



The Influence Of The Local Cultural Development Index On Indonesia's Economic Development (Panel Evidence From All Provinces In Indonesia)

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ABSTRACT

Economic growth is an economic issue and has become one of the important phenomena experienced by several developed and developing countries. High economic development is a target to be achieved, especially for developing countries. This study aims to identify the influence of the Cultural Development Index (CDI) in four dimensions: Cultural Economy (CEC), Cultural Heritage (CH), Cultural Expression (CEX), and Gender (GP) on the rate of economic growth (ERG). This study uses the Generalized Method of Moment (GMM) with data taken from secondary sources, namely the Central Statistics Agency (BPS), the Ministry of Women's Empowerment and Child Protection (KPPPA), the Ministry of Culture, and the Directorate General of Regional Development – Ministry of Home Affairs, using data from 32 provinces in Indonesia from 2018 to 2023. The estimation results using the GMM method show that the ratio of effectiveness in CEC results has a positive and significant effect, the ratio variable in CH has a positive and significant effect, The CEX ratio variable has a negative and significant effect, while the GP ratio variable has no significant effect.

INTRODUCTION

Indonesia is a country with extraordinary cultural wealth, encompassing a diverse range of artistic expressions, traditions, and local heritage spread from Sabang to Merauke. This diversity is not only a national identity, but also holds great potential in promoting inclusive and sustainable economic development. In the global context, the culture-based development approach has gained attention through initiatives such as UNESCO's Culture for Development Indicators (CDIS), which emphasizes the importance of integrating culture into national and international development strategies (UNESCO, 2014)

In Indonesia, the strengthening of cultural policies has begun with the enactment of Law Number 5 of 2017 concerning the Promotion of Culture, which serves as the basis for long-term cultural development planning. One of the measurement instruments used is the Cultural Development Index (CDI), which reflects cultural performance in various dimensions such as cultural economy, cultural heritage, cultural expression, literacy, and gender equality (Goodstats, 2024). Data shows that the CDI has been on an upward trend every year, although there are disparities between regions, particularly between provinces in western and eastern Indonesia.

The contribution of the cultural sector to the national economy is also becoming more apparent. In 2013, the arts and culture-based creative economy sector absorbed more than 7 million workers, with a dominance in the culinary and handicraft sub-sectors, and recorded productivity growth of 0.53% (Kementerian Pariwisata dan Ekonomi Kreatif, 2014). This shows that culture is not only a social entity, but also an economic asset that can be optimized to accelerate growth.

However, major challenges remain, especially in terms of youth participation and the use of culture as an instrument of development. The phenomenon of waning interest in local culture, as well as the dominance of foreign culture among urban communities, signals the need for a new, more strategic and data-driven approach (Universitas Airlangga, 2024). From an economic development perspective, growth in Regional Gross Domestic Product (RGDP) is a key indicator of a region's success. An increase in RGDP indicates successful economic development in the region. Factors such as education, government policy, and community involvement are important variables that drive sustainable economic growth (HASAN & AZIZ, 2018; UNWANULLAH ET AL., 2020)

The main objective of this study is to analyze the influence of cultural development dimensions including cultural economy, cultural heritage, cultural expression, and gender—on the rate of economic growth in all provinces in Indonesia. This analysis is expected to explain the extent to which cultural factors can contribute to strengthening regional economic performance. Using a quantitative approach based on panel data, this study provides an empirical picture of the relationship between cultural development and economic growth, which has rarely been studied comprehensively in the context of developing countries.

The contribution of this research lies in two main aspects. Academically, the results can enrich the literature on the role of culture in economic development, particularly by providing empirical evidence from the context of Indonesia, which has high cultural diversity. Practically, this research is expected to serve as a reference for the government and stakeholders in formulating more inclusive development policies, integrating culture as one of the drivers of growth. In the future, the findings of this study can also encourage strategies for developing creative industries, preserving cultural heritage, and empowering gender to support sustainable economic growth.

