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# DEEPER INSIGHT INTO THE PROGRESS IN HUMAN DEVELOPMENT IN SUB-SAHARAN AFRICA

**Summary:** Human development is defined as the development enabling an enlargement of people's choices to live valuable life. Human Development Index measures progress in this area. It evaluates achievements in three dimensions: long and healthy life, knowledge and decent standard of living. Sub-Saharan Africa is the low-income region with the majority of its population living in extreme poverty. Preconditions for the substantial progress in human development are less favourable there than in other developing regions. Although some achievements have been reached since the beginning of the 21st century, they are less unambiguous if they are compared with other regions. The aim of this paper is to identify and assess the progress in human development in Sub-Saharan Africa in comparison with selected developing regions within the 2000-2015 period. Conclusions of the paper are based on a review of relevant scientific and statistical sources, as well as on own statistical analysis.

**Keywords:** developing regions, human development, HDI, GDP, Sub-Saharan Africa.

**JEL Classification:** I30, O15.

## Introduction

Humans consider well-being and high quality of life as the final objectives of their lives regardless their origin or place where they live. However, economists have discussed for centuries how to measure progress or improvements in the quality of human life because of its partial subjective nature, and how to sum up individual improvements into society's ones. Is it possible to measure progress in the quality of life of a society with the growth in gross domestic product per capita (GDP p.c.)? No. Such measure is too narrow. It focuses only on economic wealth and does not take into account individuals and their well-being.

Therefore, economists introduced some alternative measures. Human Development Index (HDI), introduced by the United Nations Development Programme in 1990, became the most popular one. Based on human development concept, it focuses on the progress in key dimensions that are necessary for people's possibility to live the life they value.

Sub-Saharan Africa is, according to the definition of the United Nations Development Programme (UNDP), a developing region covering 46 countries. Great differences in human development can be identified if these countries are compared with each other, and if the average achievements of this region are compared with other developing regions. Because of many socio-economic, political and structural problems, we assume that the progress in human development in Sub-Saharan Africa will be slow and this region will lag behind other developing regions in human development.

The aim of our paper is to identify and assess the progress in human development in Sub-Saharan Africa in comparison with selected developing regions within the 2000-2015 period. We choose three developing regions to be compared with Sub-Saharan Africa (SSA), namely East Asia and Pacific (EAP), South Asia (SA) and Latin America and Caribbean (LAC)<sup>1</sup>.

## **1. Theoretical background for the analysis**

Traditionally, economic theory as well as practical economic policies understood country's development as the growth of its aggregate output, measured by the year over year changes in gross domestic (national) product. Therefore, in the 1950s and 1960s, many national and international development strategies formulated their primary goal as the acceleration of the economic growth. In the 1970s, economists started to emphasis wider context of development.

Breakthrough event in the understanding of a development is connected with the introduction of the concept of human development that was presented to the public in the first Human Development Report, issued by UNDP in 1990. This concept, based on works of M. ul Haq and A. Sen, emphasised that development had to put people at the centre of its concerns and that the basic purpose of the development was to enlarge people's choices [ul Haq, 2003]. The same report introduced also new indicator for the measurement of the progress in human development – the Human Development Index (HDI). This index is de-

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<sup>1</sup> See their definition on the websites of UNDP, available at [www 1].

signed as the composite indicator measuring progress in three dimensions of the human well-being, namely long and healthy life, knowledge and decent standard of living.

HDI became the most popular approach measuring improvements in the quality of life worldwide. Based on objective and hard data, it enabled countries' rankings differing from those based on GDP p.c. However, several economists presented substantial critical remarks to it. For instance, see papers of Sagar and Najam [1998]; Ranis, Stewart and Samman [2005]; Alkire and Foster [2010]; Hou, Walsh and Zhang [2015]. Some economists also try to extend HDI by introducing indexes spanning more dimensions of well-being, see Chaaban, Irani and Khoury [2015]; Sharma and Sharma [2015].

The UNDP has reflected this criticism and exposed HDI to some revisions, for the last time in 2010. Since then, the United Nations Development Programme calculates HDI as the geometric mean of three dimension indexes defined in Table 1.

