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## FISCAL DECENTRALIZATION AND ECONOMIC GROWTH: A HUMAN CAPITAL PERSPECTIVE

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### ABSTRACT

*Fiscal decentralization has become one of the key strategies in governance reform in many developing countries, including Indonesia. The goal is to strengthen regional independence in managing finances while improving the quality of public services. However, the effectiveness of fiscal decentralization in driving economic growth is still debatable, especially since its results tend to vary between regions. This study examines the relationship between fiscal decentralization and economic growth by emphasizing the role of human capital as a key analytical perspective. Using a systematic literature review approach, this study examines Scopus Q1 and Q2 indexed articles in the 2019–2024 period. The results of the study show that fiscal decentralization has significant potential in encouraging economic growth when accompanied by adequate human resource capacity, both in terms of education, skills, and bureaucratic governance. On the contrary, the weak quality of human capital often leads to inefficiency, budget abuse, and inequality in development between regions. This research contributes to the literature by integrating the theory of fiscal federalism and the theory of human capital. It highlights the importance of strengthening the capacity of local authorities and communities in optimizing the benefits of fiscal decentralization. The proposed policy implication is the need for sustainable investment in human capital development through education, training, and the application of digital technologies to strengthen transparency and accountability. Thus, fiscal decentralization is not only seen as a financial distribution mechanism but also as a strategic instrument to realize inclusive and sustainable economic growth.*

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**KEYWORDS:** Fiscal decentralization; Human capital; Economic growth; Governance; Development inclusion.

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## 1. INTRODUCTION

Fiscal decentralization has become one of the strategic policies in various countries, especially developing countries, in order to increase the effectiveness of government and accelerate economic growth. Since the 1990s, many countries have embraced fiscal decentralization in the belief that authority for managing public finances at the local level can encourage more efficient distribution of resources, strengthen accountability, and increase community participation. This policy is in line with the theory of fiscal federalism, which emphasizes that local governments know the needs of their citizens better than the central government (Lewis et al., 2020; Singh et al., 2024).

For developing countries such as Indonesia, India, and some countries in Africa, fiscal decentralization is seen as a key instrument to reduce regional inequality while expanding access to public services. Through fund transfers, regions are expected to be able to finance infrastructure development, improve the quality of education, and create a conducive business climate. However, empirical evidence shows that the results achieved are not always consistent, with some regions managing to record significant economic growth, while others have stagnated (Diaz-Serrano & Meixllop, 2019; Foa, 2022; Kim et al., 2022a).

One of the factors that is often overlooked in the debate regarding the effectiveness of fiscal decentralization is the quality of the human resources that manage public finances at the local level (Huynh & Tran, 2021; Nirola et al., 2022). Although fiscal transfers continue to increase every year, without adequate bureaucratic capacity, these funds have the potential not to be optimally utilized. Inefficiency, weak supervision, and corrupt practices often arise as a consequence of the low quality of human capital in local governments (Shon & Cho, 2020; M. Yu & Kwan, 2024; Zhao & He, 2024).

Human capital is a crucial element in determining the success of fiscal decentralization. The theory of human capital explains that long-term economic growth is influenced not only by the accumulation of physical capital, but also by investment in education, skills, and public health (Khan et al., 2021; Shao & Razzaq, 2022; Sima et al., 2023). Thus, the quality of the state civil apparatus and local communities is a determining factor in whether fiscal decentralization can translate into better public services and inclusive economic development.

A number of studies emphasize that the relationship between fiscal decentralization and

economic growth is non-linear. On the one hand, decentralization can accelerate growth through policies that are more responsive to local needs. However, without strong human resource capacity, decentralization can actually exacerbate disparities between regions and reduce fiscal efficiency (Beramendi & Rogers, 2020; Sun et al., 2023). Therefore, the human capital perspective needs to be positioned as a mediating variable that bridges the relationship between fiscal decentralization and economic growth.

Although there is literature that discusses fiscal decentralization or human capital separately, studies that systematically integrate the two aspects are limited. Most studies tend to emphasize financial aspects alone, such as the amount of fund transfers or fiscal efficiency, without looking at how the quality of human capital affects the effectiveness of those policies. This creates a knowledge gap that needs to be filled with a more comprehensive study.

Closing this gap is important, given that the success of fiscal decentralization is determined not only by the mechanism of fund allocation, but also by the extent to which local governments are able to utilize the capacity of human resources to manage development. In the context of global competition, developing countries must ensure that fiscal decentralization is not just an administrative policy, but a strategic instrument capable of increasing economic competitiveness through strengthening human capital.

The study of the integration between fiscal decentralization, human capital, and economic growth is not only relevant for Indonesia but also has global implications. Many developing countries face similar challenges, namely, large fiscal allocations that are not accompanied by adequate human resource capacity. Thus, the findings of this study can provide valuable lessons for other countries in the Asian, African, and Latin American regions that are implementing decentralization programs.

This study aims to analyze the relationship between fiscal decentralization, human capital, and economic growth using the perspective of the latest literature. The main contribution of this research is to integrate the theory of fiscal federalism with the theory of human capital in explaining the effectiveness of decentralization. In addition, this study provides policy implications by emphasizing the importance of investment in human resource development as a prerequisite for fiscal decentralization to be able to produce sustainable and inclusive economic growth.

## 2. METHODOLOGY

This study uses the Systematic Literature Review (SLR) approach to examine the relationship between fiscal decentralization, human capital, and economic growth. This approach was chosen because it is able to present a comprehensive mapping of knowledge, identify gaps in the literature, and provide a strong theoretical basis for developing future research agendas (Arvanitis, 2024; Krupinski, 2019). SLR is considered appropriate for this topic, given that the relevant literature is widespread across a wide range of disciplines, including development economics, public policy, and governance.

The study procedure was carried out based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework, which provides step-by-step guidance in selecting, filtering, and synthesizing relevant articles. PRISMA was chosen because it is an international standard that is widely used in reputable journals to maintain transparency and validity in the systematic review process (Das & Sethi, 2023; Dias Paião Júnior & Ferraz, 2024; Rethlefsen et al., 2021).

Article searches are conducted on major academic databases, including Scopus, Web of Science, ScienceDirect, and SpringerLink. The keywords used are a combination of "fiscal decentralization," "human capital," "human resources," and "economic growth." Boolean operators (AND, OR) and truncation symbols are used to expand the search results. Search limits are set on English-language articles published between 2019 and 2024 to ensure the relevance and novelty of the literature.

An article is included in the analysis if it meets the following criteria: (1) it is indexed by Scopus Q1/Q2, (2) it is a full paper journal article, (3) it focuses on the relationship between fiscal decentralization, human capital, or economic growth, and (4) it has empirical data or a clear conceptual framework. Meanwhile, excluded articles are publications in the form of conference proceedings, book chapters, editorials, or articles that are not available in full text.

