

# IDENTIFY CHILD LABOUR IN AGRICULTURE: RESEARCH IN COFFEE-GROWING HOUSEHOLDS IN DAK LAK PROVINCE, VIETNAM

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## Abstract:

Agriculture is one of the sectors in using child labour in Vietnam. According to result of Viet Nam National Child Labour Survey in 2018, child labour work in the agricultural, forestry and fishery sector is over half and 84 per cent are concentrated in rural areas.

Dak Lak province locate in Central Highlands of Vietnam presents an interesting case in industry crop systems, of which coffee is the premier commodities and contribute a large part to economic growth provincially and at the national level. The coffee tree is a key crop accounting for more than 70% of the area of industrial crops in the province. The area of coffee cultivation is currently 203,737 hectares, but only 10% of the production area is specialized. 90% is grown by the farmers themselves (People's Committee of DakLak Province (2017)). Scattered production depends on simple labor, so the impact of coffee production and trading on children in households is not small. In particular, some cases of child labor still keep going.

This paper focuses on (1) identifying the child labour in coffee households in Daklak; and (2) identifying the main factors affecting farmers' decisions to using child labour in production. Research based on primary data collected from field surveys in 6 communes in 5 districts, towns and city of DakLak province in year 2018. The main methods used are group discussions of coffee farmers, groups of children in households and semi-structured interviews for relevant local officials.

**Key Words:** *Labour Child; Coffee Farm; Household; Identify; Daklak.*

## I. Introduction

In coffee production of Vietnam, as the same as situation in developing countries. There are two groups of factors affecting the engagement of children in coffee production. First, children are more likely to get involved in coffee production for macroeconomic factors such as price fluctuation and income from coffee production. In particularly, coffee price is fluctuated in short and long term. To achieve the premium price at the peak of trading time, farmers usually involve children as labor to handle some tasks at coffee farm. Second, children are potential involved in coffee production because of the cultivation methods, application of science and technology on the production process, investment for production.

The studies by Kruger (2007) and Schuit (2012) shows that income is an important factor influencing the decision to employ child labor in coffee growing activities. The impact of income on the participation of children in coffee production is reflected in two aspects: (1) in the case of declining coffee income, households are forced to use children to reduce costs, (2) and in the case of increased coffee incomes, households may need more labour, especially child labor to harvest quickly, so that they supply coffee to the market on time. Moreover, Schuit (2012) also shows that, in order to increase income from coffee, households use most of the labour resources for this

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activity. Therefore, children become responsible for caring for younger children, looking after homes, or preparing meals for parents so that they can focus on working at coffee farm.

The impact of applying technical standards in coffee production on the involvement of children is mentioned in Castillo and Benzaken (2010). The report points out that the development of training programs for all coffee growers and providing the certificate of non-use of children in the production of coffee has been somewhat limited to this issue. Coffee farmers are trained to apply innovative methods, processes of coffee production, which have been evaluated and monitored for the presence or absence of using child-labour by ILO and Non-governmental organizations. In the Vietnamese context, the application of UTZ or Rainforest Alliance criteria has also shown the influence of these certificates on the employment of child-labour such as: forbidden to hire labor for less than 15 years and forbidden to assign heavy or hazardous work, or any that could jeopardize their physical, mental or moral well-being for children under 18 years old (Cafecontrol, 2018).

The scale of coffee production also influences the use of labour in coffee growing and harvesting. The results of Wollni and Zeller (2007) have shown that there is a correlation between the production scale, in particular the coffee area and the number of children used in coffee growing and harvesting. However, the relationship is influenced by seasonal employment factors. With a large scale of coffee production, labor for temporary recruitment is not available, so the farmers use their children as an alternative to ensure proper planting and harvesting.

Capital and tools for coffee production also indirectly affect the probability of children working in coffee farm (Tonetto, 2017). This study found a correlation between application of facilities and equipment in production and the use of child-labour. Typically, as the households that use machine tools in production and will less frequently use child labor than other households.