LITERATURE REVIEW

Economic Growth Rate (EGR)

Economic growth is seen as a key indicator of development success and future policy direction. According to Kuznets in (Todaro & Smith, 2011), economic growth is the long-term increase in a country's capacity to produce goods and services, supported by technological advances, institutional adjustments, and ideology. Todaro & Smith (2011) add that economic growth encompasses a continuous process that increases a country's productive potential. Another important factor is human resource productivity (Subandi, 2016). This means that economic development is not limited to material aspects but also includes improving the quality of human resources (Rosyadah, 2021) From a cultural perspective, economic development cannot be separated from the cultural ecosystem that provides space for creative expression by the community (Azwar, 2016).

Cultural Development Index (CDI)

Culture is a system of values, ideas, and human creations that drive economic behavior (Zuriatina, n.d.). Culture plays a significant role in human development and economic growth (Asmin, 2018; Melina, 2016). In Indonesia, the IPK covers seven dimensions: cultural economy, education, socio-cultural resilience, cultural heritage, cultural expression, cultural literacy, and gender. In this study, the focus is on four main dimensions: cultural economy, cultural heritage, cultural expression, and gender (Gani, 2007; UNESCO, 2014).

Cultural Economics (CEC)

Economics finds it difficult to measure the role of culture because cultural variables are often embedded in social customs and norms (Casson, 1993). Tylor (1871) defined culture as a complex whole that includes knowledge, beliefs, arts, laws, customs, and human habits.

Cultural Heritage (CH)

According to the Central Statistics Agency in 2022, Indonesia has 1,331 ethnic groups (Badan Pusat Statistik, 2022). According to Karmadi (2007), physical cultural heritage can be recognized through works of art, documents, writings, audiovisuals, and historic buildings. Meanwhile, non-physical culture consists of cultural values that are passed down through traditions, mother tongues, folklore, and unique arts such as dance, songs, and drama performances. Indonesia has enormous cultural potential because it is home to 1,128 ethnic groups and 746 languages, which are derived from the cultural heritage of each ethnic group (Lundia, 2018)

Cultural Expression (CEX)

Cultural expression reflects the creativity of a community, but is often vulnerable to exploitation due to a lack of legal protection (Herzani, 2020). Cultural expression can be seen in cultural centers, art forms, and the openness of cultural spaces (Sukada & Salura, 2020). Martinet (2019) emphasizes the need for international legal protection of traditional cultural expressions.

Gender (GP)

Women play a vital role in traditional culture, but are often hindered by discrimination, stereotypes, and patriarchal norms (Brilliant & Marbun, 2024; Mitamimah, 2021). Research shows that gender inequality reduces women's participation in the economy and culture (Adika, 2021). Recent studies confirm that gender inequality has a significant impact on economic growth (Leonard et al., 2022). Gender inequality remains an issue because women are still expected to play a domestic role in the household and raise children, while men are expected to earn a living and make decisions in leading the household. This then becomes gender inequality (Bhasin, 2021).

Empirical studies on the relationship between culture and economic development have been conducted by various researchers at the global and national levels. In general, the results of these studies show that culture, whether through its economic, heritage, expressive, or gender dimensions, contributes significantly to economic growth. Early research conducted by Frederking (2002) highlighted the endogenous relationship between culture and economic development. The results show that in some contexts, cultural preservation strategies are more successful when social identity is separated from economic activities. Furthermore, studies by Pugliese & Da Sacco (2007) confirm that cultural heritage has a significant positive impact on socioeconomic development. Cultural heritage is not only an element of identity, but also an

important instrument for promoting economic growth through tourism, the arts, and community based activities.

In the cultural-economic dimension, Forson et al. (2013) prove that culture has a significant effect on the rate of economic growth. This view is reinforced by Keser (2016), who emphasizes that the cultural or creative industries play an important role in providing employment, increasing exports, and supporting sustainable economic development. Similarly, Shi et al. (2014) show that culture contributes positively to human development and regional economic growth in China, especially when combined with human capital factors.

Studies related to cultural diversity have also been expanded by Shaban & Khan (2023) who researched India. They found that cultural diversity and human capital quality have a significant impact on regional economic growth, although the influence of cultural diversity can weaken in regions with low income levels. This shows that the socioeconomic context influences the strength of the relationship between culture and development.

