

# The Impact of Women's Empowerment and its Contribution on Indonesia's Economic Growth

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## Abstract

This study examined the impact of women's empowerment on Indonesia's economic growth, women's empowerment programs, and the forms of women's contributions to foster economic growth. The data used were the number of women's representation in parliament, women as professionals, women's expenditure, women's life expectancy, the percentage of women's population, and the growth rate of gross regional domestic product (GRDP) in 34 provinces of Indonesia from 2017-2021. This study combined quantitative and qualitative methods. The panel data regression and fixed effect model used in the data analysis model demonstrated that the findings of life expectancy have a negative and significant impact on GRDP in 34 provinces of Indonesia. The percentage of women's population has a negative and significant impact on the GRDP in 34 provinces of Indonesia. Women play a significant role in advancing the economy that the government remains committed to enhancing women's knowledge, skills and self-confidence through women's empowerment programs. It is envisaged that the women's empowerment program will produce excellent and high-quality human resources, which will help Indonesia's economy grow and develop.

**Keywords:** Women's Empowerment, Women's Empowerment Program, Women's Contribution.

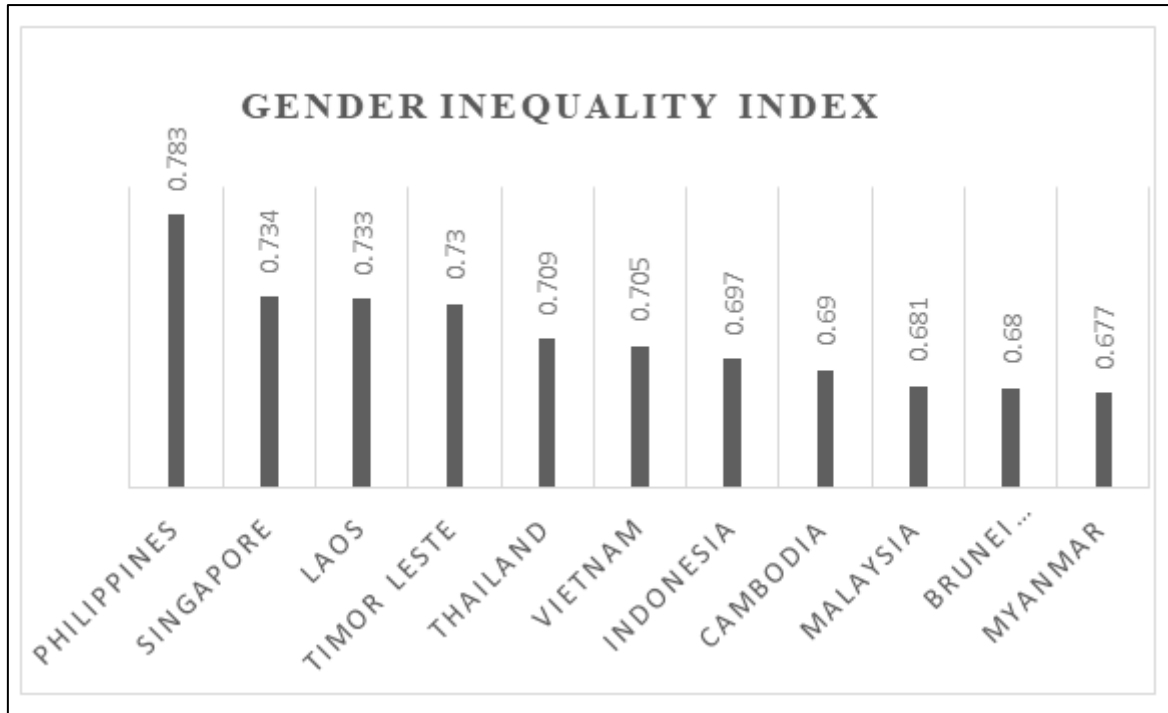
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## INTRODUCTION

Economic growth is an indicator that describes the progress of the development process in a country (Arifin, 2018). An increase in economic growth will also result in an increase in the economic activity of the community, which is another indicator of people's welfare. However, economic growth that continues to increase cannot guarantee that a nation is immune from economic issues because it has not been able to benefit all aspects of society (Mulasari, 2015).

