

# Policy Implications for Human Development of Vietnam from the History of HDI

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**Abstract:** Since the renovation was introduced in 1986 (known as Doi Moi), Vietnam has achieved many great economic successes. The spiritual and material life of the majority of the Vietnamese population has improved over time. Human development process both receives benefits from and affects back upon Doi Moi because of its interactive correlation. The Human Development Index (HDI) measures the achievement of countries in human development, however, this index varies greatly due to economic development. The relative increase of the HDI index of a country compared to others is also the requirement for the progress of a modern society because the components of HDI cover three main dimensions of life. Therefore, the calculation of the component indices of HDI has changed over time, and this affects the ranking of the HDI for various countries, including Vietnam. This research paper shows that Vietnam's income and education indices are affected negatively by these changes, especially the latter. Human development in Vietnam shows several signs of lagging behind other countries, at least behind those in the Southeast Asian region and China. Therefore, in order to reduce the gap between GNI (Gross National Income) and GDP (Gross Domestic Product) and to increase mean years and expected years of schooling as well, Vietnam needs to focus on the policies of education which can decrease dropout rate and balance educational levels. In addition, a policy for the economy restructuring needs to be adopted to raise the effectiveness of in - depth growth factors.

*Keywords:* Education, economic growth, human development, Human Development Index (HDI).

## 1. Theoretical framework

### 1.1. Summary of human development issues

It was not until the term HDI was first used by United Nations Development Program (UNDP) in its Human Development Report (HDR) that human development issues had been analyzed in Vietnam. Since then, human development has caught the attention of the general public and academic researchers

specifically in different aspects such as labor, human capital, social capital, etc.

Human development covers a large scope of research. Thereby, the component indices of HDI themselves do not express the various aspects of human development. These indices, even the core ones, only reveal one or some aspects of human development, and that incompletely.

The evolution of terms and theories are an indispensable part in human development

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process. The emergence of the phrase *well-being of society*, which was mentioned quite early with the introduction of economics since the 18<sup>th</sup> century [1], was a turning point from which the world consciously steered its attention to the development of human beings. Actually, the *well-being of society* was a sum of individual utilities [1]. Also, utility could be summed across individuals to determine *social welfare*, which is another term of well - being of society. Over time, based on an economics approach, many theories of economics have studied various human-related issues. The theory of neo-classical economics shows that technical progress determines economic growth in the long term by making labor more effective. More recently, these results and the conclusions of exogenous economics theory have continued to be confirmed in endogenous economics theory (Lucas, Rebelo, Romer, etc.) [2]. Furthermore, the endogenous economics school supposes that human capital is a determinant of the difference in economic growth between developed and developing countries.

A lot of attempts have been made to structure HDI. Early in the 1990s, in the UNDP Human Development Report, Amartya Sen [3], an Indian economist, made many efforts to build a comprehensive index to reflect aspects related to human development progress. This was abbreviated as HDI. Actually, HDI could be considered as one of the most important and most accepted indices expressing human development. Since the 1990s, which was a milestone in the introduction of HDI, the UNDP has published 22 HDI reports with 22 topics covering many aspects of human development including finance, gender, participation, technology, etc. Human beings have become a core issue of the studies [4].

Then, most recently, in 2013, the topic of the HDR was about “The Rise of the South: Human Progress in a Diverse World”. Human development in the HDRs is reflected not only by the HDI but also by relevant indices such as GDI (Gender Development Index), GEM (Gender Empowerment Measure), GII (Gender Inequality Index), etc., which, besides HDI, play the role of supporting HDI because they provide a wide perspective of human development [4].

### 1.2. Historic summary of HDI

The HDI is a composite index summary which was created at first to incorporate statistical measures of life expectancy, literacy, educational attainment and GDP per capita. The HDI is calculated by the United Nations (UN) under the UNDP. It measures a country's average achievements in three basic aspects of human development: health, knowledge, and a decent standard of living. Over time, the measurement of the three basic aspects of HDI has changed, including calculations and component indices. These changes are necessary because they are closely related to the continuously growing human socio-economic development. In the early years of HDI, component indices were quite simple and rigid. The educational index included adult literacy only, and the average poverty line for nine OECD countries was the ceiling limit in calculating the income index. Over time, improvements for HDI were created, especially in the education component. These improvements were in accordance with the increasingly high requirements for education - a vital factor supporting other aspects towards a knowledge economy. The entire changes of the history of the HDI are summarized in Table 1.