Meanwhile, the dimension of cultural expression is no less important. (Bălan & Vasile, 2015; Rech, 2022) emphasize that cultural expression can promote social integration and local development. However, without adequate legal protection, cultural expression has the potential to be exploited so that its economic benefits are not fully felt by the local community.

In addition, gender issues are also an important focus in the literature. Larasati (2022) shows that gender gaps are still evident in labor participation in the arts and culture sector, where men dominate over women. Deris et al. (2022) further prove that gender inequality has a significant impact on economic growth in Indonesia. Thus, improving gender equality is not only a matter of social justice but also an important strategy for strengthening economic development.

Overall, empirical studies provide consistent evidence that culture is an important determinant of economic development. Culture functions not only as a social identity but also as productive economic capital. However, the effectiveness of culture's contribution to economic growth is greatly influenced by the quality of human resources, the existence of supportive institutions, and policies that ensure sustainability and equality.

METHODS

This study uses a quantitative descriptive approach utilizing secondary data. Data was obtained from various official sources, including the Central Statistics Agency (BPS), the Ministry of Education and Culture, the Ministry of Women's Empowerment and Child Protection (KPPPA), and the Directorate General of Regional Development – Ministry of Home Affairs.

This research model was developed to examine the impact of cultural development on regional economic growth. The dependent variable used is Economic Growth Rate (EGR), while the independent variables include four dimensions of culture: Cultural Economy (CEC), Cultural Heritage (CH), Cultural Expression (CEX), and Gender (GP). To examine the simultaneous relationship between variables, the study uses dynamic panel data that combines cross-section data from 32 provinces in Indonesia and annual time-series data for the period 2018–2023. The research variables consist of one dependent variable, namely Economic Growth Rate (EGR), and four independent variables: Cultural Economy (CEC), Cultural Heritage (CH), Cultural Expression (CEX), and Gender (GP). Each variable is operationalized as follows: CEC is measured by the percentage of the population that earns income from artistic activities; CH is measured by the percentage of intangible cultural heritage that has been designated; CEX reflects the percentage of the population aged ≥ 10 years who have been involved in performing arts; GP is measured by the ratio of female to male labor force participation in artistic activities; while EGR is indicated by the growth of Gross Regional Domestic Product (GRDP) in percent.

In the initial stage, the analysis was conducted using a static model with the Ordinary Least Squares (OLS) and Fixed Effect Model (FEM) methods. However, this approach has weaknesses

because it has the potential to cause bias and parameter inconsistency due to endogeneity that is, the correlation between the independent variable and the error term. Therefore, this study then applied dynamic panel data regression using the Generalized Method of Moments (GMM), as developed by Anderson & Hsiao (1982) and Arellano & Bond (1991)

The GMM method was chosen because it can minimize bias by using instrumental variables. These instruments serve to overcome the problem of correlation between the lagged dependent variable and the error term, so that the resulting estimates are more efficient, consistent, and unbiased. The analysis was conducted using two approaches: Difference GMM and System GMM, with System GMM being prioritized because it can correct the weaknesses of Difference GMM in terms of estimation efficiency.

To ensure the validity of the results, the study conducted a series of diagnostic tests. The Sargan Test was used to test the validity of the instrument, while the Arellano-Bond Test was applied to detect autocorrelation in the model. In addition, a parameter significance test was also conducted to assess the effect of each independent variable on EGR. The decision criteria were based on the probability value (p-value) with a significance level of 5% ($\alpha = 0.05$). If the p-value was smaller than α , the null hypothesis was rejected and the independent variable was declared to have a significant effect on .

Endogeneity Test

Endogeneity testing is important in econometric research to identify endogeneity problems in the model used. Endogeneity arises when there is a correlation between the independent variable and the measurement error or error term in the regression model. This can be problematic because it can cause the OLS (Ordinary Least Squares) estimator to be biased and inconsistent, meaning that the estimated effect of the independent variable on the dependent variable may be inaccurate. The Durbin-Wu-Hausman test is commonly used to detect endogeneity in regression models. Theoretically, independent variables should not be correlated with the error term, and this test aims to determine whether the residuals (error term) are correlated with the error term of the independent variables. The Durbin-Wu-Hausman test is used to detect endogeneity in OLS regression.

