



CURRENT SITUATION AND TRENDS OF MULTIDIMENSIONAL CHILD POVERTY IN VIET NAM

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EXECUTIVE SUMMARY

Despite its success in economic growth and poverty reduction, Viet Nam still faces many challenges such as inequality in living standards among population groups, urbanization, climate change and, most recently, the COVID-19 pandemic. Children are a vulnerable group, which are more affected by poverty than adults. Lack of nutrition, education, access to hygienic latrines and clean water will negatively affect children's health and education for life. The main research objective of this report is to update the current situation and trends in multidimensional child poverty in the period 2014-2018. Our analysis is disaggregated by age and gender of children, ethnicity, geography, and especially by disability status of children.

We find that the proportion of multidimensional child poverty decreased rapidly during the 2014-2018 period. The proportion of children in multidimensional poverty¹ decreased from 21.2% in 2014 to 14.5% in 2018. Multi-dimensional child poverty decreased in all geographic regions and population groups. However, the poverty rate is still very high in some groups of children. The rate of multidimensional poverty among children aged 0-2 reached 26.4% in 2018. The Northern Midlands and Mountains and Central Highlands are regions with the highest proportion of multidimensional child poverty, much higher than in other regions. Ethnic minority children have a very high rate of multidimensional poverty. Nearly half of ethnic minority children are multidimensionally poor. Except for the health insurance indicator, ethnic minority children have a higher rate of multidimensional poverty than Kinh and Hoa children because of the higher deprivation rate of all the indicators.

Children with disabilities have a high multidimensional poverty rate, nearly twice that of children without disabilities. In all dimensions of multidimensional poverty, children with disabilities have a much higher rate of deprivation than children without disabilities. There is a large disparity in education and development indicators between children with disabilities and those without disabilities. Housing and environmental conditions of children with disabilities are also worse than other children. Limited access to education and sanitation will affect the educational level and health of children with disabilities and become a barrier to access to decent employment opportunities for children with disabilities in the future.

Among the dimensions of multidimensional child poverty, the dimensions of environment, development, nutrition and access to information contribute mainly to the general multidimensional poverty index. Reducing gaps in these dimensions will contribute to the rapid reduction of multidimensional child poverty. An issue of concern is that a number of dimensions with relatively high contributions to multidimensional child poverty, such as the dimension of nutrition and information, have improved quite slowly in recent years.

Based on the findings, the report provides a number of policy recommendations. The first is that more than half of the multidimensionally poor children are not in the

¹ This report uses the deprivation threshold of 1/5, meaning a child who is deprived in one fifth (or above) of the indicators or dimensions is considered multi-dimensionally poor.

locally defined poor household and have no access to national poverty reduction programs. Therefore, the government needs to institutionalize multidimensional child poverty through the enactment of child poverty standards and multidimensional child poverty measurement mechanisms in Vietnam. Second, it is necessary to ensure the development of education for young children, especially the right age attendance for children aged 11-15 in mountainous areas, ethnic minorities, and children with disabilities. Ensuring access to hygienic latrines and clean water in disadvantaged regions and ethnic minority children is also of utmost importance. Third, the multidimensional poverty issue among CWD is a serious problem. Children with disabilities have a serious shortage of developmental dimensions such as education, toys, and live in poorer living conditions than other children. Therefore, policies to support children with disabilities need to be paid special attention.

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LIST OF ACRONYMS

MOLISA: Ministry of Labour, Invalids and Social Affairs

VDS: Viet Nam Disability Survey

VHLSS: Viet Nam household living standard survey

SDG: Sustainable Development Goals

GSO: General Statistics Office

UNICEF: United Nations Children's Fund

MDCP: Multidimensional child poverty

1. INTRODUCTION

1.1. Background on child poverty in Viet Nam

Although the world economy is constantly growing, there are still about 10% of the world's population living on less than US \$1.90 a day.² Because poor households have a large number of children, children, while making up about a third of the world's population, account for half of the poor. It is estimated by UNICEF that about one in three children lives in multidimensionally poor households, meaning they lack access to basic needs such as nutrition, sanitation, or clean water...³

Poverty is considered a multidimensional phenomenon and measuring poverty requests a multidimensional approach. Sustainable Development Goal 1 (SDG 1) requires countries to reduce both monetary and multidimensional poverty rates especially poverty of children. Other SDGs also refer to improving other dimensions of well-being such as nutrition, health, education, clean water, sanitation, and environment. Achieving the SDGs will make poverty reduction sustainable.

After the economic reform, Vietnam's economy has achieved continuous growth with an annual GDP growth rate of about 6%. Vietnam has become a lower middle-income country since 2010. Vietnam has achieved broad-based economic growth, with all population groups experiencing economic growth (World Bank, 2012; Lanjouw et al. 2017). Inclusive economic growth is the foundation for Vietnam to gain poverty reduction achievements. In addition, a large number of poverty reduction programs that are implemented by government and international organizations also contribute to boosting the income of poor households and reducing poverty rates. In the period 2010-2018, the proportion of people living below the expenditure poverty line⁴, which is calculated by the General Statistics Office of Viet Nam and the World Bank, decreased from 20.5% to 6.7%.

Despite its economic achievements and poverty reduction, Vietnam still faces many challenges. The gap in living standards remains large among population groups, especially between the Kinh/Hoa groups and ethnic minorities. Nearly 45% of ethnic minorities still live in poverty. According to the 2018 Household Living Standards Survey, although ethnic minorities make up only 15% of the country's population, they

²As estimated by World Bank at <https://www.worldbank.org/en/topic/poverty/overview>

³<https://www.unicef.org/social-policy/child-poverty>

⁴ Expenditure poverty line is determined by the General Statistics Office and the World Bank. Households are considered poor if their average expenditure is below the expenditure poverty line. This poverty line is equivalent to expenditure on meeting nutritional needs of 2230 kcal/day and other non-food expenditures.

represent 75% of the poor. Urbanization increases the number of urban immigrants, with the risk of falling into a vulnerable group due to limited access to public services. Issues such as climate change, sea-level rise, and saline intrusion are also causing difficulties for agricultural production. Currently, the economy is heavily affected by the COVID-19 epidemic, leaving many near-poor households at risk of falling into poverty.

Children are a vulnerable group and are strongly affected by poverty⁵. Lack of nutrition, education, and access to sanitation and clean water will have a long-term harmful effect on children's health and education. Recognizing the multidimensional nature of poverty, especially among children, Viet Nam has been a pioneer in developing a methodology for measuring multidimensional poverty in children. Multidimensional child poverty is defined as deprivation in eight basic welfare dimensions including health, nutrition, education, housing, clean water/sanitation, child work, recreation, and social inclusion. Multidimensional child poverty is periodically monitored and analyzed as a component of Vietnam's poverty reduction using data from the Multiple Indicator Cluster Survey on Women and Children and the Viet Nam Living Standards Survey (VHLSS).

The Government of Viet Nam has issued a National Action Plan to implement the 2030 Agenda for Sustainable Development with 17 sustainable development goals to 2030 of Vietnam (VSDGs). Realizing the multidimensional nature of poverty, the Government issued multidimensional poverty lines applicable for the period 2016-2020. Accordingly, poor and near-poor households are determined by not only income but also the extent of deprivation in access to basic social services including health, education, housing, clean water and sanitation, and information. In the period of 2021-2025, the government continues to improve multidimensional indicators to identify poor households. Improving and standardizing multidimensional poverty measures in general and multidimensional child poverty in particular in conformity with the new development situation are very important in the coming period.

1.2. Necessity and objectives of the research

Children are at higher risk of poverty than adults. Nutritional and educational deficiencies affect children's lives in their adulthood that can lead to chronic and intergenerational poverty. According to the United Nations, “children living in poverty

⁵ The SDGs are defined for children under 18 years of age. However, to be consistent with the Law of Vietnam, this report uses the child age defined in the Law on Children 2016 of Viet Nam which stipulates that a child is a person under 16 years of age.

suffer from lack of nutrition, water and sanitation, access to basic healthcare services, housing, education, participation and registration. Although poverty affects all members of a household, children are influenced the most, which prevents children from developing to their full potential not only in the short term, but also in the long term” (UNGA, 2006). Children are physically and psychologically different from adults, and thus have different needs from adults. Using a common poverty measure for the entire household does not fully reflect the poverty domains and deprivation of children. For children, the need for education and entertainment plays a more important role than for adults. Among the non-poor households, there are still children who do not go to school or have access to recreational toys. Therefore, a separate multidimensional poverty measure is needed.

Since 2006, the Ministry of Labor - Invalids and Social Affairs (MOLISA), the General Statistics Office (GSO) and UNICEF have studied and proposed a methodology for measuring multidimensional child poverty based on the approach of children’s rights. The methodology was continuously improved in 2008. With technical assistance from Oxford Policy Management Center, UK, in 2018, a more complete multidimensional poverty analysis framework was developed for children. Accordingly, multidimensional child poverty is based on 8 domains including: nutrition; health; education; housing; environment; access to information; child labor; child registration (UNICEF, 2019). These domains are measured by 19 indicators using data from the Vietnam Household Living Standards Survey (VHLSS).

UNICEF (2019) analyzes multidimensional child poverty using VHLSS data 2010 and 2014. Poverty has changed so far. In the period 2015-2020, the approach of multidimensional poverty has been used by the government. The overall poverty rate has decreased but there is still a large disparity in the poverty rates among population groups. Updating analysis of multidimensional child poverty using more recent data is important in monitoring poverty and providing useful information for policy makers for designing poverty reduction policies related to children.

This report has two main objectives. **The first objective** is to update the actual status and trend of multidimensional child poverty in the period 2014-2018 using the methodology of UNICEF (2018). In order to provide a complete picture of the current situation of child poverty, the report will analyze in detail the prevalence and deprivation among children groups by age, gender, ethnicity, geography and parental characteristics.

The second objective is to analyze multidimensional poverty among children with disabilities. There have been a number of reports on disability in general and among the elderly in particular in Viet Nam, but the issue of children with disabilities in the poverty context has not been analyzed.

1.3. Report structure

This report consists of five parts. Section 1 is the introduction. Section 2 presents the method and data source for analyzing multidimensional child poverty in the report. Section 3 presents an analysis of trend and current situation of multidimensional child poverty in Viet Nam. Section 4 analyzes multidimensional poverty among children with disabilities. Finally, section 5 summarizes the main findings and provides some recommendations regarding child poverty reduction.

2. DATA SOURCE AND MEASUREMENT

2.1. Data

This study relies on data from Vietnam Household Living Standard Survey (VHLSS) in 2014, 2016 and 2018. This report uses the child age defined in the Law on Children 2016 of Viet Nam which stipulates that a child is a person under 16 years of age. The VHLSS is a sample survey which collects information on living standards, poverty status and well-being of people.

