Analysis of Factors Influencing the Gender Empowerment Index in Central Java, Indonesia

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Abstract:

This study aims to examine the influence of the Female Labor Force Participation Rate (FLFPR), Percentage of Women Who Have Ever Accessed the Internet (PPMI), Percentage of Female Population, Average Years of Schooling (AYS) for women, and Female School Participation Rate (SPR) on the Gender Empowerment Index (GEI) in Central Java Province during the period 2019–2023. This research employs a quantitative approach using secondary data and applies panel data regression analysis through the Fixed Effect Model (FEM). The results show that PPMI has a significant positive effect on GEI, while FLFPR, Percentage of Female Population, AYS for women, and SPR do not have a significant effect. The insignificant variables indicate that improvements in formal education, the proportion of the female population, and labor force participation alone are insufficient to substantially enhance gender empowerment. Conversely, PPMI emerges as a key factor, as internet access broadens women's opportunities to acquire information, skills, and networks, thereby increasing their capacity, participation, and bargaining power in economic, political, and social spheres, and serving as a strategic catalyst for accelerating gender empowerment policies at the regional level.

1. Introduction

Inclusive and sustainable human development is intrinsically linked to the pursuit of gender equality. Gender equality represents a fundamental component in the realization of economic prosperity, as it signifies that both women and men possess equivalent opportunities to benefit from developmental advancements devoid of discrimination (Rahmawati & Hidayah, 2020). This principle aligns with Indonesia's overarching human development objective, which seeks to attain gender equality to enhance the quality of human resources irrespective of gender distinctions. Consequently, gender-sensitive development is essential to ensure that individuals are afforded opportunities and their inherent rights as human beings to engage and participate in political, economic, socio-cultural, defense, and national security endeavors (KPPA, 2016).

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Gender equality and justice denote conditions wherein the roles and contributions of both men and women occur in a balanced, cohesive, and equitable manner across diverse life domains (Yuslin, 2021). The concept of gender equality transcends mere concerns regarding the parity of status between men and women, extending to the achievement of roles. Women ought to occupy a proportionate presence in governmental administration, political decision-making, and economic activities, particularly in generating household income (Dini et al., 2020).

In the context of gender-focused human development initiatives, it is imperative to expedite the advancement of the female demographic within a region through various intervention programs. This approach facilitates the prompt attainment of equal and equitable development by striving to minimize the gender disparity as much as feasible. The Government of Indonesia demonstrates a commitment to fostering gender-equitable development as articulated in Presidential Instruction Number 9 of 2000 on Gender Mainstreaming in National Development, which has subsequently been delineated in the RPJPN and RPJMN (Hadiarta et al., 2022).

In evaluating gender-related dimensions, two primary indicators are utilized: the Gender Development Index (IPG) and the Gender Empowerment Index (IDG). The IPG assesses achievements along the same dimensions as the Human Development Index (IPM), yet it highlights disparities in accomplishments between women and men (UNDP, 2014). Conversely, the Gender Empowerment Index (IDG) serves as a metric for gauging women's engagement in political, decision-making, and economic arenas, thereby illuminating the inequities in the achievements of both genders (Lusiarista & Arif, 2022). The three indicators comprise the proportion of women's contributions to labor income, women's representation in parliamentary bodies, and women's participation in decision-making roles, which are assessed through indicators encompassing women as managerial, professional, administrative, and technical personnel (UNDP, 2009). The Gender Empowerment Index for Central Java Province from 2019 to 2023 is illustrated in Figure 1.
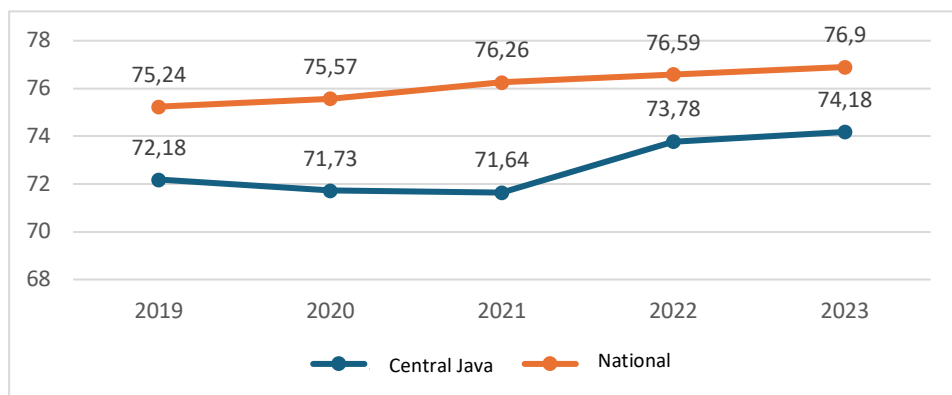

