

EVALUATING THE EFFECTIVENESS OF ZAKAT DISTRIBUTION AND PROVINCIAL ZAKAT POLICY IN ALLEVIATING POVERTY: A PANEL DATA ANALYSIS ACROSS PROVINCES IN INDONESIA

A Thesis

**Submitted to the Master's Study Program of Economics at the Faculty of
Economics and Business in partial fulfillment of the requirements for the degree
of**

Master of Arts (M.A.)



by:

Handika Putra Pamungkas

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UNIVERSITAS ISLAM INTERNASIONAL INDONESIA

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ABSTRACT

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Zakat as the one of the core pillars of Islam, holds not only religious obligations but also serves as an important social and economic instrument in addressing poverty within Muslim societies. In Indonesia, the management of zakat is regulated through Law No. 23 of 2011 which provides a national framework for the collection, distribution, and institutional governance of zakat. As a derivative of this national law, many provincial governments have issued local regulations and policies to implement and manage zakat performance within their respective regions. However, the effectiveness of these provincial zakat policies in achieving a social objective of zakat to alleviate poverty has not yet been empirically evaluated. Thus, this study aims to evaluate the effectiveness of zakat distribution and the presence of zakat policy in reducing poverty at the provincial level in Indonesia. Utilizing panel data from 34 provinces between 2018 until 2024 and applying the Generalized Method of Moments (GMM) estimation technique, this research also controls for macroeconomics factors such as Gross Domestic Product (GDP), Unemployment Rate, and Human Development Index (HDI). The results shows that the presence of provincial zakat policies is associated with lower poverty when considering the presence of control variables. In contrast, zakat distribution performance was found to have a positive association with poverty rates, highlighting a counterintuitive result driven by the economic disruption of the covid-19 pandemic crisis and the financial behaviour of zakat recipients. This study provides a practical recommendations for policymakers and zakat management institutions to maximize the utilization of regional regulation in order to optimize the role of zakat in poverty alleviation.

Keywords: *zakat regulation, poverty alleviation, Generalized Method of Moments*

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This thesis is submitted as a partial fulfilment of the requirements for the Master's degree in Economics at Universitas Islam Internasional Indonesia (UIII) in Depok. The topic of this thesis is "Evaluating the Effectiveness of Zakat Distribution and Provincial Zakat Policy in Alleviating Poverty: A Panel Data Analysis Across Provinces in Indonesia", which explores the relationship between zakat distribution, the presence of provincial zakat regulations, and their collective impact on poverty alleviation across Indonesian provinces.

The author, Handika Putra Pamungkas, has undertaken an extensive review of the relevant literature on zakat policy, zakat distribution performance, and poverty in Indonesia. The research methodology employed in this thesis is the Generalized Method of Moments (GMM), which is particularly suitable for addressing endogeneity issues and capturing the dynamic relationship between variables in panel data analysis. The findings of this study contribute to the understanding of how institutional and policy factors—beyond mere financial disbursement—can enhance the effectiveness of zakat as a tool for poverty reduction. These insights hold important implications for improving zakat governance, optimizing provincial policies, and integrating zakat more strategically into broader poverty alleviation frameworks.

The author would like to express his sincere gratitude to his supervisor, Prof. Dian Masyita, Ph.D, for the valuable guidance, constructive feedback, and unwavering support throughout the research and writing process. Additionally, the author would also like to extend heartfelt thanks to his wife, Martha Purna Syiva, and his baby son, Muhammad Arsyaka Alzam, whose presence and encouragement have been a constant source of strength and motivation during the preparation of this thesis.

It is the author's hope that this thesis will serve as a valuable resource for researchers, practitioners, and policymakers interested in exploring the intersection of Islamic social finance, zakat policy, and poverty alleviation strategies in developing countries.

Depok, July 2025

Handika Putra Pamungkas

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CHAPTER I

INTRODUCTION

1.1 Background

Islam is revealed perfectly, as mentioned in soorah Al-Maa'idah 5:3, with all the Shariah that has been conveyed (Ameenah & Philips, 1960). These Shariah rules provide a comprehensive guide to a perfect way of life, guiding humanity towards righteousness and justice. This perfection encompasses not only the core beliefs but also the comprehensive legal and ethical frameworks that govern individual and communal conduct. Among these frameworks is the concept of Sharia, which provides a detailed guideline for various aspects of life, including social justice, economic fairness, and moral integrity. Central to this understanding is the concept of Maqasid al-Sharia, which refers to the higher objectives of Islamic law aimed at promoting justice, welfare and moral integrity (Auda, 2008).

Maqashid Sharia is a concept which cannot be separated from the purposes of Islamic law. Maqasid, means the essential, complementary, and embellishing objectives, are specifically derived from an inductive classification based on a broad theme: that Sharia law exists for the benefit of mankind (Karrat & Hadi, 2024). In Islamic finance, the importance of Maqasid al-Shari'ah stems from the perspective of wealth within Islamic law. This importance is also linked to the objective of Islamic law regarding financial and business transactions, as well as the broader goals of Shari'ah concerning wealth (Lahsasna, 2009). Not only in the profitable sector, maqashid al-sharia from social finance is also important in order to optimize the wealth of the society to achieve social justice and economic prosperity. Thus, one of the objectives of the Shariah is to maintain the principles of justice ('adl), based on establishing a balance which accomplishes rights and responsibilities as well as abolishes unfairness and inequality (Vejzagic & Smolo, 2011).

Based on Auda (2008), *maqasid al-shariah* provides an answer to the fundamental Islamic question, including why giving charity (zakat) is one of the Islamic principles 'pillars'. Maqasid includes the wisdom behind rulings, such as enhancing social welfare, which is one of the wisdom behind charity (Auda, 2008). In terms of community welfare, one essential aspect is poverty alleviation (Affandi & Astuti, 2013). In today's contemporary era, the main economic challenges faced by Muslim countries in the economic fields are underdevelopment and poverty (Rahmatina & Ahmed, 2015). Therefore, reducing poverty and underdevelopment

is an essential part of maqasid shariah in order to increase well-being. Addressing poverty issue is the most critical factors in measuring human welfare, since economic difficulties may cause other challenges (Mubarak et al., 2022).

Poverty remains one of the most pressing socio-economic issues globally, and particularly in Indonesia. According to data from Badan Pusat Statistik (BPS), the poverty rate in Indonesia as of September 2024 remained at 8.57 percent of the total population, equivalent to approximately 24 million people, based on the national poverty line of IDR 595,242 per capita per month. Furthermore, in the context of social development, poverty is more complex than merely the lack of income, since it is marked by various forms of deprivation and exclusion. The concept of multidimensional poverty highlights that poverty extends beyond financial scarcity. It encompasses deprivation in multiple areas such as education, health, access to clean water and sanitation, housing, until social participation (Gallardo, 2020). This reality underscore the need for approaches that go beyond financial assistance. Thus, in recent years, many charity-based initiatives driven by Non-Governmental Organizations (NGOs) or faith-based institutions (such as zakat institutions) have shifted from merely providing unconditional cash transfers. Instead, they implement a wide range of programs aimed at improving the quality of life of the poor in a more sustainable way (Amanda et al., 2021).

Linking the social problem and the maqasid Shariah, Islam comes with obligatory payment through zakat for those who have excess wealth. Islam comes with zakat law with the main objective of purifying the wealth of the zakat payers and becoming the central justification for the equal allocation of wealth to everyone (Vejzagic & Smolo, 2011). This objective of zakat actually is the *illah* or *maqashid* of the sharia of zakat, which reveals the vision of Islam and represents a complete and integrated way of life in order to promote well-being in this world and the Hereafter (Soualhi, 2008). Economically, zakat increases the well-being of the poor by transfer of ownership of specific property from the excessive wealth party to the poor. Regarding the economic dimension of zakat, its goal is to produce positive outcomes in various areas, including aggregate consumption, savings and investment, the total supply of labour and capital, poverty alleviation, and economic growth (Wahab & Rahim Abdul Rahman, 2011). With all of these objectives of zakat, the effectiveness and efficiency of zakat management should be an important concern, apart from just making zakat a fulfilment of a Muslim's obligation. Thus, the development initiatives of zakat have a crucial role in optimizing the social and economic function of zakat.