The economy can grow because well-crafted policies are the product of cooperation between the government, stakeholders, and community participation (Coordinating Ministry for Economic Affairs of the Republic of Indonesia, 2022). Communities, as economic actors, contribute significantly to the

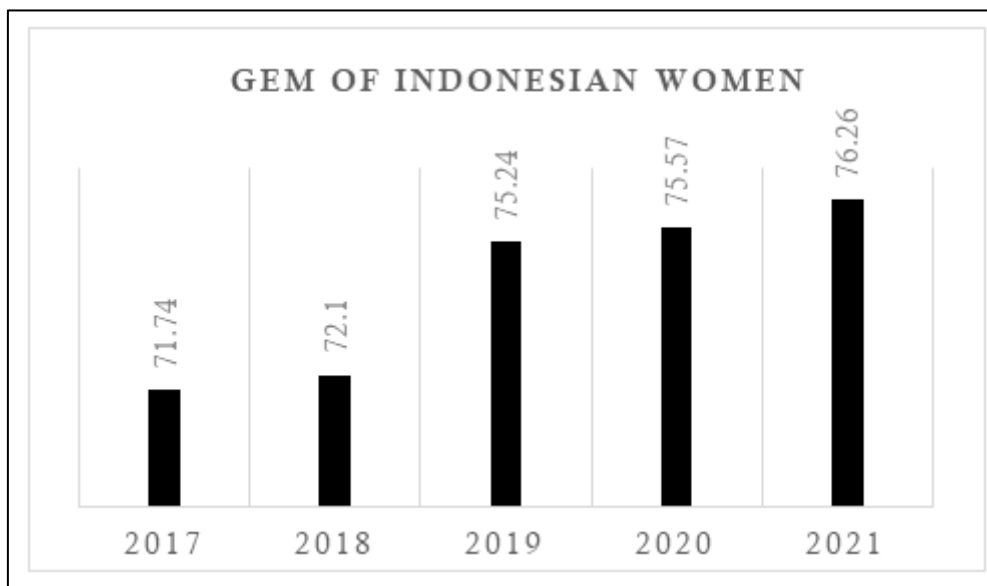
development of a conducive economic cycle. In order to support the economy, men and women must both actively participate. However, the fact is that women's contribution to the economy is still relatively low, as seen by the fact that in 2021, Indonesian women's income contribution was 37.22%, a decline of 0.04% from the previous year's 37.26% (BPS-Statistics Indonesia, 2022). This is supported by the results of the 2021 Economic Report which stated that the average wage for male workers was higher than the average wage for female workers. According to records, the average monthly wage for men in February 2021 was Rp. 2,753,192, while the average monthly wage for women was Rp. 2,215,664 (Ayuni *et al.*, 2021). The low contribution of women and the tendency for women to be placed in low positions at work created gaps (Jayani, 2019).



**Graph 1: Gender Inequality Index**  
Source: Gender Gap Report, 2022.

World Economic Forum (WEF) in the 2022 Global Gender Gap Report stated that Indonesia ranks 92nd out of 146 countries with a Gender Inequality Index scale of 0.697, indicating that there is still a sizable gender gap in Indonesia (World Economic

Forum, 2022). The presence of gender gaps can also be seen from the percentages of the Gender Empowerment Measure (GEM) and the Gender Development Index (GDI).



**Graph 2: GEM of Indonesian Women**  
Source: BPS Indonesia, 2022

The Gender Empowerment Measure (GEM) in Indonesia has increased steadily from 2017 to 2021, with a drastic increase in 2019. The indicator of women's participation in parliament improved by 0.8 percent in 2021 which contributed to the 1.02 percent

growth in GEM that year. The GEM was recorded at 21.09 percent in 2020 and 21.89 percent in 2021. In addition, it was also spurred by an increase in the indicator of women as professionals, which in 2020 had a value of 48.76 percent and increased to 49.99 percent

in 2021. The increasing GEM values show that gender empowerment in Indonesia is improving. The closer GEM is to 100, the lower the gap.

In 2021, out of 34 provinces in Indonesia, there were 4 provinces with the highest GEM percentage above the national average (76.26%) in which the four provinces are Special Region of Yogyakarta, Central Kalimantan, North Sulawesi and North Maluku. Meanwhile, 88.23% of provinces still have GEM values that were lower than the national average. This explains why there are still disparities in access, participation, control and benefits between men and women in development. Although Indonesia's GEM has improved, more attention is still needed to address women's empowerment, which is more important in provinces where GEM accomplishments are below the national average (Kemen PPPA, 2020).

Therefore, action is required to promote gender equality in order to lower the level of inequality. One of the indicators of sustainable development is gender equality, which has as one of its goals ensuring full participation and equal opportunity for women to lead at all levels of decision-making in economic, political, and social life (SDGs National Development Planning Agency, no date). The presence of gender equality will enhance economic growth and development (Pada *et al.*, 2021).

