EXECUTIVE SUMMARY

Calculation
Multidimensional Poverty Index
Indonesia

2012-2014
BACKGROUND

THE PURPOSE OF MPI

Poverty is the worst form of violence
-Mahatma Gandhi-

The problems of poverty are faced by all countries all over the world. The definitions of poverty become very broad due to the different indicators of poverty in the regions. Defining poverty by using a single definition will lead to preference over certain indicators of poverty while there might be other factors which also cause a person's poverty. The preference of some indicators has been criticized by Atkinson (1975) who stated,

"It is not possible or misleading to look at poverty with an absolute standard that is implemented for all countries and at all time, a poverty line should be defined in a social relationship and in accordance with the current society lifestyle"

The Multidimensional Poverty Index (MPI) had been developed since 2010 to map a person's poverty with clearer indicators. MPI was first developed by the Oxford Poverty and Human Initiative (OPHI) by the United Nation Development Program (UNDP) in 2010. The purpose of the MPI is to holistically capture the picture of poverty. This measurement system was made as an alternative for the globally well-known poverty indicators, such as the poverty line which used monetary approach in which the World Bank used the US dollar threshold, 1:25 Purchasing Power Parity (PPP), USD. 1.5 PPP or through a basic consumption approach (basic need) which is also used in Indonesia. The basic need approach measures the income or consumption made by a person and this monetary approach is deemed inappropriate in analyzing the root causes of human poverty (Sen, 1967).

To learn more about the multidimensional poverty’s concept, in box 1.1 and 1.2 there are examples of multidimensional poverty’s explanations that happen in Indonesia. These examples describe that poverty’s problems in each regions are different and therefore the same general policies cannot be applied to all regions. The problems of poverty faced by Surti and Orgenes are different. Surti has a housing problem which made her vulnerable to eviction in any time, while Orgenes has...
health and clean water problems.

Also in Papua, in which Orgenes lives, transportation is a major issue because the Region has a very large area with difficult topography which makes travelling from the Region becomes very expensive.

Surti, in the other hand, enjoyed proper medical treatment when she gave birth because she used the facilities in the health program for the poor that is endorsed by the government. Because she owned Jakarta Health Card, she enjoyed free medical treatment when she gave birth.

With a monthly income of IDR 3 million, Surti is not categorized as poor in monetary measurement (income). People that are categorized as ‘poor’ in Indonesia have monthly incomes below or equivalent to IDR 447,797.00. Problems occur on whether the poverty line can describe the “face” of poverty experienced by Surti. Surti work hard every day and still worry on whether she can fulfill her household needs in the next day. She daily worries about her problems due to limited toilet access and whether she will be evicted.

MPI’s Benefits and Uses

MPI is a practical measurement tool of poverty that can be used for:

a. Adding and comparing poverty measurement tools that have been used in policy making such the income indicator.

b. Monitor the poverty level and composition and also poverty reduction from time to time.

c. Evaluate the impact of poverty reduction programs.

d. Mapping the real conditions of poverty in all aspects (multidimensional) such as health, education and standard of life quality.

e. Identifying poverty traps and extreme poverty.

f. Comparing poverty from various aspects such as territorial, ethnic group, gender, household and others.
Behind the dazzling lights and rows of skyscrapers of Jakarta, live a woman named Surti. Along with her toddler son, the 35-year-old woman lives in a semi-permanent house with walls made only of plywood and zinc roof. The house was illegally built nearby the train railway and at night she used oil lamps as her source of lighting. When rain falls heavily, the house will be inundated so Surti and her son had to stay temporarily in a nearby mosque.

Surti only has primary school education. Her lack of education makes her unable to find a decent job in Jakarta, and therefore she sells fried food in the Tanah Abang area. Her monthly income of IDR 3 million is insufficient to meet the needs of herself and her toddler son.

Her condition makes her only able to consume meager foods. She also lives in an illegal semi-permanent 'house' hence can be evicted anytime. Surti also suffered the lack of access to clean water and sanitation. Every day, Surti pays IDR 6,000 to use public toilets nearby her house. When she has no money, she chooses to use a mosque's toilet or even the Ciliwung's river water.