In an economic way, the function of zakat in alleviating poverty aligns closely with the principles of social justice, as a theory that emphasize fairness, equity, and the protection of basic rights for all members of society, especially the marginalized and disadvantages (Shields, 2015). In economic terms, social justice theory is concerned with how resources, wealth, and opportunities are allocated within a society (Fleurbaey, 2019). In this regards, zakat serves as a tool for achieving social utility by channeling wealth from those who have excess wealth to those in need.

The practice of optimizing zakat with various ways of deriving legal rulings happened in the Khilafah era. The optimal utilization of zakat was achieved during the era of the Khilafah, as noted by Auda (2008) in his book. Umar made the decision to classify horses as a type of wealth subject to zakat, despite the Prophet's explicit directive to exclude them. Umar's rationale was that, in his time, horses had become significantly more valuable than camels, which the Prophet had included in zakat. Essentially, Umar recognized the 'purpose' of zakat as a means of social assistance provided by the wealthy to support the poor, irrespective of the specific types of wealth outlined in the Prophetic tradition and their literal interpretations. This practice, called *ijtihad*, is one of the ways to obtain Sharia law through personal judgment to derive legal rulings (Auda, 2008).

Even though zakat holding a crucial role within the religious and social framework of Muslim society, however, as a mandatory form of social worship, not all Muslims who are obligated to pay zakat actually fulfil this religious duty (Shukor, 2021). The level of compliance among Muslims in fulfilling their zakat obligations varies significantly, influenced by many factors, such as psychological, environmental, organizational, and sosio-demographic factors (Shukor, 2021). This disparity in compliance levels has become a social phenomenon, given that zakat not only serves as an individual act of worship but also carries a substantial social impact. Thus, it is important further to examine the determinants of individual compliance with zakat obligations, in order to obtain a deeper understanding of these dynamics, and strengthening zakat management systems and optimizing zakat's potential in reducing poverty and improving welfare of the Muslim community.

In the context of Indonesia's growing middle class, Yuswohady et al., (2014) in his book *Marketing to the Middle Class Muslim* explains that the religiosity of modern Muslims is not homogenous, but can be classified into several behavioral types, each with differing

implications on consuming patterns and religious observances. In his book, Yuswohady et al. (2014) explains that one of the interesting things about Indonesian Muslim consumers is that the more prosperous, knowledgeable, and technologically savvy they are, the more religious they are. This dynamic presents both a challenge and an opportunity in the context of zakat optimization in Indonesia. These conditions emphasize the importance of not only raising awareness of zakat, but also improving the accessibility, transparency, and professionalism of zakat management institutions to better engage capable communities of potential zakat payers.

In a contemporary era of world wide practice of zakat, to optimize the function of zakat as a religious obligation, different countries have adopt various policies and regulatory approaches in its management and implementation. This initiation is based on the function of zakat, which has significant role in the economy of Islamic states. Aside serves as a religious obligation, zakat has a function as a fiscal policy tool, influencing economic stability and social welfare (Hassan et al., 2024). Zakat has a potent fiscal policy tool as a stabilizer to promote economic balance and social justice in the economy, where zakat reduces economic inequality by distributing wealth from those with excess wealth to the less fortunate (Jaffer, 2020). Furthermore, zakat is able to stimulate economic activity by increasing demand and contributing to national economic growth (Jedidia & Guerbouj, 2020). However, the integration of zakat into state fiscal policies should be managed properly to enhance its impact on economic growth (Bayraktar & Sencal, 2022).

The integration of zakat and fiscal policy can be managed by the government through various policies and strategies. The government's role is crucial in facilitating the integration of zakat and fiscal policy through effective management, regulation, and public awareness. Thus, the government needs to utilize the objective of zakat in terms of economics and build a supporting ecosystem to shape the economic outcomes from zakat. From the complementary role, zakat can complement taxes in achieving fiscal policy goals (Safitri et al., 2024). However, to optimize the integration of zakat with fiscal policy, the government must establish a robust regulatory framework to manage zakat efficiently, based on the best approach in the country (Halim et al., 2025). The best approach could be different in every country, due to the different socio-political factors. These variations reflect each country's unique approach to integrating religious obligations with national financial and social welfare systems, aiming to optimize zakat's role in poverty alleviation and economic development (Mukhlisin et al., 2024).

These variations of zakat policy can be seen from many perspectives, such as based on the management and institutional arrangements, financing, and zakat recipients eligibility criteria (Hammad, 2022). The government's role remains crucial in determining a country's chosen zakat management system. This basic zakat management system can be seen in the management and institutional arrangement, whether state-led or charity-led. The state-led zakat policy means this country conducted a zakat fund that is administratively connected to the government, where, in most cases, it is connected to the Ministry of Religious Affairs. Meanwhile, the charity-led zakat management system only collects zakat funds based on charities, such as through mosques, as in the case of Morocco and Tunisia, or based on the community, such as in India (Hammad, 2022).

As the derivation of state-led zakat policy, we can address another stand of view of zakat management policy. Among the most discussed policies is between zakat as voluntary or compulsory payment. In the compulsory zakat system, it means zakat payment has been made obligatory by the state system, which means violation against this provision will lead to legal penalty and sanction (Beik, 2015). One of the countries that applied this scheme is Kuwait, where zakat is compulsory collected through the Ministry of Finance (Mahadi et al., 2015). In Saudi Arabia, zakat is also compulsory collected through the Ministry of Finance which lies under the Zakat and Tax General Authority (Zakat and Customs Authority, 2019). This scheme is also applied in other Muslim countries, such as Malaysia, Sudan, and Pakistan (Hammad, 2022). For Nigeria, zakat is only compulsory in certain states (Obaidullah, 2017). The interesting thing is in Singapore. Even though Singapore is not a Muslim majority country, but zakat is a compulsory payment for Singaporean Muslims (Riyanto et al., 2021).

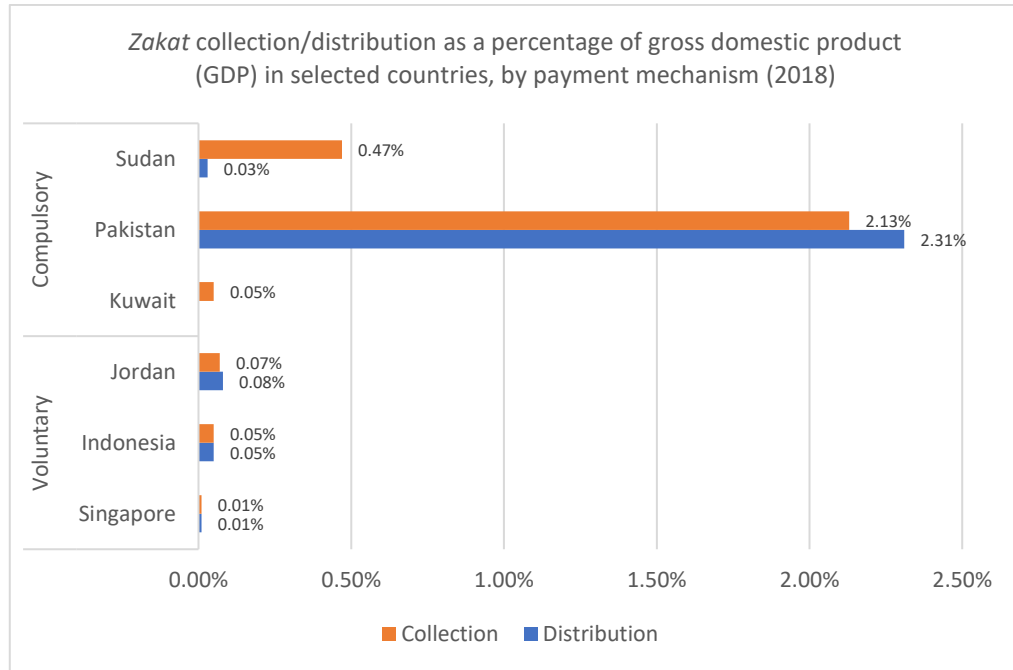
The opposite of a country that makes zakat as a compulsory payment is a country that propose zakat as a voluntary payment. In this type of policy, the government only facilitates policies for zakat management without forcing its citizens to pay zakat (Hammad, 2022). In fact, there are far more countries that implement zakat as a voluntary payment than those that implement it as a compulsory payment. Indonesia is one of the countries that has implemented voluntary zakat payments. In this case, Indonesia government facilitates the needs of Muslim society to pay their obligatory almsgiving, which is zakat. The fact that Indonesia is one of the biggest Muslim countries by population does not makes the Indonesian government to require zakat as a mandatory payment. However, Indonesia has an incentive for Muslim society who

want to pay zakat, such as zakat as a reduction in taxable income (Rizka Destiana & Zilal Hamzah, 2021).