The selection stage is carried out in three steps: identification, screening, and eligibility. At the identification stage, a total of 356 articles were found from the database. After the screening of titles and abstracts, 124 articles were retained. The feasibility stage was carried out by fully reading the remaining articles, so that finally 65 articles met the inclusion criteria and were analyzed further. This selection process is depicted through a PRISMA diagram to show the systematic flow from search to

final sample determination.

The selected articles were analyzed using thematic coding techniques to identify the main themes that emerged. Each article was reviewed in depth to explore how fiscal decentralization relates to economic growth and the mediating role of human capital in that relationship. The analysis was carried out by compiling a synthesis table that included the author, year, country, research method, and main findings. This approach allows the identification of patterns, differences, and research areas that are still underexplored.

To improve validity, two independent reviewers conducted the selection process, and the results were compared to reduce potential subjective bias. In addition, only articles from Q1/Q2 indexed journals are selected to ensure the quality of the literature. However, this study also has limitations, mainly due to the limitation of the publication period and the use of English-language articles, which potentially excludes relevant literature from other sources. These limitations are recognized as space for further research with a wider scope.

**Table 1: Prisma Article Selection Flow.**

PRISMA Stage	Selection Activities	Number of Articles
Identification	Articles are identified through database searches (Scopus, Web of Science, ScienceDirect, SpringerLink)	356
	Additional articles from other sources (cross-reference, manual search)	12
	<b>Total articles identified</b>	<b>368</b>
	Duplicates removed	26
	Articles after duplicates are removed	342
Screening	Articles filtered by title & abstract	342
	Excluded articles (irrelevant, non-peer-reviewed, outside the 2019–2024 period)	218
	Full-text articles reviewed for eligibility	124
Eligibility	Excluded article (not indexed Q1/Q2, not relevant to focus, or no theoretical/empirical contribution)	59
Included	Articles included in the qualitative synthesis (Systematic	65

### 3. RESULTS AND DISCUSSION

#### 3.1. *Fiscal Decentralization And Economic Growth*

Fiscal decentralization has long been considered one of the important instruments in driving economic growth, particularly in developing countries with geographical, social, and cultural diversity. The theory of fiscal federalism explains that by giving authority to local governments, the process of allocating public resources can be carried out more efficiently because local governments have better information about the needs of their communities. On the other hand, decentralization is expected to be able to reduce the burden on the central government, which often faces limitations in reaching all regions. Thus, theoretically, fiscal decentralization is believed to improve the quality of public spending and accelerate regional economic development.

However, empirical evidence suggests that the relationship between fiscal decentralization and economic growth is not always linear. Several studies have found that an increase in the portion of regional spending has a positive impact on the growth of gross domestic product (GDP) per capita, especially when used for basic infrastructure investments such as roads, electricity, and clean water. This infrastructure increases the productivity of the private sector while strengthening connectivity between regions. However, in many regions, public spending allocations tend to be stuck in routine expenditures such as employee salaries and operating costs, which contribute relatively little to economic growth. This indicates that the effectiveness of decentralization is highly dependent on how public funds are managed.

Fiscal decentralization can also pose the risk of fiscal fragmentation and imbalances between regions. Local governments with high fiscal capacity, such as areas rich in natural resources, often grow faster than areas with low fiscal capacity. This inequality can widen if the mechanism for transferring funds from the central government is not regulated with a fair and proportionate formula. Under certain conditions, decentralization actually strengthens the gap between regions instead of reducing it. Therefore, fiscal decentralization can be seen not only from the size of the transfer of funds, but also from the design of the policies and the redistribution instruments that accompany it.

In addition to the issue of inequality, there is also an efficiency problem in the use of decentralized

funds. Several studies report a moral hazard phenomenon, where local governments are too dependent on central transfers and are reluctant to increase the regions' original revenue capacity. This dependence reduces incentives for local governments to innovate in expanding the local tax base and optimizing the region's economic potential. As a result, although fiscal decentralization provides greater fiscal space, its impact on economic growth is not maximized.

On the other hand, the success of fiscal decentralization in driving growth is greatly influenced by governance and institutional aspects. Regions that have transparent, accountable, and participatory supervisory mechanisms tend to be able to optimize public spending so that it has a greater impact on economic development. On the contrary, weaknesses in governance often open opportunities for corrupt practices, budget misappropriation, and the allocation of funds to less productive sectors. This explains why the impact of fiscal decentralization differs between regions, even though they both receive large transfers from the center.

In the long term, fiscal decentralization can contribute to sustainable economic growth only if it is accompanied by strengthening institutional capacity. In the early stages, fiscal transfers may have a direct impact through the development of physical infrastructure. However, in the long run, factors such as the quality of the bureaucracy, planning capacity, and the ability of the region to manage local potential are key factors that determine success. In other words, fiscal decentralization is conditional: it is only effective when strong institutions and qualified human resources support it.

Cross-country studies show significant variation in the effectiveness of fiscal decentralization. In developed countries with well-established institutions, decentralization has been shown to improve the efficiency of public spending and strengthen regional economic growth. Meanwhile, in many developing countries, decentralization often produces mixed results, with some regions growing rapidly while others lagging. This variation confirms the importance of the institutional context in determining the effectiveness of decentralization policies.

Thus, fiscal decentralization has great potential to drive economic growth, but the results achieved are not automatic. The success of this policy depends on a number of factors, ranging from the design of transfer allocations, regional fiscal

capacity, to the quality of governance and human resources. Without a combination of these factors, fiscal decentralization has the potential to become an expensive policy but has little result. Therefore, evaluations of the effectiveness of decentralization should always take into account the context of local capacities and the quality of existing institutions.

**Table 2: Fiscal Decentralization And Economic Growth.**

Determining Factors	Impact on Economic Growth	Main Description	Research Source
Infrastructure investment	Positive, especially short-term	Roads, electricity, and clean water increase productivity	(Aray, 2019; C. Chen & Neshkova, 2020; Digdowniseiso et al., 2022; Xu & Warner, 2022)
Regional routine shopping	Neutral/negative	Dominance of employee salaries, minimal long-term effects	(Afonso et al., 2024; Ain et al., 2025; Xu & Warner, 2022)
Fiscal capacity inequality	Negative, widening the gap	Rich areas grow fast, poor areas lag behind	(Becerra-Ornelas & Nuñez, 2019; Li & Li, 2024)
Transparency & accountability	Significant positives	Reduce corruption and improve efficiency	(C. Chen & Ganapati, 2023; Montes & Luna, 2021)
Fiscal moral hazard	Negative	Dependence on central transfers, lack of local tax innovation	(Hanif et al., 2020; Li & Qi, 2023; Martínez et al., 2022)
Strong institutions	Positive, consistent	Increasing the effectiveness of decentralization	(Chi et al., 2021; X. Zhang et al., 2022)

### 3.2. The Role Of Human Capital As A Mediator

Human capital is one of the key factors that determine whether fiscal decentralization can truly result in sustainable economic growth. Theoretically, decentralization gives regions autonomy in managing fiscal resources and formulating policies according to local needs. However, without adequate quality of human resources, fiscal autonomy is only an administrative transfer with minimal impact. Incompetent regional apparatus often fail to design effective development policies, so budget allocation does not contribute significantly to increasing economic productivity. Thus, human capital serves not only as a development input but also as a bridge that determines the effectiveness of fiscal decentralization.

