ANALYSIS OF GENDER DEVELOPMENT INDEX 
TO PROVE ITS CORRELATION WITH THE DECREASE 
OF POVERTY LINE IN KEDIIRI CITY, INDONESIA

Suharnanik Suharnanik, Sarah Yuliarini, 
Emanuel Endrayana Putut Laksminto

Universitas Wijaya Kusuma Surabaya (Wijaya Kusuma University, Surabaya), Surabaya, East Java, Republic of Indonesia, nanik_fisip@uwks.ac.id

Abstract. Gender is a society’s perspective to differ men and women in term of their behavior which can be characterized through culture and religion values. This study aims to determine the close relationship between the Gender Development Index and the Poverty Line. This study used the Pearson Product Moment Correlation test tool to find the relationship between the Gender Development Index data and the Poverty Line Data in Kediri City. Data were collected from statistics agency in Kediri City, East Java Province of Indonesia and analyzed using a reference study on the statistical test results. The research results showed that the Gender Development Index and the Poverty Line had a solid relationship. The findings of this study showed that the Gender Development Index has increased, indicating the opposite trend: the value of the Poverty Line in Kediri City tends to decrease significantly. For the future, it is recommended that the further researchers will conduct Gender Development Index analysis in order to prove its correlation with the decrease of the poverty line in Indonesia.

Key words: Gender Development Index, measurement and analysis of poverty, gender, Indonesia

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Сухарнаник Сухарнаник, Сара Юлиарини, Эмануэль Эндрайана Путут Лакшминто
Университет Виджа Кусума в Сурабае, г. Сурабая, Восточная Ява, Республика Индонезия, nanik_fisip@uwks.ac.id

Аннотация. Понятие «гендер» означает совокупность социальных и культурных норм, которые общество предписывает людям в зависимости от их биологического пола. В различных обществах отличия в поведении мужчин и женщин характеризуются через культурные и религиозные ценности. Данное исследование направлено на определение взаимосвязи между индексом гендерного развития и чертой бедности населения в городе Кедири (провинция Восточная Ява, Индонезия). В этих целях использовался коэффициент корреляции произведения Пирсона. Данные были получены из материалов статистического агентства в Кедири. Исследование показало, что индекс гендерного развития и черта бедности тесно взаимосвязаны. Установлено: индекс гендерного развития в Кедири повышается, что указывает на тенденцию к значительному снижению уровня бедности. Рекомендуется регулярно проводить анализ индекса гендерного развития с целью контроля за чертой бедности в Индонезии.

Ключевые слова: индекс гендерного развития, измерение и анализ бедности, гендер, Индонезия

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Introduction

Poverty in developing countries is caused by less labour force participation amongst women [Barkat et al., 2021; Ogundana et al., 2021; Atozou et al., 2017]. Economic conditions can lead to poverty which cause women’s vulnerability in the form of gender-based violence [Arief, 2018]. A recent research on gender and poverty in Indonesia was found in the work of F. Faharuddin and D. Endrawati which discusses the poverty experienced by temporary workers while other family members do not have additional income [Faharuddin, Endrawati, 2022]. Though women have a role in economic activities whenever they have more bargaining power in their household lives when there is a compelling case for this, women have the ability to leave the family institution domicile without breaking ties [Amri et al., 2022]. Indeed, the gender justice development movement purposes to create a more equal, fair and healthy life [Amigo-Jorquera et al., 2019]. Gender positions humans differently between men and women based on community culture, way of thinking and behaviour intention by social provisions. These differences lead to violence, injustice, discrimination and different stereotypes between men and women.
Kediri City locates in East Java in Indonesia. Uniquely, this city is famous as the city of tofu foodstuffs influenced by Hokkien Chinese culture migrated in this city millennia ago and the city with the third largest population in the East Java region. In 2018, the population reached 292,768 people (BPS, 2021). A brief history mentions Kediri City back to 12th century as the location of the kingdom of Kediri with the famous King Airlangga, with the centre of the government of his kingdom Dahanapura which is famous for the City of Fire or Daha. A factor in history that includes a strict royal culture is, of course, the patriarchal cultural system known as the cultural color that influenced the relationship between men and women. Javanese civilization placed women in the honorable role of society despite the more important position given to men. This is how the element of culture is the determining element in the concept of gender that occurs in society [Hasanah, Musyafak, 2018]. The cultural aspect in society puts gender role differences that are formed unconsciously through continuous socialization through social institutions such as education. This happened with the intercession of family (parents) role, schools (teachers), the state (policymakers, rulers), and the community (community leaders, religious leaders, mass media, and others) that also played a role in gender formation.

