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MULTIDIMENSIONAL POVERTY AND HUMAN DEVELOPMENT OF VIETNAM IN COMPARISON WITH SOME SOUTHEAST ASIAN COUNTRIES

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Abstract: According to the United Nations Development Program's (UNDP) Annual Human Development Report and global multidimensional poverty data published by the Oxford Poverty and Human Development Initiative (OPHI) in recent years, Vietnam has made encouraging achievements in its human development and multidimensional poverty reduction. However, there still remain limitations in comparison with other countries in the region. Based on the UNDP's Human Development Index (HDI) and OPHI's Multidimensional Poverty Index (MPI) data, this article seeks to analyze, compare and contrast the MPI and HDI indicators of Vietnam with those of some other Southeast Asian countries to clarify the trends of human development and reduction in multidimensional poverty in Vietnam compared with some Southeast Asian countries in recent years.

Keywords: multidimensional poverty, human development, Southeast Asia.

Introduction

At present, the concept of human's role and poverty in development has changed. Accordingly, the role of people and poverty can be analyzed in an increasingly fuller and more comprehensive manner. Poverty is rated not only according to the economic dimension, but also to many others. The UNDP Human Development Report is considered one of the most important factors in changing people's points of view and the assessment of people in terms of poverty. In its Human Development Report, the UNDP has developed a set of indicators and methods of calculation for human development and multidimensional poverty of a particular country[2].

The HDI is calculated by the UNDP to assess the progress of each country towards the goal of human development. The HDI is based on three dimensions, such as the health dimension (assessed by life expectancy at birth), the education dimension, and the standard of living dimension (measured by gross national income per capita). In respect to multidimensional poverty, according to the UN, "poverty is a state in which a person lacks minimum capacity to effectively participate

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[2] In the UNDP Annual Global Human Development Report, the approach to and assessment of multidimensional poverty was devised after those for human development. The Human Development Index (HDI) was introduced for the first time in the Human Development Report in 1990. Meanwhile, the Multidimensional Poverty Index (MPI) was introduced in 2010 and replaced the poverty index of human development, or the Human Poverty Index (HPI).

in social activities. Poverty means not having enough food and clothing, being unable to afford schooling, not having access to healthcare services, having no land for cultivation or jobs to support themselves, having no access to credit. It also means poor people are unsafe and are excluded, have no rights nor power, are vulnerable to violence, live in risky conditions, and have no access to clean water and/or sanitation facilities" [Dang Nguyen Anh 2015]. Therefore, poverty must be approached and evaluated in a multidimensional way and there exist various approaches to and methods of assessment to poverty from a multidimensional perspective. However, most studies and assessments of multidimensional poverty conducted by organizations and countries at present, including the UNDP and OPHI, employ the methodology of Alkire and Foster [2011] to measure multidimensional poverty.

The poverty assessment method of Alkire and Foster is considered comprehensive, as it not only assesses the general poverty rate, but also shows the depth and width of poverty. To assess multidimensional poverty, Alkire and Foster developed a method of measuring the MPI based on 10 indicators, developed from the three dimensions related to the HDI, namely health, education and living conditions.

In general, the UNDP's approach to the assessment of human development and multidimensional poverty has helped evaluate human development and poverty in a more comprehensive and humane manner.

Literature review

In recent decades, the perception of poverty has changed a lot, in which Amartya Sen (1976) is one of the scholars who has a different view on poverty when suggesting that poverty is a dynamic and multidimensional phenomenon. According to A. Sen, poverty is the lack of basic capabilities of individuals or families; the lack of basic capacities is multidimensional and includes premature mortality, malnutrition, disease and widespread illiteracy, etc. To reduce poverty, it is necessary to strengthen the capacity of the poor through education and health care which in turn will increase their productivity and income. This is also the approach to human development [Sen 1999]. Therefore, it is necessary to have a multidimensional perspective on this issue instead of just using a monetary-related approach. Sen proposed two-step poverty measurement: (i) identifying the poor by the deprivation threshold; and (ii) aggregating information on poverty across the society [Sen 1976]. To approach poverty in a multidimensional way many scholars believe that it is necessary to rely on the approach of capacity, needs, social exclusion etc. From the changes in the perception and approaching to poverty, many scholars around the world have proposed different dimensions and measurement methods of multidimensional poverty. For example, when approaching poverty, Atkinson & Bourguignon [1982] consider two factors: income and life expectancy of people. Foster & Shorocks [1988] established the poverty index based on three components: head count rate, income gap per capita and the index of distribution sensitivity. Up to now, there have been different approaches and assessment methods on multidimensional poverty with different dimensions. However, the most commonly used multidimensional poverty measurement method today is that of Alkire and Foster, developed by the OPHI. Alkire and Foster's multidimensional poverty assessment method is based on three large dimensions: education, health care and living standards (this is also the dimension of the HDI). Since 2010 global human development report, UNDP has included the national MPI instead of the HPI.