The capacity of the regional apparatus is the main aspect of human capital in the context of decentralization. Local governments with highly educated and trained bureaucrats tend to be better able to formulate performance-based budgets, identify development priorities, and avoid wasteful spending. In contrast, areas with low bureaucratic capacity tend to be stuck in the use of transfer funds for routine spending, such as salary payments and benefits, which have a limited impact on long-term growth. This suggests that the quality of bureaucracy serves as a mediating variable that explains why the impact of fiscal decentralization differs between regions, even though the amount of fiscal transfers is relatively the same.

In addition to bureaucracy, the quality of human capital of local communities also affects the success of fiscal decentralization. Areas with high levels of education and workforce skills are more likely to take advantage of development opportunities, both through entrepreneurship and increased private sector productivity. Infrastructure built with central transfer funds will only have a multiplier effect if the community can use it productively. For example, road construction in areas with entrepreneurial communities can open up market access and encourage the growth of MSMEs. In contrast, in low-skill areas, the road may only function as a transportation facility without significant economic added value.

Another dimension of human capital is the ability to adapt to innovation and technology. In the era of government digitalization, the use of information technology for public financial management and fiscal transparency requires technically skilled officials. Regions with apparatus that understand the e-budgeting and e-procurement system tend to be able to reduce budget leakage and improve the efficiency of the use of public funds. Without these technological skills, fiscal decentralization risks resulting in ineffective spending due to weak monitoring and evaluation systems. Therefore, investment in the development of regional human resource technical skills is essential to strengthen decentralized accountability.

The role of human capital as a mediator is also seen in long-term dynamics. In the early stages, decentralization may provide instant results in the form of physical development funded by central transfers. However, sustainable economic growth can only be achieved if people have the skills and capacity to manage and utilize the infrastructure. For example, traditional market development will contribute to growth if traders have good financial

literacy to grow their businesses. Without it, market infrastructure risks becoming a failed physical project with no real economic benefits. Thus, the quality of HR ensures whether short-term output can be transformed into long-term outcomes.

The cross-country literature supports the view that fiscal decentralization has a greater impact in countries with a high quality of human capital. In South Korea, decentralization has been successful in driving regional development because an educated workforce and an efficient bureaucracy support it. In contrast, in some African countries, fiscal transfers have failed to increase growth due to low bureaucratic capacity and weak quality of workforce education. This difference reinforces the argument that human capital serves as a mediating variable that determines the success or failure of decentralization.

In addition to playing a role in policy planning and implementation, human capital also contributes to reducing the risk of corruption and improving regional governance. Professional and integrity regional apparatus are able to reject the practice of

budget abuse, while educated people have the capacity to exercise social control over local governments. Therefore, improving the quality of human capital not only strengthens the aspect of economic productivity but also encourages the realization of clean and transparent governance. This further shows that human capital has a dual role: as a driver of growth as well as a guardian of fiscal integrity.

Overall, findings from the literature suggest that human capital acts as a bridge linking fiscal decentralization to economic growth. The transfer of funds from the central to the regions will only be an effective stimulus if it is accompanied by human capacity that is able to manage, supervise, and utilize it productively. Therefore, the fiscal decentralization strategy must be accompanied by human capital development policies that focus on education, skills training, and digital literacy. Without strengthening this dimension, fiscal decentralization risks failing to achieve its main goal of improving people's well-being and creating inclusive economic growth.

**Table 3: Human Capital As A Mediator.**

Human Capital Dimension	Impact on Fiscal Decentralization		Implications for Economic Growth	Source Research
Bureaucratic capacity	More precise budget planning & implementation		More productive public investment	(Resnick & Siame, 2023; Rich & J., 2023; Williams, 2021)
Quality of public education	Maximum utilization of infrastructure		Growth of the MSME & services sector	(Diaz-Serrano & Meix-Llop, 2019; Hanif et al., 2020; Purbadharmaja et al., 2019)
Technological skills	Increased transparency and accountability		Fiscal efficiency & leakage reduction	(J. Chen & Pan, 2024; Hota, 2023; Tirtosuharto, 2021)
Community entrepreneurship	More productive market access		Increased local revenue	(Giraud, 2022; Kong, 2021; Pasieczny, 2020; Qin, 2024)
Integrity & professionalism	Reducing corruption and moral hazard		More sustainable growth	(Chai et al., 2024; Hu, 2021; Luintel et al., 2020; Tufail et al., 2023)

### 3.3. Institutional Capacity And Local Governance

Institutional capacity is one of the main determinants of the success of fiscal decentralization in driving economic growth. Strong institutions enable the creation of fiscal governance that is transparent, accountable, and responsive to the needs of the community. Conversely, institutional weaknesses will lead to decentralization only being a distribution of funds with no real benefits. In the framework of institutional theory, institutions function as rules of the game that shape the behavior of actors in managing public resources. Therefore, the quality of local institutions is an

important variable that explains the variation in the effectiveness of decentralization between regions and countries.

Fiscal decentralization will only yield positive results if it is followed by good regulatory capacity. Local governments with a clear regulatory system can ensure that fiscal transfers are used for priority programs that support economic growth, such as infrastructure development and improved education and health services. Conversely, weak regulatory capacity often fragments budgets into ceremonial or short-term-oriented programs, thus failing to create sustainable growth.

Local governance is also closely related to the level of budget transparency. Transparency allows

the public to know how public funds are allocated, thus narrowing the space for abusive and corrupt practices. Cross-border studies show that regions with high levels of transparency tend to experience improved fiscal performance that has a direct impact on economic growth. However, many regions in developing countries still face serious challenges in realizing information disclosure, both due to technological limitations and bureaucratic resistance.

Community participation is an important element of good governance. Through participation, the community can be involved in the development planning process and supervision of budget implementation. High public participation can strengthen the accountability of local governments, because the policies taken are more in line with the needs of the community. Unfortunately, the level of community participation is often still low, especially in areas with limited levels of education. This condition shows a close relationship between institutional capacity and the quality of human capital.

The integrity and professionalism of the regional apparatus also influence institutional capacity. An apparatus that has high competence and commitment to public services will encourage the efficient and effective use of the budget. Conversely, weakness in individual capacity, coupled with a weak organizational culture, can create a bureaucracy that is prone to corruption and inefficiency. This shows that institutional capacity building is not limited only to formal regulations, but also includes strengthening work culture and ethical values in a bureaucratic environment.