**Table 1.** Human Development Index used since 2010

Dimension	Long and healthy life	Knowledge		A decent standard of living
Indicator(s)	Life expectancy at birth	Expected years of schooling	Mean years of schooling	Gross national income p.c. (PPP Dollars)

Source: United Nations Development Programme [2017].

Before the last revision, HDI was calculated by UNDP as the simple arithmetic mean of three dimension indexes, defined in Table 2.

**Table 2.** Human Development Index used by 2010

Dimension	Long and healthy life	Knowledge		A decent standard of living
Indicator(s)	Life expectancy at birth	Adult literacy rate	Combined primary, secondary and tertiary gross enrolment ratio	Gross domestic product p.c. (PPP Dollars)

Source: United Nations Development Programme [2017].

HDI is traditionally defined on a scale 0 to 1, based on normalized values of dimension indicators. Value 1 signalizes maximal level of human development.

Introduction of HDI boosted economic discussion on the relation between the progress in human development and the growth in country's aggregate output expressed by GDP. Generally, the link between them is far from simple. At least because of the fact that an expansion of the aggregate output tells nothing about an expansion of the output's distribution in the society or improvement of individuals' lives. Nowadays, economic theory explains that the economic growth is one of the preconditions for the progress in human development, but it is not the sufficient one. "Growth of GDP promotes enhancement of living conditions, its biggest impact comes through the expanded ability to undertake public action to promote human development, and to share of the additional income that is enjoyed by the poor" [Anand and Sen, 2000, p. 2033].

## **2. Formulation of the research problem**

The United Nations classifies all countries into one of three broad categories: developed countries, countries in transition and developing countries. Furthermore, with respect to the geographical location, UNDP defines six developing regions – Arab States, East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, South Asia and Sub-Saharan Africa. We can identify great economic and social disparities between countries being classified as the developing ones. Generally, Sub-Saharan Africa is defined as the region with the worse living conditions because of the poverty and other social problems, economic and structural vulnerability, political instability, severe natural conditions etc. However, since 2000, economic, social and political conditions have improved partly there and some achievements in human development have been reached. Does Sub-Saharan Africa catch up in human development with other developing regions or do the gaps between them widen?

The aim of our paper is to identify and assess the progress in human development in Sub-Saharan Africa in comparison with selected developing regions within the 2000-2015 period. We choose three developing regions to be compared with Sub-Saharan Africa (SSA), namely East Asia and Pacific (EAP), South Asia (SA) and Latin America and Caribbean (LAC).

In order to meet the aim of our paper, we structure our analysis as follows:

1. We describe the most important achievements of SSA in human development. Then, we compare average regional values of HDI for SSA with the values concerning three selected regions.

2. We analyse the average regional values of the sub-indicators of HDI dimension indexes in order to identify existing disparities between SSA and selected regions. Then, we identify trends in the SSA's progress in catching-up with them. To do this, we calculate gaps between the values of the HDI sub-indicators for SSA and for selected regions<sup>2</sup>.

Due to the changes in methodology of HDI and lack of data, we have to divide analysed period into two shorter periods, namely the 2000-2007 period and the 2010-2015 period. We have to leave out years 2006, 2008 and 2009 in our analysis because the Human Development Reports and thus the average regional HDI values are not available for these years.

### **3. Solution of the research problem**

The United Nations Development Programme considers Sub-Saharan Africa (SSA) to be the developing region consisting of 46 countries, which makes it the largest developing region in the world. In long-term, Sub-Saharan Africa has been the low-income and underdeveloped region with the marginal share in the world's GDP, trade and influence on the international economic order. Its economic, political and social stability has always been fragile and uncertain, therefore various crises, civil wars, ethnic conflicts or coup d'états occur there very often and have affected its progress in human development.

Almost the whole SSA faces serious socio-economic and developmental problems. In 2013, 41% of SSA population live in extreme poverty (i.e. with less than 1,9 USD per day). Possibilities for the acceleration of improvements in living conditions are limited there because of the lack of resources and capacities. Therefore, the level of human development is traditionally low there.