The VHLSS has been conducted by the General Statistics Office for many years, starting in 1993. Since 2002, the survey has been conducted every two years. The survey subjects are residential households, household members and communes having sampled households. The VHLSS was conducted nationwide and collected information based on face-to-face interviews. Information collected in the VHLSS includes demography, education, healthcare, employment of individuals, income and expenditure of households, and their housing conditions and participation in poverty reduction programs. The VHLSS 2014 - 2018 covered 9,399 households from 3,133 enumeration areas (EAs) across the country, ensuring the data represented for national level, rural and urban level and economic region level.

This report also uses data from National Survey on People with Disabilities (VDS) 2016 to analyze the inter-linkages between disabilities and multidimensional child poverty. The VDS is a sample survey that was conducted in 2016 and 2017 by the GSO. This was the first large survey in Viet Nam applying international standards to identify people with disabilities as well as collected comprehensive information on people with disabilities, of which children were much concerned. The VDS had a specific module on child functioning of UNICEF/Washington Group CFM to define child disability status.

The VDS's respondents were households, household members, communes, primary and lower secondary schools, health stations in enumeration areas and social protection centers. The VDS was conducted nationwide and collected information by face to face interview. It was conducted surveying 35,442 households in 1,074 EAs and its sample represented at regional level.

2.2. Multidimensional child poverty measurement methodology

This report uses the methodology of Alkire and Foster (2011)⁶ to estimate the multidimensional poverty rate and the multidimensional child poverty index. The multidimensional child poverty index reflects not only poverty rates but also the extent of deprivation of domains of poor children.

The domains (or dimensions) and indicators used in this study are the same as in the UNICEF (2019).⁷ Accordingly, multidimensional child poverty is measured by 8 domains including: Nutrition, health, development, housing, environment, access to information, child labor and child protection. UNICEF (2019) relies on four criteria to select dimensions and indicators to measure deprivation: (i) Conformity with international standards on children's rights; (ii) Consistent with national laws and policy priorities (such as the Children's Law and Vietnam's Five-Year Socio-Economic Development Plan); (iii) Consistent with existing tools (performed multidimensional child poverty research); (iv) Measurable capability and consistency with existing data.

Children's multidimensional poverty is measured through 8 dimensions based on 8 basic needs of children including: nutrition, health, development, housing, environment, access to information, labor children and registration. Eight domains of multidimensional child poverty (MDCP) are measured by 19 indicators comprising household level indicators (applicable to children in all age groups), and individual-level indicators, meaning that there is distinction among members in the same household. MDCP has different indicators among age groups because each specific age group has its own different basic needs. For example, the child labor dimension and the health insurance indicator are only calculated for children aged 6 years and older, or the education dimension is only calculated for children aged 3 years and older. In addition, the data sources for some indicators are not adequate for all groups of children, for example, information on birth certificates and toys for children in the VHLSS is only asked for children under 5 years old.

⁶https://www.sciencedirect.com/science/article/pii/S0047272710001660?casa_token=cWV-dYWQ1w4AAAAA:er_UBsJCF0mGLs56ilEciY9JkFEXESeD3GeYT1HQmFu5UH1nowt7D8iOuo9dgD42-vN09wU.

⁷ The rights of children as stipulated in the United Nations Convention on the Rights of the Child include: (i) The right to equal treatment; The right to a name and nationality; Right to life survival and development; The right to health care, healthy food, clean water, living in a clean and safe environment in terms of health and medicine; Right to education and training; The right to rest, relax, play and to take part in cultural and creative activities; The right to get information, sharing thoughts freely, respect for children's views; Privacy and non-violent education; Right to assistance and protection; The right to keeping families together, parental care and a safe place to live; The right to care for children with disabilities.

The following indicators are common to all age groups:

Nutrition: Caloric intake; consuming main food types.

Health: Risks from alcohol and tobacco.

Housing: Housing quality; living areas.

Environment: Safe drinking water; improved latrine; waste disposal.

Access to information: Means of information communication; access to mass media.

Resident registration

The following indicators are age-specific:

Children aged 0-4: Access to health care (Health); toys, books or comic books (Education); Birth certificate registration (Registration).

Children aged 3-15: School attendance (Education).

Children aged 6-15: Health insurance (Health); Child labor (Child labor).

It should be noted that indicator of “access to health care” is only applicable to 0-4 age group for the assumption that the need for medical examination, treatment or vaccination at least once within the last 12 months is essential for young children. For older children group, indicator “access to health care” is not used to measure health deprivation because it is not certain that limited access to health care services among this older group is because they do not have health issues that require examination/treatment in health facilities or they are deprived from healthcare services.

Alkire and Foster (2011) method is used in this report to estimate deprivation score for children. This score is the arithmetic means of the deprivation indicators with the corresponding weights shown in the table above. The report uses equal weights for all domains. Since children of various ages have different multidimensional poverty measures, the weights in each domain or indicator are distinctive among age groups. The deprivation score has a minimum value of 0 (no deprivation in indicators) and a maximum value of 1 (deprivation in all indicators). Children are considered multidimensionally poor if their score is higher than the deprivation threshold. The higher the deprivation threshold is, the fewer children are deprived of multiple domains, and the corresponding multidimensional poverty rate is lower. Some reports on multidimensional poverty use a deprivation threshold of 1/3, meaning a child who is deprived in one third (or above) of

the dimensions is considered multi-dimensionally poor. However, in Viet Nam situation, the multidimensional child poverty rate at this threshold is quite low, thus not reflecting the real situation of children's well-being in Viet Nam. Therefore, similar to the measurement method used in UNICEF (2019), this report uses the deprivation threshold of 1/5, meaning a child who is deprived in one fifth (or above) of the dimensions is considered multi-dimensionally poor. With this deprivation threshold, the rate of multi-dimensional child poverty is relative to the child poverty rate derived from the national multi-dimensional poverty and poverty in expenditure (UNICEF, 2019).

Table 1: Domains and indicators for measuring MDCP

Domain/ Dimension	Indicator	Definition of deprivation	Measurement unit	Weight			
				Age 0-2	Age 3-4	Age 5	Age 6-15
Nutrition	<i>Caloric intake</i>	Children (0-15) living in households with caloric intake of less than 2100 kcal	Household	1/14	1/14	1/14	1/16
	<i>Dietary Diversity</i>	Children (0-15) living in households consuming less than 8 out of 12 main food types	Household	1/14	1/14	1/14	1/16
Health	<i>Access to healthcare</i>	Children (0-4) did not visit a healthcare center in the last 12 months	Child	1/14	1/14		
	<i>Health insurance</i>	Children (6-15) without health insurance	Child				1/16
	<i>Health risks from alcohol and tobacco</i>	Children (0-15) living in households with total expense on tobacco+ alcohol > 5% of total household expense	Household	1/14	1/14	1/7	1/16
Education	<i>School attendance</i>	Children (3-15) without school attendance	Child		1/21	1/7	1/8
	<i>Toys</i>	Children (0-4) with no toys	Child	1/14	1/21		
	<i>Books, comic books</i>	Children (0-4) with no books or comic books	Child	1/14	1/21		
Housing	<i>Housing quality</i>	Children (0-15) not living in permanent dwelling	Household	1/14	1/14	1/14	1/16
	<i>Living space</i>	Children (0-15) living in dwelling where per capita living area is less than 8m ²	Household	1/14	1/14	1/14	1/16
Environment	<i>Safe drinking water</i>	Children (0-15) living in household without safe drinking water	Household	1/21	1/21	1/21	1/24
	<i>Hygienic toilet</i>	Children (0-15) living in household without improved toilet	Household	1/21	1/21	1/21	1/24
	<i>Waste disposal</i>	Children (0-15) living in household without waste disposal place	Household	1/21	1/21	1/21	1/24
Access to information	<i>Means of information communication</i>	Children (0-15) living in household without telephone/ internet	Household	1/14	1/14	1/14	1/16
	<i>Access to mass media</i>	Children (0-15) living in household without television, radio, computer	Household	1/14	1/14	1/14	1/16
Child labor	<i>Economic activities</i>	Children (6-12) working for at least 1 hour/day	Child				1/8
	<i>Economic activities</i>	Children (13-14) working for at least 4 hour/day	Child				1/8
	<i>Economic activities</i>	Children (15) working for at least 8 hour/day	Child				1/8
Administrative registration	<i>Birth registration</i>	Children (0-4) with no birth certificate	Child	1/14	1/14		
	<i>Resident registration</i>	Children (0-15) not registered in their place of residence	Child	1/14	1/14	1/7	1/8

3. MULTIDIMENSIONAL CHILD POVERTY IN VIET NAM

3.1. Deprivation by dimension

3.1.1. Nutrition

The following table presents deprivation level of children in indicators within nutrition domain. The percentage of children deprived in calorie intake in 2014 was 14.3%, and it decreased to 12.02% in 2016. However, this rate increased slightly to 13.5% in 2018. This trend is similar to the indicator of dietary diversity. In 2014 the percentage of children deprived in this indicator was 12.7%, and it fell to 10.8% in 2016 but went up to 11.3% in 2018. However, the difference in the rate of deprivation in dietary diversity between 2016 and 2018 is not statistically significant.

In terms of geographic regions, Northern Midlands and Mountain areas and Central Highlands witnessed the most serious deprivation in nutrition domain. These regions are the two poorest regions in the country. In 2018, the Northern Midlands and Mountain areas had the highest rate of children deprived in caloric intake (17.2%). This region also experienced the highest increase in the indicator of caloric intake deprivation between 2016 and 2018 in the country (an increase of 4 percentage points). The deprivation level in dietary diversity indicator in this region was also very high (32.7%).

The level of nutrition deprivation in rural areas was higher than that in urban areas. In 2018, the percentage of children with a caloric deficiency in urban areas was 10.7%, lower than that in rural areas (14.7%). Particularly, there is a big gap in the deprivation level in the indicator of dietary diversity between urban and rural areas (2.9% and 15.0%, respectively, in 2018).

Ethnic minority children have a much higher level of deprivation than Kinh/Hoa ones⁸. This result is consistent with the results in the analysis above because ethnic minorities mainly live in rural areas and in the Northern Midland and Mountain areas and the Central Highlands.

⁸ This report categorizes the Hoa and the Kinh into one group because the Hoa mainly lives in delta and urban areas with a standard of living comparable to that of the Kinh.