Table 1: Summary of changes of HDI calculation

Year	Human Development Index			
	Knowledge ( $I_E$ )	Health ( $I_A$ )	Decent standard of living ( $I_W$ )	General calculation
1990	Adult literacy only	Life expectancy at birth	$\text{Log}_{10}$ (PPP GDP per capita) with the average poverty line for nine OECD countries as a maximum	Component index = (maximum – actual)/(maximum – minimum); calculated for current year; HDI = 1 – average of component indices
1991	Adult literacy and mean years of school enrollment		Atkinson formula: Income index = $Y^* + 2(\text{GDP}_i - Y^*)^{1/2}$ ... threshold $Y^*$ is the average poverty line for nine OECD as maximum	
1994	Maximum/minimum are 100/0 respectively	Maximum/minimum are 85/25 respectively	Maximum/minimum are 40000\$ and 200\$ respectively	Component index = (actual – minimum)/(maximum – minimum); HDI = average of component indices
1995	Adult literacy and combined gross school enrollment		Minimum income changed to 100\$	
1999			Income index = natural (PPP GDP/capita)	
2010	Mean years of schooling and expected years of schooling; adjusted according to combined educational index		PPP GDP/capita changed to PPP GNI/capita	- Minimum ( $I_A, I_E$ ) are 20 and 0 respectively, maximum of component indices changed vary the best value of a country for current year - The HDI is the geometric mean of the three dimension indices

Source: World HDRs from 1990 to 2013\* Blanks in the above table imply that component indices are the same as the previous ones or are included in the column of general calculation.

### 1.3. Literature review of research on HDI in Vietnam

The national research on HDI in Vietnam has focused on calculating the absolute value of the HDI of three main indices including income, education and health. The changes in the history of the HDI were ignored in most of these studies in Vietnam heretofore. Therefore, the significance of the changes in calculating and the number of component indices of the HDI was not mentioned or analyzed deeply.

The first research that should be mentioned here is the Vietnam Development Report. The Vietnam Development Report, an annual report, is hosted by the World Bank and is released in time for the Consultative Group Meeting of Donors annually. As a multilateral report, it provides the donor community with opportunities to identify and communicate with the central challenges for Vietnam. In spite of having the advantages of a broad analyzing framework, with many of the different socio-

economic aspects in Vietnam related to human development, these reports did not mention the changes in the HDI thoroughly or analyze the meaning of the changes [5].

Vo et al. (2006) focused on identifying the changes and the main tendency of human development in the period 1999-2004. This research showed that human development and the relevant issues improved gradually in this period. Furthermore, the research also looked at the aspect of human development at a provincial scale. It, however, contained some limitations such as small sample statistics data. This research was completed entirely in the fourth change of the HDI calculation. Therefore, the research results could be affected when the calculation of the HDI changed over time [6].

In another equivalent effort, Dang (2006) mainly emphasized the factor of the educational index contribution to the HDI. This paper showed that education became the most important factor in improving the ranking of Vietnam's HDI because of significant effects on other component indices, including income and health. Similar to other relevant research, Dang's research was completed in a stable period of HDI [7]. This research, however, did not consider the change of the HDI calculation as an important factor when it only covered the data in the period 1990-2005 and did not consider the changes of the HDI calculation as an important thing that can affect the result of the study.

Apart from the national research, HDI studies were also conducted at regional and provincial levels. Many provinces and regions in Vietnam studied the HDI related issues according to provincial statistics data. Although they are meaningful references, the results of these studies might not be exact or persuasive because of limitations of the statistics, including both technique and methodology.

The previous studies of human development in Vietnam did not mention the change of the HDI calculation as an important factor affecting Vietnam's HDI ranking. These studies focused on analyzing the data of Vietnam's human development coupled with socio - economic context. To a large extent, this shortcoming can make it difficult to orient the development of the human being, especially in the case of Vietnam.

