0.1	0.2	0.1
Gambia	9.3	4.8	7.7	20.6	1.2	16.9	0.0	0.5	0.4
Ghana	8.6	5.3	7.0	9.3	5.7	7.5	0.0	0.1	0.1
Lesotho	1.5	2.7	1.8	2.0	3.4	2.3	0.0	0.1	0.1
Liberia	6.6	3.7	6.2	7.2	4.0	6.8	0.9	1.0	1.2
Madagascar	9.1	9.4	8.0	9.5	9.8	8.3	0.0	0.6	0.2
Malawi	9.7	6.8	5.1	10.5	7.4	6.3	0.3	1.3	0.4
Mali	5.8	6.5	8.3	6.0	6.8	8.7	0.1	0.4	0.2
Mauritania	1.4	2.7	2.0	1.5	2.9	2.1	0.3	0.0	0.0
Namibia	0.2	0.5	0.4	0.4	0.8	0.6	0.0	0.0	0.0
Niger	9.3	5.5	6.9	9.8	5.7	7.2	0.1	2.2	0.9
Senegal	4.7	5.2	4.7	5.1	5.6	5.1	0.2	0.0	0.2
Sierra Leone	2.8	2.9	4.0	3.0	3.1	4.2	0.1	0.1	0.1
Tanzania	10.9	6.4	10.3	11.8	7.0	11.2	0.2	0.1	0.2
Togo	0.9	2.3	2.0	1.0	2.5	2.2	0.0	0.0	0.0
Uganda	10.3	6.3	6.5	10.7	6.4	6.8	3.4	3.6	1.1
Zambia	4.9	4.0	2.1	5.7	4.7	2.5	0.0	0.0	0.0
Zimbabwe	8.0	5.9	3.7	8.9	6.5	4.1	0.2	0.3	0.3
Full sample	**7.3**	**5.4**	**6.7**	**7.7**	**5.7**	**7.2**	**0.4**	**0.6**	**0.3**

Notes: 1=1 per cent. All cells weighted to be nationally representative.

▶ 4
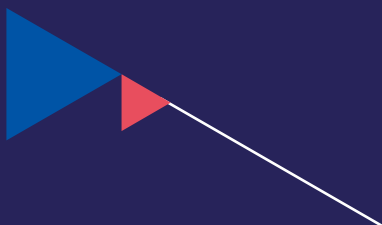
Understanding child employment, child labour and informality

4.1 Regulation

Nearly all working children are in informal employment. This could be driven by regulatory avoidance strategies on the part of the children, their families, or their employers. Child labour is often illegal. The informal economy typically operates outside the regulatory sphere, so that children might work in the informal economy because that is the only employment available to them given the minimum age for employment in the relevant legislation. If so, this would imply that changes should be observed in the prevalence of child engagement in informal employment at ages where the minimum age in employment laws relax or no longer apply.

To examine this, a counterfactual is estimated of what the informal employment rate would be expected to be at the age when minimum age no longer, applies, and compared to the actual informal employment rate at that age. If informality comes from regulatory avoidance, declines in informality would be expected when youth reach the minimum age. This approach is based on Edmonds and Shrestha (2012) who examine whether the minimum age for employment appears to be enforced in 59 countries that are part of the UNICEF Multiple Indicator Cluster Surveys (MICS) project. In no country, do they find patterns of change in time allocation that suggest that minimum ages are enforced.

Specifically, let y_{ic} represent the outcome of interest for child i in country c. Define the cut age as the age where the minimum age in employment law relaxes. Different age trends are allowed above and below the minimum age for employment and estimate:

$$(1) \quad y_{ic} = \beta_0^c + \Delta_{cut}^c * 1(A_i \geq A_{cut}^c) + \pi_c^0(A_i; A_i < A_{cut}^c) + \pi_c^1(A_i; A_i \geq A_{cut}^c) + \varepsilon_{ic}$$

$1(A_i \geq A_{cut}^c)$ is an indicator function that is 1 if age i is at or above the age of relaxation of the minimum age regulation. $\pi_c^0(A_i; A_i < A_{cut}^c)$ is linear in age for ages below the minimum age. $\pi_c^1(A_i; A_i \geq A_{cut}^c)$ is a linear in age for ages at and above the minimum age. With age defined relative to the minimum age, β_0^c is the counterfactual of what y_{ic} would be if minimum age laws were extended an additional year. Δ_{cut}^c is the change in y_{ic} at the minimum age of employment, which should be negative if regulatory avoidance is driving informality. Equation 1 is implemented by collapsing the weighted data down to the country-age year cell level and estimate the regression on the collapsed data to account for the clustering in age that is intrinsic to this research design. The findings are in table 8.

Columns 1 and 2 are from the same regression where employment is the outcome of interest. The first column contains β_0^c, the projection of the counterfactual employment rate for children at the minimum age of employment if minimum age regulations were enforced in the same way that they were enforced at younger ages. For example, the minimum age for employment in Burkina Faso is 16, so column 1 cell 1 reveals that in absence of the relaxation of minimum age for employment, 41 per cent of 16-year-olds would be employed. In the actual data, Δ_{cut}^c in column 2 shows that the employment rate is 5 percentage points lower than predicted, 36 per cent. The null

hypothesis that the projected employment rate and the actual employment rate are the same is not rejected: Δ_{cut}^c =0. In the full sample, an employment rate of 30 per cent at the minimum age for employment is projected if laws stayed in place; an employment rate of 31 per cent is in fact observed.

The remaining columns follow the same pattern of reporting β_0^c and Δ_{cut}^c as well as the statistical significance of the hypothesis test that Δ_{cut}^c =0. Columns 3 and 4 focus on informal employment as the dependent variable. As nearly all employment is informal employment, there are only minor differences between columns 1 and 2 versus columns 3 and 4. Columns 5 and 6 repeat columns 3 and 4, but restrict the sample to those currently employed. As minimum age laws should also have an impact on employment probabilities, this conditioning on employment is problematic, but it allows us to directly test for the negative effect implied by the regulatory avoidance hypothesis. The remaining columns drop this conditioning and report results for urban and rural areas subsequently. Chad is omitted from the final four columns, because it is missing data on urbanity. The focus is on employment only and not child labour, as child labour changes mechanically with the relaxation of the minimum age of employment laws, as they define child labour. The approach in columns 1–4 and 6–10 is not conditioned on employment.
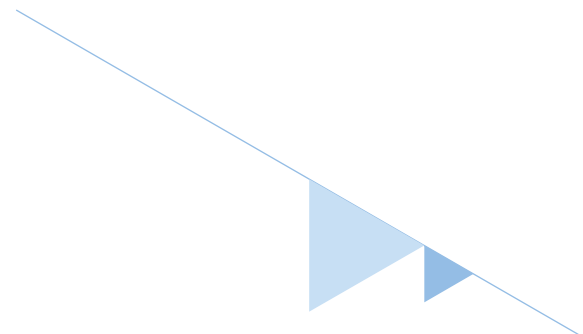
▶ Table 8. Impact of the minimum age for employment, children aged 10–17