In a comparative study on living standards of Vietnam, China and India, Ray and Sinha (2011) used a multidimensional approach and built an index of multidimensional deprivation at the household level. The authors used data from national surveys of China, India and Vietnam. In it, China's data are taken from China Health and Nutrition Survey – CHNS (1989–2006); the Indian data set came from the National Family Health Surveys –NFHS (1992–2006); and the Vietnamese information came from the two Vietnamese Living Standard Surveys – VLSS (1992–2004). From these data sources, the authors distinguish between multidimensional deprivation (MDD) in the sense of Chakravarty and D'Ambrosio (2006) and multidimensional poverty (MDP) in the sense of Alkire and Foster [2009] that was the background study for HDR, 2010, and provides comparative empirical evidence on the difference between the multidimensional measures in these three countries [Ray & Sinha 2011: 17].

In Vietnam, since 2016, the Ministry of Labor, War Invalids and Social Affairs (MOLISA) has approved the Master Plan to transform the poverty measurement approach from single-dimensionality based on income to multidimensionality as a basis for the planning and implementation of the Sustainable Poverty Reduction Program for the period 2016–2020. MOLISA's multidimensional poverty measurement method is a combination of Alkire and Foster's multidimensional poverty determination method applied with 10 indicators belonging to the five dimensions of basic social services and income poverty lines according to the traditional approach. Accordingly, the new poverty standard was determined to replace the old poverty standard with higher poverty escape criteria. Vietnam has become one of the leading countries in Asia-Pacific in measuring multidimensional poverty to reduce poverty in all dimensions [Dinh Quang Hai 2021: 97].

On the basis of applying the multidimensional poverty calculation method of the MOLISA (combining the multidimensional poverty determination method of Alkire and Foster with income poverty lines), the author group Luong Thuy Duong and Vu Quoc Huy [2017] used the data of the 2010, 2012 and 2014 VLSS to calculate multidimensional poverty across regions in Vietnam. Also, the authors have adjusted a number of indicators on income, health, access to information, housing quality to suit actual conditions and data to determine multidimensional poverty levels for regions. The overall results show that the proportion of poor households, especially of deep poverty, has increased in recent years, although access to basic services has improved significantly [Luong Thuy Duong & Vu Quoc Huy 2017: 15].

A review of a number of studies shows that there are studies on multidimensional poverty, multidimensional poverty calculation methods and a number of comparative studies on Vietnam's multidimensional poverty index. However, the analysis of the multidimensional poverty index and the human development index of Vietnam in comparison with other countries in Southeast Asia still deserves much attention. Therefore, this article aims to analyze and compare Vietnam's MPI and HDI with some Southeast Asian countries, thereby clarifying the trend of multidimensional poverty reduction and human development of Vietnam compared with some countries in the region in recent years.

Methodology

This article uses the data of research works along with descriptive analysis methods. Sources of data related to the multidimensional poverty index and human development index in Vietnam and some Southeast Asian countries are from reports by ADB, OPHI and UNDP for the period 2011–2020. From this data source, the article analyzes and compares multidimensional poverty and human development in some Southeast Asian countries. However, as the data sources vary, there are limitations when analyzing the interaction between multidimensional poverty and human development.