## **II. Research Methods**

The research applies mixed methods design (Creswell, 2014) which is combined by two methods cross-sectional survey research design (De Vaus, 2014) and case study research design (Yin, 2014) to conduct data collection. The former is employed through the survey to collect related information about the production system of coffee growers, initial processors, while the latter is conducted by interviews to collect data and information from stakeholders related to coffee production and children rights. Therefore, 3 districts of Cu M'ga, Krong Nang and Ea H'leo, Buon Ho town and Buon Me Thuot city were selected as the research sites. Collectively, they represent well for the purpose of this study the variety of contexts and conditions where coffee is grown throughout the Central Highlands. In these selected districts, town and city, there are 13 communes and wards where about 600 coffee households have linkages with a company. Therefore, the study selected 6 out of these 13 to conduct a survey, and interviewees were selected from these 600 coffee households who have children under 18 years old. Deep - interviews of relevant stakeholders used to. Who are which selected to interviewing were: 18 Children and teenagers (03 children per commune/ward) were purposively selected following the introduction from group discussions with parents. 06 officials who are responsible for children issues were selected from the 06 selected communes/wards, 01 per each. 5 officials were selected from Department of Labor, Invalids and Social Affairs of 05 of the selected districts/town/city, 01 per one.

The activities conducted by data collection tools: 1) A Semi-structured questionnaire was designed to collect information from these interviewees, aiming to comprehensively collect

information related to the impacts of growing up in coffee production communities on children rights, and the root causes of those impacts. Face-to-face interviews were separately conducted with the interviewees; 2) Group discussions: The study conducted 12 group discussions at Tân Hòa, Ea Đrong, Ea Tân, Krông Năng, Thiện An và Dliê Yang communes. Each commune has two group discussions: a parent group included heads of households who have direct linkage with supply chain actors, and a children group, were 12 to 18 years old, belonging to coffee household, with 7 – 15 participants in each group.

The surveyed data from coffee growers and initial processors was exported and analyzed by IPM-SPSS 24.0. The exploratory data analysis (EDA) was conducted to check the outliers, missing data, then other statistical indicators was applied to check the reliability, validity, correlation, mean, standard deviation, and standard errors.

The data from in-depth interviews were transcribed and translated into NVIVO. The process of this process is coding data, establishing themes, and cross-sectional analysis among themes based on objectives and research contents.

Although aiming to have insights on the coffee supply chain, the research survey focused on impact and root causes, and hence on actors from the coffee sourcing the ones at communities rather than all actors of the chain. However, the sample of household survey contain only coffee households who have direct linkage with a company, thus not representing the whole population.

### **III. Literature Review**

#### **3.1. Child rights and child labour**

##### ***3.1.1. Concept***

Rights are often defined as the legitimate demands that a person needs acquiring to ensure survival and development in the best way. Accordingly, child rights are the basic requirement and legitimate that children must be provided to ensure the best survival and development. The Convention on the Rights of the Child (CRC) 1989 identifies that a "Child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice" and to fully survive and develop children need "special care" which is based on the international conventions on human rights.

Child rights conclude right groups: 1) The rights to survival, include the right to survival and development of the child; the right to have a full name, nationality; the right to know parents and parental care. The Vietnamese Constitution of 2013 states: "Everyone has the right to live. Human life is protected by the law. No one shall be illegally deprived of his or her life." (Article 19) and "Children enjoy protection, care and education by the State, family and society and are allowed to participate in children's affairs. Infringement, persecution, maltreatment, abandonment, abuse and exploitation of labor and other forms of violating child rights are strictly prohibited" (Article 37). 2) Rights to develop include the conditions that children need to develop in harmonies such as the right to enjoy education, play, access to information, freedom of belief and religion. 3) Rights to protection: This group of rights aims to combat forms of abuse, and exploitation, which are acts that infringe on the fundamental rights of children legally recognized. This group includes: (i) the right to preserve national identity; (ii) the right not to force away from the parent, except in the best interests of the child; (iii) the right not to be subjected to arbitrary or

unlawful interference with privacy; (iv) the right to social security including social protection and other necessary measures; (v) the right to protection against all forms of exploitation, sexual exploitation, economic exploitation, abduction, trafficking which are harmful to the development of the child; (vi) The right to protection against drug using or to be involved in the production or trafficking of drugs; (vii) The right to protection from torture, cruel, punitive, deprived of the right to free freedom; and (viii) The protected volume is not required to participate in combat when children are less than 15 years old. And 4) Rights to participate include (i) the right to express their own views and the freedom to develop such views on issues affecting children; (ii) freedom of expression (not against the law); and (iii) freedom of association and peaceful assembly.