#### **3.1. Progress in human development in Sub-Saharan Africa and its comparison with selected regions**

In the 1980s, Sub-Saharan Africa's HDI was 3% higher than that of South Asia. By the year 2011, situation was reversed, and SSA's HDI was 16% lower. This reverse was caused especially by the slow progress and reversals in some SSA countries. In the 1990s, further progress was affected by economic stagna-

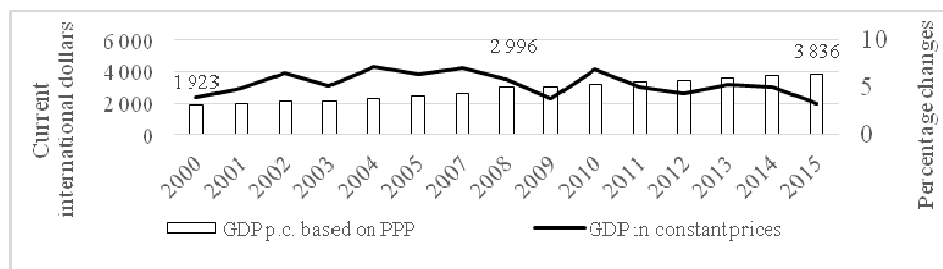
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<sup>2</sup> Because we prefer not to work with negative values of these gaps, we calculate them as the difference between EAP, LAC and SA values and those of SSA.

tion, devastating effects of HIV/AIDS on life expectancy and by numerous armed conflict [UNDP, 2012]. Overall, the social situation became more serious there and led to the higher poverty and inequality. Share of the population living in extreme poverty rose from 58% in 1981 to 64% in 1999.

Since 2000, an economic and political stability improved preconditions for human development in SSA and this region started to face rapid growth of GDP. Over the 2000-2015 period, Sub-Saharan Africa has belonged to the fastest growing regions of the world economy with the average GDP growth rate about 5,4%. Since 2010, growth rates have been declining and between years 2014 and 2015 reached only 3,36% (Figure 1). Declining growth of SSA's GDP is caused i.a. by the actual development in the world economy (moderate growth of many developed countries and China, declining prices of primary commodities, etc.), but also by the internal matters (population growth, poor governance, insufficient structural reforms, armed conflicts, etc.).

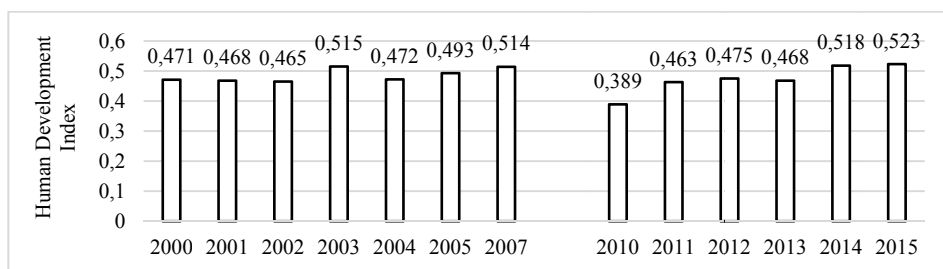
**Figure 1.** Gross domestic product in Sub-Saharan Africa



Source: Based on: International Monetary Fund [2017].

Recent impressive economic growth has brought new hopes for the progress in human development in SSA. However, progress in human development was rather moderate than impressive one, although some improvements were reached (Figure 2).

**Figure 2.** Human Development Index in Sub-Saharan Africa



Source: Based on: United Nations Development Programme [2002-2016].

In 2015, SSA was classified as the region with the low level of human development because 32 countries received this classification. The majority of SSA countries had lower level of human development than South Asia (Table 3).

**Table 3.** Details about HDI in SSA countries

HDI in SSA countries	2000	2005	New methodology since 2010	2010	2015	
Number of evaluated SSA countries*	44	44			45	46
Number of countries with**:						
• very high development	1	2			0	0
• high development	0	1			2	2
• medium development	10	9			4	12
• low development	33	32			39	32
HDI of the best SSA country	0,811	0,843			0,744	0,786
HDI of the worst SSA country	0,225	0,336			0,140	0,352
Average HDI of all developing countries	0,654	0,691			N/A	0,668
Number of SSA countries with lower HDI than the developing countries average	39	41			–	42
Average HDI of LAC (best developing region)	0,720	0,803			0,702	0,751
Average HDI of SA (2nd worst developing region)	0,530	0,611			0,516	0,621
Average HDI of SSA	0,471	0,493		0,389	0,523	
Number of SSA countries with lower HDI than SA average	31	35		37	39	

\* Data concerning Liberia are not available for the years 2000 and 2005. South Sudan became an independent state in 2011.