Most of Surti’s income comes from selling fried foods and more than half of her earning is used to fulfill the needs of her toddler son. Nearly 70 percent of her average monthly income of IDR 3 million is used to meet the needs of her child. Her motherly instincts make Surti prioritize the needs of her child, especially to buy baby formula milk and nutritious foods.
Box 1.2 Orgenes: Poverty Face in Papua

In the beautiful Raja Ampat region, lives a man named Orgenes, a father who worked as a fisherman in the Sauwandarek Village, Raja Ampat. Orgenes faces the problems of unpredictable weathers and the difficulties of selling his fishery products to the local people. Orgenes owns a longboat vessel with a capacity of 40 hp that he uses to get his income. If the vessel broke in the future, he will no longer be able to fulfill the needs of his family of 5 people.

In his village, Orgenes consumes brackish water because he cannot afford to buy bottled waters that cost Rp 6,000 for a small bottle and Rp. 10,000 for a big bottle. The bottled water is too expensive for him and can only be bought when ships from Waisai, the capital of Raja Ampat, or Sorong come to his village.

Orgenes’ family consists of 5 people: Orgenes, his wife and their three children. Since very young ages, his children mostly eat fishes and coconuts because it is difficult to obtain other nutritious foods such as vegetables or fruits other than coconut.

Transportation is also a major problem for Orgenes. To travel to more accessible place such as Waisai, Orgenes have to spend money to buy mixed gasoline that cost about Rp 120,000 for one-way, a very large amount for him. He even cannot always buy mixed gasoline because he lives in a remote area. If he cannot buy any gasoline in his village, he will walk for an hour to the neighboring Yenbekwen Village.

There is no financial institutions in his village and therefore when he has extra money Orgenes will usually keep it in a cupboard to preserve the money from the humid coastal temperature. When Orgenes want to save his money in a bank, he had to go to the banks in Waisai area and spent a lot of time just to deposit his money because there are only two banks in Waisai.
**MPI INDICATORS IN INDONESIA**

Poverty is not just a lack of money; it is not having the capability to realize one’s full potential as a human being

-Amartya Sen-

**Health Dimension**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Sanitation</th>
<th>Clean Water</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Household without adequate sanitation</td>
<td>Household without adequate clean water access</td>
</tr>
<tr>
<td><strong>Threshold</strong></td>
<td>Household without toilet</td>
<td>Household without adequate access to clean water such as protected well, piped water, protected water spring, and the distance between water source and septic tank less than 10 meters</td>
</tr>
<tr>
<td><strong>Global Reference</strong></td>
<td>SDGs goal 6 especially 6.2</td>
<td>SDGs goal 6 especially 6.1</td>
</tr>
<tr>
<td></td>
<td>Adequate Sanitation increase from 60.9 percent (2014) to 100 percent (2019)</td>
<td>Clean Water Access increase from 70 percent (2014) to 100 percent (2019)</td>
</tr>
</tbody>
</table>
# Health Dimension

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Birth Attendant</th>
<th>Under Five Nutritional Intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Birth process without the help of trained health worker</td>
<td>Household with under five (U-5) babies deprive of balance nutritional intake</td>
</tr>
<tr>
<td>Threshold</td>
<td>Birth process without the help of doctor, midwife, or other medical and paramedical workers</td>
<td>U-5 babies deprive from consuming 70-220 gr carbohydrate, 15-35 gr protein, 35-62 gr fat and 637.5 -1600 calorie in accordance with the need of the U-5 age group</td>
</tr>
<tr>
<td>Global Reference</td>
<td>SDGs goal 3 especially .1 and 3.2</td>
<td>SDGs goal 2 especially 2.1 and 2.2</td>
</tr>
<tr>
<td></td>
<td>Decrease the mother mortality rate for 100.000 life birth from 346 (SP 2010) to 306 (2019) and infant mortality rate for 1,000 life birth from 32 (2012) to 24 (2019)</td>
<td>Decrease the prevalence of babies malnutrition from 19.6 percent (2015) to 17 percent (2019) Decrease the stunting prevalence low height and very low height for age in under two years old babies from 32.9 percent (2013) to 28 percent (2019)</td>
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</tbody>
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# Education Dimension