Women's empowerment activities are one strategy to support gender equality. The objective of sustainable development includes the women's empowerment as a tool for development. It is envisaged that the existence of women's empowerment will be able to foster an environment which encourages women in making decisions in the political, economic and public fields (Mobarok, Skevas and Thompson, 2021). Women's economic empowerment must be promoted in a sustainable manner due to the fact that the level of women's economic empowerment is still low and has the potential to worsen income inequality (Wang and Naveed, 2021).

One of the women's empowerment movements in Indonesia is Indonesia's partnership with the international government under the names G20 Empowerment (government and private alliance) and Women 20. Women 20 (W20) is a G20 Engagement Group which focuses on women's empowerment with the goal of promoting women's economic empowerment with four agendas, including: promoting equality, security, and well-being by eliminating discrimination against women in the economy; achieving economic inclusion through support for MSMEs owned by women; reducing vulnerabilities and boosting resilience for women with disabilities and rural areas; and gender-equal health responses (W20 Indonesia, 2022).

According to a study by Firmansyah, C. A. and Sihaloho, E. D. (2021), women's empowerment, women's life expectancy, the percentage of women's population (PERPOP), combined variable of women as professionals, the percentage of women's representation in parliament, and women's expenditure per capita (IPROMENGP) from 34 provinces in Indonesian have a positive impact on the country's gross regional domestic product (GRDP). They also showed that women have equal rights in utilizing economic resources and participating in decision making. However, this study has some lacks in the form of limited independent variables and lack of information on women's contribution to the economy.

The study's findings by Kurnianingsih, F. *et al.*, (2022) demonstrated how women's empowerment affects parliamentary representation, decision-making, and income distribution. According to 2019 BPS-Statistics Indonesia data, the income of women in the informal sector was 26%, which shows that women continue to contribute to the income of the sector and this income is able to create community welfare.

Based on the findings of earlier studies on the impact of women's roles on economic growth, one of which is influenced by the variable of women's empowerment, it is still necessary to conduct additional research in subsequent years in order to observe developments, find out the form of women's empowerment programs and complement the limitations of earlier studies by further examining women's contributions to economic growth. Based on this, the writers conducted a research with the title "The Impact of Women's Empowerment and Contribution on Indonesia's Economic Growth".

## LITERATURE REVIEW

### Gender Equality

Gender equality is the condition in which men and women have equal access to rights and obligations in order for women to actively participate in accomplishing the goals and targets of the Sustainable Development Agenda (SDGs Bappenas, 2016). The creation of gender equality can enhance the stock of human capital, labor productivity, and the quality of human capital through increased education, which will also have an impact on economic growth (Said *et al.*, 2016). Gender equality gives women opportunities to engage in driving the economy, so that women's roles are more respected and economic performance is more active (Pertiwi *et al.*, 2021).

### Women's Empowerment

Women's efforts to acquire access to several aspects such as resources, economics, social issues, politics, and culture are called women's empowerment. Empowerment is provision for women through special government programs, such as soft skills, financial assistance for families and economic group activities, as

well as other relevant training (Darmastuti & Wijaya, 2019).

Making early investments in women to increase their access to employment and education is one method to assist women's empowerment. The success of women's empowerment can be seen in the reduction in the rate of discrimination against women in areas such as education and the labor market (Doepke & Tertilt, 2019).

### Economic Growth

Economic growth is characterized by an increase in long-term output per capita, which is emphasized by three aspects: output per capita, process, and long term. This long-term increase in output per capita is intended to promote prosperity and increase people's purchasing power. In addition, economic growth is supported by three factors, including capital accumulation, population growth, and advanced technology. The increase in the quantity of products and services produced in the community's economy is referred to as economic growth and is a component of the long-term issue (Hartati, 2021). Economic growth must be sustainable and benefits distributed equitably, this challenge can be answered through the development of sustainable innovation, which enhances opportunities and protects society from future risk (Rose, 2020).

### Women's Contribution

The word "contribution" is derived from the English word "contribute", which means to participate, donate, or be involved. The contribution may be in the form of material or direct action. Through contributing, people aim to live more effectively and efficiently (Dirgahayu & Sunarsi, 2017). Women's participation in productive activities, which in turn increases income, helps families, and reduces inequality in economic income will occur if it gives women more rights (Dutta *et al.*, 2018). According to Sri Mulyani, the role of women is real and capable of adding value. Moreover, according to data from the State of the Global Islamic Economy Report, women entrepreneurs can contribute up to USD 5 trillion to the global gross domestic product (Trihusodo, 2021).