Regarding the role of women who are considered important Indonesian government places it as an vital aspect in addressing the issue of poverty which is an significant focus of current policies. Many activities are carried out as empowerment programs in poverty alleviation, but what needs to be reviewed is that poverty is not always caused by declining economic growth. Still, other contributing factors, such as in a previous study [Listyaningsih, 2018], include social, cultural, and socio-political aspects, environment (nature and geography), health, education, and religion that need to be considered. Studies related to gender and poverty in developed countries include some works [Cheteni et al., 2019] that examined women’s poverty in South Africa [Sharpe, Swanson, 2016; Ninsiima et al., 2020; Francis East, Roll, 2015; Kabeer, 2015, 2019; Hendriks, 2019; Ogundana et al., 2021]. An economic crisis currently threatens the world due to the impact of COVID-19 pandemic [Hipsher, 2021]. This study aims to determine the close relationship between the Gender Development Index and the Poverty Line.

Literature review

Women are an integral part of gender development. The results of the research in the journal Food and Agriculture Organization (FAO) in 2008 show that women can revive the fisheries sector in Indonesia, reaching 2.3 million people. That is why the Gender and Development (GAD) strategy concentrates more on planning and project interventions that focus on the development process in relate to transformations gender relations. The concept of this strategy is called Gender Mainstreaming or often referred to as Gender Mainstreaming. The policy regulating this strategy is contained in the Presidential Instruction (Inpres) no. 9 of 2000 concerning Gender Mainstreaming in National and Regional Development.
Gender Development Index. It is necessary to understand the differences between men and women depending on gender. Gender is a perspective that distinguishes humans based on social construction in society. Men and women are determined based on values, religion, and culture, so each grouping differs from region to region. Society distinguishes between men and women no longer based on sex (gender) inherent to each, where men have genitals in the form of a penis, are tall and have the hormone testosterone. In contrast, women are individuals who have the hormones estrogen and progesterone who can give birth and breastfeed with physical characteristics such as uterus, vagina, and breasts. In M. Fakih, the concept of gender is all things about men and women in the form of traits, behaviours and actions that can be exchanged between the two, which can change from time to time so that they differ from one place to another because beliefs influence these differences [Fakih, 1999]. Hence, the cultural values of the community.

In J. C. Mosse, the concept of gender is a reality in a society that occurs as a form of human relations [Mosse, 1996]. However, it will be a problem if these differences cause problems that result in gender inequality. Five forms can be categorized as gender inequality, as follows:

1. Marginalization describes the economic conditions faced by both men and women. These conditions impact injustice where the causal factors can come from government policies, religious beliefs, traditions and even the views of scientific academics. Marginalization can also occur because of differences in the division of labour.

2. Subordination is a treatment of placing a gender group in a different one and even lower than others. There are many incidents of unfair treatment, such as putting women as personnel in the administrative field because they are considered more skilled and conscientious. Women are considered more emotional, so it is inappropriate to be a leader in a company.

3. Stereotypes are labels that tend to be hostile towards a gender group. Labelling is detrimental to a group because it affects the public’s self-image in viewing qualities that should not be considered. For example, if women like to preen, they are considered less professional in their work because they are deemed seducing and damaging relationships.