Figure 1. Gender Empowerment Index Central Java 2019-2023
Source: BPS, Proceed (2025)

Graph 1 illustrates that over the span of five years, the Central Java province has exhibited variability. The growth of the Gender Empowerment Index (IDG) in Central Java Province from 2021 to 2023 has demonstrated a consistent upward trajectory, with an increase from 71.64 in 2021 to 74.18 by 2023. Notwithstanding this upward trend during the period from 2021 to 2023, the achievements of the IDG remain below the national benchmarks.

Several studies highlight the consistent influence of women's representation in parliament, professional employment, and income contributions on the Gender Empowerment Index (IDG). Raihannabil (2025) in West Nusa Tenggara, Yustie & Prayitno (2024) in North Kalimantan, Rusli & Magna (2023) in Magelang, and Ningsih (2014) in Borneo all found these factors significantly enhance IDG. Similarly, Mahfiroh (2020) in East Java identified the role of female labor force participation, professional positions, and political representation as key determinants, alongside contributions to household income. Conversely, Rahman (2020) in Borneo observed that while labor force participation improved IDG, a higher proportion of female population correlated negatively, and internet access showed no effect. These findings indicate that political and professional participation consistently support empowerment, whereas demographic composition and digital access show mixed or limited influence.

Economic and educational factors have also been linked to gender empowerment, though their effects vary across contexts. Rifatin & Pramesti (2024) in East Java found that per capita expenditure disparities, educational attainment, women's labor force participation, and parliamentary representation had positive associations with IDG, while human development gaps and expenditure indices had negative effects. Mahfiroh (2020) further emphasized the significance of secondary education levels among women, participation in formal sectors, and civil service employment. In contrast, Erika et al. (2025) in Jambi reported that economic growth, school participation, literacy rates, and labor force participation had no significant impact, whereas poverty reduced IDG and early marriage hindered it further. These discrepancies suggest that structural inequalities, education access, and economic inclusion intersect in complex ways, shaping empowerment differently across regions. Beyond regression analyses, several descriptive and clustering studies shed light on regional disparities in IDG components. Salsabila & Hendrawan (2021) used clustering to categorize Indonesian provinces into three groups, revealing that the largest disparities stem from women's parliamentary representation. Yuslin (2021) argued that gender mainstreaming strategies in Indonesia remain suboptimal, as seen in IDG scores that fall short of equality targets.

Previous studies have highlighted that factors such as women's representation in parliament, the proportion of female professionals, income contribution, labor force participation, economic disparities, and education have shown varying influences on the Gender Empowerment Index (IDG) across different regions. However, the inconsistency of findings indicates the absence of a clear consensus regarding which variables most consistently affect the IDG. While some research suggests that formal education is not a significant determinant, others position it as a key driver. Similarly,

access to technology and basic infrastructure is often underexplored or yields inconclusive results. Moreover, there is a scarcity of studies that simultaneously examine demographic, social, economic, political, and technological factors within a unified analytical framework. This gap underscores the need for an integrated panel data approach to provide a more comprehensive understanding of the determinants of gender empowerment.