## RESEARCH METHOD

The type of research used is a mixed method with the sequential explanatory model, which began with quantitative methods and proceeded into the qualitative methods. According to Sugiyono (2015) this mixed research method aims to obtain data which are based, comprehensive, credible, and objective. Sources of data in this study included secondary data from BPS-Statistics Indonesia website in the form of GRDP of 34 provinces in Indonesia, women's representation in parliaments in 34 provinces of Indonesia, women as professionals in 34 provinces of Indonesia, expenditure of women per capita from 34 provinces in Indonesia,

women's life expectancy in 34 provinces of Indonesia and the percentage of women's population in 34 provinces of Indonesia. In addition, secondary data were also obtained from the official website of the Ministry of Women's Empowerment and Child Protection relating to women's empowerment programs in Indonesia, journals and articles related to women's contribution to economic growth.

Data analysis was conducted by using panel data. Panel data is a combination of time series and cross-sectional data. Panel data regression is a form of developing multiple linear regression to predict the parameters of the regression model (Aulina & Mirtawati, 2021).

### 1. Common Effect Model (CEM)

The Common Effect Model combines all data regardless of time and individual so that there is only dependent and independent variable data. The Common Effect Model equation is shown as follows:

$$Y_{it} = \beta_0it + \beta'X_{it} + \varepsilon_{it}$$

$Y_{it}$  = value of the dependent variable in the i-th observation unit, t-time period

$\beta_0$  = intercept of cross-sectional unit

$X_{it}$  = independent variable

$\beta$  = slope coefficient

$\varepsilon_{it}$  = error component

### 2. Fixed Effect Model (FEM)

The Fixed Effect Model is conducted by adding a dummy variable, so it can also be called as Least Square Dummy Variable (LSDV) model. The form of the FEM equation is shown as follows:

$$Y_{it} = \sum_{k=1}^n \beta_{0k} D_{ki} + \beta'X_{it} + \varepsilon_{it}$$

$\beta_{0k}$  = intercept of the k-th cross-sectional unit

$D_{ki}$  = dummy variable

### 3. Random Effect Model (REM)

The Random Effect Model is an estimation of a random effect model in which differences in individual characteristics and periods are accommodated by errors (Nachrowi & Usman, 2006). The assumption in REM estimation is that the object effect is random for all cross sections. The form of the REM equation is shown as follows:

$$Y_{it} = \beta_0it + \beta'X_{it} + \varepsilon_{it}$$

$$\varepsilon_{it} = u_i + v_t + w_{it}$$

$u_i$  = cross section error

$v_t$  = time series error

$w_{it}$  = combined error

After estimating the panel data regression model, the best model for research was selected using the Chow test and Hausman test. If a panel data

regression model has been determined, the classical assumption test was then conducted using the multicollinearity, heteroscedasticity, and autocorrelation tests. The final step in processing this data was to conduct a regression test to determine the relationship between the independent and dependent variables.

**RESULT AND DISCUSSION**

**Selection of Panel Data Regression Model Estimation**

**Table 1: Common Effect Model Estimation Results**

| Variable       | Coefficient (β) |
|----------------|-----------------|
| Intercept      | 16.930          |
| X <sub>1</sub> | 1,752           |
| X <sub>2</sub> | -0,012          |
| X <sub>3</sub> | -0,277          |

Source: STATA 14 data were processed, 2022

The panel regression model with the CEM model is based on the estimation results in Table 1.

$$\hat{Y}_{it} = 16,930 + 1,752X_{1it} - 0,012 X_{2it} - 0,277X_{3it}$$

**Table 2: Fixed Effect Model Estimation Result**

| Variable       | Coefficient (β) |
|----------------|-----------------|
| X <sub>1</sub> | -0,957          |
| X <sub>2</sub> | -4,072          |
| X <sub>3</sub> | -5,710          |

Source: STATA 14 data were processed, 2022

The panel regression model with the FEM model is based on the estimation results in Table 2.

$$\hat{Y}_{it} = \beta_{0i}D_i - 0,957X_{1it} - 4,072X_{2it} - 5,710X_{3it}$$

**Table 3: Random Effect Model Estimation Results**

| Variable       | Coefficient (β) |
|----------------|-----------------|
| Intercept      | 17,098          |
| X <sub>1</sub> | 1,685           |
| X <sub>2</sub> | -0,013          |
| X <sub>3</sub> | -0,279          |

Source: STATA 14 data were processed, 2022

The panel regression model with the REM model is based on the estimation results in table 3.

$$\hat{Y}_{it} = 17,098 + 1,685X_{1it} - 0.013X_{2it} - 0.279X_{3it}$$

After conducting panel data regression modeling, a Hausman test was carried out to determine whether to utilize REM or FEM models in this study. The Hausman test results showed a p value of 0.0000 which is less than the 5% of significance level, so H0 was rejected. The data processing results determined that FEM was the best model to utilize in this study. Furthermore, the classical assumption test was conducted, namely the multicollinearity, heteroscedasticity, and autocorrelation tests.