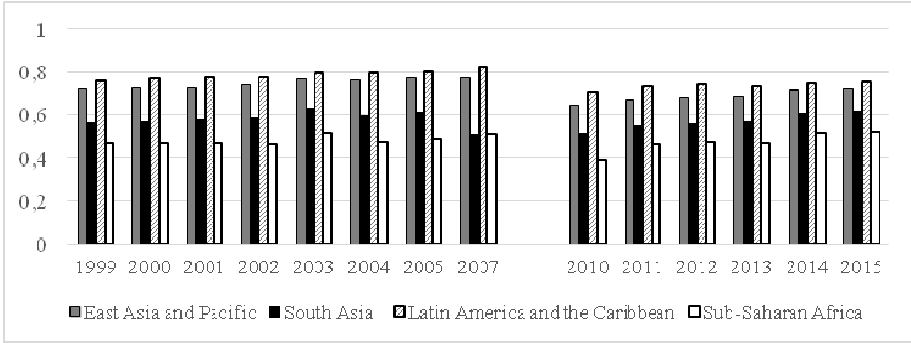
\*\* In order to ensure full comparison between selected years, we classify SSA countries with respect to the methodology applied for the countries' classification by UNDP in the Human Development Report presenting data for the year 2015. This classification is set as follows:

- countries with very high development – values of HDI higher than 0,800;
- countries with high human development – values of HDI 0,700-0,799;
- countries with medium human development – values of HDI 0,550-0,699;
- countries with low human development – values of HDI 0,550 and lower.

Source: Based on: United Nations Development Programmes [2002, 2007/8, 2010, 2016].

At the first sight, some positive progress in human development in SSA is evident. However, for the both periods, SSA achieved the lowest values of HDI from all developing regions (Figure 3).

**Figure 3.** Human Development Index in selected developing regions



Source: Based on: United Nations Development Programme [2002-2016].

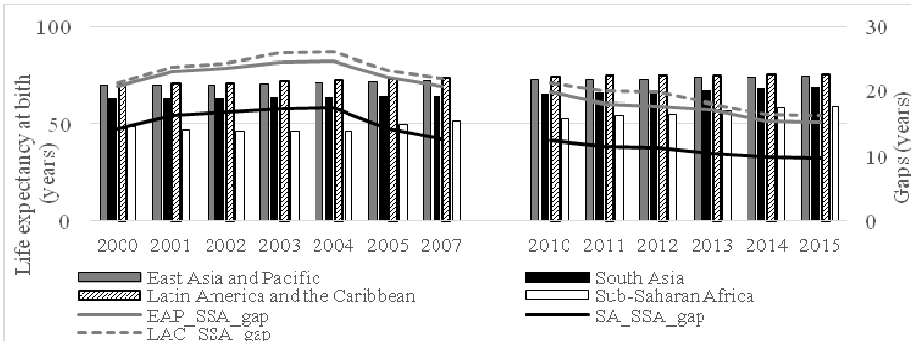
### 3.2. Achievements of Sub-Saharan Africa in the HDI dimensions in comparison with selected regions

Here we focus on deeper analysis of the progress in the defined dimensions of human development in SSA in comparison with the EAP, LAC and SA regions of the world economy.

#### *Long and healthy life*

The first dimension of HDI is defined as the *Long and healthy life*. Achievements in this dimension are evaluated by the indicator *Life expectancy at birth*<sup>3</sup>. Values of this indicator and existing gaps between values reached by EAP, LAC, SA and Sub-Saharan Africa are displayed in Figure 4.

**Figure 4.** Life expectancy at birth in selected developing regions



Source: Based on: United Nations Development Programme [2002-2016].

<sup>3</sup> Life expectancy at birth refers to the average number of years a baby born in certain year is expected to live if the mortality patterns remain constant in future.