### ***3.2. Child rights and business***

The children rights and business principles (CRBP) aims to respect and support the rights of children everywhere throughout the business activities at working place, marketplace and the working environment. These principles provide a comprehensive set of actions to address the adverse influence and prevent the children rights as well as the business solution to project the children rights.

International law forms the legal framework for the comprehensive protection of child rights in business which is based on tools such as the CRC, and ILOs Conventions on Minimum Age and the worst forms of labor. The attention was paid to the CRC General Comment No. 16 of 2013, which elaborates on the impact of the business sector on child rights and explains the role of government in supporting child rights and assisting children in the context of business. Based on this, Save the Children, UNICEF and UN Global Compact (2012) developed the "Children's rights and Business Principles" stating business responsibility to: 1) Meet their responsibility to respect child rights and commit to supporting the human rights of children; 2) Contribute to the elimination of child labour, including in all business activities and business relationships; 3) Provide decent work for young workers, parents and caregivers; 4) Ensure the protection and safety of children in all business activities and facilities; 5) Ensure that products and services are safe, and seek to support child rights through them; 6) Use marketing and advertising that respect and support child rights; 7) Respect and support child rights in relation to the environment and to land acquisition and use; 8) Respect and support child rights in security arrangements; 9) Help protect children affected by during emergencies; 10) Reinforce community and government efforts to protect and fulfill child rights.

The Children's Law of Vietnam 2016 recognizes that children have the right to access and enjoy the prescribed rights without any limitations even in business (Article 5). Simultaneously, there are specific provisions on the obligations of the State and enterprises in implementing measures to ensure the rights of children and establishing prohibited behaviors when carrying out production activities which are harming or hindering child rights.

The regulations show that in business if child labor is employed, the rights of children must be guaranteed. Therefore, it must be insured by product safety, marketing practices and children engaged in or impacted by production and sourcing.

### ***3.3. Concept of child labour in agriculture***

The CRC member states set a minimum age for children to be able to work in general at 15 years and not less than the age at which compulsory education ends (however, the convention

allows for some flexibility. in specific circumstances, including 14 years for developing countries). For work that is considered hazardous, the minimum age is 18 years.

The ILO Worst Forms of Child Labor Convention 182 (1999), ratified by 174 of the 183 Member States, identifies the worst forms of child labor including the use of child labor in hazardous work. Hazardous work is work that, by its nature or circumstances in which it is performed, has the potential to harm the health, safety or morals of children. Convention 182 is universal in scope, which means it applies to all sectors of the economy and employment status (examples include unpaid family labor on farms). family) no exceptions are possible. The Hazardous Work List is established by the competent authority at the national level and after tripartite consultation with employers' and workers' organisations (ILO).

Convention No. 129 defines the term agricultural commitments as commitments and parts of commitments with respect to crop and livestock production, including livestock production and care, forestry, cultivation and processing. agricultural. operating organization or any form of agricultural activity (ILO)<sup>1</sup>. In this respect, child labor in the agricultural sector considered to be the use of child labor in any form of agricultural activity organized by an operator.

#### **IV. Result and Discusses**

##### **4.1. *Coffee production***

Coffee plays a very important role in the agro-forestry economic structure of Dak Lak province, and is a staple crop in most districts, towns and cities. In 2017, coffee export value alone accounted for more than 50 % of total agricultural output and accounted for more than 20 % of Dak Lak's GDP. Currently, the area of coffee production accounts for more than 70% of the total area of long-term industrial crops in the province and accounts for over 33% of the country's coffee area. In addition to coffee trees some perennial trees are grown in Dak Lak such as (1) Fruit trees including orange, tangerine, grapefruit, pineapple, longan, litchi, mango, durian, jackfruit, banana, dragon fruit; (2) industrial crops including pepper, rubber, tea, cocoa and cashew nut.