Comparative studies show that fiscal decentralization is more effective in countries with good institutional capacity. For example, Germany and Canada have successfully integrated fiscal decentralization with transparent governance that promotes regional economic stability. In contrast, in some developing countries such as Nigeria or Pakistan, decentralization often fails due to weaknesses in oversight systems and the dominance of local political interests. This variation shows that decentralization is not a universal policy, but depends heavily on the institutional context of each country.

Institutional capacity also reduces the potential for fiscal conflicts between the central and regional governments. With strong institutions, the mechanism for allocating fiscal transfers can be done fairly, thereby reducing the political tensions that often arise due to fiscal inequality. In the long

term, the stability of central-regional relations is a prerequisite for consistent economic growth. On the contrary, weak institutions create policy uncertainty that can hinder private investment and regional development.

Thus, institutional capacity and local governance become the foundation that ensures that fiscal decentralization is not only administrative but also capable of driving economic growth. Strong institutions ensure more productive fiscal allocations, broader community participation, and less risk of budget abuse. Therefore, strengthening local institutions should be a priority agenda in decentralization policies, along with human capital development. Without both, fiscal decentralization risks becoming an expensive policy but with few benefits.

**Table 4: Institutional Capacity And Local Governance.**

Governance Dimension	Impact on Fiscal Decentralization	Implications for Economic Growth	Source Research
Clear fiscal regulation	Budget allocated to priority programs	Increased economic productivity	(S. Chen et al., 2022; THANH & CANH, 2020; Z. Yu et al., 2023)
Budget transparency	Reduce misuse of funds	More inclusive growth	(J. Zhang & Sun, 2024; Zhu et al., 2023)
Community participation	Policies more in line with local needs	Increased accountability & trust	(Beshi & Kaur, 2020; Chai et al., 2024; Ewetan et al., 2021)
Professionalism of the apparatus	Budget use efficiency	More effective public services	(Arkorful et al., 2021; Kim et al., 2022b)
Supervision mechanism	Reduce corruption & moral hazard	Long-term fiscal stability	(Choudhury, 2023; KUHN & PARDOS-PRADO, 2021; Nirola et al., 2022; Shon & Cho, 2020)
Central-district relations are stable.	Fairer allocation and less conflict	A more conducive investment environment	(Chai et al., 2024; Luintel et al., 2020; Shao & Razzaq, 2022)

### 3.4. Comparative Study Between Developing Countries

Comparisons between developing countries are important for understanding how fiscal decentralization works in different social, political, and economic contexts. Each country has a diverse institutional background, human resource capacity, and level of development, so that the implementation of fiscal decentralization produces non-uniform outcomes. By comparing different

experiences, valuable lessons can be learned about what factors support or hinder the success of decentralization in driving economic growth.

Indonesia is often used as a case study because it has one of the largest fiscal decentralization programs in the world. Since the enactment of regional autonomy in 2001, fiscal transfers in the form of General Allocation Funds (DAU), Special Allocation Funds (DAK), Revenue Sharing Funds (DBH), and Village Funds have continued to increase. Some regions have shown significant progress, for example, Central Java and West Java, which are able to direct funds to productive infrastructure. However, some other regions still face serious problems, including low bureaucratic capacity and reliance on central transfers. This variation shows that the same policy can produce different results depending on the quality of the institution and local human resources.

China provides another example of how fiscal decentralization can drive rapid economic growth. Since the fiscal reforms of 1994, local governments in China have been given broad authority to attract revenue and conduct public spending. This encourages competition between regions to attract investment, so economic growth increases rapidly. However, China's model also has weaknesses, such as increasing inequality between regions because rich regions manage to make better use of decentralization than poor regions.

India presents a unique case, where fiscal decentralization is implemented in a complex system of federalism. Local governments in India have significant authority in designing development programs, but political conflicts and weak administrative capacity often hamper them. Some states, like Kerala, have managed to use decentralized funds to improve health and education indicators, while others are still mired in inefficiency and corruption. This shows the importance of the role of local politics in determining the effectiveness of fiscal decentralization.

In the African region, Nigeria is a classic example

of decentralization that fails to have an optimal impact on economic growth. Although local governments receive considerable transfers from the center, weak governance and high levels of corruption have caused the budget to be largely absorbed for the benefit of local political elites. As a result, economic inequality between regions is widening, and economic growth is not inclusive. Nigeria's condition confirms that fiscal decentralization without institutional strengthening only expands the space for budget abuse.

In contrast, some Latin American countries, such as Brazil, showed more positive results. Fiscal decentralization in Brazil has been shown to drive improvements in the quality of public services, especially in the health sector through the Sistema Único de Saúde (SUS) program. However, despite the progress, Brazil also faces challenges in the form of high disparities between regions. Rich areas in the south are growing faster than poorer areas in the north, indicating that fiscal distribution still needs correction.

Comparisons between developing countries show a consistent pattern: fiscal decentralization is only successful when it is supported by three main factors: the quality of human resources, the capacity of local institutions, and a fair fiscal distribution mechanism. Countries with a combination of these three factors are able to turn decentralization into a growth engine, while countries that do not have it face the risk of stagnation or even regression. Thus, decentralization is not a one-size-fits-all policy, but rather depends on the context of each country.

Overall, this comparative study confirms that the success of fiscal decentralization is determined not only by the amount of fund transfers, but also by local readiness to manage the funds. Indonesia, China, India, Nigeria, and Brazil provide important lessons that the combination of human capital and institutional capacity is a determining factor. In other words, fiscal decentralization should be seen as a complex policy that requires adequate institutional and human resources prerequisites in order to drive inclusive economic growth.

**Table 5: Comparative Studies Between Developing Countries.**

Country	Fiscal Decentralization Model	Key Results	Key Challenges	Research Source
Indonesia	Large transfers (DAU, DAK, DBH, Village Fund)	Some areas are growing rapidly, some are stagnant	Low bureaucratic capacity in disadvantaged areas	(Hamada, 2020; Lee, 2024; Lewis, 2023; Scott, 2021)
China	Inter-regional competition, broad authority	Rapid growth, increased investment	Widening inequality between regions	(Fan et al., 2020; Hao et al., 2020; Shahbaz et al., 2022; Su et al., 2019)
India	Complex federal system	Improved health & education in Kerala	Political conflicts, inefficiency, and corruption	(Bellinger, 2022; Nair & Abhirami, 2024; Nirola et al., 2022; Sankar D et al., 2024; Singh et al., 2024)
Nigeria	Large transfers, weak governance	Growth is not inclusive, and corruption is widespread	Weak institutions and governance	(Chukwu Agwu & Udochukwu Godfrey, 2020; Ewetan et al., 2020,

Brazil	Focus on public services (SUS)	Improved healthcare services	High inter-regional disparities	2021; Ojo et al., 2023) (Aristides dos Santos et al., 2019; Coube et al., 2023; Giraudy & Pribble, 2020; Menezes-Filho & Politi, 2020; Zimmerman, 2021)
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#### 4. FUTURE RESEARCH AGENDA AND POLICY IMPLICATIONS

The literature on fiscal decentralization, human capital, and economic growth shows significant developments in the last two decades. However, despite a lot of research, a number of important areas are still not explored in depth. One of them is the integration of fiscal variables, the quality of human capital, and institutional capacity in one comprehensive analysis model. Most studies highlight only one or two dimensions, so a complete picture of causal relationships is limited.