According to data processing results, it shows a correlation between independent variables of < 0.8. The correlation between X1 and X2 is 0.3301, X1 and X3 is 0.4944, X2 and X3 is 0.0443. Therefore, it can be concluded that there is no multicollinearity problem. The heteroscedasticity test results obtained a p value of 0.000 < 5% so that H0 was rejected, which means that the FEM model detected heteroscedasticity. The autocorrelation test results obtained a p value of 0.5592 > 5%, so that the FEM model is free from autocorrelation. The writers employed robust regression to address the heteroscedasticity. Robust regression, which uses a robust standard error to address heteroscedasticity, is a regression that is not sensitive to outliers (Utomo *et al.*, 2014).

Based on the results of the parameter significance test, the F test value was determined to be 0.0041 < 0.05, indicating that the independent variables have a significant impact on the dependent variables. The probability value of the t test in the partial test was obtained as follows:

**Table 4: Partial Test**

| Variable       | Coefficient | p-value | Conclusion    |
|----------------|-------------|---------|---------------|
| X <sub>1</sub> | -0.9571     | 0.525   | Has no impact |
| X <sub>2</sub> | -4.0724     | 0.001   | Has an impact |
| X <sub>3</sub> | -5.7106     | 0.010   | Has an impact |

Source: STATA 14 data were processed, 2022

Using a significance level of 5% = 0.05, the variable X<sub>1</sub> (combined variable) has no significant impact on the dependent variables. Combined variable refers to the index women empowerment which has three component, namely: women’s representation in parliament, decision making, and the role of women in the economy. This is aligned with the study by Sari (2021), which found gender empowerment has no significant impact on per capita income.

While the variables X<sub>2</sub> (women’s life expectancy) and X<sub>3</sub> (the percentage of women’s population) have a significant impact on the dependent variables. This is aligned with the study by Firmansyah, C. A., and Sihaloho, E. D. (2021), which found that GRDP is significantly impacted by women’s life expectancy and the percentage of women’s population. The results of the study are also in line with the study by Infarizki *et al.*, (2018) which stated that the ratio of life expectancy has a significant impact on GRDP in Kedu Residency region in 2010-2018 because the life span of women is higher than men. The result of the study by Kurniawati, E., & Sugiyanti, C (2021) also found that population growth has a significant and negative effect on economic growth.

**Panel Data Regression Final Model**

$$\hat{Y}_{it} = \beta_{0i}D_i - 4,0724X_{2it} - 5,7106X_{3it}$$



According to the above panel data regression equation, it is explained that every increase in life expectancy for 1 year will result in a 4.0724% reduction in the GRDP, while every 1% increase in the women's population will result in a 5.7106% reduction in the GRDP. The increasing percentage of women's life expectancy without investment in education and skills in resource management will increase the number of unemployed. Moreover, the growing number of people with chronic illnesses in productive age will lower labor force participation and lower the productivity of human resources (Okunade & Osmani, 2020).

Economic growth is negatively and significantly impacted by population growth. This is aligned with Solow's theory of economic growth, which contended that a higher population growth rate will result in a decline in the level of capital per worker so that it will lead to a decrease in output. Therefore, it can be concluded that population growth, which is continuing to increase, has a negative impact on economic growth (Kurniawati & Sugiyanto, 2021).

$\beta_{0i}$  value is the intercept of each province which has a different value as written in the table below.

**Table 5: Estimation of Intercept for Each Province in Indonesia**

| Kabupaten / Kota     | $\beta_0$ |
|----------------------|-----------|
| Aceh                 | 580,333   |
| Sumatera Utara       | 576,334   |
| Sumatera Barat       | 578,525   |
| Riau                 | 587,641   |
| Jambi                | 587,765   |
| Sumatera Selatan     | 584,236   |
| Bengkulu             | 579,422   |
| Lampung              | 583,079   |
| Kep. Bangka Belitung | 580,394   |
| Kep. Riau            | 581,23    |
| DKI Jakarta          | 601,295   |
| Jawa Barat           | 596,263   |
| Jawa Tengah          | 607,34    |
| D.I. Yogyakarta      | 613,818   |
| Jawa Timur           | 596,895   |
| Banten               | 584,414   |
| Bali                 | 593,403   |
| Nusa Tenggara Barat  | 574,071   |
| Nusa Tenggara Timur  | 577,978   |
| Kalimantan Barat     | 583,492   |
| Kalimantan Tengah    | 579,653   |
| Kalimantan Selatan   | 579,653   |
| Kalimantan Timur     | 590,846   |
| Kalimantan Utara     | 582,594   |
| Sulawesi Utara       | 590,497   |
| Sulawesi Tengah      | 583,699   |
| Sulawesi Selatan     | 598,029   |
| Sulawesi Tenggara    | 593,234   |

| Kabupaten / Kota | $\beta_0$ |
|------------------|-----------|
| Gorontalo        | 581,352   |
| Sulawesi Barat   | 565,216   |
| Maluku           | 569,548   |
| Maluku Utara     | 579,77    |
| Papua Barat      | 551,014   |
| Papua            | 548,117   |