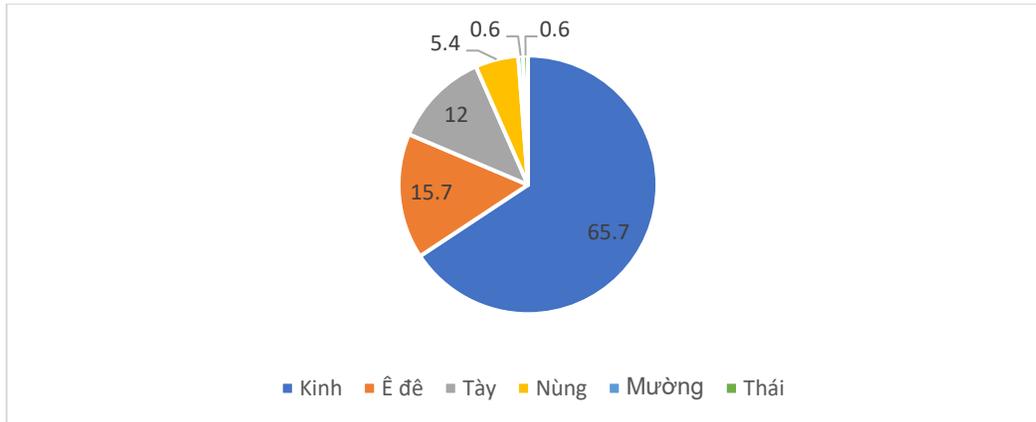
Although in Dak Lak, traditional techniques have been popularly practiced in coffee production, some international technical standards have been introduced and applied. By 2017, 11 companies in the province were given UTZ certificates for coffee manufacturing. Around 11 thousand coffee growers with 15,651 hectares of coffee production at 17 communes and wards were covered by UTZ certificates. 14 companies have applied 4C standards for a total area of 25,210 ha. This certification have involved 15,484 households who produced 94,779 tons. In addition, five coffee production cooperatives obtained FLO certificates for the area of 649.7ha with the output of 2,273 tons. Combined, certified coffee production accounts for 27 % of total output.

##### **4.2. *Socio-economic information of surveyed households and household population and labour force***

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<sup>1</sup> ILO, International labour standards and child labour in agriculture, Available at: [https://www.ilo.org/ipecc/areas/Agriculture/WCMS\\_172348/lang--en/index.htm](https://www.ilo.org/ipecc/areas/Agriculture/WCMS_172348/lang--en/index.htm), Accessed: 10:46", 5/21/2021.

Among 166 surveyed households in this study, there are 143 household who conduct only coffee production at farm, and 3 households conduct coffee collection as traders. There are 24 households which practice the initial processing of coffee cherries, retailing and providing related coffee business services. In 166 surveyed households, the Kinh ethnic group (often referred to as the Viet group) account for the highest percentage at 65.7%, which was followed by the Ede and Tay people at 15.7 % and 12%, respectively. The rest of household belonging to three ethnic minority groups: Muong, Thai and Nung, stood at 0.6% to 5.4%.



**Figure 1: Ethnicity of surveyed households** (Source: Household survey in 2018)

Over 89% of the surveyed households were male-headed. The female-headed households, accounting for 10.8 % of the total, could have been somewhat under-reported because most of surveyed household are Kinh people, traditionally regarding the male as the head of the household regardless of whether he is regularly absent. The female-headed households are mostly from the ethnic groups which are matriarchical, in which females hold the primary power position in family and make decisions related to production, finance etc. About 85% of the surveyed household heads were married, most of them monogamously. 10 % of the household heads are divorced and widowed. The remaining 8 out of 166 surveyed households are single.

Most of the surveyed households were a nuclear family, comprising of the household head, spouse and children. The “average population of households” consisted of five people. 102 out of 166 surveyed household (approx. 60%) consisted of between four and five persons, followed by 22% of household consisting of between six and seven people. The number of households with more than eight or less than three members stood at 7% and 8.4%, respectively.

The surveyed households has 2.8 laborers on average. The main labor is the husband being responsible to conduct the income generation activities. The auxiliary labor in each household is the wife who keeps the household finance and is in charge of looking after children and expenses on food, non-food, education, health and other items. The survey also indicates that there were about two children in each surveyed household, which commonly consists one boy and one girl. The total children of surveyed household is 328 children of which 83% of them are under 16 years old, followed by 17% of children from 16 to 18 years old.