RESULTS

Results of Multiple Regression Testing Panel Ordinary Least Square

Table 1. POLS Estimation

Variable	Dependent Variabel Economic Growth Rate (EGR)			
	Model 1	Model 2	Model 3	Model 4
L. EGR (-1)	0.2668*** (0.0742)	0.2626*** (0.0737)	0.2691*** (0.0745)	0.2625*** (0.0744)
CEC	-0.0234 (0.0202)	-0.0396* (0.0221)	-0.0315 (0.0253)	-0.0179 (0.0270)
CH		0.0652* (0.0366)	0.0621* (0.0370)	0.0512 (0.0377)

CEX			-0.0255 (0.0387)	-0.0433 (0.0406)
GP				0.1031 (0.0733)
C	3.4503*** (0.6360)	0.9588 (1.5365)	1.7329 (1.9372)	-3.5019 (4.1906)
R^2	0.083	0.101	0.104	0.115
No. of Cross selection	32	32	32	32
No. of Observation	160	160	160	160

Source: Data Processed, 2025

The initial analysis was conducted using the Pooled Ordinary Least Squares (POLS) method to evaluate the relationship between independent variables (Cultural Economy (CEC), Cultural Heritage (CH), Cultural Expression (CEX), and Gender (GP)) and the dependent variable, namely Economic Growth Rate (LPE). The estimation results show that the LPE lag (L.LPE) is consistently significant at the 1% level with a coefficient of around 0.26–0.27, which means that economic growth in the previous period has a positive effect on the current period. However, the contribution of independent variables to LPE variation is relatively small, as indicated by an R^2 value of only 8.3%–11.5%. Several variables show a significant effect, for example, Cultural Heritage (WB) at the 10% level, while Cultural Economy (EB) tends to be negative and is only significant in some models. This indicates that the POLS model is not yet able to fully explain the variation in LPE, so a more complex approach is needed.

Table 2. Results of Panel Multiple Regression Test Fixed Effect Estimation (FEE)

Variable	Dependent Variable Economic Growth Rate (EGR)			
	Model 1	Model 2	Model 3	Model 4
L EGR(-1)	0.0593 (0.0806)	-0.0161 (0.0731)	0.0593 (0.0777)	0.0487 (0.0794)
CEC	0.0262 (0.0418)	0.0413 (0.0374)	0.0845** (0.0405)	0.0942** (0.0430)

CH		0.3287*** (0.0571)	0.3266*** (0.0559)	0.3137*** (0.0591)
CEX			-0.1881** (0.0751)	-0.1854** (0.0754)
GP				0.0943 (0.1382)
C	2.9207*** (1.0521)	-11.8182*** (2.7257)	-6.7043** (3.3618)	-11.9198 (8.3497)
R^2	0.0088	0.2167	0.2544	0.2572
No. of Cross selection	32	32	32	32
No. of Observation	160	160	160	160

Source: Data Processed, 2025

Next, an estimation was performed using Fixed Effect Estimation (FEE) to capture unobserved differences in characteristics between provinces. The results show that the contribution of the model increased with an R^2 value of 21.67%–25.72%. In this estimation, Cultural Heritage (WB) consistently had a positive and significant effect at the 1% level, while Cultural Expression (CEX) had a significant negative effect at the 5% level. The Cultural Economy (CEC) variable also showed a significant positive effect in several models, while Gender (GP) was not significant. The EGR lag in the FEE model was not significant, unlike the POLS results. This confirms that although FEE is able to capture inter-provincial heterogeneity, there are still indications of endogeneity issues that require further econometric approaches, such as the use of the Generalized Method of Moments (GMM).

Table 3. Endogeneity Test Result

Variable	Model 1	Model 2	Model 3	Model 4
Prob. Durbin-Wu-Hausman Test	0.0000***	0.0000***	0.0000***	0.0000***
No of Cross-Section	32	32	32	32
No of Observation	160	160	160	160

Source: Data Processed, 2025

After conducting initial estimation using the Pooled Ordinary Least Squares (POLS) and Fixed Effect Estimation (FEE) methods, the next step is to test for potential endogeneity issues. This test is important because there is a possibility that the independent variables

are correlated with the error term, especially when the model includes lags of the dependent variable (LPE) as predictors.