Source: STATA 14 data were processed, 2022

Based on the coefficient of determination test, the value of  $R^2$  is 0.3703. This indicates that women's life expectancy in 34 provinces of Indonesia and the percentage of women's population in 34 provinces of Indonesia can explain the GRDP of 34 provinces in Indonesia of 37.03% while the remaining 62.79 % explained by other variables outside the model. Due to the presence of additional factors, such as trade wars, consumption, and investment, the coefficient of determination is quite low.

According to the special staff of the Minister of Finance of the Republic of Indonesia, Candra Fajri Ananda, household consumption expenditures and Gross Fixed Capital Formation (GFCF) accounted for 50.38% of Indonesia's economic growth. In the third quarter of 2022, food and beverage consumption growth increased by 2.6% (yoy), transportation and communication consumption growth increased by 12.9% (yoy), and restaurant and hotel activities growth increased by 9.1% (yoy) (Achadi, 2022).

Investment is closely related to national income. In the first semester of 2020, The Indonesian Investment Coordinating Board (BKPM) reported that investment realization was 49.3%. Well-managed investments will spur economic growth by increasing state revenues. The increase in state revenue will stimulate the government to take a more active role in implementing infrastructure development to draw in investors. In addition, by investing, it will establish a variety of new businesses which will impact on increasing the availability of jobs in which it supports growth in household consumption and consumer purchasing power (BKPM, 2020).

The trade war between the US and China indirectly affected Indonesia's economy. Due to US policy, which imposed a 25% tariff, Indonesia's overall exports to the US market through China fell by US\$ 330 million. Meanwhile, the US exports declined by US\$ 17 billion as a result of China's 25% tariff on US goods. The increase in tariffs resulted in a US\$ 40 million decrease in exporting to China through the US as a result of an indirect effect (Purwono *et al.*, 2022).

Women are agents of development who contribute significantly to the country's economic growth, but this role must be followed by improving self-quality, developing abilities and intelligence. The

government offers a range of programs for women's empowerment in an effort to raise their roles, with the goals of enhancing their self-confidence, maximizing their potential, and achieving gender equality in Indonesia. It is envisaged that the empowerment program will help women actively participate in generating prosperity. Welfare can be formed because

women have extensive knowledge, capable of defending their rights, and have their own income (Utami, 2019). If the programs for women's empowerment are successful, women will contribute more to generating economic growth. The government has implemented a number of programs for women's empowerment, such as:

**Table 6: Women Empowerment Programs in Indonesia**

| No | Program Name  | Program Description   | Types of Activity   |
|----|---|---|---|
| 1  | ASEAN Woman Entrepreneurship Network (AWEN)                     | AWEN was established in Thailand as an economic organization for the ASEAN nations in April 22, 2022. The primary goal of AWEN is to support women's economic empowerment by fostering connections between female business owners throughout ASEAN. Indonesia has the honor of being chairman of AWEN for the 2021-2023 period (Assegaf, 2021)  | <ul style="list-style-type: none"> <li>• Providing training to MSMEs, women entrepreneurs and female workers.</li> <li>• Implementing sustainable and self-sufficient promotional activities for MSMEs</li> <li>• Engaged in strengthening resilience to climate change and resolving environmental issues</li> <li>• Expanding market access in preparation for digitalization</li> <li>• Accelerating financial inclusion, literacy and discipline</li> <li>• Information-sharing among ASEAN women to strengthen relations between AWEN members.</li> <li>• Strengthening ASEAN women's leadership empowerment on a global scale.</li> </ul>   |
| 2  | W20 Sispreneur  | W20 Sispreneur is a collaborative program between the Ministry of Women Empowerment and Child Protection and XL Axiata. Sispreneur is a program implemented in the form of business management classes through digital utilization. The purpose of this program is to empower women entrepreneurs to improve business quality, build superior and empowered women MSMEs, and give women entrepreneurs access to reach international levels through giving access to capital and digital transformation. | <ul style="list-style-type: none"> <li>• In the W20 Sispreneur, XL Axiata has a role in providing business solutions, mentoring, and training. In June 2022, it was reported that this program had helped more than 1,000 women entrepreneurs across all of Indonesia, and 79% of them were successful in making the transition to the digital world. (XL Axiata, 2022)</li> </ul>  |
| 3  | The Women-friendly and Child-nurturing Village (DRPPA) Program. | It is a collaborative program between the Ministry of Women Empowerment and Child Protection, the Ministry of Village, Development of Disadvantaged Regions, and Transmigration, and the Ministry of Home Affairs. The DRPPA program is considered to be a village with a gender perspective and children's rights in managing government, development, and community empowerment in a sustainable manner.  | <ul style="list-style-type: none"> <li>• Organizing women and children in the village,</li> <li>• Availability of village data related to segregated data on women and children</li> <li>• Availability of Village Regulations/Head of Village Decree regarding DRPPA,</li> <li>• Availability of village financial resources and village assets for child protection and women's empowerment. The percentage of women's representation in village government, village consultancy agency, village community institution, and village customary institution,</li> <li>• Creating women entrepreneurs in the village.</li> <li>• Based on the rights of the child, all children receive care.</li> </ul> |