	Employment			Informal employment			Informal conditional on employment			Informal employment, urban			Informal employment, rural		
	CF[1]	RD[2]		CF	RD		CF	RD		CF	RD		CF	RD	
Burkina Faso	0.41	-0.05		0.41	-0.05		1.00	0.00		0.21	0.02		0.47	-0.06	
	(0.03)	(0.05)		(0.03)	(0.05)		(0.00)	(0.00)		(0.02)	(0.03)		(0.04)	(0.06)	
Burundi	0.22	0.11	**	0.22	0.11	**	1.00	0.00		0.18	0.03		0.22	0.12	**
	(0.02)	(0.04)		(0.02)	(0.04)		(0.00)	(0.00)		(0.02)	(0.03)		(0.03)	(0.04)	
Cameroon	0.29	-0.02		0.29	-0.02		1.00	0.00		0.11	0.00		0.38	-0.01	
	(0.03)	(0.03)		(0.03)	(0.03)		(0.00)	(0.00)		(0.02)	(0.02)		(0.04)	(0.05)	
Chad	0.22	0.02		0.22	0.02		1.00	0.00							
	(0.02)	(0.03)		(0.02)	(0.03)		(0.00)	(0.00)							
DRC	0.13	0.02		0.13	0.02		1.00	0.00		0.04	0.03	*	0.19	0.02	
	(0.01)	(0.02)		(0.01)	(0.02)		(0.00)	(0.00)		(0.01)	(0.01)		(0.02)	(0.03)	
Gambia	0.31	-0.06		0.15	-0.11		0.90	-0.01		0.12	-0.09		0.19	-0.14	
	(0.03)	(0.05)		(0.10)	(0.16)		(0.04)	(0.07)		(0.08)	(0.12)		(0.14)	(0.21)	
Ghana	0.40	-0.02		0.40	-0.02		1.00	0.00		0.28	-0.05	*	0.54	-0.01	
	(0.01)	(0.02)		(0.01)	(0.02)		(0.00)	(0.00)		(0.02)	(0.02)		(0.01)	(0.02)	
Lesotho	0.08	0.03	*	0.08	0.03	*	1.00	-0.01		0.02	0.02	*	0.11	0.03	
	(0.01)	(0.01)		(0.01)	(0.01)		(0.01)	(0.01)		(0.01)	(0.01)		(0.01)	(0.02)	
Liberia	0.24	-0.04		0.23	-0.03		0.97	0.03		0.12	-0.03		0.40	-0.02	
	(0.04)	(0.06)		(0.04)	(0.06)		(0.02)	(0.03)		(0.02)	(0.03)		(0.05)	(0.08)	
Madagascar	0.62	-0.01		0.62	-0.01		1.00	0.00		0.33	0.06		0.69	-0.02	
	(0.03)	(0.04)		(0.03)	(0.04)		(0.00)	(0.00)		(0.04)	(0.06)		(0.02)	(0.04)	
Malawi	0.44	0.01		0.41	0.01		0.99	0.00		0.20	-0.04		0.44	0.02	
	(0.02)	(0.03)		(0.03)	(0.04)		(0.01)	(0.01)		(0.02)	(0.02)		(0.04)	(0.05)	
Mali	0.24	0.10	**	0.24	0.10	**	1.00	0.00		0.15	0.09	*	0.28	0.11	**
	(0.02)	(0.03)		(0.02)	(0.03)		(0.00)	(0.00)		(0.02)	(0.03)		(0.03)	(0.04)	
Mauritania	0.07	0.01		0.07	0.02		0.99	0.01		0.03	0.03	**	0.10	0.00	
	(0.01)	(0.01)		(0.01)	(0.01)		(0.02)	(0.03)		(0.00)	(0.01)		(0.01)	(0.02)	
Namibia	0.01	-0.01		0.01	-0.01		1.00	0.00		0.01	-0.01		0.01	-0.01	
	(0.01)	(0.01)		(0.01)	(0.01)		(0.01)	(0.01)		(0.01)	(0.01)		(0.01)	(0.01)	
Niger	0.13	-0.01		0.13	-0.01		1.00	-0.01		0.10	-0.01		0.14	-0.01	
	(0.01)	(0.01)		(0.01)	(0.01)		(0.02)	(0.02)		(0.01)	(0.02)		(0.01)	(0.01)	
Senegal	0.14	0.04	**	0.14	0.04	**	1.00	0.00		0.06	0.01		0.22	0.05	

	Employment			Informal employment			Informal conditional on employment			Informal employment, urban			Informal employment, rural		
	CF[1]	RD[2]		CF	RD		CF	RD		CF	RD		CF	RD	
	(0.01)	(0.01)		(0.01)	(0.01)		(0.00)	(0.01)		(0.01)	(0.01)		(0.02)	(0.03)	
Sierra Leone	0.08	0.05	**	0.07	0.05	**	0.99	0.01		0.10	0.07	*	0.04	0.00	
	(0.02)	(0.02)		(0.02)	(0.02)		(0.00)	(0.01)		(0.02)	(0.03)		(0.01)	(0.01)	
Tanzania	0.51	-0.01		0.51	-0.01		1.00	0.00		0.29	-0.03		0.63	0.02	
	(0.03)	(0.04)		(0.03)	(0.04)		(0.00)	(0.00)		(0.03)	(0.03)		(0.03)	(0.04)	
Togo	0.04	0.03	*	0.04	0.03	*	1.00	0.00		0.02	0.05	*	0.05	0.01	
	(0.01)	(0.01)		(0.01)	(0.01)		(0.00)	(0.00)		(0.02)	(0.02)		(0.01)	(0.01)	
Uganda	0.41	-0.07		0.40	-0.07		0.96	0.00		0.19	0.06		0.46	-0.10	
	(0.03)	(0.04)		(0.03)	(0.05)		(0.01)	(0.02)		(0.06)	(0.09)		(0.04)	(0.07)	
Zambia	0.17	0.01		0.17	0.01		1.00	0.00		0.03	0.02	**	0.27	0.00	
	(0.01)	(0.01)		(0.01)	(0.01)		(0.00)	(0.00)		(0.00)	(0.01)		(0.01)	(0.02)	
Zimbabwe	0.31	0.03		0.31	0.03		1.00	-0.01		0.22	0.07		0.35	0.01	
	(0.02)	(0.03)		(0.02)	(0.03)		(0.00)	(0.00)		(0.03)	(0.04)		(0.02)	(0.03)	
Full sample	**0.30**	**0.01**		**0.30**	**0.01**		**0.99**	**0.00**		**0.16**	**0.02**		**0.36**	**0.01**	
	(0.06)	**(0.03)**		**(0.06)**	**(0.03)**		**(0.00)**	**(0.00)**		**(0.04)**	**(0.01)**		**(0.07)**	**(0.04)**	

Notes: * Significant at 10 percent. ** Significant at 5 percent. Standard errors in parenthesis.

1 CF=$-\beta_0^c$ projection of the counterfactual employment rate.   2 RD: $-\Delta_{cut}^c$ change in y_{ic} at the minimum age of employment

There are altogether 230 hypothesis tests in table 8 from 115 separate regressions. If each hypothesis test were independent, false rejections would be expected at 10 per cent of a true null hypothesis 23 times. Tests are clearly not independent in table 8, as the dependent variables are interconnected. Even so, there are only 21 rejections, less than the false rejection rate expected. Hence, there is ample basis for the reader to be sceptical of the statistically significant results in the table.

With that caveat in mind and attention to the aggregate result that the relaxation of the minimum age in employment laws does not appear to have a substantive impact on informality, there are a few countries in table 8 with statistically significant results that imply a role for such relaxation in child time allocation. However, the hypothesis being examined herein is that the dominance of child informal employment is due to regulatory avoidance. In that case, the relaxation of the minimum age in employment laws would imply that informality should decrease. In table 8, nine of 22 countries show negative estimates of Δ_{cut}^c for informal employment and four of 22 show negative estimates for informal employment conditional on employment, but none of those are statistically significant. Only Gambia is negative with a magnitude for informal employment that is meaningful, but the magnitude for Gambia is smaller than the standard error, certainly not providing compelling evidence of a potential effect of the legal minimum age on informality. Urban Ghana is small in magnitude but is statistically significant at 10 per cent. In all other cases, the statistically significant coefficients on the change with the relaxation of minimum age laws are the wrong sign for informality to be due to regulatory avoidance.