A majority of preceding research has concentrated on alternative national or provincial levels, employing limited variables and failing to thoroughly explore the socioeconomic factors influencing the IDG in Central Java province. This study addresses this lacuna by examining the impact of five principal variables on the IDG in Central Java from 2019 to 2023 through a panel data regression analysis. In light of the aforementioned context, this study aims to investigate the effects of the female labor force participation rate, the proportion of women accessing the Internet, the percentage of the female population, and the rate of female school participation on the Gender Empowerment Index in Central Java during the period from 2019 to 2023.

2. Theoretical Background

In the last twenty years, the phrase "women's empowerment," frequently utilized interchangeably with the concept of gender empowerment, has become prevalent within the discourse of international development and has emerged as a pivotal global commitment under Sustainable Development Goal 5 (SDG-5), which aims to attain gender equality and empower all women and girls (Desai et al., 2022). Empowerment is characterized as a transformative process wherein individuals who were previously disenfranchised are afforded the autonomy and means to make informed choices (Kabeer, 2005). The empowerment of women is anticipated to yield substantial positive effects on familial well-being, community dynamics, and economic progress (Neha & Ansari, 2020).

The concepts of empowerment and development are intrinsically linked, whereby empowerment is instrumental in facilitating sustainable development and is a fundamental prerequisite for the realization of gender equality and advancement in developmental outcomes (Neha & Ansari, 2020).The empowerment of women encompasses developmental objectives that are conducive to alleviating poverty, enhancing health outcomes, and fostering growth (Kazembe, 2020). Although women's empowerment has been integral to development policies in developing nations, women continue to encounter significant challenges. The role of women in development is frequently questioned, as they are often perceived as unsuitable and incapable (Probosiwi, 2015). According to Banerjee et al. (2020), women's empowerment pertains to their autonomy, the capacity to make familial decisions, attain financial independence, be acknowledged as equals to men, and have the opportunity to express their views on matters, particularly those affecting their welfare, such as education and health.

Empowerment assumes a strategic significance in the pursuit of gender equality, as this process fosters awareness, builds capacity, and enhances decision-making capabilities among individuals, particularly women, thereby fostering equitable conditions between genders (Annastasya, 2024). Elevated levels of gender empowerment afford women increased respect and autonomy, along with improved labor market conditions (Huh, 2016). Nonetheless, gender inequality persists as a tangible challenge across various sectors of development, particularly at the regional level (Kertati, 2021). Consequently, it is imperative to conduct more focused and contextually relevant investigations into the determinants of gender empowerment indices at the provincial level.

Analyses of gender empowerment strategies indicate that their implementation remains suboptimal across various regions. Yuslin (2021) noted that the execution of such strategies in Indonesia still falls short of the equality target, despite gradual progress. Rahmawati et al. (2021) in Papua revealed that both the Gender Development Index and the Gender Empowerment Index remain low compared to other provinces, with patriarchal cultural norms and limited access to education, politics, and economic opportunities serving as major constraints. Kertati (2021) found that although Surakarta City's performance exceeded both provincial and national averages, its recent downward trend underscores the need for renewed efforts. Collectively, these studies emphasize that gender disparities are shaped not only by numerical achievements but also by structural and cultural factors that remain deeply entrenched.

Other studies highlight structural, political, and economic dimensions influencing the Gender Empowerment Index. Dongre (2021) observed that, on a global scale, women's representation in parliaments and strategic positions remains limited, with Scandinavian countries standing out for their higher levels of female representation. Lestari et al. (2019) in Banyumas identified that empowerment indicators such as legislative representation, the proportion of female managers, and women's contributions to household income continue to show unsatisfactory outcomes. Kurnianingsih et al. (2022) in Tanjungpinang found that its relatively strong performance was driven by increased female participation in strategic positions and substantial contributions in the informal sector. Taken together, these findings underscore the necessity of enhancing women's political participation, leadership, and economic roles as central drivers of gender empowerment.