Table 2 : The proportion of children aged 0-15 deprived in indicators of nutrition domain (%)

<i>Indicator</i>	% caloric intake<2100 kcal/day			% deprivation in main food types			
	<i>Year</i>	2014	2016	2018	2014	2016	2018
General		14.3	12.0	13.5	12.7	10.8	11.3
Age group							
0 - 2 years old		13.2	14.3	13.8	10.0	8.1	10.2
3 - 4 years old		12.7	10.5	11.3	9.8	8.5	9.6
5 years old		13.1	12.0	11.4	11.0	10.8	10.0
6 - 10 years old		15.1	10.8	14.4	13.3	10.7	10.8
11 - 15 years old		15.1	12.7	13.8	15.3	13.4	13.5
Gender							
Boys		14.6	12.5	12.9	13.2	10.9	11.5
Girls		14.0	11.6	14.1	12.2	10.7	11.2
6 economic regions							
Red River Delta		10.9	11.6	10.8	5.8	4.4	5.9
Northern Midlands and Mountain areas		15.1	13.2	17.2	37.0	29.6	32.7
North Central and Central Coastal areas		14.0	10.7	13.0	13.2	12.3	8.5
Central Highland		20.1	17.7	16.4	22.3	16.3	12.9
South East		18.2	12.2	14.2	2.7	1.8	3.7
Mekong River Delta		12.6	10.6	11.8	6.2	4.4	5.7
Area of residency							
Urban		11.8	10.5	10.7	2.9	2.8	2.9
Rural		15.5	12.7	14.7	17.2	14.1	15.0
Ethnic group							
Ethnic minority		23.0	17.2	21.5	44.9	34.8	36.2
Kinh/Hoa		12.5	10.7	11.6	5.9	4.8	5.4

Source: Calculation based on VHLSS data

3.1.2. Health

Access to health is an important condition to ensure human capital and living quality. The deprivation level of children in the health domain is measured by 3 indicators: medical examination and treatment, health insurance and risks from household's consumption of tobacco and alcohol. The indicator of medical examination and treatment is a child-level measure for the age group of 0-4 years old. This indicator is calculated for the young children because most of them have health problems at least once a year and are in need of health services. The rate of children deprived in this indicator tended to increase slightly over the years. The medical examination and treatment for young children has not been improved in the recent years. In 2018, 41.3% of children did not use health

services in the last 12 months. Especially, children aged 3 - 4 years old experienced the rate of deprivation of 49.7%.

By regions, the Northern Midland and Mountain areas and the North Central and Central coastal areas are the two regions with the highest proportion of children facing medical examination and treatment deprivation (54.4% and 43.9% in 2018, respectively). Children in rural areas have a higher deprivation rate than urban areas (45.3% versus 31.4%). Ethnic minority children have a higher rate of deprivation than Kinh/Hoa (57.3% versus 37.1%).

Children aged 6 - 15 years old without health insurance cards are considered deprived in this indicator. The proportion of children without health insurance cards has experienced a rapid decrease in the recent years. In 2014, the number of children deprived in health insurance indicator was 8.3% meanwhile this rate fell to only 1.9% in 2018. This is partly attributed to the implementation of the Government's universal health insurance policy since 2014. However, the increase in the proportion of children with health insurance does not mean that children are given more medical examination and treatment. By regional level, the Northern Midland and Mountain areas is a poor region but the rate child deprivation of this region is the lowest rate (at 0.7% in 2018). This is because this region consists of many poor households and ethnic minority ones that received free health insurance cards from the Government.

The indicator of risks from tobacco, alcohol is measured at household level. If the household spent more than 5% of the total household expenditure on alcohol, beer and tobacco, then the children in the household are considered to be deprived in this indicator, meaning that children are at risks from household's expenditure on tobacco, alcohol and beer. The proportion of children deprived of the indicator decreased from 11.1% in 2014 to 8.0% in 2018. Remarkably, the Mekong River Delta which has the highest proportion of children deprived in indicator on risks from tobacco and alcohol, did not witness any improvement in the period 2014-2018; 19% of the children in this region are at risks from high expenditure on tobacco, alcohol and beer. For other regions, the lower the per capita income regions are, the higher the rate of deprivation of this indicator is. It means that poor households tend to consume more alcohol and tobacco proportionately than rich ones. Children living in rural households have a higher deprivation level than those living in urban areas (9.1% and 5.5% in 2018). The results also show a negative correlation between education attainment and the expenditure on tobacco and alcohol. The higher the

education level of the household head is, the lower the proportion of children living in the household are at risk from tobacco and alcohol consumption.

Table 3: The proportion of children aged 0-15 deprived in indicators of health domain (%)

<i>Indicator</i>	% without medical examination and treatment (Children aged 0-4)			% without health insurance card (Children aged 6-15)			% suffering risks from tobacco, alcohol			
	<i>Year</i>	2014	2016	2018	2014	2016	2018	2014	2016	2018
Overall		37.8	38.3	41.3	8.3	4.8	1.9	11.1	10.4	8.0
Age group										
0 - 2 years old		32.9	32.4	34.9	-	-	-	9.8	8.5	5.9
3 - 4 years old		46.2	45.6	49.7	-	-	-	10.9	10.6	5.9
5 years old		-	-	-	-	-	-	13.2	7.8	9.1
6 - 10 years old		-	-	-	6.1	4.4	1.4	11.0	10.6	9.5
11 - 15 years old		-	-	-	10.7	5.3	2.5	11.5	11.7	8.1
Gender										
Boys		36.2	40.9	41.8	7.8	5.2	2.0	11.3	10.3	8.1
Girls		39.5	35.4	40.7	8.9	4.5	1.9	10.8	10.5	7.8
6 economic regions										
Red River Delta		39.4	37.1	37.4	3.5	2.7	1.2	4.0	3.1	1.3
Northern Midlands and Mountain areas		47.9	48.4	54.4	5.1	4.7	0.7	6.8	6.0	5.4
North Central and Central Coastal areas		41.4	42.9	43.9	6.1	3.4	1.5	15.4	13.5	10.3
Central Highland		32.7	39.8	39.0	10.8	8.8	5.4	16.2	13.0	9.2
South East		31.3	28.7	26.0	11.2	3.6	1.8	7.2	10.2	4.8
Mekong River Delta		29.0	31.2	39.4	15.0	8.3	3.0	19.0	18.4	18.8
Area of residency										
Urban		32.1	26.7	31.4	5.0	3.7	1.6	7.3	6.7	5.5
Rural		40.5	43.1	45.3	9.8	5.3	2.1	12.8	11.9	9.1
Ethnic group										
Ethnic minority		48.7	48.8	57.3	6.7	4.9	3.0	16.1	13.5	11.7
Kinh/Hoa		35.4	35.6	37.1	8.7	4.8	1.7	10.0	9.6	7.1

Source: Calculation based onVHLSS data

3.1.3. Education

Human capital plays a key role in economic development (Schultz, 2002; Hanushek and Woessmann, 2008). Education is one of the most important elements of human capital, which directly affects labor productivity. Educational development is one of the United Nations Millennium Development Goals as well as Sustainable Development Goals. Therefore, children's education is a significant domain in assessing multidimensional poverty situation. The education domain is measured through three indicators, including net school attendance, having toys, and having books and comic books.

Net school attendance is an individual-level indicator. Children who are not enrolled at the right school level appropriate to their age group are considered to be deprived in this indicator. The percentage of net school attendance decreased from 14.4% in 2014 to 10.9% in 2018. The proportion of children deprived in the school attendance indicator differs significantly among age groups. The deprivation rate of children aged 3-4 who are at the age of going to kindergarten, is very high (33.8% in 2018). Meanwhile the deprivation rate of children aged 6-10 years old (the age of children in primary school) was very low, at only 2% in 2018. The percentage of children not attending lower secondary school at the right age (children aged 11 - 15) was higher, at 9.9%. The region with the highest proportion of children not attending school at the right age is the Mekong River Delta (17.2%) although this region has relatively high per capita income. It means that schooling of children depends not only on economic factors but also cultural ones. The gap in the schooling rate between ethnic minorities and Kinh/Hoa children decreased over time. This indicates that much attention has been paid to education in areas where many ethnic minority children live, such as the Northern Midland and Mountain areas (the child deprivation rate in 2018 was 9.4%, lower than that in the South East, 10.9%).

The rate of children without toys decreased over the years. In 2018, the rate of children without toys was 18.8%, meaning that nearly 2 in 10 children did not have toys. The results show that the deprivation rate of children aged 0-2 years old was much higher than that of the children aged 3 - 4 years old (22.7% versus 13.6%). The regions with low per capita income and high poverty rates such as the Central Highlands, Northern Midlands and Mountains, and North Central and Central Coastal had a greater proportion of children without toys than the other regions. Nearly half of ethnic minority children did not have toys (44.3% in 2018) meanwhile the deprivation rate in Kinh/Hoa children was only 12.1%.

The percentage of Vietnamese children without books and comic books is very high and there was no clear downward trend in the period 2014-2018. In 2018, the percentage of children without comic books was 61.3%. The deprivation level in books and comic books of the rural and ethnic minority children was much higher than urban and Kinh/Hoa ones.

Table 4: The proportion of children aged 0-15 deprived in indicators of education domain (%)

<i>Indicator</i>	% not attending school at right level (Children aged 3-15)			% deprivation in toys (Children aged 0-4)			% deprivation in books, comic books (Children aged 0-4)			
	<i>Year</i>	2014	2016	2018	2014	2016	2018	2014	2016	2018
Overall		14.4	13.3	10.9	22.7	19.7	18.8	62.6	61.8	61.3
Age group										
0 - 2 years old					26.0	22.5	22.7	66.7	68.0	65.6
3 - 4 years old		42.9	39.5	33.8	16.9	16.2	13.6	55.4	54.2	55.6
5 years old		19.9	16.1	14.6						
6 - 10 years old		3.3	2.5	2.0						
11 - 15 years old		14.1	11.5	9.9						
Gender										
Boys		15.1	14.1	11.2	22.0	17.9	17.8	62.2	62.0	61.3
Girls		13.6	12.4	10.5	23.4	21.6	20.0	63.0	61.7	61.3
6 economic regions										
Red River Delta		7.7	7.0	6.6	13.5	10.1	8.0	47.4	46.7	45.4
Northern Midlands and Mountain areas		12.8	12.5	9.4	38.1	30.9	28.2	75.6	72.1	70.2
North Central and Central Coastal areas		11.4	11.4	9.9	28.2	23.8	21.4	67.9	65.6	66.8
Central Highland		23.5	19.4	16.0	35.7	35.9	34.8	68.5	73.9	72.5
South East		13.7	12.1	10.9	9.5	8.7	13.0	54.3	53.4	48.0
Mekong River Delta		23.4	21.6	17.2	21.6	20.5	15.9	71.1	72.2	72.1
Area of residency										
Urban		10.3	9.7	8.8	10.2	11.0	9.6	48.5	47.2	46.6
Rural		16.3	14.7	11.8	28.7	23.4	22.5	69.4	68.0	67.3
Ethnicity										
Ethnic minority		22.1	19.3	15.4	50.1	39.4	44.3	85.5	78.6	86.0
Kinh/Hoa		12.8	11.8	9.8	16.7	14.7	12.1	57.6	57.6	54.8

Source: Calculation based on VHLSS data

3.1.4. Housing

Along with the economic development, the demand for better life quality is increased. Childhood development not only must be assured in terms of nutrition and health, but also need to be strengthened in terms of living space and housing quality. In the multidimensional child poverty framework, the housing domain is measured by two indicators of housing quality and house area where a child is currently living. For the housing quality indicator, children who live in a low-quality house (non-permanent shelter) are considered to be deprived in this indicator. In 2018, the proportion of children deprived in the housing quality was 7.6% (decreasing over the years in the period 2014-2018). The Mekong River Delta had the highest proportion of children deprived in the housing quality, at 17.9% in 2018, although this region had relatively high per capita income.