| No | Program Name                             | Program Description   | Types of Activity  |
|----|--|---|--|
|    |  |   | <ul style="list-style-type: none"> <li>• Eliminate violence against women, children, and victims of human trafficking.</li> <li>• No child labour.</li> <li>• No child marriage (Communication and Informatics Office (Diskominfo Jawa Timur, 2022)).</li> </ul>   |
| 4  | MAMPU                                    | The MAMPU program is a form of cooperation between the government of Australia (Department of Foreign Affairs and Trade) and Indonesia (National Development Planning Agency (BAPPENAS), with the intention of improving the access of underprivileged women in Indonesia to public services and programs as well as encouraging the achievement of sustainable development objectives. MAMPU focuses on empowering marginalized women and influencing local and national government policies.                                  | <ul style="list-style-type: none"> <li>• Enhancing conditions for the migration of women workers abroad</li> <li>• Enhancing women's health and nutritional status</li> <li>• Decreasing violence against women</li> <li>• Enhancing access to protection programs</li> <li>• Enhancing working conditions and eliminating discrimination</li> </ul>   |
| 5  | Women in Digital Entrepreneurship (WiDE) | WiDE is a program that came forth as a result of cooperation between the ICT Research and HR Development Agency of the Ministry of Communication and Informatics, and the IEEE Indonesia Section in commemoration of Kartini Day. The WiDE program was created in response to the fact that 60% of MSMEs in Indonesia are managed by women, a number that has risen in 2021, as well as their lack of familiarity with digital technology and their difficulty accessing funding for business development. (Kemenko PMK, 2022). | <ul style="list-style-type: none"> <li>• The Women in Digital Entrepreneurship training is targeted at women aged 15-35 years with the aim of creating digitally literate women entrepreneurs who are able to develop digital entrepreneurs. During the pandemic, the WiDE program was implemented with the intention of bringing about change and assisting the family's economic recovery. Panel discussions and workshops are used to conduct WiDE activities. The panel discussion intends to provide awareness regarding government policies in encouraging and increasing the role of women entrepreneurs, while the workshop is held to improve women's abilities in digital entrepreneurship.</li> </ul> |

Source: Data were processed, 2022

W20 Sispreneur program provides an opportunity for participants to win a total business capital prize of 300.000.000 rupiah, participate in product exhibition activities during W20 SUMMIT event in July 2022, and receive invitations to business networking events with W20 delegates for 10 winners. Then the next 10 winners will be selected to get direct discussions with practitioners from all over the world and intensive business assistance in one month (Sisternet, 2022).

The success of DRPPA program can be seen through Kediri Regency which is the mecca for program implementation. In supporting the development of DRPPA Kediri Regency implements: (1) Kediri Regency in implementing DRPPA formed the "Srikandi Biru" program, which is a mentoring program for brides to be until they have children aged 5 years.; (2) Psychological assistance for children experiencing

violence in isolation, family violence, disabilities, and victims of covid 19; (3) Women's quality improvement activities through fish processing, women's nutrition improvement programs, and lestari home area competitions; (4) Building an Incubation House Outlet (Garage) for women MSMEs (Diskominfo Kabupaten Kediri, 2022).

As of November 2019, the MAMPU program has helped 123,000 women and 27,000 men received access to social services and social programs offered by the government. It has also been successful in over 1600 women's organizations and empowered 35,000 women in 147 regencies/municipalities across 27 provinces. This is one result of the empowerment program. In addition, there is Indonesian Female Homemaker Network (JPPRI) which was founded in May 2017 and has 4,177 women members as well as more than 59 homemaker groups. JPPRI has also



reached more than 4,900 women migrant workers and was influential in the formation of Productive Migrant Village (DESMIGRATIF) program in which it helped develop a database system for cases of violence against women by Service Provider Forum (FPL) and assisted more than 3,300 cases in 33 regencies/municipalities in 15 provinces (BAPPENAS, 2020).