4. Violence is a treatment in the form of physical activities carried out by other people, both mentally and psychologically. This treatment is often carried out by the closest people such as husbands, brothers, parents and others. In some cases, women still hide the violent treatment they experience because of beliefs and cultural values that normalize abuse so that it is not seen as a problem.

5. Double workload is a view of women’s work, which is not considered part of the work that must be appreciated. Women work at home for domestic activities, considered everyday things such as cooking, taking care of children, and cleaning the house while still working as breadwinners. Even if women do not work outside the home, it is considered not working even though they are doing their domestic work.

Poverty. In measuring poverty, the Central Bureau of Statistics uses the ability to meet basic needs (basic needs approach). With this understanding, poverty is an economic inability to meet basic food and non-food needs measured from the expenditure side. The poor have an average monthly per capita expenditure below the poverty line. The Poverty Line is the sum of the Food Poverty Line and the Non-Food Poverty
Line. People with an average monthly per capita expenditure below the Poverty Line are poor. In comparison, the Food Poverty Line is calculated based on the value of spending on minimum food needs, equivalent to 2100 kilocalories per capita per day (BPS, 2020).

In Y. Kadji, understanding the concept of poverty is divided into four forms, namely [Kadji, 2012]:

1. Absolute poverty is a condition where a person has income below the poverty line or is insufficient to meet the needs of food, clothing, housing, health, housing, and education needed to live and work.

2. Relative poverty is a poor condition due to the influence of development policies that have not yet reached the entire community, thus causing income inequality.

3. Cultural poverty is an assessment of the picture of poverty that refers to the problem of a person’s or society’s attitude caused by cultural factors, such as not wanting to try to improve the level of life, laziness, and profligacy, even though there is help from outsiders.

4. Structural poverty is a poor condition caused by low access to resources in a socio-cultural and socio-political system that does not support poverty alleviation. Still, this factor is often the cause of poverty.

Poverty can also be distinguished based on:

1. Natural poverty is a poverty related to the scarcity of natural resources, public infrastructure, and barren land conditions.

2. Artificial poverty is a poverty related to the modernization or development system which prevents the community from controlling the existing economic resources and facilities equally.

**Gender mainstreaming.** Gender mainstreaming is a guideline for local governments in administrating governance, development and community services with a gender perspective. This guideline is contained in a regional regulation on gender mainstreaming where government administration prioritizes gender justice, both in daily life, in the world of work, in the administration of provincial government itself, and various program activities.

In the Kediri Regency development and gender program, it is essential to refer to gender mainstreaming regulations [Muhartono, 2021]. Meanwhile, in most sub-districts in Kediri City, there is gender inequality in the number of students at the secondary school level. Gender inequality is caused by economic, socio-cultural, and environmental factors. The factors related to accountability and education governance are also caused by socio-cultural factors, economy, family, religion, motivations, and motives for achievement [Setyaningrum, Handayani, 2011].

**Methods and information base of the study**

This study used quantitative method with the Pearson Product Moment Correlation test tool analysis to find the relationship between the Gender Development Index data and the Poverty Line Data in Kediri City. The data was obtained from the Indonesian Central Statistics Agency for the period from 2017 to 2021.
A comparison was made between the data of the Gender Development Index and the Poverty Line of Kediri City. After the data has been tested, the Pearson Correlation test tool is then analyzed using a reference study on the statistical test results. Here, the data size obtained is smaller than 0.50 which should carried out using the Shapiro — Wilk test. It is essentially a normalized measurement of the covariance, such that the result always has a value between −1 and 1. Furthermore, it can be seen in the correlation coefficient (r) to measure how high the correlation level is.

In line with previous researches related to poverty and gender in quantitative data using different approach such as I. Kertati, L. Dinda et al., U. Hasanah and I. Ikhsan which their studies used statistical tests with multiple regression models [Kertati, 2021; Dinda et al., 2020; Hasanah, Ikhsan, 2020]. Meanwhile, this research is different because the data used are related to the Gender Development Index (GDI) and the Poverty Line (GK).