The test was conducted using the Durbin-Wu-Hausman (DWH) Test. The test results show that in all estimated models, the null hypothesis (H0) stating that there is no endogeneity problem is rejected. In other words, there is strong evidence that endogeneity does occur in the model.

The implication of this finding is that estimates using the OLS and FEE methods have the potential to produce biased and inconsistent coefficients, so they cannot be used as a basis for valid conclusions. Therefore, this study switched to using the Generalized Method of Moments (GMM) approach, which is more appropriate for addressing endogeneity issues. GMM allows the use of valid instrument variables so that parameter estimates become more consistent, efficient, and unbiased.

Generalized Method of Moments (GMM) Estimation

To address potential endogeneity and dynamic effects, the study applied the System Generalized Method of Moments (GMM). The findings provide several important insights:

Table 4. Results of the GMM Regression Test

Variable	Dependent Variable Economic Growth Rate (EGR)			
	Model 1	Model 2	Model 3	Model 4
L1.EGR(-1)	-0.0813** (0.0344)	-0.1313*** (0.0233)	0.0307 (0.0192)	0.0990*** (0.0178)
L2.EGR(-1)	-0.311*** (0.0193)	-0.3104*** (0.0221)	-0.3124*** (0.0164)	-0.2776*** (0.0162)
CEC	0.0997*** (0.0238)	-0.0164 (0.0221)	0.0272 (0.0184)	0.0334* (0.0180)
CH		0.5215*** (0.0305)	0.5128*** (0.0292)	0.5040*** (0.0306)
CEX			-0.2231*** (0.0147)	-0.2834*** (0.0231)
GP				-0.0235 (0.1169)

AR (1) (p-value)	2.2779*** (0.4832)	-18.9669*** (1.2243)	-12.4399*** (1.4049)	-10.0530* (5.8185)
AR (2) (p-value)	0.0484	0.0478	0.0438	0.0264
Sargan Test (p-value)	0.8851	0.7745	0.8194	0.7741
No. of Cross selection	0.1383	0.1055	0.1227	0.1176
No. of Observation	32	32	32	32

Source: Data Processed, 2025

After the Durbin-Wu-Hausman (DWH) test indicated endogeneity problems, the analysis continued with the Generalized Method of Moments (GMM) to obtain more consistent and reliable estimates. This approach was chosen because GMM is able to overcome biases arising from correlations between lagged dependent variables and error terms, while utilizing valid instrument variables to produce efficient parameter estimates.

The estimation results with the System GMM show that the research model as a whole is valid and consistent. This is indicated by the Arellano-Bond Test results, where there is first-order autocorrelation [AR(1)] but no second-order autocorrelation [AR(2)], in accordance with the dynamic model assumptions. In addition, the results of the Sargan Test show that the instruments used are valid because the probability value is greater than 0.05, so there is no evidence to reject the null hypothesis regarding the validity of the instruments.

In terms of the influence of variables, the GMM estimation reinforces the finding that Cultural Economy (CEC) and Cultural Heritage (CH) have a significant positive effect on Economic Growth Rate (EGR), while Cultural Expression (CEX) has a significant negative effect. On the other hand, the Gender (GP) variable still does not show a significant effect. These findings confirm that the contribution of culture to economic growth in Indonesia is heterogeneous, where not all dimensions of culture are able to directly drive growth.

The Influence of Cultural Economy on Economic Growth Rate

Based on the estimation results, the Generalized Method of Moment (GMM) regression model estimation test shows that Cultural Economy (CEC) has a positive and significant effect on Economic Growth Rate (EGR).

The cultural economy is one of the driving forces behind improving welfare; therefore, it must be able to accelerate development through the cultural economy and preserve life on earth and humanity in managing diversity, working together through mutual cooperation and tolerance in achieving the goals of cultural economic development.

Furthermore, a study conducted by Forson et al. (2013) found that all communities agree that if cultural values truly determine economic growth, then all efforts to achieve a higher level of economic development will be a tall mountain to climb because economic culture cannot be changed. This produces a reliable and statistically significant positive coefficient, which confirms our previous expectations. Our findings are in line with (Shixue, 2001; Weber, 1958) (whose research was conducted to address economic development in terms of the level of development between Asian and Latin American economies and other parts of the world).