#### *1.4. Research methodology*

This paper uses the review methodology to analyze the HDI data following the human development issue. This method is based on the process of reviewing the relevant documents which relate to history of HDI as well as external and internal human - related studies. More specifically, through updating the secondary data from the HDRs, following the history of the HDI and comparing the data among the selected countries (Vietnam compared to Southeast Asia countries and China), the research paper emphasized the disadvantages of human development in Vietnam, especially after Doi Moi.

## **2. Results and discussion**

The number of nations analyzed in the UNDP's human development reports was not fixed. It changed over the years. In the first report, there were only 130 nations analyzed but now, in the latest report, this number has increased to 186 nations.

According to 22 HDRs conducted in the period 1990-2013<sup>1</sup>, there was a dynamic relationship between the ranking of Vietnam's HDI and the number of the total sampled nations. When the number of nations changed,

<sup>1</sup> Human development report is annually published, except for 2007 and 2012.

the rank of Vietnam's HDI changed correspondingly. Specifically, the highest rank of the HDI which Vietnam achieved was 75 out of the total 130 nations. Then, immediately, this rank went down after the first year and changed in parallel with the changes of the total number of nations from then on.

Table 2: The changes of HDI value about rank of selected countries in the first change of calculation<sup>2</sup>

	1990	1991	Change
Vietnam	75	99	24
Thailand	53	66	13
Singapore	35	37	2
Laos	85	128	43
Cambodia	91	140	49
Myanmar	81	106	25
The Philippines	66	84	18
Malaysia	46	52	6
Indonesia	77	98	21
China	65	82	17

Source: World HDRs 1990 and 1991, UNDP.

The first change in the HDI calculation led to the different fluctuations among selected countries in Table 2. The biggest changes in the ranking of the HDI respectively belong to Cambodia, Laos, Myanmar and Vietnam. In fact, these four countries are the least developed countries in Southeast Asia. In comparison with the HDR in 1990, the HDR in 1991 supplemented the mean years of school enrolment in the educational index and replaced the logarithm method with the Atkinson method<sup>3</sup> in the income index, in which the mean years of school enrolment had a more significant impact on Vietnam and other countries' HDIs than the Atkinson method did. The Atkinson specification of income in the HDI depresses the relative affluence of wealthy nations so that the gap between the rich and poor countries seems much narrower than it

actually is [8]. This means that the Atkinson specification results in an artificial increase in the income index. So, the poor countries, including Vietnam, will benefit from the HDI ranking if the Atkinson method is applied.

Adult literacy is a simple index in education. Literacy is the ability to understand, read and write a short simple statement on everyday life (HDR 1991). In the case of Vietnam, the high adult literacy rate is thanks to results before the Doi Moi and other historic factors [9]. To a large extent, Vietnamese education was affected largely by Confucian philosophy and nationally broad based educational movements during long periods of war. Therefore, the literacy rate in adults was quite high in comparison with the level of economic development. Unfortunately, this good result does not arise from improvements or special care for education, based on prevailing policy during the period before Doi Moi. The adult literacy rate is shown in Figure 2.

In fact, in Vietnam, a person could be literate by many different ways of formal and informal education. Mean years of school enrolment are considered as one of the effective ways to improve the human capital. When mean years of school enrolment increase, they can enable the learners to get more achievements in the future by enriching knowledge and skills. So, mean years of school enrolment becomes a necessary supplement for the adult literacy rate and expresses the capability of learners more exactly in the educational index. Despite the high adult literacy rate in Vietnam however, the mean years of schooling enrolment is low and ranked 6 out of the total of 10 countries (the rate of adult literacy in Vietnam is ranked 3rd in the total of 10 countries). As a result, the educational index value for Vietnam is low. Mean years of school enrolment are shown in Figure 3.

<sup>2</sup> The change in the HDI ranking of selected countries in the initial twelve - month period of the HDI assessment.

<sup>3</sup> Human Development Report 1991, UNDP.