3. Methodology

The methodological instrument employed in the present investigation involved a regression analysis of panel data utilizing econometric models, delineated as follows:

$$IDG_{it} = \beta_0 + \beta_1 TPAK_{it} + \beta_2 PPMI_{it} + \beta_3 PP_{it} + \beta_4 RLS_{it} + \beta_5 APP_{it} + \varepsilon_{it}$$

Where:
IDG = Gender Empowerment Index (%)
TPAK = Female Labor Force Participation Rate (%)

PPMI	= Percentage of Women Who Have Ever Accessed the Internet (%)
PP	= Percentage of Female Population (%)
RLS	= Average Years of Schooling for Girls (Year)
APS	= Female School Participation Rate (%)
ε	= Error term
$\beta 0$	= Constant
$\beta_{1...}\ \beta_5$	= Regression coefficient of independent variables
i	= Regency/City
t	= Year-t

The aforementioned econometric framework constitutes an amalgamation of multiple models. The variables TPAK, PPMI, and PP were derived from the model proposed by (Rahman, 2020), while the RLS variables were sourced from the model developed by (Rusli & Magna, 2023), and the APS variables were extracted from the framework presented by (Erika et al., 2025). It was posited that the variables TPAK, PPMI, RLS, and APS exert a positive influence, whereas the PP variables were anticipated to have a negative impact on the Gender Empowerment Index (IDG).

The dataset utilized in this research comprises panel data, which represents a synthesis of time series and cross-sectional data. The time series data spans the years 2019 to 2023, while the cross-sectional data pertains to the District/City of Central Java Province. The data sources were acquired from the Central Statistical Agency (BPS).

The estimation phase for the panel data regression analysis will encompass the estimation of econometric model parameters utilizing Pooled Least Squares (PLS), Fixed Effects Model (FEM), and Random Effects Model (REM) methodologies; the determination of the most appropriate estimated models through the application of the Chow test and Hausman test, and, if necessary, the Lagrange Multiplier test; the assessment of model goodness of fit for the selected estimated models; and the validation of the impact of independent variables on the chosen estimated models.

4. Empirical Findings/Result

The findings derived from the preliminary estimation of the econometric model utilizing the Pooled Least Squares (PLS), Fixed Effects Model (FEM), and Random Effects Model (REM) methodologies are encapsulated in Table 1.

Table 1. Econometric Model Estimation Results of Panel Data Regression - Cross Section

Variable	Regression Coefficient		
	PLS	FEM	REM
C	74,34649	71,01326	-0,4687
APS	0,260662	-0,011294	0,1800
PP	-0,491631	-0,100800	-0,0181
PPMI	0,144907	0,034439	0,0827
RLS	0,489178	0,897931	0,0828
TPAKP	-0,027078	-0.032791	5,6165
R^2	0,206787	0,985874	0,9632
Adjusted. R^2	0,183319	0,981793	0,9594

Variable	Regression Coefficient		
	PLS	FEM	REM
Statistic F	8,811499	241,5833	256,4279
Prob. Statistic F	0,000000	0,000000	0,0000

Model Selection Test
(1) Chow
    Cross- Section $F(34,135) = 218,986385$; Prob. $F(34,135) = 0,000000$
(2) Hausman
    Cross-Section random $\chi^2 (5) = 12,157849$; Prob. $\chi^2 = 0,0327$
Source: BPS, proceed (2025)

The Chow test alongside the Hausman test substantiated the selection of the Fixed Effects Model (FEM) as the most appropriate estimated model, as evidenced by the probability or empirical significance of the F and chi-squared statistics, which are recorded at 0.000000 (<0.01) and 0.0327 (<0.05), respectively. The comprehensive results of the estimations derived from the FEM are presented in Table 2 and Table 3.

Table 2. Fixed Effect Model (FEM) Estimation Model

$$IDG_{it} = 71,01326 - 0,011294\, APS_{it} - 0,100800 PP_{it} + 0,034439\, PPMI_{it}$$
$$\qquad\qquad (0,5579) \qquad\quad (0,3914) \qquad\quad (0,0857)^{***}$$
$$+ 0,897931 RLS_{it} - 0,032791 TPAKP_{it}$$
$$\quad (0,1349) \qquad\quad (0,3080)$$

$R^2 = 0,98587$; $DW = 1,692824$; $F. = 241,5833$; Prob. $F = 0,00000$

Sumber: BPS, processed (2025)
Note: *Significant at α = 0.01; **Significant at α = 0.05; ***Significant at α = 0.10;
The numbers in parentheses are the probability of the t-statistic value.