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Education Continuity</th>
<th>Literacy</th>
<th>Access to Preschool Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Household with school aged children that don’t finish their education in senior high school</td>
<td>Household with productive aged family members that are illiterate</td>
<td>Household with preschool aged children without access to preschool education</td>
</tr>
<tr>
<td><strong>Threshold</strong></td>
<td>School aged children that don’t finish their education in senior high school</td>
<td>Family members aged between 15-64 years old that are unable to read Latin, Arabic, or other letters</td>
<td>Children aged between 3-6 years old that are unable to access preschool education such as playgroup, early childhood education center (PAUD), kindergarten and other preschool education</td>
</tr>
<tr>
<td><strong>Global Reference</strong></td>
<td>SDGs goal 4 specially 4.1</td>
<td>SDGs goal 4 especially 4.6</td>
<td>SDGs goal 4 especially 4.2</td>
</tr>
<tr>
<td></td>
<td>Net Enrollment Rate (Angka Partisipasi Murni/APM) increase from 55,3 percent (2014) to 67,5 percent (2019)</td>
<td>Literacy for people over 15 years old increase from 94,1 percent (2013) to 96,1 percent (2019)</td>
<td>PAUD participation increase from 66,8 percent (2014) to 77,2 percent (2019)</td>
</tr>
</tbody>
</table>
# Standard of Living Dimension

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Source of Lighting</th>
<th>Fuel/Source of Energy to Cook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Household without adequate source of lightning</td>
<td>Household without adequate fuel/source of energy to cook</td>
</tr>
<tr>
<td>Threshold</td>
<td>Household using none electricity sources of lighting such as oil lamp, torchlight,</td>
<td>Household using kerosene, charcoal, briquettes, wood and others and also do not use electricity</td>
</tr>
<tr>
<td></td>
<td>others and do not have electricity capacity more than 900 watt</td>
<td>power or gas as the main fuel/source of energy to cook</td>
</tr>
<tr>
<td>Global Reference</td>
<td>SDGs goal 7 especially 7.1</td>
<td>SDGs goal 7 especially 7a and 7b</td>
</tr>
<tr>
<td></td>
<td>Society Development in basic infrastructure and connectivity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electricity ratio increase from 81.5 percent (2014) to 96.6 percent (2019)</td>
<td>Gas pipe network increase from 11.960 km (2014) to 18.322 km (2019) and the development of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>natural gas filling station (Stasiun Pengisian Bahan Bakar Gas/SPBG) increase from 40 units</td>
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<td></td>
<td></td>
<td>(2014) to 118 units (2019)</td>
</tr>
</tbody>
</table>
## Standard of Living Dimension

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Roof, Floor and Wall</th>
<th>House Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Household without adequate roof, floor and wall</td>
<td>Household head who do not own the house they inhabited</td>
</tr>
<tr>
<td><strong>Threshold</strong></td>
<td>Household with at least two out of these three criteria (roof, floor and wall) i) the house roof made from substances other than concrete, tiles, shingles, zinc, and asbestos; ii) the house floor made from substances other than marble, ceramic, granite, tiles, terrazzo, cement and wood; iii) wall made from substances other than rock and wood</td>
<td>Household which inhabit rented houses, other people houses, houses owned by parents/relations and others</td>
</tr>
<tr>
<td><strong>Global Reference</strong></td>
<td>SDGs goal 11 especially 11.1</td>
<td>SDGs goal 11 especially 11.1</td>
</tr>
<tr>
<td><strong>National Reference</strong></td>
<td>Improving the quality of inadequate housing for 1.5 million household, especially the ones in slum area.</td>
<td>The lack of housing (backlog) decrease from 7.6 million (2014) to 5 million (2019) and facilitate the fulfillment of adequate and affordable housing for 2.2 million household from the government budget</td>
</tr>
</tbody>
</table>
Indonesia is an archipelagic island country with more than 17,000 islands. Population of Indonesia is about 250 million people with hundreds of distinct native ethnic and linguistic groups.