Table 5: The proportion of children aged 0-15 deprived in indicators of housing domain (%)

<i>Indicators</i>	% of children deprived in housing quality			% of children deprived in house area		
	2014	2016	2018	2014	2016	2018
<i>Year</i>						
Overall	11.7	10.6	7.6	12.1	11.9	9.6
Age group						
0 - 2 years old	9.8	9.1	7.3	14.5	13.3	10.4
3 - 4 years old	12.1	11.4	7.9	14.1	13.9	9.6
5 years old	12.6	10.2	6.6	11.4	10.4	8.2
6 - 10 years old	12.3	10.9	7.5	12.0	11.9	9.7
11 - 15 years old	12.0	10.9	7.9	9.9	10.5	9.3
Gender						
Boys	12.2	10.9	7.5	12.0	11.0	9.6
Girls	11.3	10.2	7.7	12.1	12.7	9.5
6 economic regions						
Red River Delta	0.6	0.2	0.4	9.4	8.2	7.6
Northern Midlands and Mountain areas	23.7	21.5	17.5	13.8	11.3	8.6
North Central and Central Coastal areas	5.4	8.3	4.4	10.2	12.5	9.8
Central Highland	12.6	10.3	6.3	28.1	26.8	19.1
South East	3.6	2.3	1.5	14.0	13.8	12.9
Mekong River Delta	29.4	23.2	17.9	8.1	8.0	5.2
Area of residency						
Urban	3.8	2.2	2.2	11.0	11.1	9.6
Rural	15.3	14.0	9.9	12.6	12.2	9.5
Ethnicity						
Ethnic minority	30.6	30.4	22.1	24.2	21.9	18.8
Kinh/Hoa	7.7	5.6	4.1	9.5	9.4	7.4

Source: Calculation based on VHLSS data

The rate of children living in houses with a house area per capita less than 8 m² (meaning being deprived in terms of house area) slightly decreased in the period 2014 - 2018 and equaled to 9.6% in 2018. Central Highlands have the highest deprivation rate of living areas, at 19.1%. Notably, the South East region has the second highest rate of in this indicator (12.9%) although this is the richest region in the country. Ethnic minority children had much higher deprivation rate than Kinh/Hoa children for both two indicators within housing domain.

3.1.5. Sanitation and environment

The sanitation and environment domain is measured by three indicators, including safe drinking water, hygienic latrines and waste disposal which are household-level measurement indicators. Access to clean water and hygienic latrines plays a very important role in children's health. Deaths caused by diarrhea among under-5-children are estimated to account for 19% of all global child deaths (Boschi-Pinto et al., 2008) and one of the main causes of diarrhea is a lack of hygienic latrines and clean water (Bartram and Cairncross, 2010).

The estimated results show that the percentage of children deprived of all three indicators tended to decrease over the years in the period 2014-2018. For all three indicators, the deprivation rate in rural areas was much higher than in urban areas. There was a big gap in deprivation level of the indicators between ethnic minority and the Kinh/Hoa groups. In 2018 the percentage of ethnic minority children deprived in the indicators of safe drinking water, hygienic latrines and waste disposal was 23.4%, 42.3% and 25.8% respectively, meanwhile the deprivation rate of Kinh/Hoa children was only 2.0%, 6.3% and 5.5%. These results indicate that there is still a big disparity between ethnic minority children and Kinh/Hoa ones in access to safe drinking water, hygienic toilets and environment. This will affect children's health in the short term as well as the long term.

Table 6: The proportion of children aged 0-15 deprived in indicators of sanitation and environment domain (%)

<i>Indicators</i>	% without safe drinking water			% without hygienic toilet			% without waste disposal		
	2014	2016	2018	2014	2016	2018	2014	2016	2018
Overall	8.7	9.5	6.1	23.5	21.4	13.2	13.5	10.7	9.4
Age group									
0 - 2 years old	8.0	8.4	5.7	20.6	19.8	11.7	12.3	9.9	9.1
3 - 4 years old	8.8	9.1	6.1	23.0	20.8	13.1	12.7	10.8	9.3
5 years old	7.5	10.8	6.3	25.6	20.5	13.1	13.5	9.9	9.8
6 - 10 years old	8.8	9.2	6.2	22.9	21.3	13.4	14.1	10.8	9.3
11 - 15 years old	9.2	10.3	6.2	25.7	23.0	14.1	13.8	11.1	9.6
Gender									
Boys	8.8	9.5	5.8	23.9	21.1	13.8	13.4	10.7	9.2
Girls	8.6	9.5	6.4	23.1	21.8	12.7	13.5	10.6	9.6
6 economic regions									
Red River Delta	0.7	1.3	0.3	2.2	1.4	0.4	5.8	4.0	3.8
Northern Midlands and Mountain areas	24.4	23.1	17.8	48.1	41.1	24.9	31.6	22.7	19.8
North Central and Central Coastal areas	7.2	9.1	6.4	19.9	20.8	12.4	12.2	12.1	10.0
Central Highland	16.8	17.7	6.6	54.7	45.4	27.4	16.6	10.5	8.7
South East	1.7	1.5	0.3	3.9	3.3	1.8	3.1	3.6	1.1
Mekong River Delta	10.4	10.4	5.8	37.9	33.0	22.9	17.4	12.0	12.7
Area of residency									
Urban	2.0	1.2	0.7	5.4	4.4	2.7	5.6	5.0	3.2
Rural	11.8	12.9	8.5	31.8	28.4	17.8	17.1	13.0	12.1
Ethnicity									
Ethnic minority	30.2	30.8	23.4	70.7	63.6	42.3	36.5	26.7	25.8
Kinh/Hoa	4.2	4.1	2.0	13.6	10.9	6.3	8.6	6.7	5.5

Source: Calculation based on VHLSS data

3.1.6. Information

The information domain is measured by two indicators, including means of information communication (via telephone and internet) and access to mass media (via TV, radio and computer). These two indicators are measured at the household level. The proportion of children deprived in access to information via telephone and internet tended to decrease over the years in the period 2014-2018. In 2018 the rate of deprived children was only 4.3%, reflecting strong development of mobile phone devices and internet in Vietnam. By regions, the Central Highlands region was highlighted with a higher rate of children deprived in access to information than other regions (12.7% in 2018). Children in rural areas still had a higher deprivation rate than in urban areas. Ethnic minority children suffer from deficiency more than Kinh/Hoa ones in two indicators within the information domain. In terms of access to mass media (via television, radio and computers), the Northern Midland and Mountain areas experienced the highest rate of children deprived (19.0% in 2018).

Table 7: The proportion of children aged 0-15 deprived in indicators of information domain (%)

<i>Indicators</i>	% deprivation in access to information			% deprivation in means of access to mass media		
	2014	2016	2018	2014	2016	2018
Overall	7.6	5.8	4.3	6.4	7.5	7.9
Age group						
0 - 2 years old	7.0	4.5	3.5	6.2	6.7	8.1
3 - 4 years old	7.8	5.9	3.4	6.4	8.2	8.1
5 years old	7.2	5.6	4.2	5.6	7.7	8.9
6 - 10 years old	8.5	6.3	4.5	6.4	7.6	8.0
11 - 15 years old	6.9	6.1	5.0	6.7	7.6	7.5
Gender						
Boys	7.7	5.2	4.4	6.6	7.5	7.8
Girls	7.4	6.4	4.3	6.2	7.6	8.1
6 economic regions						
Red River Delta	3.6	1.6	2.0	1.8	2.5	2.6
Northern Midlands and Mountain areas	17.0	9.1	5.7	17.2	19.3	19.0
North Central and Central Coastal areas	8.2	9.1	6.5	6.5	9.1	8.9
Central Highland	14.7	16.0	12.7	12.5	11.4	13.3
South East	3.1	1.4	0.4	2.2	2.4	1.5
Mekong River Delta	5.3	2.8	2.1	4.5	3.4	4.7
Area of residency						
Urban	2.6	1.6	1.7	2.2	2.3	1.7
Rural	9.9	7.5	5.5	8.3	9.7	10.7
Ethnicity						
Ethnic minority	27.8	20.4	16.3	24.3	25.7	27.3
Kinh/Hoa	3.3	2.1	1.5	2.6	3.0	3.3

Source: Calculation based on VHLSS data

3.1.7. Child labor

Not all working children are considered to be in child labour. A child involved in child labour is a child working in contravention of legal regulations and whose labour activities hinder or negatively affect their physical and mental health as well as their personality and comprehensive development. The VHLSS collect information on working among children aged 6 years and older, therefore do not provide information on the working time of children aged 5 years. In addition, the VHLSS contain data on the average number of working hours per day, so we measure the average number of working hours per day of a child in the reference week to determine child labour. This measurement is aligned with

the methodology used in the National Child Labour Survey in 2018 conducted by the Ministry of Labour, Invalids and Social Affairs and the International Labor Organization. Specifically, child labor is defined in this report as follows:

- Children aged 6 to 12: engaging in economic activities at least 1 hour a day.
- Children aged 13 to 14: engaging in economic activities at least 4 hours a day.
- Children aged 15: engaging in economic activities at least 8 hours a day.

Compared with other domains, the child labor domain has low deprivation rates. The proportion of child labor decreased slightly from 2.5% in 2014 to 1.8% in 2018. By age group, children aged 6-12 have a lower working rate than children aged 13-14 and 15. Children age 13 to 15 are still in the school age. If they spend more time working to earn income, their school attendance will be influenced. This result helps explain the net school enrolment rate among children of lower-secondary school age are lower than that of children of primary school age.