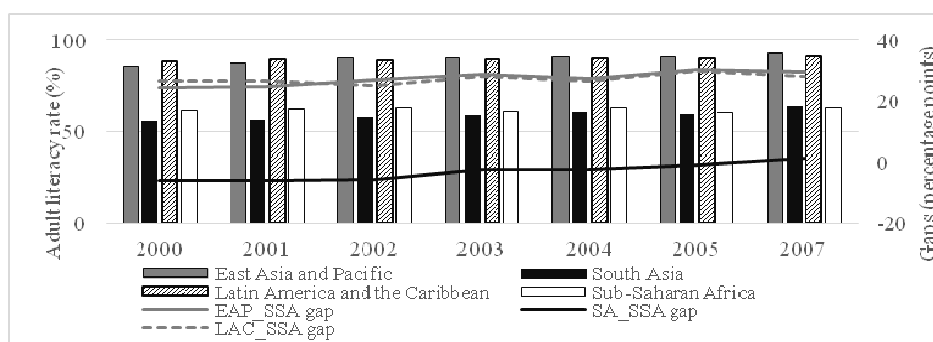
Within the period 2000-2015, Sub-Saharan Africa had the shortest *Life expectancy at birth*. Gaps that we identify show clearly that existing disparities between selected regions and SSA have been declining since 2004. It means that life expectancy has increased in SSA faster than in other regions, which is natural because of the relatively high level of life expectancy there.

### Knowledge

The second dimension of HDI is defined as the *Knowledge*. Two indicators evaluate achievements in this dimension. By the year 2010, UNDP used *Adult literacy rate* and *Combined primary, secondary and tertiary gross enrolment ratio* for the evaluation of the achievements in this dimension. Since 2010, they have used *Expected years of schooling* and *Mean years of schooling*. Because of the limited size of the paper, we choose one indicator for every period.

For the 2000-2007 period, we observe *Adult literacy rate*<sup>4</sup>. The lowest adult literacy rates were reached in this period in SA. However, the gap between SA and SSA was closed in 2007. Since then, SA has achieved higher rates than SSA. According to the World Bank's data [2017], *Adult literacy rate* accounted for 60,1% in SSA in 2010, while in SA for 66,7%. Gaps between EAP or LAC and SSA did not change significantly because of similar trends in the progress in adult literacy (Figure 5).

**Figure 5.** Adult literacy rate in selected developing regions

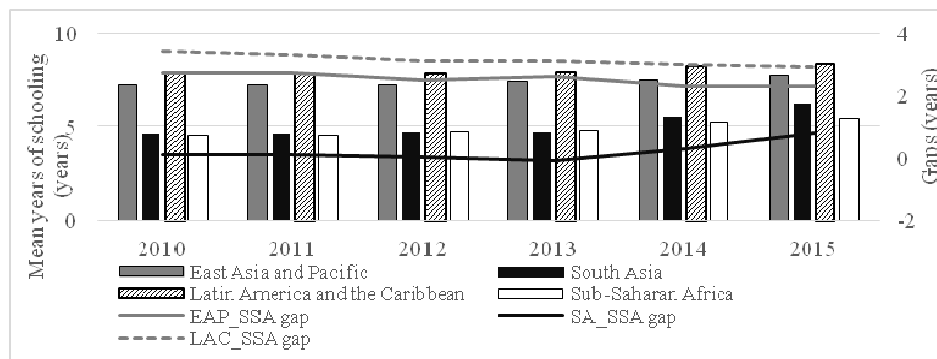


Source: Based on: United Nations Development Programme [2002-2009].

<sup>4</sup> Adult literacy rate expresses the percentage of people ages 15 and above who can both read and write, as well as understand a short simple statement about their everyday life.

We choose indicator *Mean years of schooling*<sup>5</sup> for the 2010-2015 period. In 2010, number of years spent on average on schooling by SSA's citizens was nearly the same as that of the SA's ones. However, progress in availability of education was more impressive in SA and the gap between SA and SSA has been widening since 2013. Trends in the progress in this dimension of human development were similar for EAP, LAC and SSA. Therefore, gaps did not change significantly between years 2010 and 2015 (Figure 6).

**Figure 6.** Mean years of schooling in selected developing regions



Source: Based on: United Nations Development Programme [2010-2016].