Problems in Indonesia is very diverse because of the rich diversity of development among regions and islands. In the media, it can be seen that the housing problem is one of biggest problem in Jakarta, in Tasikmalaya is lack of clean water, while in East Nusa Tenggara is malnutrition.

The problems are so diverse in Indonesia and cannot be shown by using only a single indicator, the multidimensional poverty indicators are able to show the problems that happened in the national level, the provincial level, and the district level though of course there are limitations in defining poverty characteristic.

The method of Alkire Foster certainly cannot capture all poverty's characteristic in the community because this method can only analyze chosen poverty indicators. However, at least the method can provide basic indicators for poverty in the various regions.

National MPI Analysis

Comparison of Poverty Rate (%) between Multidimensional and Monetary Analysis 2012-2014
There was a downward trend in multidimensional poverty in Indonesia in 2012-2014, indicating the people’s growing prosperity. Multidimensional poverty indicators are used to measure poverty’s indicators in the regions and the multidimensional poverty reduction in Indonesia showed good improvements both in individual level and household level.

The number of people in who suffered multidimensional poverty in Indonesia had been reduced from 89,495,293 people in 2012 to 81,482,014 people in 2013 (down 8.95 percent) and then was further reduced in 2014 to 79,583,588 people (down 2.32 percent). The average reduction in multidimensional poverty was 5.64 percent. The number of households had also decreased significantly from 2,159,335 households in 2012 to 20,073,326 households in 2013 and 19,351,919 households in 2014.

Other MPI indicators such as poverty, the poverty intensity and multidimensional poverty index showed downward trends that show improvements in the people’s life. However, the local administrations still need to give special attentions to multidimensional poverty because the poverty intensity is still relatively high and measured evenly both in rural and urban areas.

**Multidimensional Poverty Profile**

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**Multidimensional Poverty Rate**

Multidimensional poverty rate indicates the percentage of households that suffered multidimensional poverty against the number of all households in the measured area. For example if there are 300 households that suffered multidimensional pov-
In an area which is inhabited by 1,000 households, the multidimensional poverty index in the region is 30 percent.

Multidimensional poverty rate in Indonesia in the period of 2012-2014 had the same pattern with the monetary poverty rate. Multidimensional poverty rate in this period showed the pattern of a downward trend, similar with the poverty rate which is measured through monetary means.

In 2012, 35 percent of households nationwide suffered multidimensional poverty. The number had reduced very significantly from 2013 (30.8 percent), the poverty rate slightly reduced in 2014 to 29.7 percent, the multidimensional poverty rate in Indonesia had went down 5 percent within two years.

Meanwhile, the monetary poverty rate tends to follow the downward trend of the multidimensional poverty. In 2012, there was approximately 11.7 percent of Indonesian households that were classified as poor. In 2013, the number slightly decreased by 0.2 percent and was further declined 0.2 percent in 2014 to 11.3 percent. It shows that multidimensional poverty rate had decreased faster than the monetary poverty rate.

These number showed improvements in education, health and life quality standards, along with economic conditions. The households enjoyed growing welfare prosperity in faster pace than the monetary side. This may indicates that government programs have been quite successful in addressing the problems of multidimensional poverty in Indonesia, especially in 2013. The government program related to multidimensional poverty alleviation, among others, Birth Insurance (Jaminan Persalinan/Jampersal), School Operational Assistance (Bantuan Operasional Sekolah/ BOS), the Hope Family Program (Program Keluarga Harapan/ PKH), the National Program for Community Empowerment (Program Nasional Pemberdayaan Masyarakat/ PNPM), Cheap and Very Cheap House Program (Program Rumah Murah dan Sangat Murah), Clean Water for People Program (Program Air Bersih untuk Rakyat), Cheap and Save Electricity Program (Program Listrik Murah dan Hemat), etc.

In Indonesia, multidimensional poverty is concentrated in rural areas. In terms of trends, the poverty rate had shown downward trend in the period of 2012 to 2014. The poverty rate in the rural area is 2.2 times larger than the urban area.