Table 8: The proportion of children aged 0-15 deprived in indicators of labor domain

<i>Indicators</i>	% child labour (all children)			% child labour (children aged 6-12)			% child labour (children aged 13-14)			% child labour (children aged 15)		
	2014	2016	2018	2014	2016	2018	2014	2016	2018	2014	2016	2018
<i>Years</i>	2014	2016	2018	2014	2016	2018	2014	2016	2018	2014	2016	2018
Overall	2.5	2.0	1.8	2.1	1.8	1.3	8.4	6.7	6.5	9.3	6.1	5.9
Gender												
Boys	2.7	2.2	2.0	2.1	1.9	1.5	9.7	7.7	8.5	10.8	7.2	6.4
Girls	2.3	1.8	1.6	2.1	1.8	1.1	7.1	5.7	4.5	7.9	5.0	5.3
6 economic regions												
Red River Delta	0.7	0.2	0.3	0.6	0.1	0.0	1.1	0.8	0.9	7.9	1.7	1.8
Northern Midlands and Mountain	5.1	4.6	3.7	5.8	5.7	3.5	18.3	15.5	15.1	9.1	9.4	7.2
North Central and Central Coastal	2.9	1.8	2.0	2.8	2.0	2.0	8.1	6.1	5.4	7.8	1.7	6.0
Central Highland	4.3	3.5	2.6	2.9	3.1	0.5	15.1	10.5	13.0	12.8	9.4	11.9
South East	1.0	1.0	0.7	0.6	0.4	0.1	1.6	4.7	3.1	7.9	4.7	5.4
Mekong River Delta	2.7	2.1	2.3	1.2	0.8	1.1	11.0	7.2	7.8	12.6	12.1	7.0
Area of residency												
Urban	0.7	0.4	0.5	0.1	0.3	0.2	2.3	1.6	1.8	7.4	1.0	3.2
Rural	3.4	2.7	2.4	3.0	2.5	1.8	10.8	8.7	8.7	10.1	7.7	7.1
Ethnicity												
Ethnic minority	7.9	6.2	5.3	8.0	7.0	4.3	29.4	19.6	22.3	12.9	14.2	14.5
Kinh/Hoa	1.4	1.0	1.0	0.9	0.6	0.6	4.0	3.6	3.0	8.5	4.2	4.0

Note: The definition of deprivation rates in the child labor dimension for groups of children is presented in Table 1.

Source: Calculation based on VHLSS data

By regions, the Northern Midland and Mountain areas and the Central Highlands experienced the highest rates of child deprivation (3.7% and 2.6% respectively in 2018). Mekong River Delta is a region with relatively high per capita income among the six economic regions, but has a relatively high deprivation rate of children at 2.3% in 2018, especially among the young group aged 15 this rate up to 9.6%. The ethnic minority children had a deprivation rate in the labor domain for households up to 9.8% in 2018. The deprivation rate of ethnic minority children aged 13-14 was up to 22.3% in 2018, substantially higher than that of Kinh children. This can be a cause of disparity in enrollment rate at lower-secondary school level between ethnic minority children and Kinh/Hoa peers.

3.1.8. Registration

The registration domain includes two indicators of birth registration and resident registration, which are at individual level. The deprivation rate in these two indicators is low: only 1.5% of children aged 0-4 without a birth certificate and 2.9% of children aged 0-15 without resident registration in 2018. The Central Highlands witnessed the highest rate of children without birth certificate (3.6% in 2018).

In terms of resident registration indicator, the South East experienced the highest proportion of children without resident registration (11.2% in 2018). One of the reasons is that there is a large share of immigrants in this region which includes provinces such as Ho Chi Minh City, Dong Nai, Binh Duong where many industrial zones located and many migrant workers come to work from other provinces. These migrant workers do not register for permanent residence for individuals and their families. Similarly, the proportion of urban children without a resident registration is higher than in rural areas because there are a large number of immigrants in urban areas. Having no resident registration will affect the access to public services such as medical examination and treatment, benefiting from health insurance and attending public school of children.

Table 9: The proportion of children aged 0-15 deprived in indicators of administrative registration domain (%)

<i>Indicator</i>	% deprivation in birth registration			% deprivation in resident registration			
	<i>Year</i>	2014	2016	2018	2014	2016	2018
Overall		2.1	1.4	1.5	3.0	3.1	2.9
Age group							
0 - 2 years old		2.9	2.3	2.5	5.2	5.0	5.4

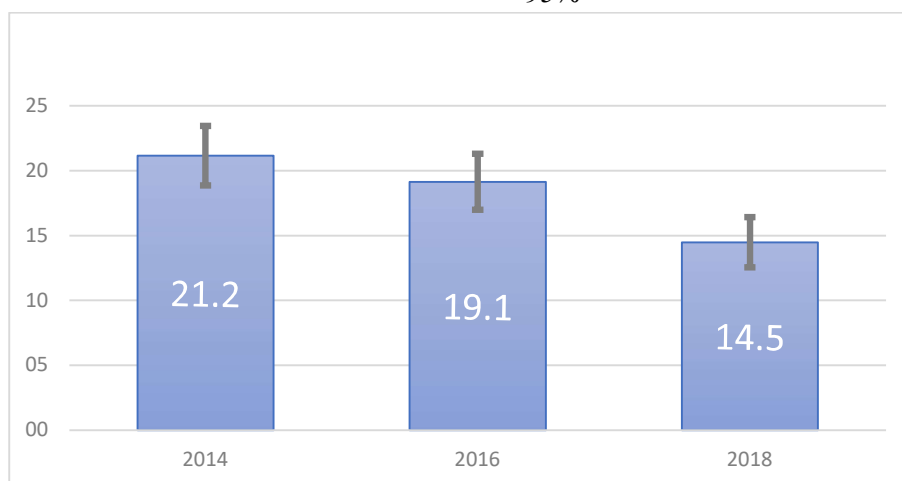
<i>Indicator</i>	% deprivation in birth registration			% deprivation in resident registration		
3 - 4 years old	0.7	0.4	0.2	3.6	4.6	3.0
5 years old	-	-	-	2.9	2.5	1.6
6 - 10 years old	-	-	-	2.7	2.7	2.9
11 - 15 years old	-	-	-	1.8	2.0	1.8
Gender						
Boys	1.6	1.3	1.7	2.9	3.0	2.9
Girls	2.6	1.6	1.3	3.2	3.3	3.0
6 economic regions						
Red River Delta	1.5	1.0	1.3	3.0	2.6	1.9
Northern Midlands and Mountain areas	1.8	0.9	2.2	0.9	1.1	1.7
North Central and Central Coastal areas	1.8	0.7	0.9	1.8	1.2	1.2
Central Highland	5.0	3.0	3.6	2.4	1.1	0.7
South East	0.9	1.6	0.6	7.9	11.6	11.2
Mekong River Delta	3.6	3.0	1.5	2.4	2.3	2.2
Area of residency						
Urban	0.8	1.6	1.2	6.1	7.9	5.8
Rural	2.8	1.4	1.6	1.6	1.2	1.6
Ethnicity						
Ethnic minority	4.5	2.1	2.6	0.9	1.0	0.7
Kinh/Hoa	1.6	1.3	1.2	3.5	3.7	3.5

Source: Calculation based on VHLSS data

3.2. Multidimensional child poverty (MDCP) rates

Using the information from the eight domains analysed above, we can compute the deprivation score and the multidimensional child poverty rates. The figure below shows the multidimensional child poverty rates at the threshold (k) of 1/5, i.e. a child who is deprived in one fifth (or more) of the dimensions is considered multi-dimensionally poor. To assess whether the level of change is statistically significant or not, this figure also presents an additional 95% confidence interval for the multidimensional poverty rate. The results show that the multidimensional child poverty rate decreased in the period 2014-2018. The proportion of multidimensionally poor children declined rapidly from 21.2% in 2014 to 14.5% in 2018.

Figure 1: The proportion of multidimensionally poor children and confidence interval 95%

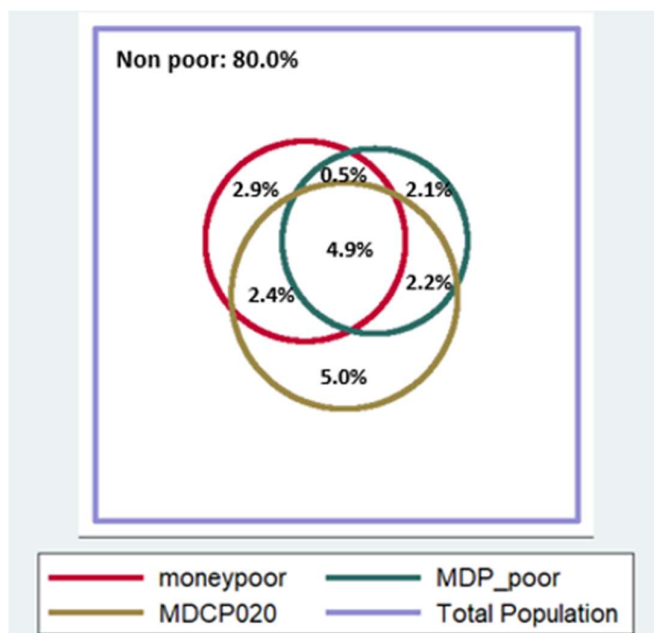


Source: Calculation based on VHLSS data

The reality is that many multidimensionally poor children may not be in the poor households as defined by the local authorities. Poor households in Vietnam are defined by income and multidimensional poverty line specified in Decision No. 59/QĐ-TTg dated November 19, 2015 of the Prime Minister. The percentage of children living in poor households defined by this poverty line was 9.7% (VHLSS 2018). In addition, poverty is also measured and monitored using an expenditure poverty approach developed by the General Statistics Office of Viet Nam and the World Bank. Accordingly, children are considered poor if they live in households with per capita expenditure less than 11,970 thousand VND per year (in 2018). The child poverty rate by expenditure in Vietnam in 2018 was 10.7%.

The figure below compares the overlap between poverty measures including national multi-dimensional poverty line, monetary poverty and multidimensional child poverty. It shows that 20% of children in Viet Nam in 2018 was poor on at least one poverty measure. Half of all multidimensionally poor children are also monetary poor. Around 4.9% of children were poor in all three measures. In terms of single measure of poverty, 2.9% of children were poor using expenditure measure only, 2.1% of children were poor when measured by national multi-dimensional poverty line only, and 5.0% were poor using MDCP measure only. Approximately 7.4% of multidimensionally poor children were not in poor households defined by the national multi-dimensional poverty approach. This means that these children will not be able to access assistance offered by national poverty reduction programs.

Figure 2: Overlap between the poverty measures in 2018, (% of children in each category)



Source: Calculation based on VHLSS data

3.3. Multidimensional child poverty rates among population groups

There multidimensional child poverty (MDCP) rates are not different between boys and girls. However, there are differences among age groups. Children in 0-2 age group had the highest MDCP rate (33.2% in 2014, 30.0% in 2016 and 26.4% in 2018), followed by the group of children aged 3-4 years old. Zooming in the dimensions and indicators used for each age group, the result indicates that the higher rate of 0-4 age group is due to the respective disparity of this age group in the dimensions of health (health care and medical treatment for children aged 0-4), education (not enrolled in the right level of education among children aged 3-4) and administrative registration (birth registration and residential registration for children aged 0-4) in comparison with other age groups. Although for 6-15 age group child labour indicator is taken into account, the rate is relatively lower than those of other indicators and not raising the overall rate of multidimensional poverty. The higher MDCP rate among younger group (0-4 years) can be explained by the fact that households with young children are often headed by young people who have low income and fewer assets than older peers.