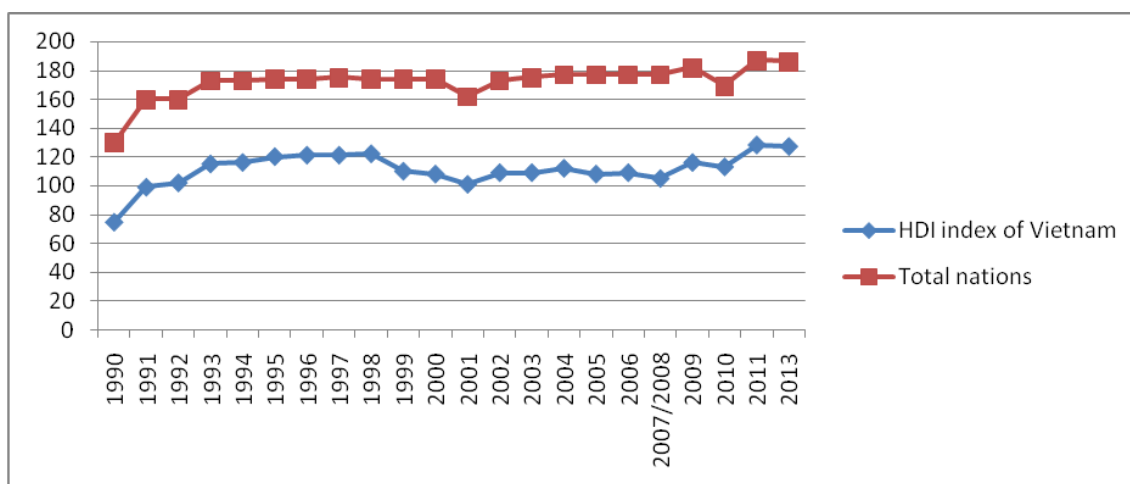


Figure 1: The ranking of Vietnam HDI in the period 1990-2013.

Source: World HDRs from 1990 to 2013.

Note: HDI in 1990 is adjusted to be in accordance with other years.

From Table 3, the number of nations in the HDR increased from 160 (1991) to 173 (1994), an increase of 13 nations. Vietnam is one of 3 countries which had a decrease in rank of more than 13. Especially, the HDI rank of Thailand increased from 66 in 1991 to 54 in 1994. After the fluctuations of the HDI value in 1991 (the first calculation change), while many of the countries above, quickly improved their ranks but with the exception of Vietnam, Laos, Cambodia and Myanmar. This simply arose from the slow improvements in income and education of these countries.

The next change in the HDI calculation was focused on education when mean years of school enrolment was replaced by the combined gross enrolment ratio, which was applied in the period 1995-1999. Likewise, this change originated from the difficulty in collecting data of the countries mentioned above [8]. It is not analyzed in this paper.

The fifth change has been the last change of HDI until now. After ten years from 1999,

the HDI has seen significant changes related to educational, income indices and calculation method. Specifically, adult literacy and combined gross school enrollment in the educational index were replaced by mean years of schooling and expected years of schooling. In addition PPP GDP/capita changed to PPP GNI/capita for income index; simple arithmetic average was replaced by geometric mean of the three dimension indices. This can be considered as the biggest change in the HDI after many years.

Besides the change related to calculation and replacement for component indices, the number of nations listed in the HDR in 2010 also decreased. Compared to HDR 2009, in HDR 2010, except for Thailand and Singapore, the other countries listed in Table 4 improved their rank when the HDI changed. Improvement in Vietnam's HDI, however, was quite small in comparison with Cambodia, Laos, Myanmar, the Philippines and Malaysia. This result could be explained by the following reasons.