Thus, we assume that the production process is homogeneous throughout the world (Petraakis & Kostis, 2013) This assumption is used because the limited degree of freedom, due to

the small sample size (i.e., the limited number of observations for cultural variables), does not allow for a relevant in-depth analysis.

The Effect of Cultural Heritage on Economic Growth Rate

Based on the estimation results, the Generalized Method of Moment (GMM) regression model estimation test shows that cultural heritage has a positive and significant effect on the economic growth rate.

The creative economy has become one of the important pillars in promoting sustainable development in various developing countries. Paglioto (2016) emphasizes that the creative economy is capable of generating significant economic and social benefits, such as increased income, job creation, strengthening of local identity, and appreciation of cultural diversity. and political empowerment, especially for young people and minorities. A creative economy development strategy that is integrated with fiscal policy and cultural development can expand export trade through unique, competitive, and high value-added products and services. Therefore, this approach is relevant for creating inclusive, sustainable, and locally-based economic growth.

Among the factors that greatly influence economic development are the culture or cultures of a country. However, in the past, culture was often treated by economics as an exogenous variable or a legacy variable (Tabellini, 2010). The importance of paying more attention to cultural factors in economics was formulated by Malinowski as follows: Economics as a study of wealth and welfare, namely of future production and exchange activities, will benefit greatly from viewing economic man not as entirely separate from his ideals and considerations.

The Effect of Cultural Expression on Economic Growth Rate

Based on the estimation results, the Generalized Method of Moment (GMM) regression model test shows that Cultural Expression (CEX) has a negative and significant effect on Economic Growth Rate (EGR).

Cultural expression (CEX) is recognized as having various impacts on the economic growth of a region. Several studies show that if CEX is not managed properly, it can have a negative effect on the rate of economic growth. For example, an excessive emphasis on preserving traditions can reduce innovation and adaptation in the economic sector, which are necessary for sustainable growth. However, this statement needs to be balanced with studies showing that effective management of CEX can actually support economic growth through the development of tourism and increased cultural appeal (Anggraini, 2021)

Fusco Girard & Vecco (2021) state that although cultural heritage plays a role in place regeneration, the process requires time and complex cross-sector coordination, so that its impact on economic growth can be delayed or even hampered if not supported by appropriate policies. Dorpalen (2022) shows that inequality in cultural engagement can weaken the contribution of culture to economic growth. When cultural expression is only enjoyed by certain groups and is not inclusive, the potential for innovation and productivity that comes from cultural diversity cannot be optimally utilized.

Thus, the negative and significant influence of CEX on EGR in the estimation model may reflect structural conditions in which cultural expression has not been effectively integrated into economic development strategies, or may even become an obstacle when not managed inclusively and productively.

The Effect of Gender on Economic Growth Rate

The estimation results using the System GMM method show that the Gender (GP) variable has no significant effect on the economic growth rate (EGR) in all models tested. The gender coefficient tends to be negative but is not statistically significant, which means that variations in

women's participation in the cultural sector workforce cannot be used as a strong predictor of regional economic growth during the study period.

In a number of empirical studies, gender variables are often assumed to influence economic growth through labor force participation, access to education, and equal opportunities. However, in certain contexts, especially in countries with economic structures that are not yet fully responsive to gender dynamics, this influence is not always statistically significant in terms of economic growth rate (EGR). This can be attributed to various factors, such as the dominance of the informal sector, low levels of female participation in the productive sector, or economic policies that have not yet systematically integrated a gender perspective.

Klasen & Lamanna (2009) show that although gender gaps in education and employment have the potential to hinder economic growth, the effect is highly dependent on the regional and institutional context. In some regions, such as South Asia and the Middle East, the influence of gender on economic growth tends to be weaker due to data limitations, structural barriers, and social norms that limit women's active participation in the formal economy.

Thus, the insignificance of gender variables on EGR in some economic models can be interpreted not as an absence of influence, but as a reflection of structural conditions and policies that are not yet optimal in utilizing gender potential as a driver of growth.