Table 10: Multidimensional child poverty headcount by child characteristics (%)

	Year 2014	Year 2016	Year 2018
Overall	21.2	19.1	14.5
Age group			
0 - 2 years old	33.2	30.0	26.4
3 - 4 years old	29.3	28.4	20.4
5 years old	21.5	18.2	13.8
6 - 10 years old	14.0	12.5	9.0
11 - 15 years old	17.7	15.6	11.5
Gender			
Boys	21.7	19.1	14.8
Girls	20.6	19.2	14.2

Source: Calculation based on VHLSS data

Among six economic regions, Northern Midlands and Mountains areas and the Central Highlands experienced the highest MDCP rates (29.3% and 25.4%, respectively in 2018). The MDCP rate in rural areas was much higher than in urban areas, with the corresponding rate of 18.6% compared to 5.0% in 2018. By ethnic groups, children of ethnic minority groups had a MDCP rate far more than Kinh/Hoa children (46.4% and 6.8% respectively in 2018), which is also consistent with above analysis that children belonging to ethnic minority groups have much lower access to basic social services than Kinh/Hoa children in most indicators. Considering some ethnic groups that have more than 100 observations, the Mong ethnic group had an extremely high MDCP rate, at 81.4% in 2018, followed by the Dao with 43.8%. The Muong had the lowest MDCP rate among the selected ethnic groups (13.1%) but was still twice as high as the MDCP rate of the Kinh/Hoa ethnic group (6.8%).

Table 11: Multidimensional child poverty headcount by regions and ethnic groups (%)

	Year 2014	Year 2016	Year 2018
Overall	21.2	19.1	14.5
6 economic regions			
Red River Delta	7.0	5.4	3.9
Northern Midlands and Mountain areas	40.2	34.5	29.3
North Central and Central Coastal areas	19.0	20.4	13.8
Central Highland	41.2	32.8	25.4
South East	9.6	10.5	6.6
Mekong River Delta	27.4	21.5	15.6
Area of residency			
Urban	8.9	8.4	5.0
Rural	26.8	23.6	18.6

	Year 2014	Year 2016	Year 2018
Ethnicity			
Ethnic minority	61.2	52.5	46.4
TÀY	30.0	22.1	18.3
THÁI	56.6	44.2	31.1
KHƠ ME	62.0	32.6	35.7
MƯỜNG	28.5	24.8	13.1
NÙNG	39.6	25.8	17.1
MÔNG (MÈO)	90.6	86.3	81.4
DAO	69.7	53.9	43.8
Kinh/Hoa	12.7	10.8	6.8
Gender of household head			
Male	22.0	19.3	15.1
Female	18.1	18.6	12.1
Education level of household head			
No diploma	41.9	39.2	32.8
Primary	22.8	19.7	14.5
Lower secondary	14.2	13	10.9
Upper secondary	9.3	10.8	9.6
Elementary/Intermediate Trade	6.7	6.8	3.9
College+	4.1	3.2	2.9

Source: Calculation based on VHLSS data

3.4. Multidimensional poverty index

In addition to calculating the percentage of children who are poor in multiple dimensions or the incidence of poverty (known as the headcount ratio - H), the intensity of poverty (i.e. the percentage of deprivations suffered by each child on average – A) is also measured in order to come up with multi-dimensional poverty index.

Table 11 below shows that the multidimensional child poverty rate has decreased, but the deprivation intensity has not been improved. The A-score was 32.5% in 2018, meaning that a poor child is deprived of about one third of all dimensions on average and this situation has not been changed since 2014. The multidimensional poverty index ($MPI = A * H$) ranges from 0 to 1, and higher values imply higher poverty. The MPI of children in Viet Nam decreases from 0.070 in 2014 to 0.047 in 2018 as a result of the reduction in the multidimensional poverty rate.

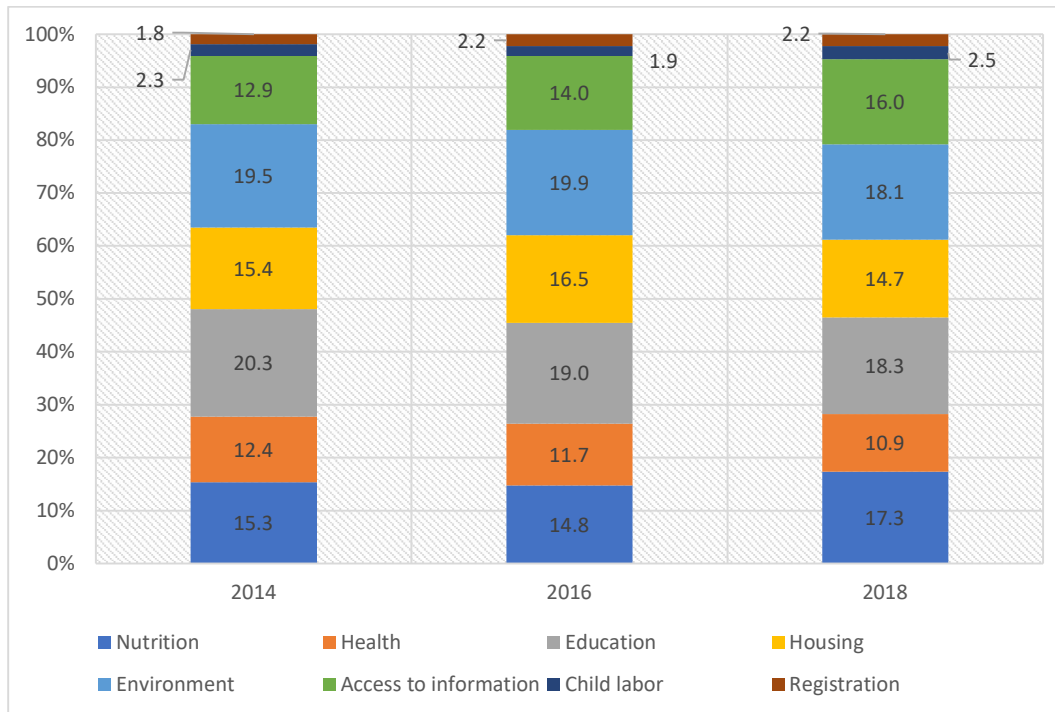
Table 12: Multidimensional poverty index (MPI)

Index	Year 2014	Year 2016	Year 2018
H	21.2%	19.1%	14.5%
A	32.9%	32.3%	32.5%
MPI	0.070	0.062	0.047

Source: Calculation based on VHLSS data

We decompose the MPI into contribution of the eight domains and indicators. The analysis results indicate that the dimensions of environment, education, nutrition and information contribute the most to the MPI among children. Specifically, the multidimensional poverty situation in Vietnam is significantly resulted from the lack of access to clean water, sanitation and waste treatment (environment dimension), lack of access to net school attendance, to toys, books and comic books (education dimension), insufficient caloric intake and lack of dietary diversity (nutrition dimension), and lack of access to means of information communication such as telephone, Internet, and lack to access to mass media such as TV, radio and computer (information dimension). Domains of working and administrative registration (birth registration and residential registration) account for a very small share in deprivations resulting in multidimensional child poverty.

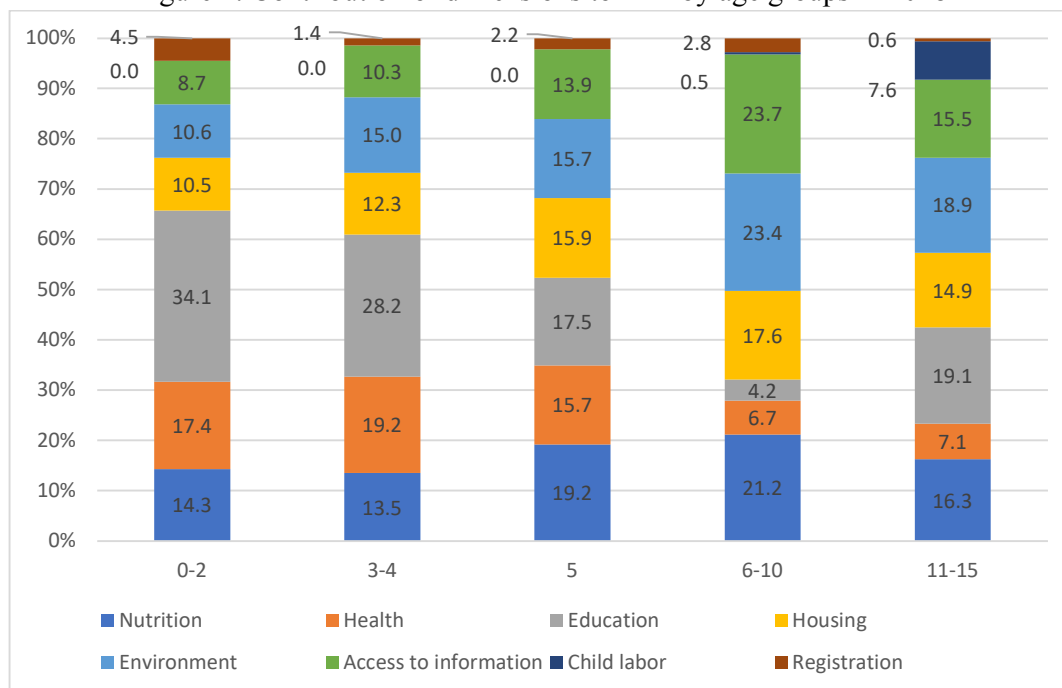
Figure 3: Contribution of dimensions to MPI (%)



Source: Calculation based on VHLSS data

Figure 4 below shows the decomposition of eight domains to MPI of children by age groups, we find that each different age group has different main factors leading to multidimensional reality. For children aged 0 - 4 years old, education domain contributes the most to the multidimensional child poverty (lack access to early childhood education, lack of toys and comic books), followed by the health domain (insufficient medical examination and treatment, and high exposure to risks from alcohol and tobacco consumption by adults). For 5-year-old children group, all domains equally contribute to the MPI (except for the administrative registration accounting for 0.6% only). For children aged 6 - 10, household-level domains including environment, information and nutrition make large contribution to MPI. For children at the age of 11 - 15 years old, the education and environment domains (low net school attendance and lack of access to clean water, sanitation and waste treatment) contribute the most to the multidimensional poverty.

Figure 4: Contribution of dimensions to MPI by age groups in 2018



Source: Calculation based on VHLSS data

An important question is what share each population group by geographic area contributes to the overall multidimensional poverty index. The table below analyzes the proportion of contribution by of geographical regions to the multidimensional child poverty index across the country. The Northern Midlands and Mountains area has a smaller proportion of children than others (17.2% in 2018) but accounts for a large share of multidimensionally poor children (34.8% in 2018). The Red River Delta and the South East have large children population but a small share of multidimensional child poverty, so the contribution of these two regions to overall multidimensional poverty is smaller than other regions.

Multidimensionally poor children in Viet Nam are mainly in rural areas. The proportion of children in rural areas is 69.5% but the share of multidimensionally poor children is up to 89.4%. In other words, nearly 9 in 10 multidimensionally poor children in Viet Nam are from rural areas.