In Indonesia, the zakat management systems stands on the Law No. 23 of 2011 in zakat management policy. Thus, this law is a fundamental legal standing in how the zakat management system in Indonesia. In short, the presence of this law leads Indonesia to led-state zakat management. However, Indonesia still adopts the voluntary zakat collecting rather than the compulsory zakat collecting system. The Indonesia government does not directly manage zakat administration in the country. Instead, the private sector is also given the opportunity to play a role in establishing zakat management institutions (Yahya, 2020). This means that private institutions can still collect and disburse zakat funds from society, but they must regularly report their activity to the government.

From the economic perspective, zakat can be understood as a faith-based economic instrument, with a potent role in economics as a complement of conventional fiscal and monetary policies, especially in Muslim countries. The productive utilization of zakat funds, such as through microfinance, entrepreneurship support, and community development programs, has a potential to enhance labour productivity, create new business opportunities, and reduce unemployment rate (Djaghballou et al., 2018). These economic multipliers underscore the broader macroeconomic impact of zakat, not only in addressing concerns on welfare, but also supporting sustainable economic growth. In addition, the historical data shows that the zakat management with compulsory collection policy is gives a greater performance rather than voluntary collection. This fact can be seen by the data comparing the zakat collection performance between these two policies, as shown by the table below.

Figure 1. 1. Zakat Performance Comparison between Compulsory and Voluntary Policies on GDP



Source: (Hammad, 2022)

The figure above shows the comparison of zakat collection and distribution performance between countries with two different policies, which are zakat as compulsory payment and zakat as voluntary payment. In order to display the data from the countries that applied zakat as voluntary payment, the figure above give the performance from three different countries, which are Jordan, Indonesia and Singapore. Zakat performance of these three countries relatively very small if compared to GDP. All of these three countries have zakat performance below 0.1% compared to GDP. The lowest is in Singapore, which its zakat collection and disbursement is only 0.01% of GDP. Among the reasons for this small amount of zakat in Singapore is that Singapore is not a Muslim-majority country, with the share of the Muslim population in Singapore is around 14% (Singapore Department of Statistics, 2018). However, in Jordan and Indonesia as Muslim-majority countries, the zakat collection performance is still relatively small compared to GDP, which for Indonesia zakat collection is 0.05%, and for Jordan the zakat collection is 0.07% compared to GDP. However, in terms of a countries with compulsory zakat collection policy, the zakat performance is relatively larger rather than the countries with voluntary zakat collection policy. The relatively huge number is shows by Pakistan, which the zakat collection in 2018 is 2.13% of GDP. Meanwhile in Sudan

with its compulsory zakat collection policy, the zakat collection is relatively small with 0.47% compared to GDP. In Kuwait, although a compulsory zakat collection policy was also applied, it only applied to companies, meaning this data does not include the value of Zakat charity donated to the Kuwait zakat institution, i.e., Zakat House (Hammad, 2022). This niche policy on zakat in Kuwait affects the relatively small performance of zakat collection in Kuwait.

Furthermore, figure 1.1 above depicts Pakistan as a country with the highest zakat performance relative to its GDP, both in terms of collection (2.13%) and distribution (2.31%). At first glance, the fact that zakat distribution in Pakistan exceeds its collection might seem contradictory. However, this condition can be explained by understanding the nature of zakat fund management. The data represented in the figure only captures the performance in a single year, which is 2018. In reality, zakat distribution in any given year can exceed that year's collection if there is a surplus of zakat funds carried over from the previous year. This is precisely what occurred in Pakistan. In 2017, zakat collection amounted to 8,141,680,000 Pakistan rupees, while the amount distributed during that year was 7,570,910,000 rupees (Auditor General of Pakistan, 2019). This resulted in a surplus of 570,770,000 rupees. Consequently, in 2018, Pakistan was able to distribute 8,009,770,000 rupees in zakat, which was higher than the zakat collected in the same year, which totaled 7,377,680,000 rupees (Auditor General of Pakistan, 2019). This carryover mechanism explains the anomaly observed in the data.

Despite the insight from zakat performance compared to the economic scale of a country, the broader message conveyed by Figure 1.1 is the relatively limited scale of zakat collection and distribution across all countries compared to the size of their respective economies. This observation leads to questioning the actual effectiveness of zakat in addressing poverty at a national level. Even in countries with compulsory zakat systems, such as Sudan and Pakistan, the figures remain small in proportion to GDP. The situation is even smaller in countries with voluntary zakat mechanisms, where zakat often accounts for less than 0.1% of GDP. To address this challenge, several countries have attempted to boost zakat compliance through incentives. For example, Malaysia has implemented a policy where zakat payments from Muslims in Malaysia can be claimed as a tax rebate, directly reducing the amount of income tax owed (Wijayanti et al., 2022). This approach recognized that individuals, particularly Muslims, are subject to two types of financial obligations, which are zakat as a religious obligation and tax as a legal payment, both of which draw from the same income base.

Consequently, zakat cannot be treated as the sole financial instrument for poverty alleviation, as its collection potential is often constrained by the competing demands of the tax system.

In order to optimize the function of zakat, some countries linked zakat to a social protection system. For instance, in Oman, zakat is embedded with a coordination mechanism; in Jordan, zakat is used to develop complementary eligibility criteria; and in Sudan, zakat is included in the social protection strategies and planning (Hammad, 2022). The practice of how zakat is linked to the social protection system is different across countries. However, in general, the method on how to link zakat with the social protection system is through budgeting and social expenditure, coordinated with eligibility criteria databases, and strategizing in social protection or strategies in poverty alleviation (Hammad, 2022). This strategy can strengthen the impact of zakat on poverty issues.

Among the countries which integrated the zakat fund with the social poverty program is Saudi Arabia, where all the zakat received in Saudi Arabia goes to the Ministry of Human Resources to utilize in various social development programs, such as cash assistance to vulnerable people, disabilities, widows and orphans (Government of Saudi Arabia, 2021). Besides Saudi Arabia, Yemen is another country that integrates Zakat with social protection budgeting. In Yemen, the State's Chamber of Zakat disburse zakat funds to the district level to provide the society with Social Welfare Fund and merges the zakat with contributions to the other sources of financing used for social protection (Machado et al., 2018). Furthermore, Kuwait also applied the integration between zakat and government social initiatives. Kuwait has a policy to make zakat compulsory funds from the corporation collected by the Ministry of Finance (Hammad, 2022). The zakat fund in Kuwait is accrued to the national treasury and used in the public interest program to provide security and justice, defense, education, health care, social solidarity, religious services, housing, amenities, water and electricity, and so on (Mahadi et al., 2015). These are several countries with a policy of integrating zakat and government initiatives linked with national social programs. In these countries, zakat is not only managed by government-making institutions but is also integrated with national initiatives.

Based on the Sharia perspective, linking Zakat with the social protection initiatives of a nation is possible as long as the disbursement of Zakat still complies with Sharia rule. Since zakat is religiosity funding, the disbursement scheme of zakat should follow the Sharia terms.