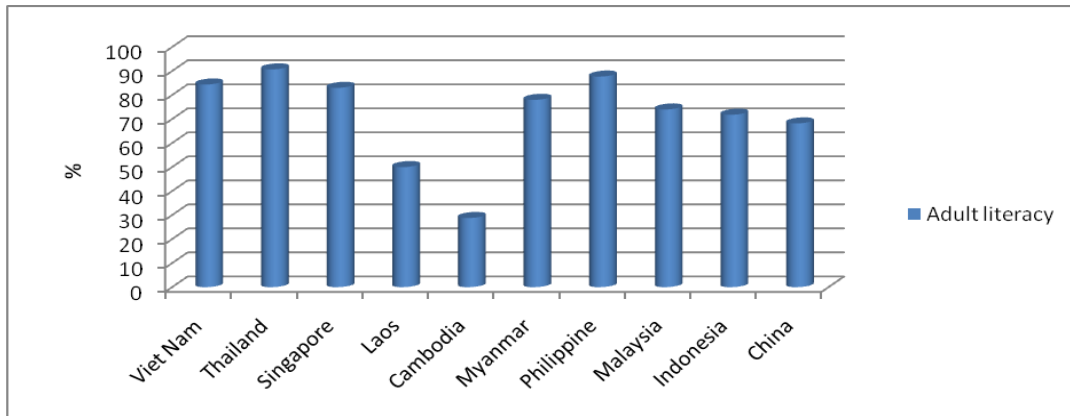


Figure 2: Adult literacy rate of selected countries in HDR 1991.  
Source: HDR 1991, UNDP

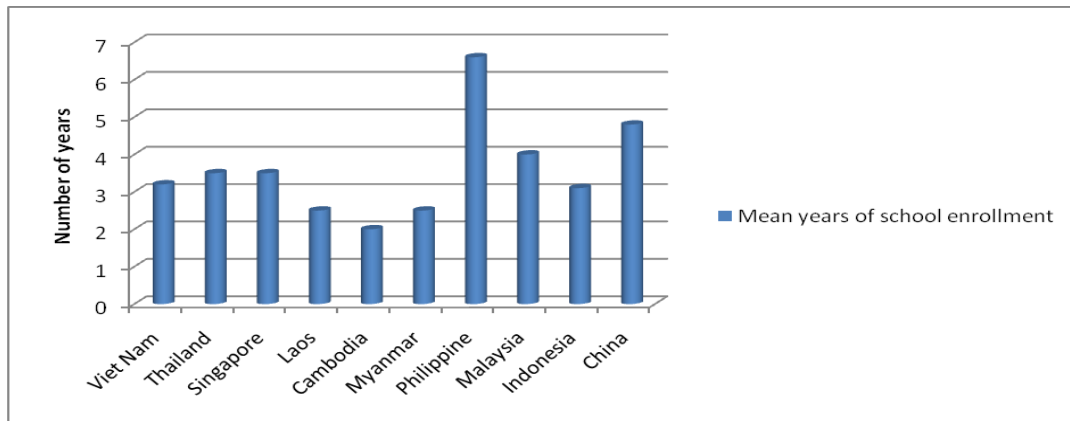


Figure 3: Mean years of school enrolment of selected countries in HDR 1991.  
Source: World HDR 1991, UNDP

Table 3: HDI fluctuations in the second change of calculation in selected countries

	1991	1994	Change in rank
Vietnam	99	116	17
Thailand	66	54	-12
Singapore	37	43	6
Laos	128	133	5
Cambodia	140	147	7
Myanmar	106	130	24
Philippines	84	99	15
Malaysia	52	57	5
Indonesia	98	105	7
China	82	94	12
Number of nations	160	173	13

Source: World HDR 1991 and 1994

Table 4: Change in HDI rank of the selected countries

	2009	2010	2011	2013
Vietnam	116	113	128	127
Thailand	87	92	103	103
Singapore	23	27	26	18
Laos	133	122	138	138
Cambodia	137	124	139	138
Myanmar	138	132	149	149
Philippines	105	97	112	114
Malaysia	66	57	61	64
Indonesia	111	108	124	121
China	92	89	101	101
Number of nations	182	169	187	186

Source: HDR 2009-2013

Table 5: GDP (PPP current international US\$) in comparison with GNI (PPP current international US\$)  
(Unit: times)

	1990-1993	1994-1997	1998-2001	2002-2005	2006-2009	2010-2012	Average of entire process
Vietnam	1.16	1.12	1.1	1.13	1.13	1.06	1.12
Thailand	1.01	1.02	1.03	1.05	1.04	1.04	1.03
Singapore	1.01	0.995	1	1.06	1.05	1.01	1.02
Laos	1	1.01	1.03	1.04	1.05	1.07	1.03
Cambodia	-	-	1.03	1.05	1.05	1.06	1.05
Philippines	1.01	0.97	0.97	1.002	1.01	1	0.99
Malaysia	1.05	1.05	1.07	1.07	1.03	1.03	1.05
Indonesia	1.095	1.03	1.09	1.07	1.04	1.03	1.06
China	1	1.01	1.02	1.01	1	1	1.01

Source: Calculated from World Bank's data, data.worldbank.org/indicators

Note: Dashes (-) in Cambodia's box mean that these results are not calculated

Firstly, PPP GDP/capita replaced by PPP GNI/capita means that per capita income represents potential living standard and the wealth of nations more and more closely. GDP even includes the share of income which belongs to foreigners living in and working for the host countries while GNI only includes the share of income which national resources including capital, labor and other own factors generate. This big change of the HDI affects the value of this index for developing countries

where the factor income gap with foreigners is often negative.