Table 3. Regional Effects and Constants

No	Region	Effect	Constant
1	Cilacap Regency	0.525923	71.539183
2	Banyumas Regency	1.430635	72.443895
3	Purbalingga Regency	1.014591	72.027851
4	Banjarnegara Regency	4.376248	75.389508
5	Kebumen Regency	-3.015863	67.997397
6	Purworejo Regency	-0.081661	70.931599
7	Wonosobo Regency	-21.05722	49.95604
8	Magelang Regency	-0.169824	70.843436
9	Boyolali Regency	12.64999	83.66325
10	Klaten Regency	0.217799	71.231059
11	Sukoharjo Regency	6.908541	77.921801
12	Wonogiri Regency	2.793788	73.807048
13	Karanganyar Regency	2.987873	74.001133
14	Sragen Regency	-2.615118	68.398142
15	Grobogan Regency	-11.28821	59.72505
16	Blora Regency	-5.24122	65.77204

No	Region	Effect	Constant
17	Rembang Regency	-2.873707	68.139553
18	Pati Regency	-2.354279	68.658981
19	Kudus Regency	-4.979391	66.033869
20	Jepara Regency	-12.65943	58.35383
21	Demak Regency	-2.450842	68.562418
22	Semarang Regency	6.315655	77.328915
23	Temanggung Regency	15.11037	86.12363
24	Kendal Regency	7.533804	78.547064
25	Batang Regency	-4.580454	66.432806
26	Pekalongan Regency	1.367585	72.380845
27	Pemalang Regency	11.99808	83.01134
28	Tegal Regency	3.366257	74.379517
29	Brebes Regency	-6.658991	64.354269
30	Magelang City	5.331968	76.345228
31	Surakarta City	6.92112	77.93438
32	Salatiga City	5.084056	76.097316
33	Semarang City	1.297605	72.310865
34	Pekalongan City	-10.57127	60.44199
35	Tegal City	-6.634414	64.378846

Source: BPS, processed (2025)

From Table 2, it is discernible that a statistically significant Fixed Effects Model (FEM) has been estimated, exhibiting an empirical significance F value of 0.0000 (< 0.01), alongside a coefficient of determination (R^2) amounting to 0.98587; this suggests that the FEM estimated model possesses a remarkably high predictive capability. However, it is imperative that this predictive capability is subjected to critical interpretation, as an analysis of the five variables within the econometric model reveals that, in fact, only one variable, namely the percentage of women who have accessed the Internet (PPMI), demonstrates a statistically significant impact on economic growth with an empirical significance t value of 0.0857 (< 0.1).

The variable denoting the Percentage of Women Who Have Ever Accessed the Internet exhibits a regression coefficient of 0.034439, characterized by a linear-linear relationship. Specifically, this implies that a 1% increase in the percentage of women who have ever accessed the Internet correlates to a 0.034439% increase in the Gender Empowerment Index. Conversely, a 1% decrease in the percentage of women who have ever accessed the Internet would result in a 0.034439% decrease in the Gender Empowerment Index.

In Table 3, it is evident that the region exhibiting the highest constant value is Temanggung Regency, quantified at 86.12363. This finding indicates that the influences of the variables including Female School Participation Rate, Percentage of Female Population, Percentage of Women Who Have Accessed the Internet, Average

Female School Length, and Female Labor Force Participation Rate in Temanggung Regency tend to yield a higher Gender Empowerment Index relative to other Districts/Cities within Central Java Province. Following Temanggung Regency, the two Regencies with the most substantial constant values are Boyolali Regency and Pemalang Regency.