4.2 Flexible schedules and job amenities

Working is an experience, and an agent's decision to participate in it is influenced by pay as well as other aspects of the work experience. Amenities around the work environment vary with formality (Pradhan and van Soest 1997), and differences in how those amenities are valued by children or their agents could lead to differential sorting of children and adults into informal work.

Is there differential sorting of children and adults into informal vs formal work? Table 3 (in section 2 above) documents that formal work is more prevalent among adults, consistent with the hypothesis of sorting. A more complete picture of the relationship between age and formality is shown in figure 4.

Figure 4 contains a lot of information. The dark, bolded line in the centre is the employment rate for the pooled sample of 22 countries examined in this study. Conditional on being employed, the share of employment that is formal is pictured at the bottom of the figure, and the

share of employment that is informal is pictured at the top. The bolded, orange lines are for the pooled samples for formal and informal shares of employment; and each of the 22 countries is also shown. Figure 4 spans ages 10–70. Age 70 is chosen as the top age because sample sizes drop after that and the data become volatile.

Figure 4 is consistent with sorting, as informal shares seem to be U-shaped in age. Chacaltana, Bonnet, and Leung (2019) document this U-shape in nearly every country and region in the world. The U-shape implies that the probability of a worker being in a formal job varies with age and is highest during prime working ages. Both the formal share of employment and employment rates are an inverted U in age. These patterns appear in every country in the study population. Namibia and Burundi are at the extremes, but still exhibit inverted U's in formal share and employment rates. Formal share peaks at age 50 in Namibia with more than half of the employed in formal employment. Burundi peaks at age 47 with 3 per cent of the employed in formal work.

▶ **Figure 4. Employment rate and employment shares, by age and country**
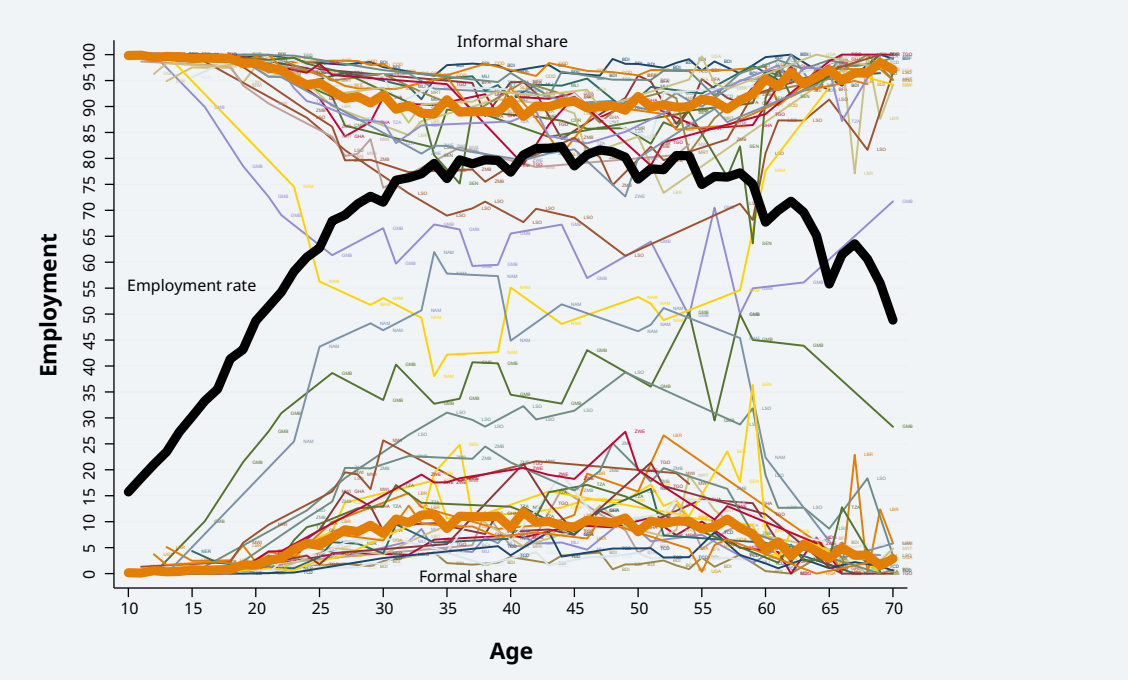
This broad pattern of a correlation between prime working age and formality is especially evident when bifurcating the sample by gender. This is pictured in figure 5. While there are no gender differences in informality for children (as there is virtually no variation), women have lower employment rates and more informality at prime working ages. Both men and women exhibit the U-shape for informal share and inverted U for formal share and employment, albeit with different rates, as men are more likely to be employed and more likely to be in formal employment.

Figure 5 represents a pooled sample throughout, with blue lines showing male and red lines female. The middle lines plot the employment rate by age. The bottom of the figure plots formal employment shares, while the top displays informal employment shares.

A strong correlation between employment rates and formality shares implies that the groups most likely to be on the margin of whether to work are more likely to be in informal employment. Hours worked and flexibility of schedule seem likely candidates for the amenity that induces children into almost entirely informal employment. Figure 6, using the pooled sample from figure 5, plots the distribution of hours worked by those in formal employment (dashed blue line), informal employment in informal economic units (solid blue line), and informal employment in formal economic units (dashed light blue line). Hours worked below 35 hours per week are more common among workers in informal employment in the informal sector. Formal employment below 30 hours per week is unusual and there are clear concentrations of 40 and 50 hours worked per week for such employment. Informal employment in the formal sector appears to be a mix of the two distributions, although much closer to formal employment than informal.