Vietnam is one of the countries which has a gap between GDP and GNI, and GDP has an absolute value that is greater than that of GNI. Of course, Vietnam is not the only country that falls in this situation.

As shown in Table 5, the differences between GDP and GNI of nine selected countries are almost positive. Ironically, this difference in the case of Vietnam is the biggest



compared to eight other countries. The average value for the period 1990-2012 is 1.12 times. This value is much higher than that of other countries, especially the Philippines, China and Singapore. Therefore, according to the *ceteris paribus* assumption, the rank of Vietnam HDI would be affected negatively. This result is quite close to the current situation in Vietnam when the economic growth model relies on labor and capital - intensive sectors and off-shoring activities, and low and slow-growing labor productivity [10].

*Secondly*, once again the educational index has been adjusted. This is shown in Table 6.

As mentioned in the HDRs, expected years of schooling are defined as “number of years of schooling that a child of schooling entrance age can expect to receive if prevailing patterns of age-specific enrolment rates are to stay the same throughout the child’s life” [4]. While mean years of schooling are defined as “average number of years of education received by people aged 25 and older in their lifetime based on education attainment levels of the population converted into years of schooling based on theoretical durations of each level of education attended” [4]. Obviously, compared to previous ones, this change is meaningful. The adult literacy rate is so simple to fully express the learner’s knowledge capability. The

learners not only need to understand the meaning of words but also learn more about complicated knowledge and skills to meet the increasing demands of the modern society. In addition, that is not significant if the dropout rate is high.

From Table 6, the mean years of schooling in the case of Vietnam are very low. This number is ranked 8 out of a total of 10 countries in three reports of the UNDP. This result contrasts with the traditional viewpoint of Vietnamese people who appreciate education. Mean years of schooling in Vietnam are even less than that of Cambodia (5.5 compared to 5.8).

In Table 7 above, the mean years of schooling in Vietnam slightly increases in the entire period 1980-2012, but for the last three years it shows little progress. Furthermore, the gap between the value of mean years of schooling and expected years of schooling has increased over time. This is not a good signal if formal education (years of schooling) is considered as a vital factor for human development and sustainable economic development. This result implies that the educational demand of Vietnamese people is not being met fully for many different reasons, in which the dropout rate becomes one of them.

Table 6: Value of component indices in the educational index of Vietnam and selected countries

	2010		2011		2013	
	Mean years of schooling	Expected years of schooling	Mean years of schooling	Expected years of schooling	Mean years of schooling	Expected years of schooling
Vietnam	5.5	10.4	5.5	10.4	5.5	11.9
Thailand	6.6	13.5	6.6	12.3	6.6	12.3
Singapore	8.8	14.4	8.8	14.4	10.1	14.4
Laos	4.6	9.2	4.6	9.2	4.6	10.1
Cambodia	5.8	9.8	5.8	9.8	5.8	10.5
Myanmar	4	9.2	4	9.2	3.9	9.4
Philippines	8.7	11.5	8.9	11.9	8.9	11.7
Malaysia	9.5	12.5	9.5	12.6	9.5	12.6
Indonesia	5.7	12.7	5.8	13.2	5.8	12.9
China	7.5	11.4	7.5	11.6	7.5	11.7

Source: HDRs 2010-2013, UNDP

Table 7: Mean years and expected years of schooling in Vietnam

	1980	1990	2000	2005	2006	2007	2008	2009	2010	2011	2012
Mean years of schooling	4.3	4	4.5	4.9	5.1	5.2	5.3	5.4	5.5	5.5	5.5
Expected years of schooling	8.7	7.9	10.4	11.1	11.2	11.4	11.5	11.6	11.9	11.9	11.9