**Table 1: General information of surveyed household**

Categories	Minimum	Maximum	Mean	Std. Deviation
Age	24.00	90.00	45.60	10.95
Population ( people)	1	11	5.07	1.62
Household labour	0	6	2.83	1.12
Children under 16	0	5	2.64	0.98

(Source: Household survey in 2018)

#### 4.3. Characteristics of coffee production of the surveyed household

The survey indicated that only 17% of surveyed household applies different certification in coffee production. Good agriculture practice (GAP) and supplier certification standards such as Olam’s in coffee production have been practiced by the highest percentage of households at 3.0% and 7.7%, respectively. The percentage of households applying other certifications such as UTZ, organic coffee and 4C is around 0.6% to 1.8%. The group discussions with coffee growers showed that there are no significant changes “before” and “after” applying certification in coffee production, hence 83% of sampled households do not apply this certification to their current production. In particular, a coffee grower at group-discussion reported that:

*“If we apply the certification, we need to obey the requirements to be certified for our coffee product, however, there is no difference between certified and non-certified coffee farmers such as the same selling price, market, and productivity. The certified farmers may spend more money on production as they have to buy manure from other provinces to fertilize coffee. Moreover, they have to pay the certification to certify their coffee. As a result, we have not recognized the benefit from the certification; therefore we have not applied to our current production.”*

In some case, children’s or adolescents’ participation in working such as helping parents around the home or assisting family to earn money after school or holidays, which does not cause their health and personal issues as well as inhibiting during schooling, is generally considered as being something positive. As the UTZ certification mentioned, children younger than 15 are not employed in any form and Children younger than 18 do not conduct heavy or hazardous work, or any that could jeopardize their physical, mental or moral well-being. Among 4 types of certifications in coffee production across six selected communes, three of them including UTZ, 4C and supplier certification standards from Olam paid attention to children rights, while Good Agriculture Practice focuses on environment and social welfare of labor in general.

With regard to the effect of applying certification on using children in coffee production, the result from group discussion indicated that UTZ or 4C requires not employing child-labor during the business circle of coffee production. Accordingly, coffee growers have not hired children for their production. This leads to increased use of their own children who are from 7 years old to 17 years old in coffee production. A farmer at Tan Hoa ward mentioned that because they cannot hire children with cheap allowance, they need helps from their sons/ daughters at a coffee plantation to save the labor cost. An interview with a girl in Tan Hoa commune confirmed that her family had hired some seasonal child-labor to harvest coffee beans; however, they no

longer hire children to work at coffee farm due to the requirement of 4C certification. Consequently, the girl has to help their parents at the farm after school in the afternoon.

The survey found that collecting coffee provides the highest revenue for household at around 300 million VND per year, followed by the turnover from coffee production at 100 million VND per year. The revenue of initial processing and providing service are only at 96 million VND per year and 9 million per year, respectively.

### **4.3. Child labor in coffee productions**

#### **Children's engagement in stages of coffee production.**

Across 6 sampled communes, children are commonly engaged in different stages of coffee production from 6 to 7 years old. The group discussion with farmers and interviews with children revealed three reasons why children start to work in coffee production at a young age. Firstly, children at 6 or 7 years old can handle some simple jobs in coffee production such as picking coffee beans and spreading coffee to dry in the backyard. Secondly, when those children have no school, there is no one to look after them at home; therefore, these children accompany parents to coffee farms and they start to learn and help their parents at some stages in coffee production. Thirdly, there are not many leisure activities for children at communes; hence they often follow their parents and play football or "hide and seek" at farms, and then also help with some tasks.

Children from surveyed households were assigned different tasks in stages of coffee production such as weeding, fertilizing, pruning, picking, weighing and carrying coffee, which they usually do on weekends or holidays. Especially in the summer, when there is no school time, children are supposed to work more on weekdays. The survey indicates that 90.0% of children from surveyed households engaged in picking or harvesting coffee beans in October to December based on the seasonal calendar of coffee production. The percentage of children engaging in drying and milling coffee cherries at 45.7% and 47.6%, respectively. A significant proportion of children (approx. 32.0% and 28.3%) took part in watering and weeding the coffee area.