This provision has been mentioned in Al-Qur'an, at at-Tauba: 60 where the distribution of zakat is only intended for eight types of *asnaf*, which are the poor and the indigent, *amil* (those who work on zakat), *mu'allaf* (the reverts), *riqab* (freeing the slaves), *gharimin* (the debtors), *fii sabilillah* (in the cause of Allah), *ibnu sabil* (the stranded traveller or wayfarer). However, in the contemporary era, the interpretation of each *ashnaf* is broader. Among the *asnaf* with broad interpretation is *fii sabilillah*. The difference in *fii sabilillah* interpretation also happens at the country level, in which such obtainments are usually issued by an authorized fatwa body. For example, in Kuwait, *fii sabilillah* refers to financing and funding operations of the Islamic da'wah, while in Egypt, *fii sabilillah* can be used in all activities (Ramadhani & Hamzah, 2024).

The variation in zakat policies across Muslim countries shows how religious obligation are often contextualized within different governance systems and social structures. It also highlighting the importance of designing zakat management strategies that are compatible with its nation values and culture. However, the key question is whether these different policies lead to differences in zakat's social outcomes. Empirical studies found that mandatory zakat policy achieve greater fund mobilization, yet sometimes struggle with bureaucratic inefficiencies and lower levels of community trust (Athief et al., 2022a) Conversely, voluntary or decentralized zakat systems may lead to higher levels of donor engagement and program diversity, but they often face gaps in reach and coordination that can limit their poverty-alleviation potential (Zainuddin et al., 2023)

Despite the growing body of literature detailing the various implementation policy frameworks of zakat in many countries, however, few studies undertake a cross-nation evaluation of zakat's effectiveness as a social welfare mechanism. Most research remains to a single-country case studies (Akram & Muhammad, 2014; Mutmainah et al., 2024; Rodzi et al., 2013). Among the obstacles to making a comparative analysis is the lack of standardized, publicly accessible data on zakat collection, distribution, and impact. For instance, Indonesia and Malaysia are the countries which illustrate the transparent and longitudinal zakat reporting, which have relatively complete zakat collection and distribution performance. In Indonesia, official records of zakat collection have been systematically published since 2002 (BAZNAS, 2016). Similarly, Malaysia's have released comprehensive reports dating back to 2005 (Pusat Pungutan Zakat, 2016). In contrast, countries such as the United Arab Emirates and Saudi Arabia typically disclose only zakat collection (Ministry of Finance, 2017). In Saudi Arabia

and UAE, zakat distribution data is very hard to find. This asymmetry in data availability not only hinders the ability of researcher to evaluate and evaluate and compare the social effectiveness of differing zakat policies, but also highlight the need for standardized reporting frameworks to capture the full lifecycle of zakat funds.

There are no official statements as to why some countries such as Saudi Arabia and the UAE only publish their zakat collection data. In fact, amidst the limitations of published data, a study by Gazar (2021) shows that Saudi Arabia and UAE are the countries with the highest quality scores for zakat institutions website among Middle East and North Africa (MENA) countries. This asymmetric information is an implication of zakat governance in the country, such as in Saudi Arabia, the zakat collection is reported by General Authority of Zakat and Tax (GAZT) under the Ministry of Finance, while the zakat distribution transferred to the Saudi Arabian Monetary Agency (SAMA) which is the central bank of Saudi Arabia, and then transferred to the Social Insurance Agency of the Ministry of Social Affairs (Muhammad, 2019). This bureaucratic separation, although intended to streamline specific operational roles, often leads to asymmetric information in the availability and transparency of zakat data.

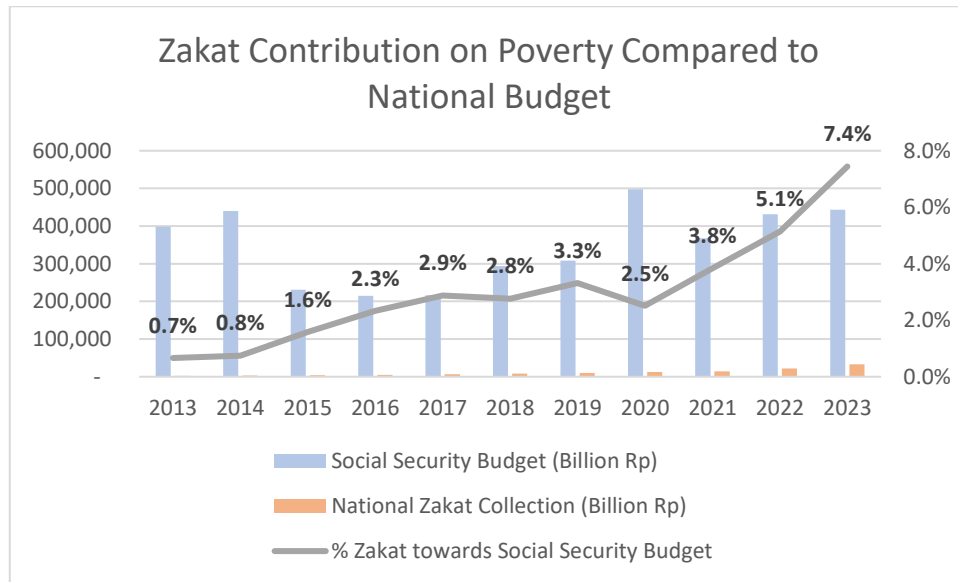
The issue of asymmetric information in zakat management in Saudi Arabia extends beyond financial reporting to encompass the disclosure of zakat's intended social outcomes, particularly in poverty alleviation. While zakat fundamentally has a role as an instrument to reducing poverty and promoting social welfare, public access to data and evaluations regarding this role to addressing poverty remains limited in Saudi context. Saudi Arabia does not officially disclose statistics on poverty or define a poverty threshold, even though the poor neighbourhoods and slums still exist, in an invisible location from the tourists and visitors (Stolzmann, 2025). Raphaeli (2003) observed that the Saudi Arabia economy was being mismanaged. He stated that the Al Saud family in the Kingdom of Saudi Arabia primarily enriches themselves while the people continues to fall into poverty. Supporting this, Niblock & Malik (2007) also notes in their book that since the oil boom in Saudi Arabia in 1962, the royal family continued to accumulate wealth, while poverty indicators have consistently increased each years. If such behavior is indeed occurring, it is not unlikely tht a country like Saudi Arabia disclose the poverty condition among their people.

Due to the limited availability of comprehensive and standardized zakat data across countries, combined with the deserve institutional structures and regulatory frameworks

governing zakat management in different Muslim-majority nations, conducting comparative studies on zakat performance and its social outcomes at the across countries level remains highly challenging. Given these constraints, it is considerably more feasible to conduct focused research, particularly in Indonesia, where the zakat management system is still evolving and shows a progress in terms of data transparency and legal frameworks. In Indonesia, zakat governance employs a hybrid model that combines government oversight (through BAZNAS) with private sector involvement (via private zakat institution/LAZ), aiming to balance regulatory control and local adaptability (Yahya, 2020).

This study is focuses in Indonesia for several important reasons. As of 2025, Indonesia stands as the most populous Muslim-majority country in the world, with a total muslim population reaching approximately 242.7 million people, where this counts figure accounts for 88.25% of Indonesia's total population, and makes 12.27% of the global muslim population resides in Indonesia (World Population Review, 2025). Given this demographic scale, Indonesia holds substantial potential in the management of Islamic sosial finance instruments, particularly zakat. with large number of Muslim population, Indonesia has the potency of zakat collecting up to 327 trillion rupiah. However, in 2023, zakat in Indonesia collected 32,3 trillion rupiahs, 10% of the zakat potency (BAZNAS, 2024a). If we compare the number of zakat collections in 2023, this number is at 7% of the social security budget of Indonesia, where the Indonesia social security budget is 443.400 trillion (BAZNAS, 2024b). On the other hand, Indonesia's zakat potency is 73% of the national social security budget, making zakat one of the social instruments with great potential to overcome social problems. However, the performance of zakat collection in Indonesia shows a positive trend compared to national social security budget. This positive trend shows by the figure above.