*Source:* Barro and Lee (2011) estimates based on UNESCO Institute for Statistics data on education attainment (2012) and Barro and Lee (2010) methodology

### 3. Conclusions and policy implications

#### 3.1. Conclusions

Human development, a large and long lasting issue, requires continuous improvement in order to meet the demand of people better and better, and is based on three main aspects including: health, knowledge, and decent living standards. Although it is not a comprehensive and unique measure, the HDI also has become a good referential index for measuring the achievements in the development process. The main results of this paper include:

*Firstly*, parallel to requirements for the development process, education in Vietnam has not delivered a good signal. Specifically, the educational index of Vietnam has been sensitively affected by changes in the calculation and component indices of educational index. Especially, the field of education in Vietnam shows signs of lagging behind other countries in the Southeast Asian region and China.

*Secondly*, another disadvantage of Vietnam in the HDR's rank is the gap between GDP and GNI. Vietnam's GDP is significantly larger than GNI. This is a problem in the case of Vietnam. More specifically, according to the old calculation of the HDI, Vietnam benefits from that because of the rapid economic growth over a long period. Adversely, with the new calculation, Vietnam faces a comparative challenge when GNI does not increase

synchronously with GDP, as expected in comparison with other countries.

*Thirdly*, this paper also shows that the educational system and circumstance of Vietnam, so far, does not enable Vietnamese people to study at school as much as they want. This is shown when comparing expected years of schooling and mean years of schooling. From the traditional viewpoint, Vietnam can be considered as one of the countries with a mass of people studying and showing the need for studying at all educational levels. In addition, the Vietnamese economy witnessed a long-lasting rapid economic growth process over a long period after Doi Moi (1986). Unfortunately, no clear evidence was found to prove that the demands for study of the majority of Vietnamese people would be better met.

#### 3.2. Policy implications

Maybe, Vietnam has gained various achievements in human development. But those achievements are not adequate with the potential and expectation of a country with a low starting point like Vietnam. In comparison with other countries, Vietnam has shown little improvements anyway. While Vietnam has only improved some aspects of human development compared to its previous starting point, other countries (at least in the selected countries above) have made more progress. Furthermore, human development in Vietnam reflected through HDI is affected more

negatively than in other countries. As mentioned above, human development is not a fixed process. It requires a huge policy effort from the countries to put people in the centre of development.

Based on the main results listed above, this research paper tries to give some policy implications (as follows) to aim at orienting the human development process in Vietnam while the measurement of the human development index becomes more and more stable.

*Firstly*, in order to improve the rank of the HDI, in the future Vietnam needs to focus on an educational policy oriented towards increasing the years of schooling of students at all educational levels. This does not mean that Vietnam needs to increase the mean years of schooling by increasing the number of students at the universities. Instead, policies need to be adopted to decrease the dropout rate and balance educational levels.

*Secondly*, for macroeconomic aspects, Vietnam needs to quickly change its growth model from a model based on growth factors in width, including capital and labor to a model based on growth factor in depth including total factor productivity. This can help Vietnam quickly improve income reliant on productivity

and also decrease the share of off-shoring activities. Therefore, the gap between GDP and GNI can be lessened.

## References

- [1] Bentham, Jeremy, "Introduction to the Principles of Morals", Athlone, London, 1970.
- [2] Loi, Ngo Thang et al, "Development Economics", National Economics University Publishing House, Hanoi, 2012.
- [3] World HDR, Concept and Measurement of Human Development, New York, 1990.
- [4] World HDRs, Human Development Report, New York, 1990-2013.
- [5] United Nations Development Programme, Vietnam Human Development Reports, Hanoi, 2001-2013.
- [6] Thanh, Vo Tri et al, "Vietnam Human Development 1999-2004: Changes and Main Tendency", Political Publishing House, Hanoi, 2006.
- [7] Dang, "Contribution of Education to Vietnam's HDI in the Process of Socio-economic Renovation from 1990-2005", VNU, Hanoi, 2006.
- [8] Stanton E.A, "The Human Development Index: A History", Journal of Political Economy Research Institute, 2007.
- [9] NCSSH, Doi Moi and Human Development in Vietnam, Hanoi, 2001.
- [10] CIEM, Renovation of Growth Model, Hanoi, 2012.