Table 13: Distribution of multidimensionally poor children by geographical regions (%)

	Year 2014		Year 2016		Year 2018	
	Proportion of children	Proportion of poor children	Proportion of children	Proportion of poor children	Proportion of children	Proportion of poor children
Overall	100	100	100	100	100	100
6 economic regions						
Red River Delta	22.5	7.4	21.9	6.2	21.7	5.9
Northern Midlands and Mountain areas	14.5	27.6	15.9	28.7	17.2	34.8
North Central and Central Coastal areas	21.2	19.1	22.6	24.1	23.9	22.8
Central Highland	7.5	14.5	7.9	13.5	7.8	13.7
South East	15.6	7.1	14.0	7.7	14.0	6.4
Mekong River Delta	18.8	24.4	17.7	19.9	15.3	16.5
Area of residency						
Urban	31.5	13.2	29.1	12.7	30.5	10.6
Rural	68.5	86.8	70.9	87.3	69.5	89.4

Source: Calculation based on VHLSS data

Regarding age group structure of the multidimensional child poverty in Viet Nam, the youngest age group 0-2 years old share a large proportion (contribution of 16.8% of target population but 30.6% of multidimensional child poverty in 2018). It is followed by the group of children aged 11-15 (25.1% of multidimensional child poverty in 2018).

By ethnicity, among multidimensionally poor children in Viet Nam, 62.1% are from ethnic groups while ethnic children account for 19.4% of the children population. This finding is also consistent with the above analysis that ethnic minority children have much higher deprivation rate across most of the indicators than Kinh/Hoa ethnic groups.

Table 14: Distribution of multidimensionally poor children by demographic characteristics (%)

	Year 2014		Year 2016		Year 2018	
	Proportion of children	Proportion of poor children	Proportion of children	Proportion of poor children	Proportion of children	Proportion of poor children
Overall	100	100	100	100	100	100
Gender						
Boys	51.3	52.6	51.3	51.2	51.4	52.4
Girls	48.7	47.4	48.7	48.8	48.6	47.7
Age group						
<i>0 - 2 years old</i>	19.7	31.0	17.6	27.5	16.8	30.6
<i>3 - 4 years old</i>	11.5	15.8	14.2	21.1	12.6	17.8
<i>5 years old</i>	6.4	6.5	5.9	5.6	6.9	6.6
<i>6 - 10 years old</i>	31.8	21.0	31.1	20.3	32.1	19.9
<i>11 - 15 years old</i>	30.6	25.7	31.3	25.5	31.6	25.1
Ethnicity						
Ethnic minority	17.4	50.4	20.0	54.9	19.4	62.1
Kinh/Hoa	82.6	49.7	80.0	45.1	80.7	37.9

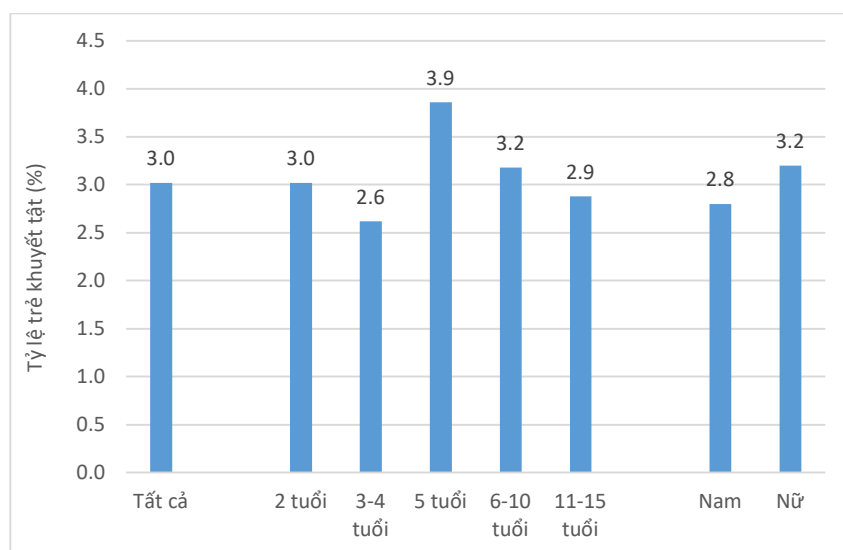
Source: Calculation based on VHLSS data

4. DISABILITY AND MULTIDIMENSIONAL CHILD POVERTY

4.1. Disability rate among children aged 2 to 15 years

The data of Viet Nam's National Survey on People with Disabilities (VDS) 2016 was used to analyze the correlation between disability and multidimensional poverty situation in children. Children are identified as disabled if they have a lot of difficulties or inability to carry out activities such as walking, hearing, seeing, remembering, concentrating, communicating and taking care of themselves. Information on disability is collected for people aged from 2 and over. To be consistent with the above sections in terms of age range, the VSD 2016 data on children aged 2 – 15 years was analyzed. Accordingly, 3% of children aged 2-15 are those with disabilities, meaning that there are nearly 900,000 children with disabilities. The figure below shows that the disability rate of 5-year-old children is higher than other age groups, more girls with disabilities than boys. However, this gender disparity is not statistically significant.

Figure 5: The proportion of children with disabilities by gender and age groups (%)



Source: Calculation based on VDS 2016 data

4.2. Deprivation rate by dimension

The 2016 VDS aims to collect information on disability, so its questionnaire is different from the VHLSS. The 2016 VDS does not have enough information on 19 indicators of 8 child poverty dimensions. With 2016 VDS data, 6 dimensions and 12 indicators were developed to calculate multidimensional child poverty index (The list of indicators and weights is presented in the annex section). Table 14 below analyses children's deprivation rate by indicators. Children with disabilities have higher levels of deprivation than children without disabilities in all indicators. For individual-level indicators, there is a big deprivation gap between groups of children with and without disability in the education domain, including school attendance at the right age (26.3% compared to 9.0%); toys (26.9% versus 15.6%); books, comic books (68.3% over 62.1%). The limitation in accessing to education will result in a major barrier to access to decent job and income for children with disabilities in adulthood. This can lead to chronic and intergenerational poverty in people with disability.

Table 15: Deprivation rate in indicators by disability status of children (%)

Domain	Indicator	All children	Children without disability	Children with disabilities
Health	Medical examination and treatment	14.74	14.71	15.71
	Health insurance	2.72	2.68	4.02
Education	School attendance at right level	9.54	9.00	26.31
	Toys	15.95	15.64	26.93
	Books, comic books	62.29	62.12	68.26
Housing	Permanent dwelling	9.90	9.78	13.79
	Living space	13.14	13.10	14.46
Environment	Safe drinking water	7.38	7.33	9.05
	Hygienic toilet	22.52	22.27	30.42
Access to information	Phone, internet	3.93	3.90	4.92
	Television, radio, computer	6.21	6.09	10.12
Registration	Birth registration	1.04	0.99	2.78

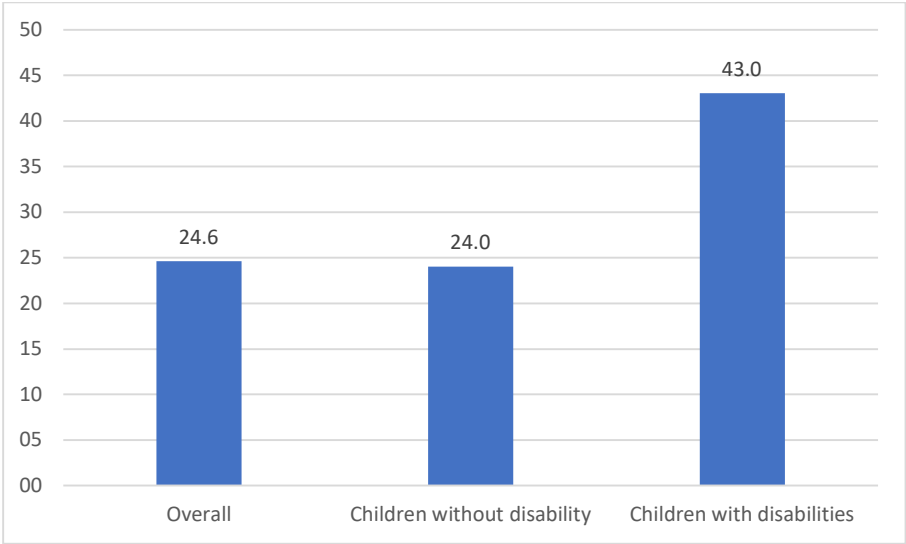
Source: Calculation based on VDS 2016 data

Apart from individual-level measure indicators, children with disabilities also have a higher level of deprivation than children without disabilities in household-level measure indicators such as housing, environment, access to information. The analysis results also show that children with disabilities have a higher rate of living in limited conditions than those without disabilities. Thus, children with disabilities are not only disadvantageous in access to education for development themselves but also deprived in living conditions of the family.

4.3. Multidimensional poverty in children with disabilities

The table below presents that the multidimensional poverty rate of children with disabilities is much higher than children without disabilities at various cut-off thresholds. With cut-off threshold $k = 1/5$ (threshold used to analyze multidimensional poverty in the report), the proportion of children with disabilities in multidimensional poverty is 43.0%, almost double that of children without disabilities (24.0%). Thus, nearly half of children with disabilities are multidimensionally poor.

Figure 6: The proportion of multidimensionally poor children by disability status (%)



Source: Calculation based on VDS 2016 data

The following table presents multidimensional poverty rate of children with and without disabilities by age group and gender. Children with disabilities have a higher multidimensional poverty rate in all age groups. Children with disabilities aged 2 years old and 11-15 years old experienced very high multidimensional poverty rates (49.0% and 49.3%, respectively). Almost half of children aged 2 years old and aged 11-15 years are living in multidimensional poverty.

Table 16: The proportion of multidimensionally poor children by disability status and demographic characteristics (%)

	All children	Children without disability	Children with disabilities
Overall	24.6	24.0	43.0
Age group			
2 years old	28.1	27.4	49.0
3 - 4 years old	28.4	28.1	40.7
5 years old	18.8	18.0	38.8
6 - 10 years old	20.9	20.3	38.4
11 - 15 years old	27.2	26.6	49.3
Gender			
Boys	24.7	24.1	44.8
Girls	24.6	24.0	41.6

Source: Calculation based on VDS 2016 data

The multidimensional poverty rate of children with disabilities in the Northern Midlands and Mountains areas is 57.6%, meaning that nearly 6 out of 10 children with disabilities in this region are multidimensionally poor. The following is the Mekong River Delta with the multidimensional poverty rate of children with disabilities at 47.1%. The proportion of children with disabilities in multidimensional poverty in rural areas is also very high (47.1%), much higher than in urban areas. Although urban households have better access to basic social services such as education, safe drinking water, hygienic toilets or information communication, but children with disabilities in urban areas still have a relatively high multidimensional poverty rate at 28%. The multidimensional poverty rate of ethnic minority children with disabilities is remarkably high, up to 71.6%.