Findings and results

The World Bank (2008) calculates the level and number of impoverished people using a single measure uniform for all countries. According to the World Bank’s (2014) development policy review, a person who is said to be poor earns less than US$ 1.25 per day. While the poverty line measured by the size of US$ 2 has also been published, where more than 2 billion people live less than that limit. The US dollar is US$ PPP (Purchasing Power Parity), not the official exchange rate. These two limits are absolute poverty lines.

Based on data from BPS from 2017 to 2021 contained in Table 1 the GDI and the GK data are shown. The data is then analyzed to obtain a close relationship between the two variables.

<table>
<thead>
<tr>
<th>Years</th>
<th>GDI</th>
<th>GK</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>94.64</td>
<td>42.00</td>
</tr>
<tr>
<td>2018</td>
<td>94.48</td>
<td>45.00</td>
</tr>
<tr>
<td>2019</td>
<td>94.53</td>
<td>47.00</td>
</tr>
<tr>
<td>2020</td>
<td>94.39</td>
<td>49.00</td>
</tr>
<tr>
<td>2021</td>
<td>94.21</td>
<td>51.00</td>
</tr>
</tbody>
</table>

From the data above, we do a normality test using the Shapiro — Wilk test because the data size is smaller than 50, as shown in Table 2.
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Table 2

<table>
<thead>
<tr>
<th>Tests of normality</th>
<th>Kolmogorov — Smirnov(^a)</th>
<th>Shapiro — Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>GDI</td>
<td>0.174</td>
<td>5</td>
</tr>
<tr>
<td>GK</td>
<td>0.136</td>
<td>5</td>
</tr>
</tbody>
</table>

\(^a\) Lilliefors Significance Correction.

* It is a lower bound of the true significance.

In N. K. Rompis, F. G. Worang, J. E. Tulung, the normality test is used to determine whether the data has been distributed under normal conditions or not [Rompis et al., 2018]. If the data is represented as an image, there is a diagonal line to measure whether the points are close to the line. The closer it is, the distribution is considered normal, but if not, it is considered abnormal. From the table of normality test results above, it is found that for the GDI, the value of Sig. = 0.915 > 0.05 then the data is normally distributed. Likewise, with GK, whose value of Sig. = 0.976 > 0.05 then the data is normally distributed.

Furthermore, the correlation coefficient (r) can be measured by measuring the level of correlation. Some things that need to be considered from the correlation coefficient, as in Table 3, are: Sign of the correlation coefficient: If the correlation coefficient is positive (+), then the relationship between the two variables is unidirectional. Conversely, if the correlation coefficient is negative (−), then the relationship between the two variables is negative. Correlation level, which shows the level of closeness of the relationship between 2 variables:

Table 3

<table>
<thead>
<tr>
<th>Signs of correlation coefficient and correlation level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation coefficient (R)</td>
</tr>
<tr>
<td>0 &lt;</td>
</tr>
<tr>
<td>0.4 ≤</td>
</tr>
<tr>
<td>0.6 ≤</td>
</tr>
</tbody>
</table>

Herein, the correlation coefficient (r) based on the Pearson Correlation revealed in Table 4 below:

Table 4

Data correlations GDI and GK Kediri City, Indonesia

<table>
<thead>
<tr>
<th>IPG</th>
<th>GDI</th>
<th>1</th>
<th>−0.925*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.024</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>GK</td>
<td>Pearson Correlation</td>
<td>−0.925*</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>0.024</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
It shown on significant of 2-tailed reached = 0.024 < 0.05, convince to be a significant relationship between the GDI and the GK in Kediri City. Furthermore, the Pearson Correlation obtained = –0.925, this means the sign of the correlation coefficient is negative (–), so the correlation is in the opposite direction, meaning that the greater the GDI, the smaller the GK, or the smaller the GK, the greater the GDI; the level of the relationship between the GDI and the GK is quite substantial because: \( 0.6 \leq |r| = 0.925 < 1 \).