Southeast Asian countries include 11 countries, namely Vietnam, Laos, Cambodia, Thailand, Myanmar, Malaysia, Indonesia, Singapore, Philippines, Timor-Leste and Brunei. However, OPHI's multidimensional poverty data source has but 8 countries (Vietnam, Laos, Cambodia, Thailand, Myanmar, Indonesia, Philippines and Timor-Leste). Therefore, we only analyze and compare Vietnam with 7 Southeast Asian countries.

Multidimensional poverty indices in a number of Southeast Asian countries

Multidimensional poverty indices in a number of Southeast Asian countries in 2011 and 2021

According to the OPHI, Vietnam's MPI in 2021 decreased by 77.4% (from 0.084 points to 0.019 points) compared with the figures in 2011. This is the second highest decrease compared with the six countries (except Myanmar for no 2011 data) in Southeast Asia (Indonesia decreased by 85.3%, from 0.095 points to 0.014 points; Thailand decreased by 66.7%, from 0.006 points to 0.002 points; Philippines decreased by 62.5%, from 0.064 points to 0.024 points; Timor-Leste decreased by 38.0%, from 0.358 points to 0.222 points; Cambodia decreased by 35.4%, from 0.263 points to 0.170 points; and Laos decreased by 59.6%, from 0.267 points to 0.108 points). Compared with seven Southeast Asian countries, Vietnam's MPI in 2021 is only higher than that of Thailand and Indonesia, and lower than that of the Philippines, Indonesia, Laos, Cambodia, Myanmar and Timor-Leste (Fig. 1).
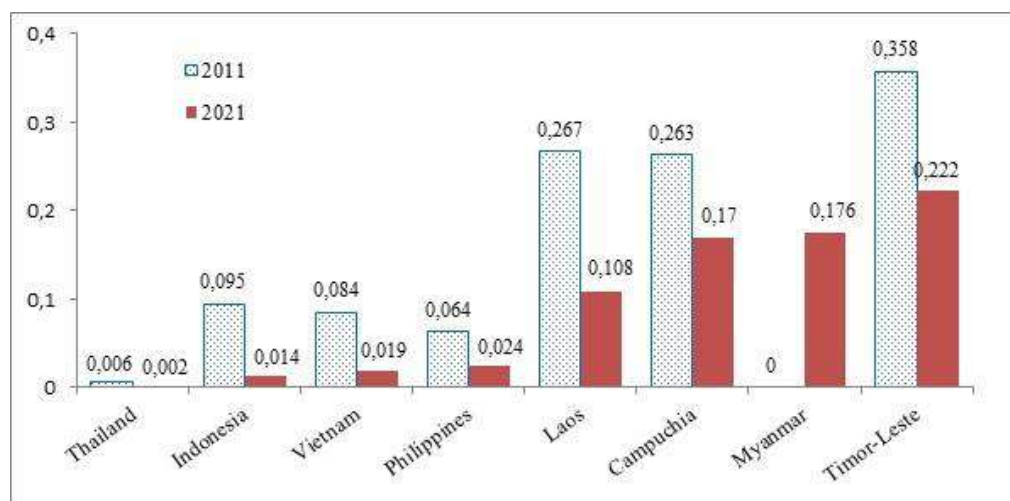
Fig. 1: MPI of a number of countries in Southeast Asia in 2011 and 2021[3]

Source: [UNDP 2011: 143–144; OPHI 2021]

Rate of poor households, intensity of deprivation and MPI rankings of a number of countries in Southeast Asia in 2021

According to the MPI rankings by countries in 2021 released by the OPHI, Vietnam is in the low MPI group, not just in Southeast Asia. In 2021, Vietnam ranked 38th out of 109 countries with the multidimensional poverty rate of 4.9% and the intensity of deprivation rate of 39.50%. According to the rankings, among the eight countries in Southeast Asia, Thailand is the best, ranked 12th out of 109 countries, followed by Indonesia ranked 30th out of 109 countries. Meanwhile, Laos, Cambodia, Myanmar and Timor-Leste were ranked in the lower group (Laos 62th, Cambodia 68th, Myanmar 71th and Timor-Leste 78th out of 109 countries).