Table 17: The proportion of multidimensionally poor children by disability status, geographic region and ethnicity (%)

	All children	Children without disability	Children with disabilities
Overall	24.62	24.04	43.04
Regions			
Red River Delta	9.61	9.09	30.79
Northern Midlands and Mountain areas	45.98	45.41	57.6
North Central and Central Coastal areas	22.71	22.27	38.07
Central Highland	40.22	40.19	40.92
South East	12.3	11.87	34.12
Mekong River Delta	31.85	31.29	47.06
Area of residency			
Urban	10.93	10.47	28.04

	All children	Children without disability	Children with disabilities
Rural	29.84	29.25	47.77
Ethnicity			
Ethnic minority	61.25	60.87	71.56
Kinh/Hoa	15.78	15.23	34.5

Source: Calculation based on VDS 2016 data

The above analysis indicates that the multidimensional poverty of children with disabilities is much more serious than that of children without disabilities in all groups. This also means that better response to the needs to access basic social services for children with disabilities in all regions should be improved in all regions and children groups.

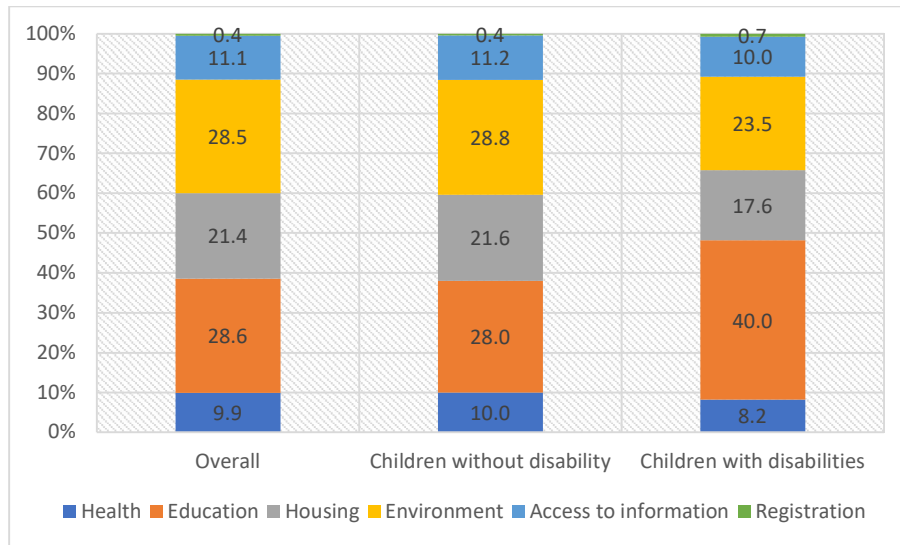
Table 18: MPI by disability status

	All children	Children without disability	Children with disabilities
H	24.6%	24.0%	43.0%
A	31.6%	31.6%	31.3%
MPI	0.08	0.08	0.13

Source: Calculation based on VDS 2016 data

There is a large disparity in multidimensional child poverty between children with and those without disability. This gap is caused by a big difference in the multidimensional child poverty headcount rate (H) between the two groups of children. There is no difference in the depth of multidimensional poverty between children with and those without disability.

Figure 7: Contribution of dimensions to MPI



Source: Calculation based on VDS 2016 data

In order to provide information for designing multidimensional poverty reduction policies for children with disabilities, we need to understand to what extent specific domains contribute to overall multidimensional poverty. The analysis shows the extent of contribution of the domains to multidimensional poverty is similar between children with disabilities and those without disability. The education domain with indicators of access to education, books, and comic books has the highest level of contribution to overall multidimensional poverty of children with disabilities at 40.0%. Another domain that has a major impact on the multidimensional poverty of children with disabilities is the environment (contribution of 23.5%), including indicators of safe drinking water and hygienic toilets, which related to characteristics of households where children live in. The following is the housing, information and health domains with the contribution rates of 17.6%, 10.0% and 8.2% respectively. The protection domain has a very low level of contribution because the rate of children without birth certificates in Viet Nam is small.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusions

Poverty is a multidimensional phenomenon, with children being more vulnerable to poverty than adults. Analysis of the VHLSS 2014-2018 data shows that the rate of multidimensional child poverty declines rapidly over the years. The proportion of multidimensional child poverty decreased from 21.2% in 2014 to 14.5% in 2018. The rate

of multidimensional child poverty decreased in across geographic regions as well as population groups, however considerable disparities exist.

The multidimensional poverty rates are high among certain groups. Children aged 0-2 have the highest poverty rate (26.4% in 2018), while children aged 6-10 have the lowest multidimensional poverty rate (9% in 2018). MDCP of children in the Northern Midland and Mountain and the Central Highlands, where there are a large proportion of ethnic minorities, is much higher than those in other regions. MDCP of children Red River Delta and Southeast are lowest. Multidimensional child poverty is alarmingly high among ethnic minorities, i.e. nearly half (46.4%) of ethnic minority children are in multidimensional poverty. Kinh/Hoa children have a much lower rate of deprivation in the multidimensional poverty indicators, except for the health insurance indicator. However, having health insurance does not mean better access to health care services. Ethnic minority children and rural children have a lower rate of healthcare service utilization than Kinh/Hoa and urban children.

Children with disabilities suffer from deprivation at a higher rate as much as twice than those without disabilities in all indicators across all domains (43.0% vs. 24.0%). In all dimensions of multidimensional poverty, children with disabilities have much higher rates of deprivation than children without disabilities. Dimensions of disparity between children with disabilities and those without disabilities is education. Housing and environmental conditions of children with disabilities are also worse than those of other children. Limited access to education, lack of clean water, sanitation and proper waste treatment will affect the development and health of children with disabilities, leading to barriers to their access to decent work and employment opportunities in their adulthood.

In terms of overall multidimensional poverty, it is found that living environment, education, nutrition and access to information are the main dimensions contributing to the general multidimensional poverty index. Reducing the gap in these dimensions will contribute to the rapid reduction of multidimensional child poverty. While the indicators on living environment and education for children have improved over the years 2014-2018 (the proportion of children deprived in these dimensions decreased), in the indicators of nutrition and access to information, no progress was observed, i.e. the proportion of children deprived in nutrition and information dimensions increased over the years 2014 - 2018. Half of multidimensionally poor children were not in poor households defined by the national approach to multidimensional poverty. This means

that these children are not be able to access assistance offered by national poverty reduction programs.

5.2. Policy recommendations

Based on the above analysis findings, the report proposes some policy recommendations as follows:

First, more than half of the multidimensionally poor children are not living in poor household as defined by the national multidimensional poverty line. Thus, these multidimensionally poor children cannot access national poverty reduction assistance programmes. This shows the important role of standardizing child poverty measurement tools to accurately identify multidimensionally poor children, ensuring that no poor children are left out. Multidimensional poverty in children is different from that in households, so it is necessary to have an appropriate methodology to identify multidimensional poverty in children, using a child multidimensional poverty indicator system. Then, the government needs to endorse the methodology for measurement of multidimensional child poverty in Viet Nam for uniform implementation. The multidimensional child poverty indicator system will become an effective and necessary tool to monitor and evaluate the implementation of Vietnam's sustainable development goals (SDGs) on children. The measurement multidimensional child poverty should be carried out regularly and periodically to update and consider changes, thereby developing appropriate policies to reduce child poverty.

Second, there is a need for policies on basic social services of education and health, focusing on specific groups of children. In terms of education, it is necessary to support children in the age group 3 - 4 and 11 - 15 years old, and children in mountainous areas and those belonging to ethnic minorities, and children with disabilities. These are the groups of children with a high rate of lack of books and story books, and a low rate of net school attendance. Regarding health, although children under 6 years old are provided with free insurance cards, the proportion of young children using health services in poor and ethnic minority groups is still very low. Improving the quality and access of health services for young children is essential.

Third, appropriate poverty reduction policies should be designed to meet different needs of different children groups, such as urban and rural children, children of different age groups, and children of different regions. Because children in different groups have different multidimensional poverty status and different levels of deprivation. For example, for children in rural areas, in the Northern Midland and Central Highlands, and

ethnic minority children, the government should make more investment in improving their access to hygienic latrines and clean water.

Fourth, multidimensional poverty among children with disabilities is very serious. Children with disabilities have higher levels of deprivation than children without disabilities in all indicators, especially in education. Children with disabilities live in poorer living conditions than those without disabilities. Children with disabilities have poorer access to basic social services than children without disabilities. Therefore, policies to support children with disabilities need to be prioritized.

Finally, indicators measuring multidimensional child poverty need to be further improved. Currently, the nutrition dimensions have not been measured at the child level, household level, i.e. the overall nutritional level of the household must be used as a proxy for children's nutrition. Children's nutrition-related indicators such as height, weight or daily servings should be considered for inclusion in the VHLSS' questionnaires to better measure multidimensional poverty. Indicators measuring multidimensional child poverty need to be included in the national indicator system for monitoring multidimensional child poverty at the macro level.

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The rate of population live under poverty line continuously decreases. In the period 2010-2018, the percentage of poor people defined by monetary poverty line of the General Statistics Office and World Bank reduced from 20.5% to 6.7%.

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Annex I

Table P.1. Multidimensional poverty measure indicators of children with disabilities

Domain	Indicator	Cut-off threshold	Weight			
			0-2	3-4	5	6-15
Health	<i>Medical examination and treatment</i>	Children (0-4) did not visit a healthcare center in the last 12 months	1/6	1/6		
	<i>Health insurance</i>	Children (6-15) without health insurance				1/5
Education	<i>School attendance</i>	Children (3-15) without school attendance		1/18	1/4	1/5
	<i>Toys</i>	Children (0-4) with no toys	1/12	1/18		
	<i>Books, comic books</i>	Children (0-4) with no books or comic books	1/12	1/18		
Housing	<i>Housing quality</i>	Children (0-15) not living in permanent dwelling	1/12	1/12	1/8	1/10
	<i>Living area</i>	Children (0-15) living in dwelling where per capita living space is less than 8m ²	1/12	1/12	1/8	1/10
Environment	<i>Safe drinking water</i>	Children (0-15) living in household without safe drinking water	1/12	1/12	1/8	1/10
	<i>Hygienic toilet</i>	Children (0-15) living in household without hygienic toilet	1/12	1/12	1/8	1/10
Access to information	<i>Means of information communication</i>	Children (0-15) living in household without phone/internet	1/12	1/12	1/8	1/10
	<i>Access to mass media</i>	Children (0-15) living in household without television, radio, computer	1/12	1/12	1/8	1/10
Child registration	<i>Registration of birth certificate</i>	Children (0-4) with no birth certificate	1/6	1/6		