Figure 1. 2. Zakat Proportion on Poverty National Budget



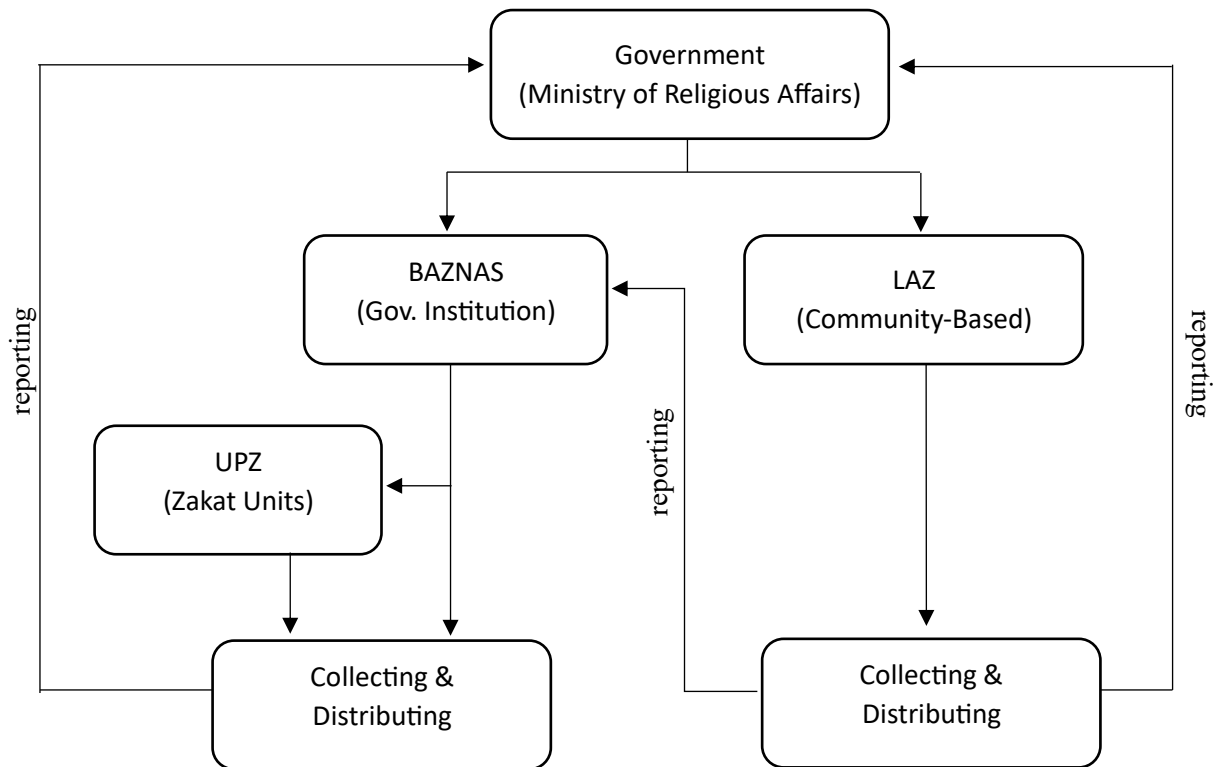
Source: (BAZNAS, 2024b)

As mentioned above, the zakat collection in 2023 reached the amount of 7.4% of the national social security budget. This performance has increased significantly from the 2013 performance when the zakat collection was only 0.7% compared to the social security budget. The trend shows increasing year on year, except in 2020, where the trend dropped to 2.5% due to the high amount of Social Security Budget. This fact shows the huge potency of zakat in Indonesia, with the current policy where Indonesia still adopt a voluntary zakat collection policy.

In managing the zakat as a religious obligation and a social-economic instrument, Indonesia has established a legal framework for zakat management through Law No.23 of 2011 concerning Zakat Management. This regulation provides a formal structure for the collection and distribution of zakat in Indonesia. Under this law, Indonesia established a dual zakat management system involving two types of authorized institutions, which are *Badan Amil Zakat Nasional* (BAZNAS) as the official, government-appointed body responsible for zakat management at the national, provincial and local level, and private zakat institution or *Lembaga Amil Zakat/LAZ* as a community-based zakat institutions established by the public, which must obtain operational licences from the Ministry of Religious Affairs and are subject to the supervision and coordination of BAZNAS (Yahya, 2020). Aside through BAZNAS and LAZ,

zakat collection in Indonesia is also conducted through zakat collection unit (*unit pengumpul zakat/UPZ*) as the zakat collection unit established by BAZNAS in government institutions, state-owned enterprises, private companies, religious institutions, and community organizations (Pradana et al., 2018). To obtain a deeper understanding of each role of the institutions in Indonesia's zakat management, the diagram below depict a connection of each institution.

Figure 1. 3 Connection of Each Institutions in Zakat Management



Source: Authors Compilation

Based on Law no. 23 of 2011 on Zakat Management, in Indonesia, zakat is explicitly described as religious duty (*ibadah*) for Muslims, and the government's role is to regulate and manage its institutional collection and distribution to ensure it is carried out efficiently, professionally, and transparently (Mubtadi & Susilowati, 2018). Thus, the law no 23 of 2011 does not impose legal sanctions or penalties on individual Muslims who fail to pay zakat. Therefore, in Indonesia, Law no 23 of 2011 serves primarily to institutionalize the management and governance of zakat rather than to make its payment legally mandatory for individual Muslims.

The current policy of zakat management in Indonesia makes it hard to assess how effective it is in achieving social goals, especially in eradicating poverty. Most of the studies regarding how zakat works on poverty only related to programs generated by each zakat institution (Aji, 2021; Furqani et al., 2018; Vegirawati et al., 2022). Since there is no linked scheme from zakat to assess national poverty circumstances, it is hard to measure how the effectiveness of zakat in solving poverty issues.

Although law no. 23 of 2011 serves as the primary legal foundation for zakat governance in Indonesia, the law also mandates the formulation of more detailed derivative regulations to regulate the operational aspects of zakat management at both the national and regional levels. These derivative regulations are essential for accommodating Indonesia's decentralized administrative system and addressing regional variations in zakat management practice. For instance, each provincial government, through its governor, is authorized to issue regional regulations (*Peraturan Gubernur*) on zakat management, in accordance with the guidelines set by Law No. 23 of 2011. These provincial regulations allow for adjustments to the specific characteristics, demographic conditions, and sosio-economic needs of each region (Bariyah, 2018). Example of the provincial regulation which impose the payment of zakat is in Riau Province through Regional Regulation (*Perda*) No. 2 of 2009, which stipulates administrative sanctions for *muzakki* (Muslim zakat payers) who deliberately neglect to pay *zakat maal*. This regulation represents a stricter approach to zakat compliance compared to other province in Indonesia.

In addition to evaluating the role of zakat distribution on poverty, this study introduces a novel dimension by including the existence of formal zakat policies at the provincial level. While many previous studies have focused solely on the amount of zakat disbursement/collection, few have investigated whether regulatory presence at local policy enforcement to the overall effectiveness of zakat as a poverty reduction tool. Given Indonesia's decentralized governance system, this variation across provinces brings an opportunity for deeper analysis.

Ideally, provinces that have established formal zakat regulations should be more effective in managing zakat collection and distribution, thereby contributing more significantly to poverty reduction. Based on this premise, this research has an objective to observe and evaluate the impact of zakat distribution performance and zakat policy at the provincial level

in Indonesia on poverty alleviation. By examining the variations in zakat distribution and regulatory frameworks across provinces, this research aims to determine whether the presence of zakat policies enhances the effectiveness of zakat as a poverty reduction tool. Nevertheless, this study also acknowledges that the total value of zakat distribution in Indonesia remains relatively small when compared to the scale of the national and regional economies. Therefore, to obtain a more comprehensive and reliable analysis, this research incorporates several control variables, including Gross Domestic Product (GDP), Unemployment Rate, and Human Development Index (HDI).