According to the multidimensional poverty data published by the OPHI in 2021, Thailand has the lowest multidimensionally poor household rate (0.58%), followed by Indonesia (3.62%), Vietnam (4.90%), the Philippines (5.80%); Laos (23.07%), Cambodia (37.19%) and Timor-Leste being the highest (48.25%) (Table 1). The multidimensionally poor household rates of these seven countries in Southeast Asia show that there exist large differences among them. To note, the difference between the country with the lowest rate (Thailand) and the country with the highest rate (Timor-Leste) is about 40-fold higher (0.58% compared to 48.25%). Comparing Vietnam's multidimensional poverty rate with the seven countries in the region, it can be seen that its rate is four times higher than that of Thailand and 1.4 times lower than that of the Philippines. Vietnam's multidimensional household rate is about nine times lower than that of Timor-Leste.

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[3] Although the nations' multidimensional poverty indices were published by the OPHI in 2011 and 2021, the data used for the calculation of the indices were collected a few years before. Myanmar has no data for 2011. However, due to insufficient data, not all countries' indices were calculated based on all ten indicators. For example, the MPI in 2021 of Vietnam, Indonesia and Philippines were defined without the nutrition indicator.

Table 1. **Rate of poor households, intensity of deprivation and MPI rankings of a number of countries in Southeast Asia in 2021**

Country	Population in multidimensional poverty (H) %	Intensity of deprivation among the poor (A) %	MPI by countries
Thailand	0.58	36.07	12/109
Indonesia	3.62	38.71	30/109
Vietnam	4.9	39.05	38/109
The Philippines	5.8	41.84	41/109
Laos	23.07	46.95	62/109
Cambodia	37.19	45.81	68/109
Myanmar	38.32	45.89	71/109
Timor-Leste	48.25	45,91	78/109

Source: [OPHI 2021]

Rates of poor households and income poverty under national standards of a number of countries in Southeast Asia in 2021

The statistics in Fig. 2 show a significant difference in the multidimensional poverty and income poverty rates of these countries. Among the eight countries in Southeast Asia, except for Vietnam, where there is no significant difference, the rest experience differences are between their multidimensional poverty and income poverty rates. Thailand and the Philippines are the two countries where the multidimensional poverty rates are lower than their income poverty rates (the multidimensional poverty rate of Thailand is 10.7 times lower than its income poverty rate; the Philippines, nearly 2.9 times lower, Indonesia is 2.7 times lower). In contrast, Laos, Cambodia, Myanmar and Timor-Leste have multidimensional poverty rates higher than their income poverty rates (Laos is nearly 2.1 times higher; Cambodia 1.7 times higher; Myanmar 1.5 times higher; and Timor-Leste 1.2 times). This shows that, although Thailand, Indonesia and the Philippines still have high income poverty rates, people in these countries have less difficulty in accessing social services and meeting their basic needs in daily life. Meanwhile, Cambodia, Myanmar, Laos and especially Timor-Leste not only have high income poverty rates, but many people of these countries also face difficulties in accessing social services and meeting their basic needs in daily life.
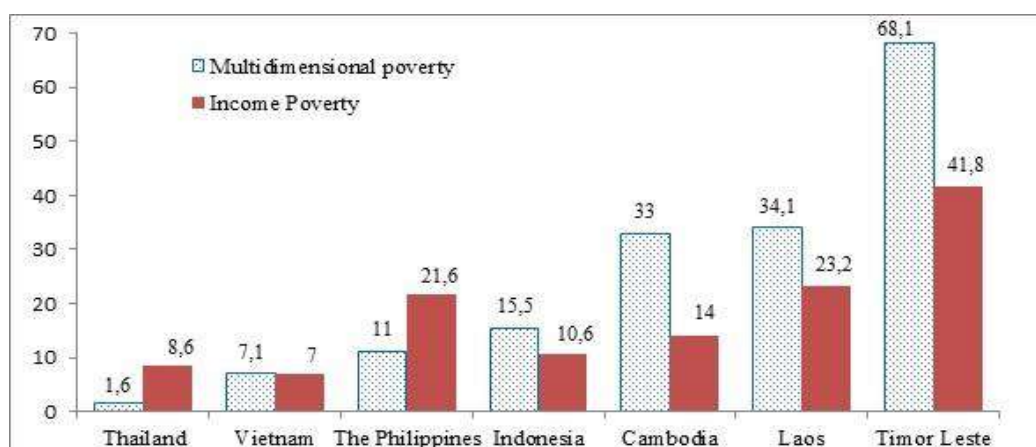
Fig. 2. Rates of multidimensionally poor households and income poverty in accordance with national standards of a number of countries in Southeast Asia in 2021 (%)
Source: [OPHI 2021; ADB 2021]