The lowest constant value is attributed to Wonosobo District, which stands at 49.95604. This observation suggests that the effects of the variables including Female School Participation Figures, Percentage of Female Population, Percentage of Women Who Have Accessed the Internet, Average Female School Length, and Female Labor Force Participation Rate in Wonosobo District are associated with a relatively low Gender Empowerment Index when compared to other districts/cities. Subsequently, the two Districts with the lowest constant values after Wonosobo Regency are Jepara Regency and Grobogan Regency.

5. Discussion

The Gender Empowerment Index across various districts and municipalities within Central Java Province during the temporal span of 2019-2023 was found to be exclusively positively correlated with the Percentage of Women Who Have Accessed the Internet. Conversely, the Female School Participation Rate, the Percentage of the Female Population, the Average School Length of Women, and the Participation Rate of the Female Labor Force did not exhibit any statistically significant impact.

The metrics related to Women's School Participation were found to have no discernible effect on the Gender Empowerment Index. This phenomenon can be attributed to the inconsistent and inadequate quality of education; School Participation Figures merely reflect enrollment statistics and do not account for the educational quality experienced by the students. The resources, curricula, and pedagogical approaches employed within public and peripheral educational institutions have not been conducive to cognitive and critical empowerment. Furthermore, there exists a lack of integration of secondary education with vocational training or gender-sensitive economic empowerment initiatives. Therefore, despite the elevated Average Participation Score (APS), women remain devoid of adequate resources necessary to secure professional or political roles, which are integral components of the Gender Empowerment Index (IDG). This finding corroborates the research conducted by Erika et al. (2025), which similarly concluded that School Participation Figures exert no influence on the Gender Empowerment Index.

The Percentage of the Female Population was determined to have no significant impact on the Gender Empowerment Index. This is attributable to the relatively stable nature of the female population of productive age; from 2019 to 2023, the proportion of women aged 15-64 in Central Java consistently ranged from 65% to 67% of the total female demographic, indicating minimal annual fluctuation. Although the cohort of working-age women is substantial, this does not necessarily imply equitable access to economic resources, representation in influential positions, or authority over decision-making processes. This assertion contradicts the findings of Rahman (2020),

which indicated that the Percentage of the Female Population negatively affected the Gender Empowerment Index.

The percentage of women who have ever accessed the Internet was found to exert a positive influence on the Gender Empowerment Index within Central Java Province for the period spanning 2019-2023. This observation aligns with theoretical frameworks positing that increased utilization of Internet information technology can enhance women's empowerment in domains such as education, economics, and politics, thereby contributing to an elevated gender empowerment index. Elevated internet usage among women undoubtedly serves to broaden their access to information, knowledge, and skillsets. This study is congruent with research conducted by Beena & Mathur 2012), which established that the Percentage of Women Who Ever Accessed the Internet positively correlates with the Gender Empowerment Index.

The Average Female School Length was found to have no significant influence on the Gender Empowerment Index. This conclusion arises from the persistently low quality of education; despite improvements in the RLS (School Participation Rate), the literacy, mathematical, and scientific competencies of Indonesian students remain below the global average (OECD, 2023). Numerous women may complete formal educational programs yet lack the requisite functional skills for entry into the formal labor market or for attaining professional roles. The enhancement of formal education has not facilitated structural changes in women's economic, political, and social access. This assertion is supported by the research conducted by Rusli & Magna (2023), which indicated that Average School Length does not significantly influence the Gender Empowerment Index.

The Women's Labor Force Participation Rate did not exert an influence on the Gender Empowerment Index. This observation arises from the fact that the elevated rate of female labor force participation in Central Java Province signifies that a substantial number of women are engaged in employment; however, over 60% are employed within the informal sector, predominantly lacking social safeguards, and most earn below the Regional Minimum Wage (BPS, 2024), with low and volatile incomes insufficient to elevate the ratio of women's average earnings in the aggregate. Thus, despite an increase in participation rates, the levels of economic control and bargaining power remained marginal, rendering the labor force participation rate of women insignificant in enhancing the Gender Empowerment Index. This study diverges from the research conducted by Rifatin & Pramesti, (2024), which established that the Women's Workforce Participation Rate does indeed influence the Gender Empowerment Index.