The interviews with children and group discussions with farmer parents found that children from ethnic minority households were assigned double amount of tasks in coffee production than the Kinh. In particular, data analysis from the survey reveals that the number of children at some stages of looking after coffee trees are mostly from ethnic minority households including seedling, fertilizing and spraying herbicides and pesticides. There are two reasons why ethnic minority children are engaged more in coffee production explained by farmers in group discussions. Kinh parents pay more attention to children's education than ethnic minority ones; hence they not only send children to school but also have tutors at weekends or in the afternoon. According to selected commune's report, there is not difference in accessing educational services between Kinh people and ethnic minority ones; even the ethnic children are prioritized in education such as reducing the school fees, providing book and other learning facilities. However, the ethnic household head have not recognized the importance of children education, then they have not fully invested in children education. Additionally, ethnic minority children are the main part of the "labour exchange" among household in ethnic minority villages. Labor exchange is quite commonly practiced among the ethnic

minority household, which can be defined as the exchange of labour, mostly the children, among household in same village or kin groups. The modality is based on the reciprocal exchange of working days and number of labour among households. However, the children involved in labor exchange are from 9 year old to 17 year old as they can handle more tasks at coffee farms.

Besides picking coffee and carrying sacks of coffee, children from 14 to 17 years old are also assigned to do the pesticides for coffee and mix the chemicals (approx. 2.4%). Because the younger ones cannot carry the sprayer, the parents do not assign these tasks for them. However, this issue is not common and only happens to a minor percentage of children from ethnic minority households. More importantly, those children neither wear protective goggles, nor masks, nor boots, nor any other kind of protective equipment when they apply the pesticides. There exist several risks for poisoning from pesticides, snakes, insects, and injuries from cutting tools and branches. Moreover, high levels of exposure to sunlight cause high fever, lifting and carrying heavy baskets and repetitive movements cause musculoskeletal injuries.

**Table 2: Number of children engage in different stages of coffee production**

*Unit: Children*

<b>Stages of coffee production</b>	<b>Number of children in each stage</b>	<b>Age from ( years old)</b>	<b>Percentage of cases</b>
Seedling	6	10-17	1.8
Planting	14	12-17	4.3
Spraying	8	14-17	2.4
Pruning	30	8-16	9.1
Weeding	78	9-19	23.8
Watering	105	7-17	32.0
Fertilizing	45	11-17	13.7
Picking	298	6-17	90.9
Transporting,	10	15-17	3.0
Drying	150	6-16	45.7
Milling	156	6-16	47.6
Selling	31	9-14	9.5

*(Source: Household survey in 2018, group discussion and interview)*

### **Children's working times in coffee production activities**

The survey indicates that children from 16 to under 18 years old have nearly double working time compared to children under 16 years old. In particular, the average working time per day of children from 16 to 18 years old is 8 hours, whereas this figure is at 5 hours with children under 16 years old. The number of months that children from 16 to 18 years old work in coffee production

is 4.16 months doubling the working time of children under 16 years old. Similarly, children from 16 to 18 years old have to work around 13 days in a month, while children under 16 years old work 8 days.

This difference was explained during the group discussions with coffee farmers. Indeed, children under 16 have spent time at school for the whole day, especially primary school students. Accordingly, they have not fully engaged in coffee production. A girl 10 years old at Thien An commune stated that

*“..When I was at primary school, I had to stay there for the whole day in the boarding school, providing education for pupils who live on the premises, as opposed to a day school. Accordingly, my brother who are 17 years old worked at the farm more hours than me as he only had school in the morning. For me, I now just help my parent to dry coffee after school time..”*

Similarly, primary schools at communes have organized more tutors to increase the capacity and knowledge for students and tutoring in the afternoon and at weekends. Hence primary and secondary school students have to attend those to increase the practices on related subjects. As a result, children under 16 years old have not spent much time at coffee farms.

Conversely, children from 16 to 18 years old are mostly at high school in which the schooling is only in the morning; therefore, they can help their parents at coffee farms in the afternoon. The difference in working time of children under 16 and others was also caused by children’s physical health. Most children at interviews reported that if the siblings are over 16 years old, they have to take more responsibilities in coffee production than the younger. For instance, children from 16 to 18 years old might handle the water pump, spray pesticide, operate the mower etc. Hence, they can help their parents with those jobs at coffee farm.