Rates of deprived multidimensionally poor households in a number of countries in Southeast Asia in 2021

The rates of deprived multidimensionally poor households in the eight countries in the region show that Thailand, Indonesia, Vietnam and the Philippines are the four countries with relatively low rates of deprivation in different indicators. Thailand has the highest rate of deprived multidimensionally poor households with the indicator of nutrition, accounting for 0.34%. As for Indonesia, Vietnam and the Philippines, the highest rate of deprived multidimensionally poor households is with the indicators cooking fuel. Meanwhile, Timor-Leste has the high rates of deprived multidimensionally poor households in most indicators. For Timor-Leste, in four out of ten indicators, the rates of deprived multidimensionally poor households reach more than 30%, of which seven indicators are more than ten times higher than the rates of Vietnam (Table 2).

Table 2. **Rates of poor households by indicators of a number of countries in Southeast Asia in 2021 (%)**

Indicators	Thailand	Indonesia	Vietnam	The Philippines	Laos	Cambodia	Myanmar	Timor-Leste
Nutrition	0.34	n/d	n/d	n/d	12.04	20.41	17.51	35.37
Child mortality	0.15	1.46	0.88	1.48	1.93	1.83	2.01	3.56
Years of schooling	0.40	1.55	3.62	2.95	16.65	21.56	25.01	15.87
School attendance	0.17	0.70	1.32	1.57	9.13	10.81	9.04	14.90
Cooking fuel	0.28	2.38	4.44	5.20	22.90	36.24	37.25	46.97
Sanitation	0.08	2.18	4.05	3.62	17.19	30.61	27.64	32.49
Drinking water	0.03	1.35	1.50	1.98	10.44	21.31	13.60	19.06
Electricity	0.03	0.77	0.45	2.53	6.07	26.22	26.64	19.55
Housing	0.10	1.31	3.08	4.43	12.02	21.80	34.95	41.86
Assets	0.11	1.71	1.16	3.47	7.12	6.62	15.73	29.70

Source: [OPHI 2021]

According to the OPHI's statistics of the deprivation rates in the indicators of the MPI of the eight countries in Southeast Asia in 2021, there are differences in these countries.

In particular, when considering the deprivation rates of the three dimensions in the MPI of these Southeast Asian countries, Laos, the Philippines, Timor-Leste and Myanmar are the four countries with the highest rates of deprivation in the dimension of living conditions (49.23%, 48.67%, 47.56% and 46.57% respectively); Thailand, Vietnam and Cambodia are countries with a high percentage of shortfalls in the education indicator contributing to the MPI (45.07%, 42.62% and 39.67%); while health spending has the lowest contribution to the country's MPI (Fig. 3).

It can be seen, therefore, that compared with the seven other countries in the region, Vietnam does not have a high multidimensional poverty rate. However, the intensity of deprivation of multidimensionally poor households in Vietnam is relatively high. In addition, the years of schooling rate contributes considerably to the country's MPI.
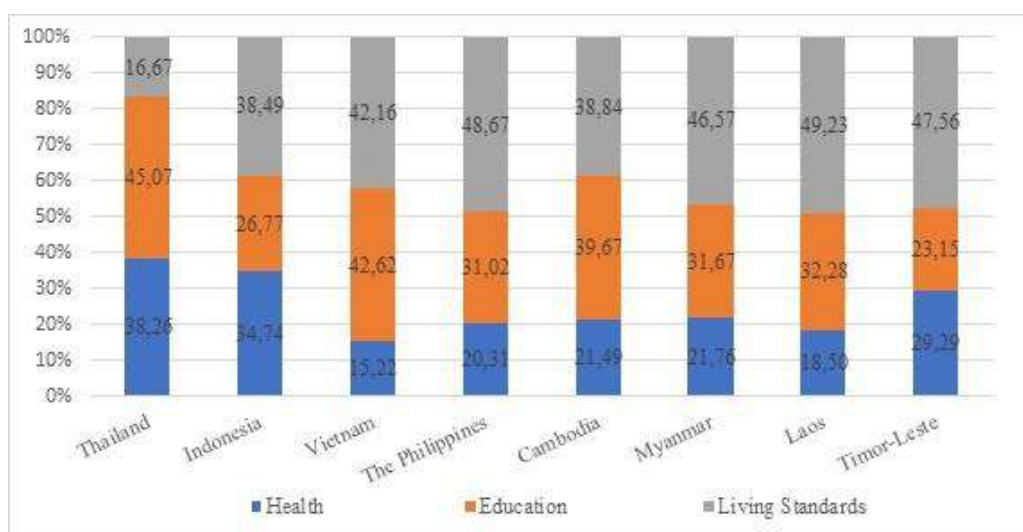