### Women's Contribution on MSMEs

In Indonesia, women's contributions are important to overcoming challenges, encouraging economic recovery, and transforming the economy. One form of women's contribution to the economic sector is the large number of female MSMEs actors, which is 97% with a contribution of MSMEs to GDP of 61% (Trihusodo, 2021). Almost all economic activities are currently beginning to shift to the digital era, so according to the minister of finance, women can participate in the economy through digital MSMEs and run their own businesses from home. Moreover, this offers a chance to advance women's roles and achieve prosperity.

### Women's Contribution on the Field of Education

The role of women as agents of development can be realized along with gender equality, which gives women access to resources and the power to decide how these resources should be administered. Women need to be motivated by improving the quality of the population at productive age through education and skills in order to be able to make the most of the resources they have. The higher the education, the higher the economic growth (Karwati, 2020).

Education is one of the supporting factors in increasing development. Through education, technological and innovation knowledge will be developed to stay up with digital advancements that result in competent and skilled human resources. Women's contribution to education can increase labor productivity and provide a prospective workforce which will increase national income (Haqiqi, 2021). The Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) reported that 61% of the 2,906,239 teachers are women. Therefore, women have a significant impact in producing the nation's next generation of morally upright and qualified citizens (Kemenko PMK, 2021).

### Women's Contribution on the Utilization of Demographic Bonus

According to projections, Indonesia will enter a demographic bonus phase between 2030 and 2040 in which 64% of the population will be in the productive age category. The demographic bonus is envisaged to stimulate economic growth and decrease poverty by optimally employing the population of productive age in development activities. In February 2022, the population of productive age in Indonesia was recorded at 75.62%. In order to fully capitalize on this

demographic bonus, it is important to maximize the women's contribution to the labor market. This will increase household income which will raise per capita income and result in the creation of excellent human resources (Huba, 2022).

The demographic bonus is a condition in which there is an abundance of labor force and an improvement in the quality of labor which can compete in the global market, thus it must be used as effectively as possible to promote progress and economic growth (Sutikno, 2020). Women play a crucial role in supporting the demographic bonus by lowering the birth rate through making investments in family planning and reproductive health, enhancing education, and actively participating in the labor market. The potential of women of productive age needs to be further investigated and developed, particularly through the fields of education and job training in order to enhance women's access to take advantage of demographic bonus and thereby the status of the nation will be enhanced (Kartika, 2018).

### Women's Contribution on Creative Economy

Based on data for June 2022, the population in Indonesia was recorded at 275,361,267 people with a proportion of 138,999,996 male residents and 136,361,271 female residents (The Directorate General of Population and Civil Registration of the Ministry of Home Affairs (Dukcapil Kemendagri), 2022). There is still inequality as evidenced by the labor force participation rates of males (82.27%) and women (53.34%) which necessitates for action to advance women's roles. The creative economy is being used by the government to improve the role of women by highlighting the potential and creativity of human resources which can be applied in 17 different creative economy sub-sectors.

This creative economy was chosen so that women can contribute in taking care of family needs and have access to resources or opportunity to start enterprises (Khairunnisa *et al.*, 2022). Women's participation in the creative economy has the potential to enhance economic growth. According to records, women made up 65.4% of those working in the creative industries. The increase in the total exports of the creative economy, which reached \$24 billion or Rp374 trillion in 2021, is evidence of the benefits of women's participation in the sector (CNBC Indonesia, 2022).

## CONCLUSIONS

Panel data regression in this study used the fixed effect model and the model obtained is as follows:

$$\hat{Y}_{it} = \beta_{0i}D_i - 4,0724X_{2it} - 5,7106X_{3it}$$

According to the panel data regression model presented above, it can be interpreted that every increase in life expectancy for 1 year will result in a 4.0724% reduction in the GRDP, while every 1%

increase in the female population will result in a 5.7106% reduction in the GRDP.

Women play a significant role in fostering economic growth since they are considered as agents of development. Nevertheless, the women's contribution on the development is still undervalued and underappreciated. In order to address this, the government created programs for women's empowerment to enhance women's skills and creativity so they may compete and contribute to the development. The government runs a number of programs for women's empowerment, including AWEN, W20 Sispreneur, DRPPA, MAMPU, and WiDE. The majority of programs place a greater emphasis on the economic field through enabling female MSMEs actors to raise digital literacy and expand markets. Women who are adequately equipped with knowledge and skills will make the greatest contributions to the development, which will have an effect on enhancing economic growth.

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