The GDI has a strong relationship with the GK in Kediri City from 2017 to 2021 in a negative direction and a two-way significance level of 0.024. This strong relationship can be seen in the value of the correlation coefficient, namely \(|r| = 0.925\). Furthermore, based on the direction of the negative association, it can be said that if the GDI increases, the GK tends to decrease significantly, or vice versa. If the GDI decreases, the GK tends to increase significantly.

Testing the relationship between the Gender Development Index and the Poverty Line shows that there is a significant correlation where poverty is a joint work of both men and women on an equal basis. In the concept of gender, women and men have the same role in dealing with the problem of poverty. Poverty caused by gender issues can result in a low scope of work that men have dominated. The results in line with D. W. Puspita revealed poverty in Central Java Province that is caused by unemployment, PDNR and population [Puspita, 2015]. Meanwhile in Yogyakarta, it is mainly caused by cultural aspect [Listyaningsih, 2018]. On the other hand, the contextualized growth model and lack of education hinder policies in building women’s empowerment [Ogundana et al., 2021]. This study supports the government’s strategy of increasing gender development because poverty conditions must be addressed immediately in a developing country.

**Conclusion**

The principle of action must be more widespread and equitable. In a universal policy, the Indonesian state has regulated in the Outline of State Policy in which the community, both men and women, must play an active role in development. In the construction of policies made by the government, it has referred to the equality of men and women. But in reality, the community has not entirely accepted it. It can be seen in the activities of government programs on family health that women dominate. Meanwhile, economic empowerment activities for medium and micro enterprises are still dominated by men. Involving women in development is a product that transforms gender relations in the Gender Mainstreaming strategy. From the results of the Spearman correlation test to see the close relationship between the Gender Development Index and the Poverty Line, it is stated that the Gender Development Index and the Poverty Line have a solid relationship.

This data indicates that as the Gender Development Index increases, the value of the Poverty Line in Kediri City tends to decrease significantly. For this reason, the City Government of Kediri focuses on development programs based on gender mainstreaming. The efforts can be made by: (1) formulating gender-just policies; (2) developing a program of gender-responsive activities; (3) increasing the role of women and guaranteeing equal rights in enjoying the rights of citizens in the economic, social, cultural, political and legal fields; (4) making a paradigm shift in the government of Kediri City to prioritize gender justice, community life, work environment, and other. For the future, it is recommended that the further researchers will conduct GDI analysis to decrease the poverty line in Indonesia.
References


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*Information about the authors / Информация об авторах*

**Suharnanik Suharnanik** — Dr. Sc. (Sociology), Associate Professor, Universitas Wijaya Kusuma Surabaya (Wijaya Kusuma University, Surabaya), Surabaya, East Java, Republic of Indonesia, nanik_fisip@uwks.ac.id (доктор социологических наук, доцент, Университет Виджая Кусума в Сурабае, г. Сурабая, Восточная Ява, Республика Индонезия).

**Yuliarini Sarah** — PhD, Lecturer, Universitas Wijaya Kusuma Surabaya (Wijaya Kusuma University, Surabaya), Surabaya, East Java, Republic of Indonesia, sarahyuliarini@uwks.ac.id (PhD, преподаватель, Университет Виджая Кусума в Сурабае, г. Сурабая, Восточная Ява, Республика Индонезия).

**Endrayana Putut Laksminto Emanuel** — Master of Science, Lecturer, Universitas Wijaya Kusuma Surabaya (Wijaya Kusuma University, Surabaya), Surabaya, East Java, Republic of Indonesia, endrayana_fbs@uwks.ac.id (магистр естественных наук, преподаватель, Университет Виджая Кусума в Сурабае, г. Сурабая, Восточная Ява, Республика Индонезия).