Fig. 3. Rates of deprivation in indicators of MPI of a number of countries in Southeast Asia in 2021. *Source:* [OPHI 2021]

Human development indices of a number of countries in Southeast Asia

Since the time the HDI was devised by the UNDP - in general, and for the past 10 years in particular - the human development indices of most countries in Southeast Asia have been on the rise. Among the eight countries data which the article uses to compare, Myanmar, Cambodia and Laos are the countries with the most impressive growth rates in the past 10 years (Myanmar' HDI increased by 1.3% every year; Cambodia, 1.1%; and Laos, 1.0%). The indexes of the Philippines, Timor-Leste, Thailand and Vietnam have a slower growth rate (the Philippines' HDI increased by 0.76% every year; Thailand, 0.73%; and Vietnam, 0.60%). The slow growth trend of these countries is due to their belonging to the group of high human development countries, so their breakthrough to rapid growth will be more difficult than in the medium human development group (except Timor-Leste).
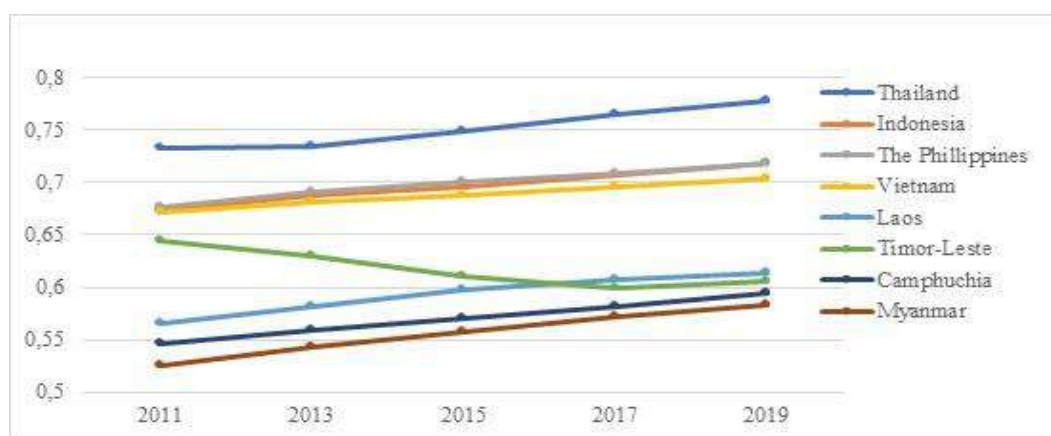
Fig. 4: Human development indices of a number of countries in Southeast Asia in the 2011–2019.
Source: [UNDP]

Over the past 10 years, Vietnam's HDI growth rate has been slower than that of the other seven countries (Fig. 4). This leads to an increasing lagging behind the group of countries with a higher HDI index than Vietnam, namely Thailand, Indonesia and the Philippines (for example, when compared with Indonesia, the gap in 2011 was only 0.002 points, but by 2019 it was 0.014). In contrast, the gap is narrower when compared with such countries with lower HDI as Laos, Timor-Leste, Cambodia and Myanmar (for example, when compared with Myanmar, the gap has decreased from 0.145 points to 0.121 points).