1.2 Research Problem

Zakat management is not only seen as a religious obligation, but also has great economic potential. The economic impact of zakat management may also be caused by different zakat management policies in across province in Indonesia While Law No. 23 of 2011 on Zakat Management provides a clear legal framework for zakat governance, and several provinces have established their own zakat policies in alignment with this law, the actual effectiveness of these policies in reducing poverty remains unexplored. In fact, the performance of zakat distribution and the implementation of provincial zakat regulations is vary across provinces, raising questions about their consistency and real contribution to poverty reduction.

In order to examine how zakat policies impose an effects on poverty, this study will focus on policies and zakat distribution performance at the provincial level. Furthermore, considering that zakat distribution in Indonesia still accounts for a relatively small portion of the overall economy, it is necessary to assess its impact while controlling for broader macroeconomic variables, including Gross Domestic Product (GDP), Unemployment Rate, and Human Development Index (HDI).

1.3 Research Question

With the problem stated above, this research put forward the research question as to what extent do zakat distribution performance and provincial zakat policies, in reference to Law No. 23 of 2011, contribute to poverty reduction in Indonesia's province? Thus, this study seeks to address the following research question:

- i. To what extent does zakat distribution performance contribute to poverty reduction at the provincial level in Indonesia?

- ii. Does the existence of provincial zakat policies enhance the effectiveness of zakat management in reducing poverty?

1.4 Research Purpose

This research has a purpose to evaluate the effectiveness of zakat management in reducing poverty across Indonesian provinces. Specifically, this research aims to assess how zakat distribution performance and the implementation of provincial zakat policies, guided by Law No. 23 of 2011, influence poverty alleviation outcomes at the regional level. This study is expected to generate empirical evidence that contributes to the academic discourse on Islamic social finance while offering practical insights for policymakers, zakat management institutions, and regional governments in optimizing zakat's role in social welfare and poverty alleviation.

1.5 Research Hypothesis

Based on the research background, problem, and objective, this study proposes the following hypothesis:

H1: Zakat distribution performance has a significant negative effect on poverty rate.

H2: The existence of formal provincial zakat policies significantly give a negative effect on poverty rate.

1.6 Significance of the Study

This study holds a theoretical and practical significance in the field of social finance and public policy, especially in the context of zakat management and poverty alleviation in Indonesia. The significance of this study is regarding the limited number of empirical studies that examine the impact of zakat on poverty while incorporating the effect of zakat policy implementation. Although numerous studies have explored the relationship between zakat distribution and poverty reduction in various context, however, the researcher did not find any study that have included the existence of formal zakat regulations at the regional level influences the effectiveness of zakat management in achieving social outcomes. Thus, this research contributes to filling an important gap in the literature on Islamic social finance and zakat governance. By including the provincial zakat policy and the zakat distribution performance, this study is very relevant in the Indonesia context, where decentralized

governance allows each province to implement specific zakat policies and applied the policy to enhance the effectiveness of zakat management.

In addition, this study makes a methodological contribution by applying the Generalized Method of Moments (GMM), as a method that rarely used in Indonesia zakat studies, aside it relevance for controlling unobserved heterogeneity and endogeneity, as two common issues in socio-economic studies. By using both policy variables and advanced estimation methodology, this research aims to fill the methodological and conceptual gaps in the zakat-poverty nexus literature in Indonesia

1.7 Research Outline

To elucidate the objective of this research, this thesis will follow a structured approach, divided into several key sections as follows:

Chapter I: Introduction

This section explain the topic and its significane, state the problem and question the research addresses, research purpose, research hypothesis and research outline.

Chapter II: Literature Review

The literature review offers an overview of existing research related to the topic, summarizing key studies and findings. This section also discusses the theoretical framework to support the research and points out limitations in previous studies that this research aims to address.

Chapter III: Methodology

The research design details the quantitative approach and provides information regarding the sample and the method of collecting and analyzing the data.

Chapter IV: Results and Discussion

In the results and discussion section, the key findings of the research are summarized. The interpretation of these results is provided, discussing their meaning in the context of the research question.

Chapter V: Closing

The closing section summarizes the key points of the research, recapping the main findings and their importance. It acknowledges any limitations of the study that may affect the results or their generalizability. Suggestions for future research are provided, recommending areas for further investigation.

CHAPTER II

LITERATURE REVIEW

2.1 Theory

In this chapter, will be presented the understanding of variables and the theory used in this research. Below will be explained about the Social Justice Theory as the grand of this research and some explanation regarding the basic concept which is important in this research.

2.1.1 Zakat

Zakat is an Islamic mandatory charitable alms that serves as a key component of Islamic Social Welfare. In Arabic, zakat means “to purify”, highlighting its role in purifying the wealth of the muzakki, in addition to being a mandatory obligation (Abror, 2019). The term “zakat” appears in the Quran 30 times, with one notable verse being Surah At-Taubah verse 60, which outlines the recipients of zakat (*mustahik*). There are eight categories of beneficiaries, known as *ashnaf*, which include: *faqir* (very poor), *miskin* (poor), *amil* (zakat collector), *mualaf* (recent converts to Islam), *riqab* (slaves), *gharimin* (debtors), *sabilillah* (those engaged in religious activities), and *ibnu sabil* (travelers). In At-Taubah verse 60. All of those eight zakat recipients are divided into two, the first one is with the terms “*lii*” which the physical wealth must be transferred to recipients with absolute ownership, and the second is with the terms “*fii*” which denotes the owner (Sarif & Kamri, 2009)ly for specific purpose (Sarif & Kamri, 2009). Based on At-Taubah verse 60, the term “*lii*” refers to the poor, very poor, *amil* and *mualaf*, which all of this *mustahik* have absolute ownership of zakat given to them. Meanwhile, the terms “*fii*” refers to the rest of *mustahik*, which are *riqab*, *gharimin*, *sabilillah* and *ibnu sabil*. From these two distinction of zakat disbursement, the first group of zakat disbursement is only used for consumption as the priority scheme of disbursement (D. Ahmad et al., 2014).

In Sharia terms, eventhough zakat has eight parties as receiver, but the prioritized group of distribution refers to the first four group with terms “*lii*”, which are the poor, very poor, *amil*, and *mustahik* (Rodzi et al., 2013). This provision as explained by the Hadith by Abu Ma’bad:

“(the slave of Ibn Abbas) Allah’s Apostle said to Muadh when he sent him to Yemen, “You will go to the people of the Scripture. So, when you reach there, invite them to testify that none has the right to be worshipped but Allah, and that Muhammad is His Apostle. And if they obey you in that, tell them that Allah has enjoined on them five

prayers in each day and night. And if they obey you in that tell them that Allah has made it obligatory on them to pay the zakat which will be taken from the rich among them and given to the poor among them. If they obey you in that, then avoid taking the best of their possessions, and be afraid of the curse of an oppressed person because there is no screen between his invocation and Allah.” (Hadith Rwahul Bukhari wa Muslim 2: 573)

The hadith above describes the main objective of zakat, which zakat has a function to redistribute wealth by collecting it from the rich and giving it to the poor. Thus, by directing funds to the poor, zakat aims to provide financial assistance to those who are economically disadvantaged, improving their living conditions and helping them meet basic needs. Based on the hadith above, in an economic context, zakat has a huge potency to significantly contribute to poverty alleviation in Muslim communities, driven by a sense of solidarity among Muslims to support those in need as defined by Shariah law (Hossain, 2012). While zakat primarily targets the impoverished, it has evolved into a tool for economic empowerment in contemporary times. A study by (Furqani et al., 2018) found that to achieve sustainable well-being through zakat distribution, it is essential for the mustahiq not only to have their basic needs met but also to gain the ability to work and support their families. Therefore, zakat can be effectively utilized as a means of economic empowerment for mustahiq, enabling them to meet their needs independently, particularly through productive zakat programs.

2.1.2 Political Economy

‘Politics’ is a highly contested notion. One conception of politics makes it essentially equivalent to government (Caporaso & Levine, 1992). Moreover, politics is a kind of activity associated with the process of government and linked with the public sphere; on another, it is about ‘power’ relations and struggles not necessarily confined to the process of government or restricted to the public domain (Burnell et al., 2017). This complex notion of politics impact various dimensions of life, including economic, social and cultural dimension of society. In terms of the economy, it has a complex and multifaceted relationship with political decisions. The success of economic reforms often depends on the political environment (Szyliowicz, 1986).