DISCUSSION

The main contribution of this research lies in its attempt to integrate cultural dimensions into the analysis of economic development. This research confirms that culture, which has been viewed primarily as a social aspect, also has significant relevance in explaining variations in economic growth at the regional level. This is important because it strengthens the argument that sustainable economic development depends not only on conventional factors such as investment and technology, but also on the cultural capital of a region.

The managerial implications of this study are the importance of formulating more integrated public policies in managing cultural dimensions. Local and central governments need to provide support in the form of infrastructure, economic incentives, and promotion to transform cultural activities into productive activities that can boost economic growth.

However, this study has limitations, particularly regarding the use of interprovincial secondary data, which may not fully represent micro variations at the district/city level. In addition, the cultural indicators used are still limited to four dimensions, whereas the overall CDI covers seven dimensions. These limitations may affect the internal and external validity of the study.

For future research, it is recommended that researchers develop analyses using smaller observation units (e.g., districts/cities) and include other CDI dimensions, such as cultural education and cultural literacy. Subsequent research could also explore qualitative methods to gain a deeper understanding of the mechanisms by which culture influences economic growth. Thus, future research could provide a more comprehensive understanding of the relationship between culture and economic development in Indonesia.

CONCLUSION

This study aims to analyze the influence of the Cultural Development Index (CDI), which consists of the dimensions of Cultural Economy (CEC), Cultural Heritage (CH), Cultural Expression (CEX), and Gender (GP) on the Economic Growth Rate (EGR) in 32 provinces in Indonesia during the period 2018–2023 using the Generalized Method of Moments (GMM) approach.

The results show that Cultural Economy (CEC) and Cultural Heritage (CH) have a significant positive effect on EGR, indicating that these cultural dimensions are capable of driving regional economic growth. Conversely, Cultural Expression (CEX) has a significant negative effect,

indicating that certain cultural activities have not been optimally monetized, thereby potentially suppressing economic productivity. Meanwhile, the Gender (GP) variable did not show a significant effect on EGR, reflecting the continued existence of structural barriers to women's participation in the cultural sector.

These findings are both consistent with and differ from previous literature. For example, Bălan & Vasile (2015) research confirms that cultural expression can promote social cohesion and local development, while this study finds that cultural expression has a negative impact on economic growth, possibly because cultural expression in Indonesia is still more symbolic than productive. Conversely, the findings on cultural heritage are consistent with the research by Pugliese & Da Sacco (2007) which emphasizes cultural heritage as a significant factor in economic development.

The explanation for unexpected findings, such as the negative influence of CEX, can be linked to the phenomenon of cultural commodification. When culture is produced solely for market consumption without regard to its authentic value, its economic contribution can decline Adorno (1944). This shows that cultural expression in Indonesia still needs stronger monetization strategies and institutional support.

LIMITATION

As with any empirical research, this study has certain limitations that must be acknowledged. First, the analysis was based on secondary data aggregated at the provincial level, which restricts the ability to capture micro-level variations across households, firms, or specific cultural communities. This level of aggregation may have obscured more nuanced relationships between cultural factors and economic growth

Second, the study covered a relatively short observation period (2018–2023). While this timeframe provides a useful snapshot of cultural and economic dynamics, it may not fully reflect long-term structural changes or cyclical variations in cultural development and growth trajectories. Longer time horizons might yield different insights.

Third, despite employing the System Generalized Method of Moments (GMM) to address endogeneity and dynamic effects, unobserved variables outside the model could still influence the results. This is particularly relevant in explaining the unexpected negative effect of cultural expression and the non-significant impact of gender

These limitations may have shaped the study's findings in important ways. For example, the insignificant results for gender could partly stem from measurement constraints in available secondary data, rather than a true absence of effect. Similarly, the negative relationship identified for cultural expression may reflect the lack of institutional and policy support for transforming cultural participation into economic outcomes, rather than an inherently adverse impact.

By acknowledging these shortcomings, this study highlights the need for future research that incorporates micro-level datasets, explores longer periods, and applies complementary qualitative approaches to deepen the understanding of how cultural dimensions interact with regional economic growth.

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