The district exhibiting the highest consistent outcome was Temanggung Regency, which achieved a score of 86.1263, followed closely by Boyolali Regency with a score of 83.66325. These results underscore the structural support for female empowerment that is not entirely encapsulated by quantitative metrics such as the Average Participation Score (APS) or the Regional Labor Statistic (RLS). The involvement of

women in the tobacco plantation sector in Temanggung, alongside the dairy farming industry in Boyolali, contributes significantly to family income and enhances women's economic bargaining capacity within households and local communities (Satiti et al., 2022). These findings are congruent with the assertions made by Kasim et al., (2025), which indicate that productive, community-based formal employment opportunities can fortify women's engagement in public decision-making processes. Consequently, the elevated constants observed in Temanggung and Boyolali can be interpreted as a manifestation of the proactive role of women within the strategic economy, thereby impacting overall gender empowerment (Rosyidi et al., 2025).

Conversely, the lowest constant values were recorded by Wonosobo Regency, with a value of 49.95604, and Jepara Regency, with a value of 58.35383. These results imply the presence of considerable structural impediments to women's empowerment (Sahu & Behera, 2025). Dewi et al. (2025) reveal that, despite a relatively high labor participation rate of women in these two regions, a majority are employed in informal sectors, such as small-scale trading, which lack social protection and do not facilitate access to strategic decision-making positions. Research conducted by Safitri & Ridwan (2024) emphasizes that entrenched patriarchal cultural norms in rural Central Java inhibit women's entry into the formal sector and their ability to occupy decision-making roles. Decaprio & Agustina 2024) observe that limited urbanization and a lack of diversification within economic sectors exacerbate the gender gap across regions. The low participation of women in the economy can be attributed to socio-cultural and economic factors that inadequately support women's involvement in regional development (Bayumi et al., 2022).

6. Conclusions

The Fixed Effect Model (FEM) was identified as the most suitable estimation model. This model exhibits a coefficient of determination (R2) of 0.985874. The Gender Empowerment Index within Central Java Province for the duration spanning 2019 to 2023 is significantly affected by the proportion of women who have ever engaged with the Internet. Conversely, the Female School Participation Rate, the Percentage of the Female Population, the Average Duration of Women's Education, and the Female Labor Force Participation Rate were determined to have no discernible impact on the Gender Empowerment Index. Notably, the peak Gender Empowerment Index is recorded in Temanggung Regency, whereas the nadir of this index is observed in Wonosobo Regency.

The Percentage of Women Who Have Accessed the Internet (PPMI) exerts a favorable influence on the Gender Empowerment Index, indicating that enhanced Internet accessibility for women correlates with an increase in the availability of information, social networks, digital literacy, as well as educational and economic opportunities, ultimately facilitating the tangible empowerment of women. The Female School Participation Rate and the Average Duration of Women's Education were found to exert no influence on the Gender Empowerment Index. Notwithstanding the escalation of the Average Participation Score (APS) and the Rate of Learning Support

(RLS), the caliber of education has yet to adequately prepare women for access to strategic or professional roles. The Percentage of the Female Population does not impact the Gender Empowerment Index, as a higher number of women of productive age does not necessarily correlate with their engagement in decision-making processes or access to economic resources. Similarly, the Female Labor Force Participation Rate has no bearing on the Gender Empowerment Index, as a significant proportion of women's labor force involvement is predominantly concentrated in the informal sector, characterized by low income and the absence of social security, thereby exerting no effect on income ratios or other indicators of structural empowerment.

It is imperative for local governments in Central Java Province to enhance the quality of education and facilitate women's access to the formal sector to effectuate a direct influence on gender empowerment. Continual improvements in digital access and literacy are essential, as they have been demonstrated to significantly propel the Index of Gender Development (IDG). Future research endeavors may be warranted to incorporate cultural factors, local policies, and qualitative methodologies to acquire a more comprehensive understanding. Furthermore, it is advisable that analogous studies be undertaken in other regions to derive more exhaustive conclusions and augment the comprehension of the factors influencing the Gender Empowerment Index.

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