The World Bank's data [2017], concerning government expenditure per one student in primary level of education (expressed as the percentage of GDP p.c.), signalizes that SSA countries invest on average more money in education than SA countries. In 2012, EAP countries spent on average 17,26% of their GDP p.c. on education, LAC countries 14,54%, while SSA countries invested on average 10,07% and SA ones only 8,14%.

### ***Decent standard of living***

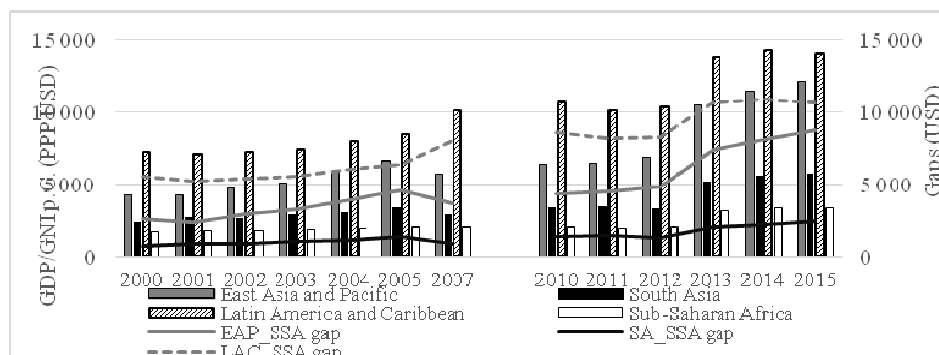
The third dimension of HDI is defined as the *Decent standard of living*. UNDP changed again methodology for the evaluation of achievements in this dimension. In 2010, they replaced the former indicator GDP p.c. with the indicator *Gross national income p.c.* (GNI p.c.)<sup>6</sup>. SSA reached the lowest values of GDP p.c. during the 2000-2007 period, as well as the lowest values of GNI p.c. during the 2010-2015 period (Figure 7). Gaps between all regions and SSA wid-

<sup>5</sup> This indicator expresses average number of years of education received by people ages 25 and older.

<sup>6</sup> GNI expresses the sum of value added by all resident producers and any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income from abroad.

ened between years 2012 and 2014. Since 2014, significant widening has been evident in the case of SSA gaps with EAP and SA.

**Figure 7.** GDP or GNI p.c. in selected developing regions



Source: United Nations Development Programme [2002-2016].

## Conclusions

Generally, human development is defined as the process of enhancing human capabilities to expand their choices and opportunities so that individuals can lead a life of respect and value [UNDP, 2000]. Growth of country's GDP is one of the preconditions for the progress in human development. However, the long-lasting observations show clearly that some countries achieved progress in human development despite relative moderate growth of GDP, and some countries did not achieve any progress in human development despite relative high growth of GDP. Will it be the case of Sub-Saharan Africa, which faced the rapid growth of GDP within the analysed 2000-2015 period? Although we admit a time shift between the GDP growth and its transformation into the improvements in the living conditions of the SSA's population, we cannot say ambiguously yes or no.

In our analysis, we paid attention to the progress in human development in Sub-Saharan Africa in comparison with the selected developing regions (East Asia and Pacific, Latin America and Caribbean, South Asia) within the 2000-2015 period. We identified positive progress and some achievements in human development in SSA but they were not so ambiguous if we compared them with the levels achieved in Latin America and Caribbean, East Asia and Pacific, and South Asia.

**Table 4.** Results of the analysis

Dimension/ Indicator	Evaluation of SSA	
	Values of HDI sub-indicators	Widening or narrowing of the gaps
Long and healthy life • Life expectancy at birth	The lowest for the period 2000-2015	Gap with other regions: narrowing since 2004
Knowledge • Adult literacy rate (2000-2007), • Mean years of schooling (2010-2015)	The 2nd lowest, in 2007 the lowest  Similar to SA, since 2014 the lowest	Gap with SA: widening since 2007 Gaps with EAP, LAC: no significant changes  Gap with SA: widening since 2014 Gaps with EAP and LAC: no significant changes
Decent standard of living • GDP p.c. (2000-2007), • GNI p.c. (2010-2015)	The lowest for the 2000-2007 period  The lowest for the period 2010-2015	Gaps with EAP and SA: widening in the period 2000-2005, in 2007 narrowing Gap with LAC: widening  Gaps with other regions: widening since 2012

If we sum up results of our analysis (Table 4), we can say that within the 2000-2015 period, SSA caught up with selected developing regions only in the first dimension of human development (*Long and healthy life*). Selected developing regions, namely LAC, EAP and SA, achieved higher levels in other dimensions of human well-being. Furthermore, disparities between South Asia and Sub-Saharan Africa have been increased.