▶ **Figure 5. Employment rate and employment shares, by age and sex**

▶ Figure 6. Hours worked per week, by formal/informal status
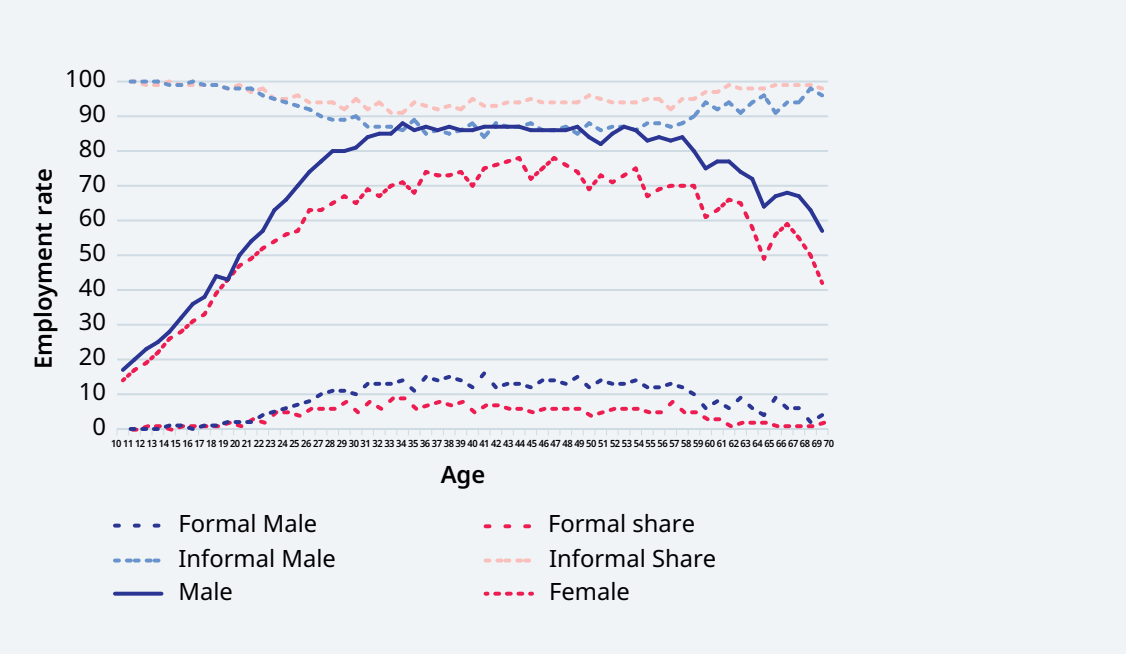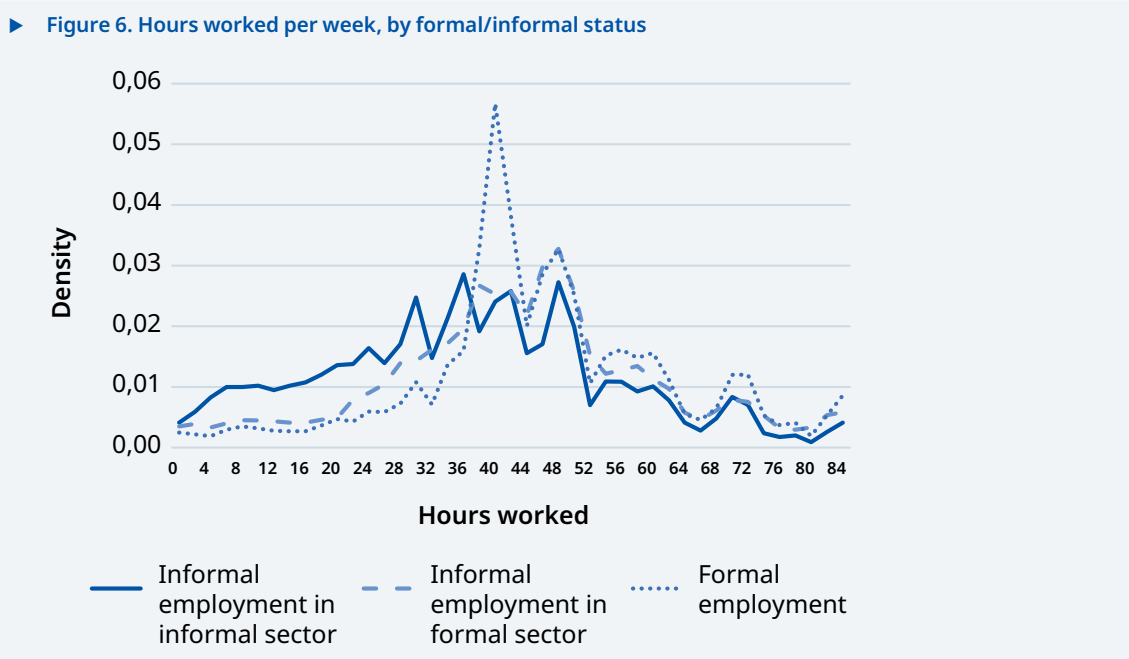
While figure 6 matches expectations for total employment, the data for children are more ambiguous. The distributions of hours worked overlap across job types. This is evident in figure 7 which replicates figure 6 but limiting the sample to children aged 10–17. The distribution of hours worked appears similar for both children in formal employment (dashed blue line) and in informal employment in the informal sector (solid blue line). There seems to be more intensity in hours worked in children employed in informal employment in the formal sector (dashed red line).

▶ Figure 7. Hours worked per week by children aged 10–17, by formal/informal status
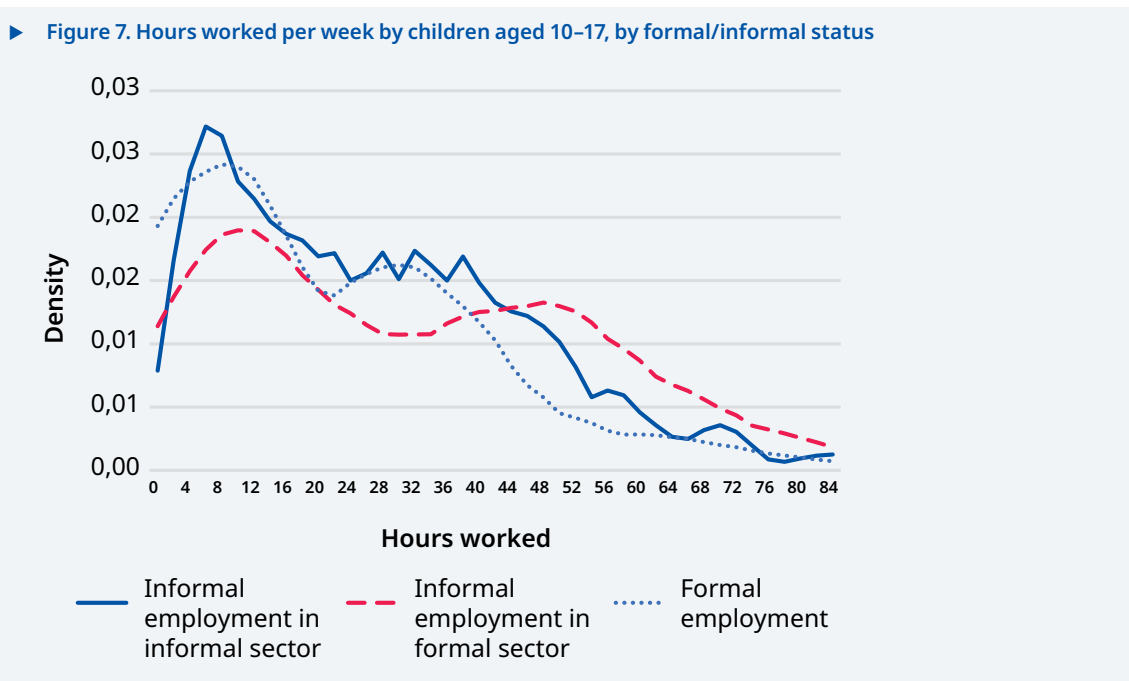
Overall, other than worksite, which is much less likely to be household-based and more likely to be a fixed location, job characteristics are not clearly distinct between formal employment and other job types. This is evident in table 9 which provides job- and child-related characteristics for working children. Informal employment in formal enterprises seems to stand apart somewhat. That type of job is more likely to be in manufacturing and in market services. There are less associated schooling and more hours worked in the older age group. Formal employment does not stand apart as less flexible or more intensive. For both age groups, rates of attendance at school are higher and hours worked are lower in formal work than in informal employment in the informal sector. Also, formal employment is less likely to be characterized as child labour.

▶ **Table 9. Characteristics of children's main jobs, by type and age group**

	Children aged 10–14			**Children aged 15–17**		
	Informal employment in the informal sector	Informal employment in the formal sector	Formal employment	Informal employment in the informal sector	Informal employment in the formal sector	Formal employment
Population	11 000 000	62 143	37 843	8 004 066	102 437	57 901
Attends school (%)	68.5	68.4	80.2	40.0	28.5	48.6
Works part-time (<=20 hours/week) (%)	52.6	61.2	78.3	34.1	30.5	37.1
Works long hours (>=43 hours/week) (%)	15.5	19.1	4.2	25.0	41.9	14.2
Work is child labour (%)	70.5	68.1	43.0	29.8	46.3	20.5
Fixed worksite, non-household (%)	1.8	8.8	82.4	6.0	29.7	68.8
Work is household-based (%)	84.8	78.4	0.4	76.6	43.1	2.6
Worker is employee (%)	5.8	21.5	10.5	12.2	56.9	13.3
Works in agriculture (%)	80.5	53.2	93.0	72.4	21.5	68.6
Works in manufacturing (%)	2.3	11.3	0.6	4.0	18.0	6.8
Works in construction (%)	0.2	0.4	0.0	1.1	3.2	0.0
Works in mining (%)	0.6	0.5	0.0	1.8	2.3	3.2
Works in market services (%)	5.6	30.7	5.9	9.2	47.7	16.3
Works in non-market services (%)	2.4	2.5	0.6	5.6	6.7	4.1
Work NEC (%)	8.4	1.3	0.0	5.9	0.5	0.9

Notes: Pooled data. School attendance is not available for Burkina Faso and Madagascar. Worksite is not available for Burkina Faso, Cameroon, Chad, Gambia, Niger and Sierra Leone. NEC= not elsewhere classified.