To address poverty and promote development, it is crucial to recognize the political dimensions of governance (Leftwich, 1994). In the context of linking politics and economics,

there are three different approach to understand the politics based on Caporaso & Levine (1992):

1. Politics as Government

This approach equates politics with the formal institutions of government and their activities. However, the criticism of this approach is not all government actions are “political”, and it overlooks non-state political actors.

2. Politics as Public

In this approach, politics is linked to the public sphere, where private actions have broader societal consequences.

3. Politics as Authoritative Allocation of Values

Politics is defined by binding decisions for society, enforced through society such as laws and policies, compulsorily.

These three approach should be integrating together to create politics as both a process (allocation) and a space (public life), mediated by government (Caporaso & Levine, 1992). Thus, politics cannot be implemented separately from one dimension, where politics should be viewed from various dimensions with good governance to support public interests. Good governance is an essential feature of any development process, where development is fundamentally political and cannot be separated from the forms of politics (Leftwich, 1994). This means, it is important to understanding the political context and the nature of the state.

2.1.3 Variety of Zakat Policy Across Countries

Zakat policy is an example of how political economy is applied in Muslim countries, including Indonesia. Zakat serves a similar purpose across Muslim-majority countries, in order to increase the social welfare (Hossain, 2012). Despite the similarity of objective, however, the policy applied in various countries can be different. The zakat policy can be seen in a various stand of view. In observing various types of zakat policy, some papers have done this research. One of the most comprehensive research on explaining zakat policies has conducted by Hammad (2022), where this research observes the zakat policies based on management and institutional arrangements, financing and payment mechanisms, eligibility criteria for beneficiaries, and types of benefits from zakat distribution. In management arrangements, the sub-topics of zakat policies are state-led vs charity-led, centralized vs decentralized, integration with fatwa-making body, and linkage to social protection systems. In terms of financing, there

are several sub-topics, including voluntary vs compulsory payments, types of zakatable wealth, and incentives to pay zakat. These two main topics are interesting since it is seen as two main topics on zakat policies. Another research has also been done and discussed based on these two policy topics. The study by Powell (2009) observed the practices on countries which impose compulsory zakat policy and voluntary zakat policies, and found that the countries with the presence of zakat policies (in terms of whether it is zakat as voluntary or compulsory payment) have a correlation with higher GDP rather than the country who does not have such as zakat policies.

Even though there are various types of zakat policies among countries, however, most countries still do not have any policy on zakat collection. Study by Powell (2009) showed that 24 of 40 muslim predominantly countries in Asia and Africa do not have a policy on zakat collection. Moreover, 10 countries implement a law to establish a voluntary zakat collection , and the rest of 6 countries enforce a mandatory zakat approach.

In the context of policies related to the economy, it is important for us to map countries whose governments have policies related to zakat management which give a possible impact to the economy. In a country, the basic policy of zakat management may be implemented as state-led, charity-led, or mix of the two (Hammad, 2022). In short, state-led zakat policy is where the state have the responsible for collecting, managing, and distributing zakat, while in charity-led zakat policy is, zakat is collected and distributed by private Islamic charities, mosques, or NGOs rather than the state (Hammad, 2022). These two policies can have a different impact on economy through different impact on the performance of zakat collection and management, because countries with government intervention in zakat collection can increase zakat collection and provide a greater impact on distribution (Athief et al., 2022b)

In the state-led policy, zakat collection is usually conducted by Ministry or governmental institutions, even though each country's government institutions' scope, responsibilities, and duties may vary. For instance, some countries such as Saudi Arabia, Jordan and Pakistan, Bangladesh, and Oman, managed their zakat fund only by their ministry (Djafar et al., 2023). Although zakat management in those countries is carried out by the ministry or part of the government, the practice carried out may differ from one country to another. In most countries which implemented state-led zakat policy, such as Pakistan, Saudi Arabia, Kuwait, and Oman, zakat is managed under the ministry of religious affairs (Djafar et al., 2023). Furthermore,

Kuwait and Saudi Arabia have further management where they also involve the Ministry of Finance in managing zakat (Hammad, 2022).

Another practice of zakat management is where the community can pay zakat to private institutions or mosques, which this initiation is what we call charity-led zakat management (Hammad, 2022). Among the countries that implement charity-led zakat management is Morocco and Tunisia, where zakat is usually collected as charity and voluntary-based through mosques (Machado et al., 2018).

The other policy on zakat collection is a countries which mix zakat state-led and charity-led policy. Mixed zakat collection occurs in a country where there are State-led Zakat institutions, but there are still non-governmental institutions that can also collect zakat (Hammad, 2022). The example of a countries which manage this mix policy is Indonesia and Egypt. However, in Indonesia, the private institutions still need to report their zakat collection and distribution performance to the government (Qutaiba et al., 2024). Even though this mix policy provides an opportunity for private institutions to participate in managing zakat, however, this model presents other challenge. In some cases, this policy model like lack of cooperation and coordination between the parties working in the field of zakat (Hashem & El-sha'er, 2015).

Another zakat policy which give a direct impact on zakat performance and the economy is compulsory or voluntary zakat collection. In compulsory zakat collection policy, zakat is collected by a state authority that has the legal/religious mandate to enforce it, while voluntary zakat collection means zakat is collected by private charities, non-governmental organizations, or individuals because there is no central authority to enforce it, while still consider zakat as a religious obligation (Athief et al., 2022b).

Pakistan as one of the State which implemented compulsory zakat fund, collecting zakat through automatic deductions from savings bank accounts in the first day of Ramadhan (Toor & Nasar, 2003). Then, the distribution of zakat funding is disbursed to the provincial, district and local level based on population size, where the district with greater population will receive higher zakat funds (A. Khan, 2014). Meanwhile, Indonesia adopt voluntary zakat collection under the supervision of National Board of Zakat (Badan Amil Zakat Nasional—BAZNAS), which required zakat collection to be led by the state and ordered private Zakat collectors such

as mosques or private zakat institutions to register for a Zakat Collection Permit (Saidurrahman, 2013).

In order to optimize the function of zakat in terms of economic well-being, some countries linked zakat with social protection system. The mechanism on how zakat is linked to social protection system is vary, such as setting coordination mechanism (Oman), developing complementary eligibility criteria (Jordan), including zakat in social protection strategies and planning (Sudan), or use zakat to finance social protection budget (in Saudi Arabia, Kuwait and Yemen) (Hammad, 2022). Jordan has done an actual strategy to optimise zakat with social protection system, through *National Social Protection Strategy 2019-2025*. In this strategy, Jordan improve social assistance programs coordinated by National Aid Fund and Zakat Fund to ensure effective performance and efficient spending (Government of Jordan, 2019). More specifically, Jordan emphasises a harmonizing efforts between zakat fund and national aid fund to avoid duplication of services and enhance the targeting of assistance (Government of Jordan, 2019). In Jordan, zakat is complementary for the government program where only poor families who are not receiving support from any other assistance programme are entitled to receive zakat (Machado et al., 2018).

Meanwhile, in Indonesia, some initiatives have collaborated the distribution of zakat with government programs, such as the BAZNAS initiative, which distributes zakat through the Family Hope Program (*Program Keluarga Harapan*), as a government program to eradicate poverty (BAZNAS, 2023) However, this initiative is still limited to self-initiatives between BAZNAS and the government, and has not been formulated in a standard provision. Thus, in fact, Indonesia does not yet have provisions to linked zakat with social protection system.