## References

- Alkire S., Foster J. (2010), *Designing the Inequality-Adjusted Human Development Index (HDI)*. Human Development Research Paper 2010/28, UN Development Programme, New York.
- Chaaban J., Irani A., Houry A. (2016), *The Composite Global Well-Being Index (CGWBI): A New Multi-Dimensional Measure of Human Development*. "Social Indicators Research", Vol. 129, Iss. 1, pp. 465-487.
- Hou J., Walsh P.P., Zhang J. (2015), *The Dynamics of Human Development Index*, "The Social Science Journal", Vol. 52, Iss. 3, pp. 331-347.
- International Monetary Fund (2017), World Economic Outlook Database April 2017, <http://www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx> (accessed: 2.08.2017).
- Ranis G., Stewart F., Samman E. (2005), *Human Development: Beyond the HDI*, Center Discussion Paper No. 916, Economic Growth Center, Yale University, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=756967](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=756967) (accessed: 1.08.2017).
- Sagar A.D., Najan A. (1998), *The Human Development Index: Critical Review*, "Ecological Economics", Vol. 25, Iss. 3, pp. 249-264.

- Sharma H., Sharma D. (2015), *Human Development Index – Revisited: Integration of Human Values*, “Journal of Human Values”, Vol. 21, Iss. 1, pp. 23-36.
- Anand S., Sen A. (2000), *Human Development and Economic Sustainability*, “World Development”, Vol. 28, No. 12, pp. 2029-2049.
- Ul Haq M. (2003), *The Human Development Paradigm* [in:] S. Fukuda-Parr, A.K. Shiva Kuma (eds.), *Readings in Human Development*, Oxford University Press, Oxford, pp. 17-34.
- United Nations Development Programme (2000-2016), *Human Development Reports 2000-2016*, <http://hdr.undp.org/en/global-reports> (accessed: 25.06.2017).
- United Nations Development Programme [UNDP] (2017), *Human Development Reports, Human Development Index*, <http://www.hdr.undp.org/en/content/human-development-index-hdi> (accessed: 25.06.2017).
- United Nations Development Programme [UNDP] (2018), *Developing Regions*, <http://hdr.undp.org/en/content/developing-regions> (accessed: 7.12.2018).
- World Bank (2017), *World Bank Open Data*, <http://data.worldbank.org/> (accessed: 3.08.2017).

## ANALIZA POSTĘPÓW W ZAKRESIE ROZWOJU SPOŁECZNEGO W AFRYCE SUBSAHARYJSKIEJ

**Streszczenie:** Rozwój społeczny definiuje się jako rozwój umożliwiający poszerzenie dostępnych ludziom wyborów pozwalających na przeżycie wartościowego życia. Wskaźnik Rozwoju Społecznego mierzy postęp w tej dziedzinie, ocenia osiągnięcia w trzech wymiarach: długie i zdrowe życie, wiedza i dostatni standard życia. Afryka Subsaharyjska to region o niskich dochodach, w którym większość ludności żyje w skrajnym ubóstwie. Warunki wstępne dla istotnego postępu w rozwoju społecznym są tam mniej korzystne niż w innych regionach rozwijających się. Chociaż wiele w tej kwestii zostało osiągnięte od początku XXI wieku, to rezultaty nie są jednoznaczne, zwłaszcza jeśli porównuje się je z innymi regionami. Celem artykułu jest identyfikacja i ocena postępu w rozwoju społecznym w Afryce Subsaharyjskiej w porównaniu z wybranymi regionami rozwijającymi się w latach 2000-2015. Wnioski artykułu są wynikiem przeglądu odpowiednich źródeł naukowych i statystycznych, a także przeprowadzonej własnej analizy statystycznej.

**Keywords:** rozwój regionów, rozwój społeczny, HDI, PKB, Afryka Subsaharyjska.