Hence, in comparing job characteristics across type of employment for children, there is no clear evidence that informality offers more flexibility or is more compatible with schooling. Of course, it is not obvious that the formal jobs children have taken are valid counterfactuals for the types of formal jobs that children who have selected into informal work could have taken, had taken formal jobs. There may be different types of employment opportunities available to different children. Hence, the next section examines how selection into informality and formality may be impacted by the types of jobs available to the child.

4.3 The location of employment opportunities

Table 10 shows that, overall, 83.4 per cent of working children aged 10–14 and 76.0 per cent of working children aged 15–17 do so with a co-resident household member in the same job. A job

is defined as a combination of industry, worksite type, and worksite location. For instance, 62.9 per cent of employed children aged 10–14 in Burkina Faso co-reside with another person who is employed and in the same industry at the same type of worksite in the same worksite location. This same figure for the age group 15–17 in Burkina Faso is 68.8 per cent. The table repeats the same calculation by informality job type. Missing cells result when there are no children in that cell (for example, there are no children aged 10–14 in formal employment in Burundi). With regard to informal employment in the informal sector, 83.7 per cent of children aged 10–14 and 76.3 per cent of children aged 15–17 co-reside with someone in the same job. This is also true for 78.6 per cent of children aged 10–14 and 75.0 per cent of children aged 15–17 in formal employment. In fact, for the age group 10–14, in seven countries all children in formal employment have a co-resident co-worker.

▶ Table 10. Share of employed children with co-resident co-workers, by country, job type and age group

	Children aged 10–14				Children aged 15–17			
	Overall (%)	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)	Overall (%)	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)
Burkina Faso	62.9	62.9	49.2	100.0	68.8	68.9	68.9	0.0
Burundi	65.6	66.3	17.8		72.7	73.0	3.0	100.0
Cameroon	82.8	83.4	53.1		75.2	75.4	69.3	91.1
Chad	83.1	83.1		100.0	75.8	75.8	100.0	0.0
DRC	66.7	66.9	48.4	0.0	57.5	57.6	52.6	0.0
Gambia	73.7	73.7			95.5	65.0	0.0	74.8
Ghana	89.0	89.1	72.9		77.7	77.8	71.4	0.0
Lesotho	31.6	31.6			31.4	32.0	0.0	0.0
Liberia	87.8	88.3	70.0	95.9	85.7	87.1	57.0	95.4
Madagascar	87.0	87.0			78.9	79.2	68.4	23.0
Malawi	59.0	58.0	11.7	100.0	56.6	58.0	17.0	58.2
Mali	83.3	83.3	100.0	100.0	80.0	80.8	40.8	70.4
Mauritania	39.6	39.8	0.0	32.8	42.2	42.7	0.0	100.0
Namibia	23.0	23.0			44.9	44.3		100.0
Niger	56.4	56.5	22.5	100.0	42.7	42.2	0.0	71.4
Senegal	81.1	81.6	0.0	0.0	72.1	72.7	33.7	0.0

	Children aged 10–14				Children aged 15–17			
	Overall (%)	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)	Overall (%)	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)
Sierra Leone	93.5	93.5	100.0	100.0	84.2	84.3	0.0	100.0
Tanzania	95.0	95.2	81.3	0.0	89.4	89.5	76.5	46.3
Togo	59.8	59.8			46.3	46.9	0.0	
Uganda	90.2	90.2	97.6	85.9	80.8	81.0	52.5	92.5
Zambia	90.0	90.0	100.0		88.3	88.3	83.0	
Zimbabwe	88.8	88.9	46.0	100.0	76.6	76.4	79.5	95.6
Full sample	**83.4**	**83.7**	**67.8**	**78.6**	**76.0**	**76.3**	**56.1**	**75.0**

Notes: 1=1 per cent. All cells weighted to be nationally representative. Missing cells lack observations.

These rates are much larger than seen in the adult population. Table 11 replicates table 10 for the adult population, bifurcating by sex rather than age. Adult females are more likely to have a co-resident household member with the same job than are males, but both are substantively below the rate of matches for children: 34.4 per cent of adult males and 47.6 per cent of adult females have jobs that are also held by another co-resident family member. Formal employment is particularly unlikely to be shared, with 20.3 per cent of adult males and 30.6 per cent of adult females having a formal employment job that matches with a household member.

▶**Table 11. Share of employed adults with co-resident co-workers, by country, job type and sex**

	Adult males aged 25–50				Adult females aged 25–50			
	Overall (%)	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)	Overall (%)	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)
Burkina Faso	34.0	34.3	40.3	29.3	59.5	60.0	59.0	48.8
Burundi	43.8	46.2	19.2	22.9	47.4	47.8	39.2	40.9
Cameroon	33.1	35.1	28.3	29.4	48.0	51.1	27.0	36.7
Chad	17.3	17.7	8.2	14.9	38.9	38.8	37.3	43.9
DRC	28.4	33.2	11.1	13.7	37.2	37.9	29.5	22.8
Gambia	54.1	42.2	38.7	44.3	82.6	64.5	73.0	63.2
Ghana	22.4	23.8	17.4	15.6	36.2	37.3	14.2	25.7
Lesotho	46.1	43.5	31.4	54.7	45.4	42.2	41.4	54.5
Liberia	39.3	48.4	16.3	17.6	47.4	50.4	26.2	21.6
Madagascar	17.9	18.0	19.8	15.4	38.2	39.4	31.9	20.3
Malawi	49.4	55.2	14.0	35.4	56.3	60.4	22.0	43.7

	Adult males aged 25–50				Adult females aged 25–50			
	Overall (%)	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)	Overall (%)	Informal employment in the informal sector (%)	Informal employment in the formal sector (%)	Formal employment (%)
Mali	46.4	50.5	21.3	34.1	72.8	74.3	34.7	68.8
Mauritania	20.5	21.2	15.3	19.9	22.6	22.0	24.4	30.2
Namibia	19.7	20.8	14.3	18.8	19.0	17.2	4.1	21.2
Niger	11.1	11.0	11.8	12.0	30.6	29.9	36.2	41.8
Senegal	34.8	37.9	20.2	28.7	51.7	52.8	46.4	44.8
Sierra Leone	62.3	66.5	27.0	33.9	69.4	71.2	31.5	41.2
Tanzania	52.2	63.7	12.5	15.1	62.4	67.9	15.3	24.9
Togo	22.2	25.4	0.0	5.8	28.8	29.5	34.3	12.3
Uganda	40.6	44.7	22.5	15.2	53.6	56.2	33.2	24.0
Zambia	35.1	46.6	6.6	10.8	48.0	52.3	14.5	23.5
Zimbabwe	34.9	40.8	15.2	18.7	43.0	46.5	18.0	28.6
Full sample	**34.4**	**38.4**	**15.7**	**20.3**	**47.6**	**49.4**	**29.0**	**30.6**

Notes: 1=1 per cent. All cells weighted to be nationally representative.