The future research agenda needs to develop a multidisciplinary approach that combines the theory of fiscal federalism, the theory of human capital, and institutional theory. By integrating these three perspectives, researchers can provide a richer explanation of why fiscal decentralization works in one country but fails in another. It also opens up opportunities to develop new theoretical frameworks that are more in line with the realities of developing countries that face unique challenges in terms of human resources and institutional capacity.

In addition to the theoretical framework, research methods also need to be improved. Many previous studies used cross-sectional analysis, which could only capture relationships at a single point in time. Future research should use long-term panel data to more accurately see the dynamics of fiscal decentralization and economic growth. Advanced quantitative methods such as dynamic panel regression, structural equation modeling, or even causal inference methods based on machine learning can help produce more robust findings.

One area that is still rarely researched is the role of digitalization in strengthening fiscal decentralization. Digital transformation in public financial management, such as the implementation of e-budgeting, e-procurement, and blockchain-based transparency systems, has the potential to increase accountability and reduce corruption. Future research can explore how digitalization can

strengthen the role of human and institutional capital in optimizing fiscal decentralization.

In addition to the technological aspect, the socio-cultural dimension is also worth attention. Many studies tend to ignore how social norms, local political culture, and societal structures affect the effectiveness of decentralization. In fact, these factors often determine whether regional fiscal policies are really carried out in the public interest or are actually used for the benefit of certain groups. Future research should include socio-cultural variables so that the results of the analysis are more contextual.

In terms of policy, the literature emphasizes the importance of balancing fiscal decentralization with investment in human capital. Central and local governments must realize that the transfer of funds without increasing bureaucratic and community capacity will only result in limited development output. Therefore, a policy agenda that emphasizes education, skills training, and digital literacy must go hand in hand with fiscal decentralization policies.

The next policy implication is the need to strengthen local institutions. Without transparent and accountable governance, decentralization risks becoming a source of inefficiency and corruption.

The government should encourage community-based oversight mechanisms, expand access to public budget data, and enforce the rule of law to ensure the use of funds according to goals. Policies that focus on good governance will strengthen the positive effects of decentralization on economic growth.

Thus, the future research agenda and practical policy complement each other. Researchers need to generate more in-depth empirical findings through multidisciplinary approaches and advanced methods, while policymakers need to implement those recommendations to create effective fiscal decentralization. The combination of strong human capital, accountable institutions, and digital technology will be key for fiscal decentralization to drive truly inclusive and sustainable economic growth.

**Table 6: Future Research Agenda And Policy Implications.**

Dimensions Explored	Research Recommendations Future	Practical Policy Implications
Theoretical framework	Fiscal, human capital, and institutional integration	Comprehensive theory-based policy formulation
Methodology	Use panel data, advanced quantitative	Long-term data-driven monitoring

	methods	
Digitization	Research the role of e-budgeting, e-procurement, and blockchain	Implementation of technology for fiscal transparency
Socio-cultural dimension	Analysis of the influence of local socio-cultural and political norms	Design policies according to local contexts
Human capital	Focus on education, training, and digital literacy	Human resource investment as a condition for fiscal success
Local institutions	Strengthen community-based governance and oversight	Minimize corruption and moral hazards

## 5. CONCLUSION

This systematic review confirms that fiscal decentralization has significant potential to drive economic growth, but the results vary widely between regions and countries. The effectiveness of these policies is not determined solely by the magnitude of the fiscal transfer, but by the quality of human capital and the underlying institutional capacity. In other words, fiscal decentralization is not an automatic pro-growth policy, but rather conditional and heavily influenced by local readiness.

The literature review results show that human capital serves as a mediating variable that bridges the relationship between fiscal decentralization and economic growth. Competent regional apparatus and people with education, skills, and digital literacy can more productively optimize the use of public funds. On the contrary, the weak quality of human resources results in budget allocation being trapped in routine spending, inefficiency, and even corrupt practices that hinder long-term growth.

Comparative studies also show that institutional capacity and local governance are important foundations for the success of fiscal decentralization. Regions or countries with transparent fiscal regulations, high public participation, and strong supervisory mechanisms tend to be able to transform decentralization into inclusive economic growth. On the contrary, weak governance widens inequality and creates fiscal instability.

Theoretically, this study contributes by integrating the theories of fiscal federalism, human capital theory, and institutional theory to explain the variation in the impact of fiscal decentralization. This integration enriches academic discourse by offering a multidimensional perspective that is more appropriate for analyzing the context of developing countries.

## REFERENCES

- Afonso, A., Tovar Jalles, J., & Venâncio, A. (2024). Fiscal decentralization and public sector efficiency: Do natural disasters matter? *Economic Modelling*, 137, 106763. <https://doi.org/10.1016/j.econmod.2024.106763>
- Ain, Q. U., Yousaf, T., & Tahir, M. A. (2025). Decentralization policies and sustainable rural development: A path to eradicating poverty ( <sc>SDG 1</sc> ) and hunger ( <sc>SDG 2</sc> ). *Sustainable*

The emerging policy implication is that fiscal decentralization should be seen not only as a financial distribution mechanism, but as a strategic instrument of regional development. Investment in human capital through education, skills training, and digital literacy must go hand in hand with strengthening local governance to ensure policy effectiveness. In addition, the use of digital technology in public financial management needs to be accelerated to increase fiscal transparency and accountability.

The limitation of this study lies in the scope of the literature that focuses on Q1/Q2 indexed articles in the period 2019–2024 and only includes English-language publications. This limitation has the potential to exclude important findings from other relevant sources. In addition, this study is an SLR-based qualitative study, so it does not provide a more detailed quantitative empirical test of the relationship between variables.

Based on these limitations, future research should use cross-border panel data with advanced quantitative methods to test the causal relationship between fiscal decentralization, human capital, and economic growth. In addition, exploring the role of digitalization and local socio-cultural factors in strengthening or weakening the effectiveness of decentralization is a promising field of study to enrich the literature.

Overall, the study confirms that fiscal decentralization's success is highly dependent on the quality of human capital and the capacity of local institutions. The combination of the two determines whether regional fiscal policies can be an inclusive economic growth engine or simply an unproductive administrative burden. Therefore, an effective decentralization strategy should be seen as part of a long-term development agenda that puts people and institutions at the heart of economic transformation.