The component indicators of the HDI of Vietnam compared with the seven countries in Southeast Asia in 2020 (Table 3) show that Vietnam is not far behind the seven other countries in terms of life expectancy, expected years of schooling and the mean years of schooling. In the region, Vietnam even takes the lead in terms of life expectancy. Compared to Thailand, which has the best HDI among the seven Southeast Asian countries, Vietnam has a higher mean of years of schooling (8.3 vs. 7.9). This can be seen as encouraging the achievements that Vietnam has made in recent years in improving mean years of schooling for its people.

Table 3. **Human development indices and sub-indices of a number of countries in Southeast Asia in 2019**

Country	HDI	Life expectancy at birth (years)	Expected years of schooling (years)	Mean years of schooling (years)	GNI per capita (PPP $)	HDI by countries
Thailand	0.777	77.2	15.0	7.9	17,781	79/189
Indonesia	0.718	71.7	13.6	8.2	11,459	107/189
The Philippines	0.718	71.2	13.1	9.4	9,778	107/189
Vietnam	0.704	75.4	12.7	8.3	7,433	117/189
Timor-Leste	0.606	69.5	12.6	4.8	4,440	141/189
Laos	0.613	67.9	11.0	5.3	7,413	137/189
Cambodia	0.594	69.8	11.5	5.0	4,246	144/189
Myanmar	0.583	67.1	10.7	5.0	4,961	147/189

Source:[UNDP 2021: 344–345]

However, Vietnam's Gross National Income (GNI) per capita remains low and there is a large gap between it and other countries in the region. Vietnam's GNI per capita is 2.4 times lower than that of Thailand, 1.6 times lower than that of Indonesia; and 1.3 times lower than that of the Philippines. Vietnam's GDP per capita in 2015 reached USD 7,433, while that of Thailand was USD 17,781; Indonesia USD 11,459; and the Philippines USD 9,778. Vietnam's GNI per capita is only higher than Myanmar, Timor-Leste and Cambodia (USD 4,961, USD 4,440 and USD 4,246 respectively). Low GNI per capita is one of the reasons that led to the fact that Vietnam's HDI is always lower than that of other Southeast Asian countries, even though Vietnam has higher results in the remaining indicators. In the HDI rankings in 2020 - although Vietnam was lagging behind Thailand, Indonesia and the Philippines, but ahead of Timor-Leste, Laos, Cambodia and Myanmar - in terms of rankings, Vietnam is 38 levels behind Thailand[4] and 30 levels ahead of Myanmar (the country with the lowest HDI among the eight countries). In the future, it is believed that to improve Vietnam's HDI and its HDI rankings, jointly with maintaining the achievements in the indicators of the dimensions of health and education, Vietnam needs to concentrate on indicators of the living conditions dimension.

Vietnam's other indicators have reached relatively high levels; therefore, growth rates in these indicators may slow down over time. Meanwhile, the figures of a number of the countries in the region that currently have low HDI rankings may increase more quickly, as they have focused on implementing health care and education policies to reduce child mortality and increase average life expectancy as well as mean years of schooling. Laos, Cambodia and Myanmar will tend to increase rapidly in the coming years, because - for the last five years - these three countries have seen the fastest improvement in the human development indices in the region. In the period 2015-2019, on average, Laos' HDI increased by 2.06% every year; Cambodia, 2.13%; and Myanmar, 2.61%. Also in that period, Vietnam's HDI average annual growth rate was but 1.21%; Thailand 1.47%; the Philippines 1.52%; Indonesia 1.63%. Meanwhile, that index of Timor-Leste decreased by an average rate of 1.51% per year.

Multidimensional poverty index and human development index

Studies have shown that income poverty or multidimensional poverty affects people's ability to develop [UNDP 2010; Madan 2012; Nguyen Dinh Tuan 2014; Dang Nguyen Anh 2015; UNDP and VASS 2015; Wang, Feng, Xia et al. 2016]. In Madan's research on human development and poverty in India, by using data on MPI and HDI of states, the author showed a statistically close relationship between MPI and HDI. Accordingly, high levels of multidimensional poverty will lead to low levels of human development and vice versa [Madan 2012]. Poverty limits people's access to education, jobs, healthcare services etc. Moreover, it directly affects human development. This can be seen via the analysis of multidimensional poverty and human development data in some countries in Southeast Asia.