The group discussions with farmers also found that ethnic minority children spent more time in coffee production compared to the Kinh because of two reasons. Firstly, ethnic minority children have been assigned more tasks in coffee production than the Kinh children have, hence, they have spent more working hours per day and working months per year. Secondly, the ethnic minority parents considered children as family labor. This means that children have the responsibility to work at farms as long hours as their parents do; by contrast, Kinh children can decide whether they help their parents at farm. For this reason, working time of ethnic minority children is longer than among the Kinh.

**Table 3: working time of children in day, moth, and year in sampled households**

	<b>Children under 16</b>	<b>Children 16 to 18 years old</b>
No of working hours/ day	4.97	8.04
No of working days/ month	8.12	13.52
No of working months/ year	2.13	4.16

**Children using tools/machines and chemicals in coffee production:**

The survey found that children across six sampled communes have used machines, tools, and chemicals in coffee production. In particular, the number of children from 16 to 18 years old using those items in coffee production is twice higher than the children under 16 years old do. The data analysis indicated that 173 out of 328 children surveyed used sharp tools such as knives and hoes to trim the coffee branch and grass, which causes injures. The reason why children using those tools was explained by farmers in group discussions. Most farmers stated that children are strong enough to use knives and hoes in coffee production. Moreover, farmers are equipped with small size of knives or hoes to fit the children’s size.

There are not many children under 16 years old using motorized tools in coffee production. The survey indicated that only 15 children under 16 YO have used various machines such as mini coffee pruning machines, pesticide sprayers, or lawn trimmers, whereas this figure is at 67 children from 16 to 18 years old. The result from interviews with children who are from 16 to 18 revealed that because these children can handle these machines, their parents often assign the task of weeding or pruning or spraying to them.

A considerable percentage of children worked with different chemicals in coffee production (approx. 7.9%), mostly working with chemical fertilizers, pesticides and herbicides. The number of children from 16 to 18 YO handling these chemicals is double that of children under 16. However, these children have not had any training on using chemicals. Most of children from interviews stated that they acquired knowledge on mixing pesticide and herbicide from their parents. In some cases, the children mixed pesticide without any protective items such as face covers or gloves. This caused health problems.

**Table 4: The number of children using tools/machines and chemicals in coffee production**

	<b>Children under 16 YO</b>	<b>Children from 16 to 18 YO</b>
Water pump/ water pipe	5	2
Farm vehicles	1	3
Mini coffee pruning machine	2	4
Backpack manual Pesticide Sprayer	0	4
Electric Lawn Trimmer	12	56
Knives, hoes	46	127
Chemical fertilizer	2	6
Pesticides	3	6
Herbicide	3	6

**Factors affecting the probability of children working in coffee production**

The result from research can explain factors affecting the working time of children in coffee production as follows:

The first, household income has a significant relationship with working hours per day of children in coffee production. This means that the more income generation activities households have, the more hours children have to work. This argument has been explained in group discussions that when the farmers have more agricultural based activities, children often spend their working time at farms, so that the parents have more time to look after other crops.

The second, household population has a significant effect on working days per month and working months per year of children in coffee production.

The third, area of coffee production has a strong positive relationship with working days per month of children. One hectare increased in coffee area leads to 2.6 unit increased in working days of children in a month.

The fourth, coffee revenue has a significant positive relationship with working time per day and working days per month. One unit increased in coffee revenue leads to 2 units and 1.3 increased of working time per day and working days per month. The reason, explained by farmers in group discussions, is that coffee revenue is based on the quantity and the coffee price. When the price of coffee increases, farmers will need more help from son or daughter to harvest coffee, so that they can sell products in time to achieve the premium price. This is especially an issue in households who depend on selling their crop after drying, and who cannot afford to store for later.

The fifth, cost of coffee production has a significant relationship with working days of children in a month. However, this relationship is not enough to validate how much increased costs leads to decreased or increased number of working days for children in a month.

The sixth, the place of the coffee farm or the distance between house and farm has a positive relationship with working hours per day of children. Across six selected communes, coffee growers traveled on average 7 to 8 kilometers to conduct the coffee production at the farm.