- Development, 33(1), 700–716. <https://doi.org/10.1002/sd.3147>
- Aray, H. (2019). A new approach to test the effects of decentralization on public infrastructure investment. *Regional Studies*, 53(7), 1042–1057. <https://doi.org/10.1080/00343404.2018.1538552>
- Aristides dos Santos, A. M., Perelman, J., Jacinto, P. de A., Tejada, C. A. O., Barros, A. J. D., Bertoldi, A. D., Matijasevich, A., & Santos, I. S. (2019). Income-related inequality and inequity in children's health care: A longitudinal analysis using data from Brazil. *Social Science & Medicine*, 224, 127–137. <https://doi.org/10.1016/j.socscimed.2019.01.040>
- Arkorful, V. E., Lugu, B. K., Hammond, A., & Basiru, I. (2021). Decentralization and Citizens' Participation in Local Governance: Does Trust and Transparency Matter? – An Empirical Study. *Forum for Development Studies*, 48(2), 199–223. <https://doi.org/10.1080/08039410.2021.1872698>
- Arvanitis, C. (2024). Systematic literature review in five steps. *The Journal of the Acoustical Society of America*, 155(3\_Supplement), A103–A103. <https://doi.org/10.1121/10.0026958>
- Becerra-Ornelas, A. U., & Núñez, H. M. (2019). The technical efficiency of local economies in Mexico: a failure of decentralized public spending. *The Annals of Regional Science*, 62(2), 247–264. <https://doi.org/10.1007/s00168-018-0894-1>
- Bellinger, N. (2022). Rural decentralization and infant mortality among select Indian states: a preliminary analysis. *Contemporary South Asia*, 30(2), 202–209. <https://doi.org/10.1080/09584935.2022.2059061>
- Beramendi, P., & Rogers, M. (2020). Fiscal decentralization and the distributive incidence of the Great Recession. *Regional Studies*, 54(7), 881–896. <https://doi.org/10.1080/00343404.2019.1652895>
- Beshi, T. D., & Kaur, R. (2020). Public Trust in Local Government: Explaining the Role of Good Governance Practices. *Public Organization Review*, 20(2), 337–350. <https://doi.org/10.1007/s11115-019-00444-6>
- Brandon, A. (2021). Regional Financial Autonomy and Anti-Corruption Efforts to Combat Budget Leakage in Western and Eastern Indonesia: New Findings. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3932097>
- Chai, J., Hao, Y., Wu, H., Yu, Y., & Hu, N. (2024). How do local government fiscal revenue targets affect green technology innovation in China? *Economics of Innovation and New Technology*, 33(7), 1002–1028. <https://doi.org/10.1080/10438599.2023.2267447>
- Chen, C., & Ganapati, S. (2023). Do transparency mechanisms reduce government corruption? A meta-analysis. *International Review of Administrative Sciences*, 89(1), 257–272. <https://doi.org/10.1177/00208523211033236>
- Chen, C., & Neshkova, M. I. (2020). The effect of fiscal transparency on corruption: A panel cross-country analysis. *Public Administration*, 98(1), 226–243. <https://doi.org/10.1111/padm.12620>
- Chen, J., & Pan, L. (2024). Impact of the Coupling Coordination Degree of Human Capital and Infrastructure on High-Quality Economic Development: Empirical Evidence from Chinese Cities. *Sustainability*. <https://doi.org/10.3390/su16208905>
- Chen, S., Liu, X., & Lu, C. (2022). Fiscal Decentralization, Local Government Behavior, and Macroeconomic Effects of Environmental Policy. *Sustainability*, 14(17), 11069. <https://doi.org/10.3390/su141711069>
- Chi, M., Muhammad, S., Khan, Z., Ali, S., & Li, R. Y. M. (2021). Is centralization killing innovation? The success story of technological innovation in fiscally decentralized countries. *Technological Forecasting and Social Change*, 168, 120731. <https://doi.org/10.1016/j.techfore.2021.120731>
- Choudhury, S. (2023). Non-random selection into entrepreneurship in the realm of government decentralization and corruption. *European Journal of Political Economy*, 78, 102377. <https://doi.org/10.1016/j.ejpoleco.2023.102377>
- Chukwu Agwu, E., & Udochukwu Godfrey, O. (2020). Capital Market and Fiscal Policy Shocks in Nigeria. *Journal of Finance and Accounting*, 8(3), 125. <https://doi.org/10.11648/j.jfa.20200803.13>
- Coube, M., Nikoloski, Z., Mrejen, M., & Mossialos, E. (2023). Persistent inequalities in health care services utilisation in Brazil (1998–2019). *International Journal for Equity in Health*, 22(1), 25. <https://doi.org/10.1186/s12939-023-01828-3>
- Das, A., & Sethi, N. (2023). Cash transfers and human capital outcomes of children in LMICs: A systematic review using PRISMA. *Heliyon*, 9(4), e14758. <https://doi.org/10.1016/j.heliyon.2023.e14758>
- Dias Paião Júnior, G., & Ferraz, D. (2024). Economic diversification and sustainable growth: a systematic literature review and bibliometric analysis. *Environment, Development and Sustainability*. <https://doi.org/10.1007/s10668-024-05667-2>
- Diaz-Serrano, L., & Meix-Llop, E. (2019). Decentralization and the quality of public services: Cross-country