Given that working children largely work with co-resident household members, it should follow that the types of economic activities present in the household influence whether and how children work. To document this, the study turs to a regression framework to allow control for likely confounders in this discussion. Specifically, let y_{ih}^c represent the outcome of interest for child i living in household h in country c. As estimated:

$$(2) \quad y_{ih}^c = \beta_0^c + \beta_1^c E_h + \lambda_{gA}^c + \lambda_h^c + \varepsilon_{ih}^c.$$

λ_{gA}^c is a vector of age*sex fixed effects that vary by geography. Because of this flexible functional form for controlling for age, sex and location, ages 10–17 can be pooled in estimating (2). λ_h^c is a vector of household level demographic controls. E_h is a vector of indicators of the types of economic activities present for adults who co-reside in the child's household. They will vary across specifications. ε_{ih}^c is a mean zero error term that allows for correlations within household. β_1^c is the difference in y_{ih}^c associated with the presence of a given economic activity in the household. This is not a causal parameter as there will certainly be latent factors associated with child and adult employment decisions. Rather, the results of this regression in (2) are analogous to the differences in means presented in previous tables; they simply condition on age, sex and demographics differences.

The results of estimating (2) are in shown in table 12. When there is informal activity in the child's home, children are more likely to work and more likely to be in work that would be considered child labour. This association is largest when own-home-based informal work is present in the household, but it is approximately half as large as when there is informal work present in the child's household that is not based physically in the child's home. Employment and child labour are lower when there is not home-based informal activity in the child's household in every country but Burundi. The observation that the association between employment and informal sector activity in the child's household is lower when that work is based outside the child's home is true in all but seven countries. Employment and child labour are lower when there is formal employment in the household in the pooled data and in all but seven countries.

▶ **Table 12. Association between types of economic activity carried out by children aged 10–17**

	Employment						Child labour					
	Home-based informal		Non-home-based informal		Formal		Home-based informal		Non-home-based informal		Formal	
	coefficient/ (Std. Error)		coefficient/ (Std. Error)		coefficient/ (Std. Error)		coefficient/ (Std. Error)		coefficient/ (Std. Error)		coefficient/ (Std. Error)	
Burkina Faso	0.09	**	0.00		-0.04	*	0.06	**	-0.01		-0.06	*
	(0.01)		(0.01)		(0.02)		(0.01)		(0.01)		(0.02)	
Burundi	-0.02	**	0.00		-0.06	*	-0.02	**	0.01		-0.04	*
	(0.02)		(0.01)		(0.02)		(0.01)		(0.01)		(0.01)	
Cameroon	0.23	**	0.10	*	-0.02		0.16	**	0.06	*	0.00	
	(0.03)		(0.02)		(0.02)		(0.02)		(0.01)		(0.01)	
Chad	0.42	**	0.13	*	0.03		0.27	**	0.08	*	0.02	
	(0.03)		(0.02)		(0.02)		(0.02)		(0.01)		(0.02)	
DRC	0.03	**	0.04	*	-0.01		0.02	**	0.03	*	-0.01	
	(0.01)		(0.01)		(0.01)		(0.01)		(0.00)		(0.00)	
Gambia	0.22	**	0.04	*	-0.07	*	0.12	**	0.03	*	-0.04	*
	(0.04)		(0.02)		(0.02)		(0.04)		(0.01)		(0.01)	
Ghana	0.15	**	0.12	*	0.04	*	0.09	**	0.04	*	0.02	
	(0.02)		(0.02)		(0.02)		(0.01)		(0.01)		(0.02)	
Lesotho	0.00	**	0.01		-0.03	*	-0.01		0.00		-0.01	
	(0.01)		(0.01)		(0.01)		(0.01)		(0.01)		(0.01)	
Liberia	0.14	**	0.07	*	-0.05	*	0.08	**	0.04	*	-0.04	*
	(0.02)		(0.02)		(0.02)		(0.01)		(0.01)		(0.01)	
Madagascar	0.11	**	0.03		-0.06	*	0.06	**	0.02		-0.01	
	(0.02)		(0.03)		(0.03)		(0.02)		(0.02)		(0.02)	
Malawi	0.02	**	0.09	*	0.01		0.01	**	0.05	*	0.04	*
	(0.02)		(0.03)		(0.03)		(0.01)		(0.02)		(0.02)	
Mali	0.18	**	0.06	*	0.05	*	0.12	**	0.05	*	0.04	*
	(0.01)		(0.01)		(0.02)		(0.01)		(0.01)		(0.02)	
Mauritania	0.03	**	0.02	*	0.02		0.00	**	0.01	*	0.00	
	(0.01)		(0.01)		(0.02)		(0.00)		(0.00)		(0.01)	
Namibia	0.01	*	0.00		0.01	*	0.00		0.00		0.00	
	(0.00)		(0.00)		(0.00)		(0.00)		(0.00)		(0.00)	
Niger	0.06	**	0.07	*	0.04	*	0.05	**	0.03	*	0.02	
	(0.01)		(0.01)		(0.02)		(0.01)		(0.01)		(0.01)	
Senegal	0.14	**	0.07	*	-0.01		0.06	**	0.05	*	-0.01	
	(0.01)		(0.01)		(0.01)		(0.01)		(0.01)		(0.01)	

	Employment						Child labour					
	Home-based informal		Non-home-based informal		Formal		Home-based informal		Non-home-based informal		Formal	
	coefficient/ (Std. Error)		coefficient/ (Std. Error)		coefficient/ (Std. Error)		coefficient/ (Std. Error)		coefficient/ (Std. Error)		coefficient/ (Std. Error)	
Sierra Leone	0.05	**	0.07	*	-0.01		0.03	**	0.05	*	-0.02	*
	(0.02)		(0.01)		(0.01)		(0.02)		(0.01)		(0.01)	
Tanzania	0.23	**	-0.04	*	-0.05		0.12	**	-0.01		-0.04	*
	(0.03)		(0.03)		(0.03)		(0.02)		(0.02)		(0.02)	
Togo	0.04	**	0.02	*	0.00		0.03	**	0.01	*	-0.01	
	(0.01)		(0.01)		(0.01)		(0.01)		(0.01)		(0.01)	
Uganda	0.23	**	0.15	*	0.05		0.08	**	0.07	*	0.00	
	(0.02)		(0.03)		(0.04)		(0.01)		(0.02)		(0.02)	
Zambia	0.05	**	0.11	*	-0.03	*	0.02	**	0.01	*	-0.01	*
	(0.01)		(0.01)		(0.01)		(0.01)		(0.00)		(0.00)	
Zimbabwe	0.10	**	0.20	*	-0.02		0.02	**	0.06	*	0.01	
	(0.02)		(0.01)		(0.02)		(0.01)		(0.01)		(0.01)	
Full sample	**0.12**	****	**0.06**	*****	**-0.02**	*****	**0.06**	****	**0.03**	*****	**-0.01**	*****
	(0.00)		**(0.00)**		**(0.01)**		**(0.00)**		**(0.00)**		**(0.00)**	

Notes: * Significant at 10 per cent. ** Significant at 5 per cent. Standard errors clustered by household are in parenthesis. Regressions include controls for age, sex, urbanity and household demographics.

Taken together, the findings in this section seem consistent with an extremely simple explanation of why child labour is so concentrated in the informal economy. Children largely work with family members. When children are in households where their adult family members work in the informal economy, children are more likely to work. When children are in households where their adult family members are in formal employment, children are less likely to work. Consequently, working children are usually in situations where they are more likely to work informally.

This raises the question about children whose economic activity does not seem to match a family member. Table 13 contains the same descriptive statistics as table 9 but with different divisions of the data. Informal employment is grouped regardless of whether the economic unit is formal. For both formal and informal employment, the sample is now bifurcated by whether the child appears to work with a co-resident household member. Most working children are doing so with a co-resident family member, so the population estimates for the subgroups working alone are small.