In 2012, the percentage of poor households in rural areas reached more than 47.6 percent, or about 22.4 percent higher than the poverty percentage in the urban area within the same year. The poverty rate in rural area rapidly declined in 2013 with a significant decline of 5.4 percent, and continue to decline in the following year to 40.8 percent. In urban area, the poverty rate in the period of 2014 tended to be stable in the range of 18 percent after declined by 4 percent compared with the percentage in 2012.

The trend of poverty rate in rural
area had declined significantly by 7 percent, indicating that the
government development programs had been focused on the
villages and primarily focused on health, education and stan-
dard of living.

**Multidimensional Poverty Severity**

Multidimensional poverty severity indicator shows the score se-
vere of deprivation suffered by a group of people according to
selected poverty indicators. For example, if a group of people
scores low on 7 out of 11 indi-
cators then the group’s score will be 63.6 percent

The movement patterns of mul-
dimensional poverty’s intensity
in Indonesia during the period of 2012-2014 period tend
to be similar, both in rural and
urban areas. The multidimen-
sional poverty’s intensity in the
rural and urban area in the
provinces moved downward in 2013. However, the following
year, the poverty’s intensity re-
mained the same in the rural
area and increased in the urban
area. It means that the numbers
of poverty indicators that had
low scores in the urban area’s
households had increased once
more in 2014. The multidimen-
sional poverty’s intensity had
remained mostly the same and
only increased slightly, namely
by 0.4 percent.

This poverty’s intensity experi-
enced slight increase in the pov-
erty’s indicators analysis, espe-
cially in the rural area. It showed
that while the percentage of
poor households decreased but
the number of severity indica-
tors experienced by the poor
household, especially in urban
areas is increased

**Multidimensional Poverty Index**

Multidimensional poverty index is calculated by multiplying the
percentage of poor households
with the poverty intensity. The in-
dex value between regions can later be compared against each other

This multidimensional poverty’s index can reflect the severity and the percentage of poor
people in a region. The index’s concept can be understood as
combination between degree of
poverty intensity in many dimen-
sion that can affect human ca-
pability. For example if region A and region B have the same
poor household’s percentage, the stakeholders cannot decide
which region must be prioritized. However, if the percentage also
take account of the poverty’s in-
tensity then the stakeholders can
decide on the priority region.
For example, region A has the
poverty’s severity of 40 percent
and region B has the poverty’s
severity of 50 percent. It can be
concluded that region B should
be the top priority. Multidimen-
sional poverty index can be
calculated as follows. The Mul-
tidimensional Poverty Index in
region A is calculated as 0.4 x
0.4 which equals 0.16. In Region
B, the index is calculated as 0.4
x 0.5 which equals 0.20. The
multidimensional poverty index shows that the poverty’s severity
in region B is larger than region A.

In the period of 2012-2014,
Indonesia multidimensional pov-
erty index showed a downward
trend. The largest decline in the
index occurred in 2012-2013
with a 0.02 basis points decline
at the national level. The largest
decline occurred in the rural area
with 0.02 basis points while the
decline in urban area was only
0.013 basis points in the same
year.

In 2013-2014, the decline is
quite small, the rural area only
declined 0.006 basis points
while the urban area only de-
creased 0.03 basis points and
subsequently the national pov-
erty only fell 0.005 basis points.

**Multidimensional Poverty’s Characteristics**

The multidimensional poverty’s characteristics in Indonesia is
dominated by four indicators
commonly associated with the
standard of life quality. The
four indicators are source of lighting, clean water, sanitation
and fuel for cooking. Throughout
the period of 2012-2014, these
four indicators were the largest
problems faced by poor house-
holds in Indonesia. The four indi-
cators were relevant in almost
every provinces in Indonesia.
It implicates that these factors
significantly contributed to the
problems of multidimensional
poverty in Indonesia.

During the period of 2012-
2014, 8 out of 10 poor house-
holds lacked the access to ade-
quate lighting source, one of the
major problems in Indonesia, the
other problems are clean wa-
ter access (8 out of 10 house-
hold) and sanitation (7 out of
10 households). Other problems
are the lack of nutritional balance for under five years old babies, the lack of clean water access, illiteracy, and housing which showed quite significant upward trend every year.