- evidence from educational data. *Environment and Planning C: Politics and Space*, 37(7), 1296–1316. <https://doi.org/10.1177/2399654418824602>
- Digdowniseiso, K., Murshed, S. M., & Bergh, S. I. (2022). How Effective Is Fiscal Decentralization for Inequality Reduction in Developing Countries? *Sustainability*, 14(1), 505. <https://doi.org/10.3390/su14010505>
- Ewetan, O. O., Matthew, O. A., Babajide, A. A., Osabohien, R., & Urhie, E. (2020). Fiscal federalism and economic development in Nigeria: An auto-regressive distributed lag approach. *Cogent Social Sciences*, 6(1). <https://doi.org/10.1080/23311886.2020.1789370>
- Ewetan, O. O., Osabohien, R., Matthew, O. A., Babajide, A. A., & Urhie, E. (2021). Fiscal federalism and accountability in Nigeria: an ARDL approach. *Journal of Money Laundering Control*, 24(2), 361–373. <https://doi.org/10.1108/JMLC-05-2020-0046>
- Fan, F., Li, M., Tao, R., & Yang, D. (2020). Transfer-based decentralization, economic growth, and spatial inequality: Evidence from China's 2002–2003 tax sharing reform. *Urban Studies*, 57(4), 806–826. <https://doi.org/10.1177/0042098019856780>
- Foa, R. S. (2022). Decentralization, historical state capacity, and public goods provision in Post-Soviet Russia. *World Development*, 152, 105807. <https://doi.org/10.1016/j.worlddev.2021.105807>
- Giraud, L. G. B. M. E. (2022). Industrial policy, innovative entrepreneurship, and the human capital of founders. *Small Business Economics*, 60, 707–728. <https://doi.org/10.1007/s11187-022-00611-y>
- Giraudy, A., & Pribble, J. (2020). Territorial Inequality in Health Service Delivery: Lessons from Latin America's Federations. *Latin American Politics and Society*, 62(3), 19–43. <https://doi.org/10.1017/lap.2020.5>
- Hamada, M. (2020). Comment on "Making Economic Policy in a Democratic Indonesia: The First Two Decades." *Asian Economic Policy Review*, 15(2), 235–236. <https://doi.org/10.1111/aepr.12307>
- Hanif, I., Wallace, S., & Gago-de-Santos, P. (2020). Economic Growth by Means of Fiscal Decentralization: An Empirical Study for Federal Developing Countries. *Sage Open*, 10(4). <https://doi.org/10.1177/2158244020968088>
- Hao, Y., Chen, Y.-F., Liao, H., & Wei, Y.-M. (2020). China's fiscal decentralization and environmental quality: theory and an empirical study. *Environment and Development Economics*, 25(2), 159–181. <https://doi.org/10.1017/S1355770X19000263>
- Hota, S. P. (2023). Education infrastructure, expenditure, enrollment, and economic development in Odisha, India. *International Journal of Educational Development*. <https://doi.org/10.1016/j.ijedudev.2023.102903>
- Hu, Z. (2021). The effect of income inequality on human capital inequality: Evidence from China. *Structural Change and Economic Dynamics*, 58, 471–489. <https://doi.org/10.1016/j.strueco.2021.06.015>
- Huynh, C. M., & Tran, H. N. (2021). Moderating effects of corruption and informality on the fiscal decentralization—economic growth nexus: Insights from OECD countries. *Annals of Public and Cooperative Economics*, 92(2), 355–373. <https://doi.org/10.1111/apce.12298>
- Khan, Z., Ali, S., Dong, K., & Li, R. Y. M. (2021). How does fiscal decentralization affect CO2 emissions? The roles of institutions and human capital. *Energy Economics*, 94, 105060. <https://doi.org/10.1016/j.eneco.2020.105060>
- Kim, S., Lee, Y., & Kim, T. (2022a). The relationship between fiscal decentralization and trust in government: evidence from the South Korean case. *International Review of Administrative Sciences*, 88(2), 373–389. <https://doi.org/10.1177/0020852320933325>
- Kim, S., Lee, Y., & Kim, T. (2022b). The relationship between fiscal decentralization and trust in government: evidence from the South Korean case. *International Review of Administrative Sciences*, 88(2), 373–389. <https://doi.org/10.1177/0020852320933325>
- Kong, N. Q. D. (2021). Human Capital and Entrepreneurship. *Journal of Human Capital*, 15, 513–553. <https://doi.org/10.1086/716344>
- Krupinski, E. A. (2019). Writing Systematic Reviews of the Literature—It Really Is a Systematic Process! *Journal of Digital Imaging*, 32(2), 199–200. <https://doi.org/10.1007/s10278-018-00176-x>
- KUHN, T., & PARDOS-PRADO, S. (2021). Corruption and support for decentralisation. *European Journal of Political Research*, 60(3), 625–647. <https://doi.org/10.1111/1475-6765.12420>
- Lee, C. (2024). Comment on "Fiscal Sustainability in Indonesia: Policies and Progress." *Asian Economic Policy Review*, 19(2), 248–249. <https://doi.org/10.1111/aepr.12472>
- Lewis, B. D. (2023). Indonesia's New Fiscal Decentralisation Law: A Critical Assessment. *Bulletin of*

- Indonesian Economic Studies, 59(1), 1–28. <https://doi.org/10.1080/00074918.2023.2180838>
- Lewis, B. D., Nguyen, H. T. M., & Hendrawan, A. (2020). Political accountability and public service delivery in decentralized Indonesia: Incumbency advantage and the performance of second-term mayors. *European Journal of Political Economy*, 64, 101910. <https://doi.org/10.1016/j.ejpoleco.2020.101910>
- Li, S., & Li, G. (2024). Fiscal decentralization, government self-interest, and fiscal expenditure structure bias. *Economic Analysis and Policy*, 81, 1133–1147. <https://doi.org/10.1016/j.eap.2024.01.014>
- Li, S., & Qi, T. (2023). Fiscal decentralization, local government debt, and corporate innovation. *Finance Research Letters*, 54, 103764. <https://doi.org/10.1016/j.frl.2023.103764>
- Luintel, K. B., Matthews, K., Minford, L., Valentinyi, A., & Wang, B. (2020). The role of Provincial Government Spending Composition in growth and convergence in China. *Economic Modelling*, 90, 117–134. <https://doi.org/10.1016/j.econmod.2020.04.024>
- Martínez, Y. U., Arzoz, P. P., & Arregui, I. Z. (2022). Tax collection efficiency in OECD countries improves via decentralization, simplification, digitalization, and education. *Journal of Policy Modeling*, 44(2), 298–318. <https://doi.org/10.1016/j.jpolmod.2022.03.003>
- Menezes-Filho, N., & Politi, R. (2020). Estimating the causal effects of private health insurance in Brazil: Evidence from a regression kink design. *Social Science & Medicine*, 264, 113258. <https://doi.org/10.1016/j.socscimed.2020.113258>
- Montes, G. C., & Luna, P. H. (2021). Fiscal transparency, legal system, and perception of the control on corruption: empirical evidence from panel data. *Empirical Economics*, 60(4), 2005–2037. <https://doi.org/10.1007/s00181-020-01849-9>
- Nair, M. S., & Abhirami, A. (2024). Localizing sustainable development goals (SDGs) through decentralized governance: Insights from Kerala, India. *Journal of Infrastructure, Policy and Development*, 8(16), 10339. <https://doi.org/10.24294/jipd10339>
- Nirola, N., Sahu, S., & Choudhury, A. (2022). Fiscal decentralization, regional disparity, and the role of corruption. *The Annals of Regional Science*, 68(3), 757–787. <https://doi.org/10.1007/s00168-021-01102-w>
- Ojo, A. E., Ammasoma, D., & Adalakun, J. O. (2023). Responsiveness of the Construction Sector to Fiscal Policy in Nigeria. *Journal of Construction in Developing Countries*, 28(2), 121–137. <https://doi.org/10.21315/jcdc-02-22-0027>
- Pasieczny, P. K. J. (2020). Impact of Resources on the Development of Local Entrepreneurship in Industry 4.0. *Sustainability*. <https://doi.org/10.3390/su122410272>
- Purbadharmaja, I. B. P., Maryunani, Ananda, C. F., & Santoso, D. B. (2019). The implications of fiscal decentralization and budget governance on economic capacity and community welfare. *Foresight*, 21(2), 227–249. <https://doi.org/10.1108/FS-05-2018-0052>
- Qin, J. X. L. H. X. W. M. B. Y. (2024). Local Government Fiscal Stress and Regional Entrepreneurship: Evidence from a Natural Experiment in China. *Economic Analysis and Policy*. <https://doi.org/10.1016/j.eap.2024.08.026>
- Resnick, D., & Siame, G. (2023). Organizational commitment in local government bureaucracies: The case of Zambia. *Governance*, 36(3), 933–952. <https://doi.org/10.1111/gove.12713>
- Rethlefsen, M. L., Kirtley, S., Waffenschmidt, S., Ayala, A. P., Moher, D., Page, M. J., Koffel, J. B., Blunt, H., Brigham, T., Chang, S., Clark, J., Conway, A., Couban, R., de Kock, S., Farrah, K., Fehrmann, P., Foster, M., Fowler, S. A., Glanville, J., ... Young, S. (2021). PRISMA-S: an extension to the PRISMA Statement for Reporting Literature Searches in Systematic Reviews. *Systematic Reviews*, 10(1), 39. <https://doi.org/10.1186/s13643-020-01542-z>
- Rich, J., & J., A. (2023). Outsourcing Bureaucracy to Evade Accountability: How Public Servants Build Shadow State Capacity. *American Political Science Review*, 117(3), 835–850. <https://doi.org/10.1017/S0003055422000892>
- Sankar D, H., Benny, G., Jaya, S., & Nambiar, D. (2024). National Rural Health Mission reforms in light of decentralised planning in Kerala, India: a realist analysis of data from three witness seminars. *BMC Public Health*, 24(1), 678. <https://doi.org/10.1186/s12889-024-18181-x>
- Shahbaz, M., Abbas Rizvi, S. K., Dong, K., & Vo, X. V. (2022). Fiscal decentralization as a new determinant of renewable energy demand in China: The role of income inequality and urbanization. *Renewable Energy*, 187, 68–80. <https://doi.org/10.1016/j.renene.2022.01.064>
- Shao, S., & Razzaq, A. (2022). Does composite fiscal decentralization reduce trade-adjusted resource