▶ **Table 13. Characteristics of children's main jobs, by co-resident co-worker status and age group**

	Children aged 10–14				Children aged 15–17			
	Informal with co-resident	Informal without co-resident	Formal with co-resident	Formal without co-resident	Informal with co-resident	Informal without co-resident	Formal with co-resident	Formal without co-resident
Population	9 214 888	1 812 291	29 741	8 103	6 161 199	1 945 305	43 439	14 461
Attends school (%)	71.9	48.8	88.9	48.6	43.9	26.9	59.9	6.8
Works part-time (<=20 hours/week) (%)	54.2	44.2	85.7	50.9	35.0	31.1	39.1	30.7
Works long hours (>=43 hours/week) (%)	13.9	24.1	4.6	2.6	22.4	34.0	9.7	28.7
Work is child labour (%)	69.9	73.5	32.8	80.2	25.3	45.0	15.6	35.3
Fixed worksite, non-household (%)	1.2	5.9	82.4	82.4	3.9	13.6	75.6	46.9
Work is household-based (%)	86.5	75.4	0.5	0.0	79.9	64.5	0.9	7.8
Worker is employee (%)	3.7	17.0	1.3	44.3	7.0	31.1	9.9	23.5
Works in agriculture (%)	85.2	55.1	92.9	93.3	80.2	44.6	82.3	27.6
Works in manufacturing (%)	1.7	5.6	0.7	0.0	2.6	9.2	2.4	19.9
Works in construction (%)	0.1	0.8	0.0	0.0	0.5	3.4	0.1	0.0
Works in mining (%)	0.5	1.2	0.0	0.0	1.5	3.0	0.7	10.9
Works in market services (%)	4.0	14.9	5.7	6.7	6.5	19.7	11.0	32.3
Works in non-market services (%)	1.1	9.2	0.7	0.0	2.4	15.8	3.6	5.5
Work NEC	7.4	13.1	0.0	0.0	6.3	4.3	0.0	3.8

Notes: Pooled data. Schooling is not available for Burkina Faso and Madagascar. Worksite is not available for Burkina Faso, Cameroon, Chad, Gambia, Niger and Sierra Leone. NEC= not elsewhere classified.

However, children working away from a family member look different. A majority of them are not attending school: 71.9 per cent of children aged 10–14 in the informal sector with a household resident go to school, but only 48.8 per cent attend school if they are in informal employment without a household resident in the same job. They also are twice as likely to work long hours. They appear less likely to be in a fixed work location, more likely to be an employee, and are more often found in services and in work "not elsewhere classified" (NEC). Formal working 10–14-year-olds appear more similar regardless of whether a family member works with them, than

children in informal work except that for those without a family member present school attendance is much lower.

Older children aged 15–17 who are working in the formal sector without a co-resident family member in the same job really stand out in table 13. Only 6.8 per cent attend school; 28.7 per cent work long hours; they are three times as likely to be in child labour; are 38 per cent less likely to be in a fixed location; and are more likely to be in manufacturing, mining and market services. For this older population group, children working informally without a co-resident co-worker look more like the

formal sector workers without a co-resident co-worker than they do other informal workers.

This observation, that informality is less a predictor of vulnerability than is proximity to a family member in work, could also reflect the intensity of employment in the child's household. Table 14 replicates table 13 in terms of job characteristics but splits the sample by the intensity of informal employment for co-resident adults. Column 1 tabulates job characteristics of working children for children with no employed adult present. In column 2, children have co-resident working adults, all in the informal economy. In column 3, adults are mixed. In column 4, all co-resident adults are in the formal sector. The order and content in columns 1–4 (age group 10–14) repeat in columns 5–8 (age group 15–17). The large differences in job characteristics for children with informality intensity that are seen with parental proximity are simply not observed here.

▶ **Table 14. Characteristics of children's main jobs, by intensity of formality in the household**

	Children aged 10–14				Children aged 15–17			
		Household with >=1 employed adult				Household with >=1 employed adult		
	No employed adult	Adults all informal	Adults mixed	Adults all formal	No employed adult	Adults all informal	Adults mixed	Adults all formal
Population	8 066 434	40 100 000	4 886 902	10 300 000	4 554 186	17 900 000	2 622 874	5 815 746
Attends school (%)	75.2	81.4	87.7	78.3	55.5	65.6	75.8	59.8
Works part-time (<=20 hours/ week) (%)	51.6	52.4	63.1	51.1	35.8	33.8	36.0	34.8
Works long hours (>=43 hours/ week) (%)	17.1	15.4	12.3	18.0	26.5	24.3	32.4	29.1
Work is child labour (%)	10.1	16.6	8.2	9.1	8.0	10.7	6.8	7.7
Fixed worksite, non-household (%)	5.5	1.9	3.7	5.2	7.8	6.1	14.6	8.9
Work is household-based (%)	73.4	88.1	73.1	72.5	62.0	78.9	71.0	62.9
Worker is employee (%)	10.8	4.3	17.1	12.4	19.1	9.9	34.2	22.7
Works in agriculture (%)	71.9	82.5	63.3	69.5	66.6	74.8	45.0	62.1
Works in manufacturing (%)	2.1	2.3	3.8	2.1	4.4	4.0	5.2	4.3
Works in construction (%)	0.4	0.1	0.3	0.5	1.6	1.1	1.5	1.7
Works in mining (%)	0.8	0.6	0.6	0.8	1.6	1.9	1.1	1.5

| | Children aged 10–14 | | | | Children aged 15–17 | | | |
| | | Household with >=1 employed adult | | | | Household with >=1 employed adult | | |
	No employed adult	Adults all informal	Adults mixed	Adults all formal	No employed adult	Adults all informal	Adults mixed	Adults all formal
Works in market services (%)	5.1	5.3	17.3	6.8	10.6	8.7	20.1	12.0
Works in non-market services (%)	2.4	2.1	8.3	3.9	4.8	4.2	23.8	9.0
Work NEC	17.1	7.1	6.4	16.6	10.3	5.1	3.3	9.4

Notes: Pooled data. Schooling is not available for Burkina Faso and Madagascar. Worksite is not available for Burkina Faso, Cameroon, Chad, Gambia, Niger and Sierra Leone. NEC=not elsewhere classified.
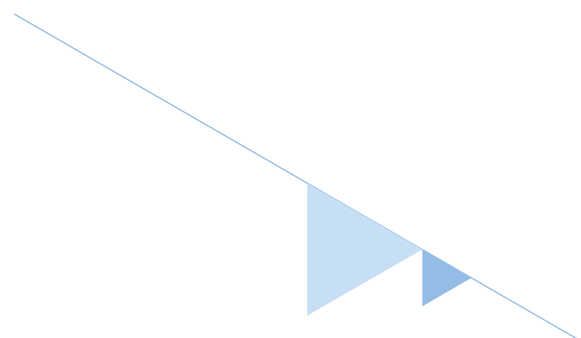
▶5

Conclusions

Working children are almost entirely in the informal economy, accounting for 99.7 per cent of employed children aged 10–14 and 99.3 per cent of employed children aged 15–17. This analysis suggests that this dominance of informality is largely due to the fact that most working children work with a co-resident family member, and families that are engaged in the informal economy are more likely to have their children work.

However, children who are not co-working with a co-resident household member stand out in the analysis as especially vulnerable. For older children especially, children who are working without a co-resident family member look more alike regardless of whether their job is formal or informal. There are two implications of this observation.

First, formalization in isolation is unlikely to address the circumstances of the most vulnerable children. This may be because their vulnerability comes from the lack of family members in the workplace or because children working without family members may in general lack family support. Formalization will not solve either reason. Second, a more nuanced understanding of the child's work environment might be important for targeting especially vulnerable children. The next step in this research agenda should be to try to better understand what types of worksites are most likely to be associated with vulnerability. After that, consideration can begin of different interventions that might be appropriate to those work environments and will protect children.