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[4] According to the 2020 UNDP HDI ranking, in Southeast Asia, Thailand was second only to Singapore, which was listed in the category of countries with very high HDI (0.938 points ranked 11th out of 189 countries).
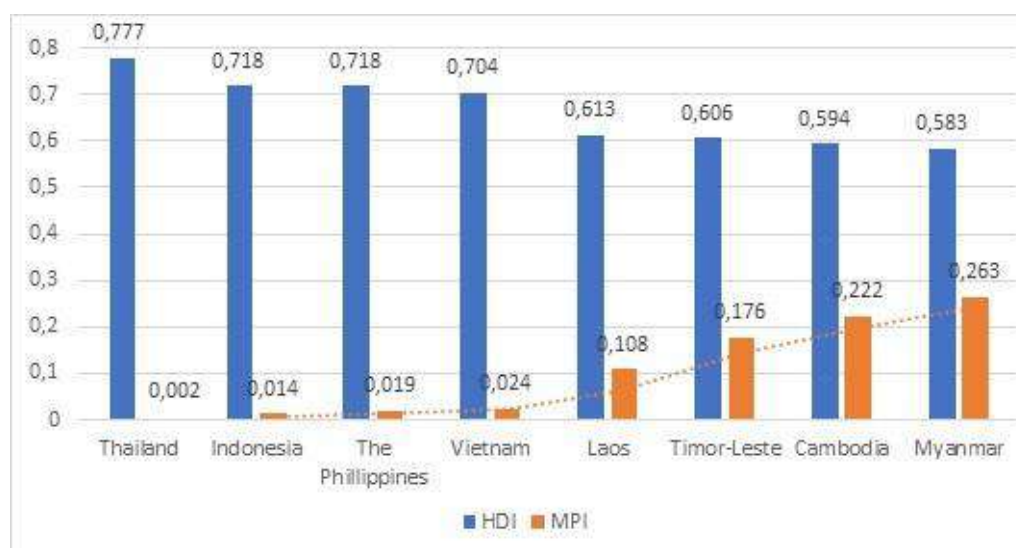
Fig. 5. MPI and HDI of a number of countries in Southeast Asia in 2020.
Source: [UNDP 2020: 352-353; OPHI and UNDP 2021: 29–30]

MPI and HDI data of some countries in Southeast Asia in Fig. 5 show that countries with high MPI have low HDI and vice versa. This means that when a country has a high multidimensional poverty rate, many households still face difficulties in accessing social services and improving living conditions. The limitation in access to social services and development resources and improving living conditions affects the improvement of human abilities (both mental and physical) and, moreover, it affects human development. Among the eight Southeast Asian countries analyzed in the article, Thailand has the lowest MPI and the highest HDI, followed by Indonesia, the Philippines and Vietnam, which are among the countries with low MPI and high HDI. Laos, Timor-Leste, Cambodia and Myanmar are in the group of high MPI and low HDI.

Conclusion

From the analysis of MPI and HDI data of a number of countries in Southeast Asia, significant differences among countries can be seen. Out of the eight Southeast Asian countries, Thailand has the best rankings in both MPI and HDI. This shows that Thailand has paid attention to human development and poverty reduction not only in the income dimension but also in the non-income one. Vietnam is also in the group of the countries with pretty good rankings on these two indicators, but compared with Thailand, Vietnam still has a long way to go to make up the shortfall. Also, the results show that usually countries with high MPI have low HDI and vice versa.

In general, and in recent years, the multidimensional poverty rates of countries in the region have tended to decrease while their HDI indices have tended to increase. However, there remain differences in the trends among countries. Indonesia, Vietnam, Thailand and the Philippines are the countries where the multidimensional poverty rates have tended to decrease rapidly. Laos, Cambodia and Myanmar are the countries with the highest HDI growth rates among the eight Southeast Asian countries in the past five years.

In recent years, with the good implementation of policies on health care, education and poverty reduction, Vietnam has had positive achievements in its poverty reduction and is in the group of the countries with high HDI. However, to keep this achievement and to add to the implementation of the above policies, Vietnam should improve its per capita income, as it is relatively low compared with the countries in the region.

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