- consumption through institutional governance, human capital, and infrastructure development? *Resources Policy*, 79, 103034. <https://doi.org/10.1016/j.resourpol.2022.103034>
- Shon, J., & Cho, Y. K. (2020). Fiscal Decentralization and Government Corruption: Evidence from U.S. States. *Public Integrity*, 22(2), 187–204. <https://doi.org/10.1080/10999922.2019.1566427>
- Sima, M., Liang, P., & Qingjie, Z. (2023). The impact of fiscal decentralization on economic growth: A comparative analysis of selected African and OECD countries. *Heliyon*, 9(9), e19520. <https://doi.org/10.1016/j.heliyon.2023.e19520>
- Singh, R., Bhattacharjee, S., & Nandy, A. (2024). Fiscal decentralization for the delivery of health and education in Indian states: An ongoing process is more desirable than a policy shift. *Journal of Policy Modeling*, 46(2), 254–271. <https://doi.org/10.1016/j.jpolmod.2024.01.006>
- Su, X., Lu, K., Hu, X., & Xiang, Y. (2019). Reforms on county-level fiscal governance in China: impact on urban-rural income inequality. *International Review of Public Administration*, 24(2), 81–100. <https://doi.org/10.1080/12294659.2019.1608011>
- Sun, Y., Gao, P., & Razzaq, A. (2023). How does fiscal decentralization lead to renewable energy transition and a sustainable environment? Evidence from highly decentralized economies. *Renewable Energy*, 206, 1064–1074. <https://doi.org/10.1016/j.renene.2023.02.069>
- THANH, S. D., & CANH, N. P. (2020). FISCAL DECENTRALIZATION AND ECONOMIC GROWTH OF VIETNAMESE PROVINCES: THE ROLE OF LOCAL PUBLIC GOVERNANCE. *Annals of Public and Cooperative Economics*, 91(1), 119–149. <https://doi.org/10.1111/apce.12255>
- Tirtosuharto, D. (2021). The impact of fiscal efficiency on poverty reduction in Indonesia: institutional factors and geographical differences. *Journal of Geographical Systems*. <https://doi.org/10.1007/S10109-021-00359-1>
- Tufail, M., Song, L., Wang, W., Gu, X., & Khan, S. (2023). Race to Top or Race to Bottom Approach: Disaggregated Effect of Fiscal Decentralization and Its Implications for Consumption-Based Carbon Emissions. *Journal of the Knowledge Economy*, 15(3), 15243–15277. <https://doi.org/10.1007/s13132-023-01690-2>
- Williams, M. J. (2021). Beyond state capacity: bureaucratic performance, policy implementation and reform. *Journal of Institutional Economics*, 17(2), 339–357. <https://doi.org/10.1017/S1744137420000478>
- Xu, Y., & Warner, M. E. (2022). Crowding Out Development: Fiscal Federalism after the Great Recession. *Environment and Planning A: Economics and Space*, 54(2), 311–329. <https://doi.org/10.1177/0308518X211053643>
- Yu, M., & Kwan, C. Y. (2024). Fiscal decentralization and the attenuating effects of inter-governmental transfers and economic development on corruption in China. *Australian Journal of Public Administration*, 83(4), 749–763. <https://doi.org/10.1111/1467-8500.12636>
- Yu, Z., Wu, Y., & Zhu, Z. (2023). Fiscal Decentralization, Environmental Regulation, and High-Quality Economic Development. *Sustainability*, 15(10), 7911. <https://doi.org/10.3390/su15107911>
- Zhang, J., & Sun, Z. (2024). Spatial spillover effects of manufacturing agglomeration on China's total factor carbon productivity: evidence from the regulatory role of fiscal decentralization. *Environmental Science and Pollution Research*, 31(8), 11912–11932. <https://doi.org/10.1007/s11356-024-31898-x>
- Zhang, X., Hu, X., & Wu, F. (2022). Fiscal Decentralization, Taxation Efforts, and Corporate Green Technology Innovation in China Based on Moderating and Heterogeneity Effects. *Sustainability*, 14(22), 15372. <https://doi.org/10.3390/su142215372>
- Zhao, R., & He, P. (2024). Government spending efficiency, fiscal decentralization, and regional innovation capability: Evidence from China. *Economic Analysis and Policy*, 84, 693–706. <https://doi.org/10.1016/j.eap.2024.08.033>
- Zhu, L., Liu, S., & Kong, D. (2023). Governments' fiscal stress and firm decentralization. *International Review of Financial Analysis*, 90, 102911. <https://doi.org/10.1016/j.irfa.2023.102911>
- Zimmerman, K. (2021). The Public Good and the Brazilian State: Municipal Finance and Public Services in São Paulo, 1822–1930. *Hispanic American Historical Review*, 101(4), 717–719. <https://doi.org/10.1215/00182168-9366831>

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