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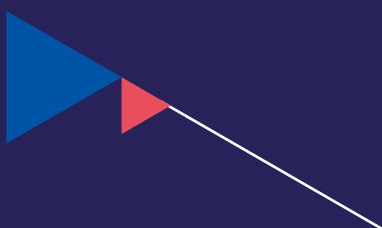
Annexes

Annex 1. Data selection

This paper's analysis is limited to sub-Saharan African countries that have nationally representative household surveys where informality and child labour since 2008 can be defined. The following countries are omitted:

- ▶ Angola - No known survey since 2008 with informality

- ▶ Benin - No known survey since 2008 with both informality and employment of children aged 10–14

- ▶ Botswana - No known survey since 2008 with informality

- ▶ Central African Republic - No known survey since 2008 with informality

- ▶ Côte d'Ivoire - No known survey since 2008 with both informality and employment of children aged 10–14

- ▶ Eritrea - No known survey since 2008 with informality

- ▶ Ethiopia - No known survey since 2008 with informality

- ▶ Gabon - No known survey since 2008 with informality

- ▶ Guinea - No known survey since 2008 with informality

- ▶ Guinea-Bissau - No known survey since 2008 with informality

- ▶ Kenya - No known survey since 2008 with informality

- ▶ Mauritius - No known survey since 2008 with both informality and employment of children aged 10–14

- ▶ Mozambique - No known survey since 2008 with informality

- ▶ Nigeria - No known survey since 2008 with informality

- ▶ Rwanda - No known survey since 2008 where informality can be defined

- ▶ Somalia - No known survey since 2008 with both informality and employment of children aged 10–14

- ▶ South Africa - No known survey since 2008 with both informality and employment of children aged 10–14
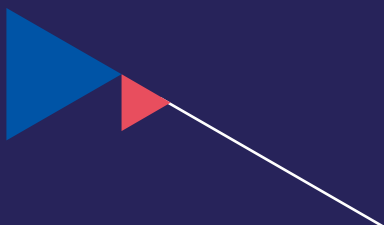
Annex 2. Complementary tables

▶ **Table A2.1. Employment-related questions, by country**

Country	Year	Minimum age of employment data in survey (based on questionnaire)	Employment		Child labour				Unused but relevant		
			Any type of productive activity	For at least 1 hour in the last 7 days	Hours in productive activities in last 7 days (SDG 1*)	Hours including chores (SDG 2*)	Hazardous Industry	Hazardous occupation	Work at night	Injured while working	Protective equipment while working
Burkina Faso	2014	10	1	1	1	0	1	0	0	0	0
Burundi	2014	10	1	1	1	0	1	0	1	0	0
Cameroon	2014	5	1	1	1	0	1	0	1	0	0
Chad	2018	6	1	1	1	1	1	0	0	0	0
DRC	2012	5	1	1	1	1	1	1	0	0	0
Gambia	2018	7	1	1	1	1	1	1	0	0	0
Ghana	2013	5	1	1	1	1	1	1			
Lesotho	2019	10	1	1	1	1	1	1	0	1	0
Liberia	2010	5	1	1	1	1	1	0	0	1	0
Madagascar	2015	5	1	1	1	0	1	1	0	0	0
Malawi	2013	10	1	1	1	1	0	0	0	1	0
Mali	2018	6	1	1	1	1	0	0	0	0	0
Mauritania	2017	10	1	1	1	0	1	0	0	0	0
Namibia	2018	8	1	1	1	1	1	0	0	0	0
Niger	2017	10	1	1	1	0	1	0	1	0	0
Sierra Leone	2014	5	1	1	1	1	1	1	0	1	0
Tanzania	2014	5	1	1	1	1	1	1	1	1	1
Togo	2017	10	1	1	1	1	1	0	1	0	0
Uganda	2017	5	1	1	1	1	1	1	1	1	1
Zambia	2018	5	1	1	1	1	1	1	1	1	0
Zimbabwe	2019	5	1	1	1	1	1	0	1	1	0

Note : * SDG 1 refers to SDG 8.7.1: Proportion of children engaged in economic activities; SDG 2 refers to the SDG 8.7.1: Proportion of children engaged in economic activities and household chores (for additional details see UN: https://unstats.un.org/sdgs/dataportal/database).

▲ Table A2.2. Data sources on formality, by country

Country	Year	Employment in the informal sector								Informal employment			
		If 1 is yes (unit not in public sector):								For employees	If (10) is unknown, then both (11) and (12) need to be provided to be considered formal		
			If 2 is unknown:										
				If 3 is unknown:								
					If 4 is unknown (either to be informal):			If employer, own-account worker, or member of a producer cooperative, informal is defined based on the unit (cols 1–7)				Nature of employment contract is neither a fixed term contract nor permanent
		Economic unit is not in the public sector	Economic unit is not registered with social security, income, or sales tax authority	Unit does not maintain formal booking	Unit does not contribute to social security	Unit has <= 5 workers	Unit not located on fixed premises	Contributing family worker is informal		No contribution to social security	Not entitled to paid annual leave	Not entitled to sick leave	
		(1)	(2)	(3)	(4)	(5)	(6)	(8)	(9)	(10)	(11)	(12)	
Burkina Faso	2014	1	1	0	1	0	0	1	1	1	1	1	0
Burundi	2014	1	1	1	1	1	1	1	1	1	1	1	0
Cameroon	2014	1	1	1	1	0	0	1	1	1	1	1	0
Chad	2018	1	1	0	0	0	0	1	1	1	1	1	0
DRC	2012	1	1	1	1	1	1	1	1	1	0	0	0
Gambia	2018	1	1	1	1	0	0	1	1	1	0	0	0
Ghana	2013	1	0	0	1	1	1	1	1	1	1	1	0
Lesotho	2019	1	1	1	1	1	1	1	1	1	1	1	0
Liberia	2010	1	1	0	1	1	1	1	1	1	1	1	0
Madagascar	2015	1	1	1	1	1	1	1	1	1	1	1	0

		Employment in the informal sector									Informal employment			
		If 1 is yes (unit not in public sector):										For employees		
				If 2 is unknown:									If (10) is unknown, then both (11) and (12) need to be provided to be considered formal		
					If 3 is unknown:										
						If 4 is unknown (either to be informal):								
Country	Year	Economic unit is not in the public sector	Economic unit is not registered with social security, income, or sales tax authority	Unit does not maintain formal booking	Unit does not contribute to social security	Unit has <= 5 workers	Unit not located on fixed premises	Contributing family worker is informal	If employer, own-account worker, or member of a producer cooperative, informal is defined based on the unit (cols 1–7)	No contribution to social security	Not entitled to paid annual leave	Not entitled to sick leave	Nature of employment contract is neither a fixed term contract nor permanent
		(1)	(2)	(3)	(4)	(5)	(6)	(8)	(9)	(10)	(11)	(12)	
Malawi	2013	1	1	1	1	1	1	1	1	1	1	1	0
Mali	2018	1	1	1	1	1	1	1	1	1	1	1	0
Mauritania	2017	1	1	1	1	1	1	1	1	1	1	1	0
Namibia	2018	1	1	1	1	1	1	1	1	1	1	1	0
Niger	2017	1	1	1	1	1	1	1	1	1	1	1	0
Senegal	2015	1	1	1	1	1	1	1	1	1	1	1	0
Sierra Leone	2014	1	1	0	1	0	0	1	1	1	1	1	0
Tanzania	2014	1	1	1	1	1	1	1	1	1	0	0	0
Togo	2017	1	1	1	1	1	1	1	1	1	1	1	0
Uganda	2017	1	1	1	1	1	1	1	1	1	1	1	0
Zambia	2018	1	1	1	1	1	1	1	1	1	1	1	0
Zimbabwe	2019	1	1	1	1	1	1	1	1	1	1	1	0