***Further, results from group discussions and in-depth interviews indicate reasons why children still are in coffee production:***

- First of all, children work in coffee production is the solution to overcome the problem of shortage of labour, especially in the peak season. The study found that coffee farmers hardly plan for their labour during the coffee seasons. Consequently, they usually face the problem of lacking labour and use children as labour to save labour cost. The farmers at group discussions stated that if their children work at coffee farms, they could save around 2 million VND to 4 million VND per year. Otherwise, they have to pay 250 thousand VND for one adult labourer per day to do harvesting of the coffee bean, if such labour is available

- In other hand, as the fields are far away, children take part to help their families finish the work within a day so that they do not have to stay overnight. This story was found during interviews with children. For instance, a girl in Dlie Yang stated that: *“if I didn’t come to help my parents to do watering and weeding in the coffee farm, they would not finish their tasks within a*

*day and need to stay to the next day. Accordingly, I would have to stay at home by myself. In that case, I have to cook and do other housework while my parents are absence. I would not have enough time to do my homework”.*

- Children often engage in a number of activities, which need several workers. The group discussion with farmers revealed that harvesting coffee needs the collaboration among workers of which a person harvests coffee, another will put the covered canvas to pick up coffee, and the rest puts coffee in baskets. Additionally, children are as tall as the coffee tree; hence, they are more suitable to harvest the bean from the tree.

- Finally, machines used in coffee production come at a high price compared to the income such as watering machines and drying machines. For this reason, farms use traditional methods of watering and drying coffee in the backyard. These tasks can be easily handled by children, and therefore the parents often engage them in these tasks.

## **V. Conclusion**

Vietnam is agricultural country. Agricultural households had diverse sources of income such as crop production, animal husbandry, off-farm, wages and remittance. The income from crop production accounted for the largest amount. However, in general of agricultural production, particular in coffee production of Vietnam is still an outdated production field that requires a lot of human resources. This led situation in most of the farm households, children engaged in many agricultural production activities.

In this study, six factors were found to have correlation with child-labor in coffee production: the household income, the income from coffee production, the revenue from coffee production, the area of coffee production, and the distance between home and the coffee farm. All have a correlation with the volume of working time which children spent for coffee production. Whereas, the household population has a negative correlation with the children's working time volume in coffee production. In addition, causes of child-labor in coffee production were found being that some activities were more suitable for children than adults; traditional production tools were still used which children could practice well and thus they were mobilized, as the adult labor force was needed elsewhere.

Early child labor leads to impacts on aspects of children's rights across all four rights groups. It causes negative effects on the psychological, mental and safety of children. In particularly, children suffer from feelings of anxiety; they have less space and time to play, relax and entertain; and they have to live in unsafe, unsuitable and polluted environments.

In order to limit the coming to an end of child labor in agricultural production, it is necessary to strengthen synchronous measures, including: better law compliance, increasing consumer recognition of social responsibility, awareness of children's rights, the development of science and technology in agricultural production and stable income from agricultural production. Meanwhile, the trend of rural-urban labor migration and labor migration from the agricultural sector to other fields, unskilled children for work, population growth, climate change and Cultural and customary barriers are seen as threats to the realization of children's rights and increasing children's participation in agricultural production.

Child labor issues cannot be solved overnight. In order to protect children in situations where there is child labor in agricultural production, it is first necessary to determine what children should not do, equip children with safe means of work, and provide them with Basic skills for the job. This solution can at least help children protect themselves.

Second, a long-term solution is needed to strengthen the implementation of children's rights and children's participation in agricultural production, which is to improve knowledge and awareness of local people and stakeholders. on issues related to children's rights.

Third, businesses are encouraged to commit to the Business Principles and Children's Rights and this is a good opportunity to improve the implementation of children's rights.

Finally, the legal and policy framework is always an important factor. Therefore, it is necessary to advocate for adequate legal and policy frameworks for the protection of children and strengthen their enforcement in the process of realizing children's rights.

It is a challenge to eliminate child labour in agriculture because agriculture is an under-regulated sector in Vietnam. This means that the regulations on child labour – if they exist – are often less stringent in agriculture than in other sectors. In fact, adult and child workers in agriculture are not covered by or are exempt from general safety and health laws. For example, in breach of ILO Conventions, children are sometimes not prohibited to operate dangerous machinery and drive tractors in agriculture while restrictions exist in other sectors.

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