2.1.4 Zakat Policy In Indonesia

The legal framework governing zakat management in Indonesia has passed significant developments over the past few decades, reflecting the growing importance of zakat as both a religious obligation. The earliest formal legal basis for zakat management is Law no. 38 of 1999 on zakat management. This law was a significant milestone, emerging during the end of the new-orde in the late 1990s, and reflected the growing recognition of Islamic law within the national legal system and the active role of Islamic civil society in advocating zakat formal regulation (Ridwan, 2020). However, as the role of zakat has gained greater attention, there is a growing need to reform and modernize the regulatory system to enhance zakat management

system. This led to the enactment of Law no. 23 of 2011 on Zakat Management, which official repealed and replaced Law no. 38 of 1999. One of the most significant improvements on Law no. 23 of 2011 is the establishment of *Badan Amil Zakat Nasional* (BAZNAS) as an official government body with a legal authority to coordinate, supervise and manage zakat in Indonesia. This law also restructured the licensing and supervision system for *Lembaga Amil Zakat* (LAZ) as a legal community-based zakat institutions, which requiring them to obtain formal operational permits from the Ministry of Religious Affairs and to regularly report their activities and financial performance to BAZNAS (Febriani et al., 2024).

In accordance with Law No. 34 of 2004 on Regional Government, each regional government in Indonesia is granted the authority to manage and administer public affairs and local community interests within its jurisdiction, based on the principles of autonomy and decentralization (Bariyah, 2018). In terms of zakat management, this provision also extends to the management of zakat at the provincial and district/city levels, allowing regional governments to regulate zakat collection, distribution, and governance in accordance with the specific circumstance of their regions. This decentralized authority is reflected in the varied implementation of zakat management regulations across different provinces in Indonesia. The list of provincial regulation regarding the zakat management shown as follows:

Table 2. 1 List of Provincial Regulations

No.	Province	List of Provincial Regulations
1	Nanggroe Aceh Darussalam	<i>Aceh Governor Regulation Number 38 of 2016 concerning the Second Amendment to Aceh Governor Regulation Number 60 of 2008 concerning the Mechanism for Zakat Management</i>
		<i>Aceh Qanun No. 3 of 2021 concerning Amendment to Aceh Qanun No. 10 of 2018 on Baitul Mal</i>
		<i>Aceh Governor Regulation Number 18 of 2018 concerning Infaq Management at Baitul Mal</i>
		<i>Aceh Governor Regulation Number 8 of 2022 concerning Zakat and Infaq Management at Aceh Baitul Mal</i>
2	North Sumatra	<i>Instruction Number 451.12/14100 of 2010 concerning the Implementation of Civil Servants' Infaq</i>
		<i>Governor Instruction Number 188.54/04/INST/2012 concerning Optimization of Zakat Collection from Provincial Government Officials</i>
		<i>Governor Instruction Number 188.54/3/INST/2019 concerning Optimization of Zakat Collection from Muslim Provincial Government Employees</i>

3	West Sumatra	-
4	Riau	<i>Riau Provincial Regulation No. 2 of 2009 concerning Zakat Management</i>
5	Jambi	<i>Jambi Governor Regulation No. 14 of 2008 concerning the Zakat Management Agency</i> <i>Governor Instruction Number 01 of 2011 concerning the Obligation to Pay Zakat</i>
6	South Sumatra	<i>South Sumatra Provincial Regulation Number 6 of 2005 concerning Zakat Management</i> <i>South Sumatra Governor Decree Number 310/KPTS/VI/2016 concerning Income Zakat, Infaq, and Shadaqah for Officials and Staff within the Provincial Government of South Sumatra</i>
7	Bengkulu	-
8	Lampung	<i>Lampung Governor Circular No. 045/1644/07/2015 concerning the Zakat Awareness Movement</i>
9	Bangka Belitung Islands	-
10	Riau Islands	<i>Riau Governor Instruction Number 1 of 2019 concerning the Collection of Professional Income Zakat for Civil Servants (ASN) and Employees of Regional-Owned Enterprises (BUMD) within the Riau Provincial Government</i>
11	DKI Jakarta	<i>Governor Regulation Number 3 of 2019 concerning the Completion of BAZIS DKI Jakarta's Duties and Functions</i> <i>Governor Instruction Number 67 of 2019 concerning the Collection and Payment of Income Zakat for Civil Servants and New Civil Servants within the DKI Jakarta Provincial Government</i> <i>Governor Appeal of DKI Jakarta Number 1 of 2022 concerning the ZIS and DSKL Movement for 1443 H/2022 AD</i>
12	West Java	<i>Governor Regulation Number 70 of 2015 concerning ZIS Management within the Regional Government of West Java Province</i>
13	Central Java	<i>Circular Letter Number 451/6718 of 2016 regarding Follow-up on the Optimization of Zakat Management</i>
14	Yogyakarta Special Region	<i>Circular Letter Number 451/1194 of 2010 regarding the Establishment of Zakat Collection Units (UPZ) and the Implementation of Zakat, Infaq, and Shadaqah (ZIS)</i>
15	East Java	-
16	Banten	<i>Banten Provincial Regulation Number 4 of 2004 concerning Zakat Management</i>
17	Bali	-
18	West Nusa Tenggara	<i>West Nusa Tenggara Provincial Regulation No. 09 of 2015 concerning the Organization and Management of ZIS</i>

19	East Nusa Tenggara	-
20	West Kalimantan	-
21	Central Kalimantan	<i>Circular Letter Number: 188.5/721/Kesra/2019 concerning Optimization of Zakat, Infak, and Alms Collection from State Civil Apparatus (ASN) within the Central Kalimantan Provincial Government</i>
22	South Kalimantan	<i>Governor Instruction No. 00867 of 2016 concerning the Establishment of UPZ and Optimization of ZIS Collection in South Kalimantan</i>
23	East Kalimantan	-
24	North Kalimantan	-
25	North Sulawesi	-
26	Central Sulawesi	<i>Central Sulawesi Governor Regulation No. 27 of 2019 concerning the Revocation of Governor Regulation No. 7 of 2012 concerning the Management of ZIS for Civil Servants and Other Officials (considered no regulation)</i>
27	South Sulawesi	-
28	Southeast Sulawesi	-
29	Gorontalo	<i>Gorontalo Governor Regulation No. 7 of 2014 concerning the Collection of Zakat within the Gorontalo Provincial Government</i>
30	West Sulawesi	<i>West Sulawesi Governor Regulation No. 19 of 2014 concerning Procedures for the Collection of Professional Zakat for Civil Servants within the West Sulawesi Provincial Government</i>
31	Maluku	-
32	North Maluku	<i>North Maluku Provincial Regulation No. 4 of 2013 concerning Zakat Management</i>
33	Papua	<i>Circular Letter Number 451/5837/SET concerning Optimization of Zakat Collection</i>
34	West Papua	-

Source: Authors Compilation; (BAZNAS, 2024a)

Based on the table above, each province may have a different approach to imposing the zakat provision. However, these regional policies remain under the general framework of Law No. 23 of 2011 on Zakat Management, ensuring the zakat governance in Indonesia operates within a nationally coordinated system. Some provinces in Indonesia have adopted zakat management regulations that are in some cases, stricter or more specific than the provisions in Law No. 23 of 2011 on Zakat Management. For instance, Riau Province enforce a regional regulation on Perda No. 2 of 2009, which goes beyond national provisions by give a sanctions

for muzakki who intended to fail to pay zakat maal. Meanwhile, Aceh Province holds a unique position as a special autonomous region that formally applies Islamic law. Aceh manages zakat through a dedicated public institution called Baitul Mal Aceh (BMA), which operates under the authority of regional Islamic by-laws (*qanun*) (Bariyah, 2018). This regulation represents a special approach in encouraging zakat compliance compared to other province. Aside from these special cases, the majority of provincial zakat policies in Indonesia emphasize the obligation of zakat management and the participation of certain public groups in zakat contributions, particularly civil servants (*ASN*), such in West Java, North Sumatra, South Sumatra, DKI Jakarta, Central Kalimantan, Gorontalo, and West Sulawesi, as mentioned in the list of provincial zakat regulation in the table above.

2.1.5 Social Justice Theory

Social Justice Theory is a theory that emphasize fairness, equity, and the protection of basic rights for all members of society, especially the marginalized and disadvantages (Shields, 2015). According to John Rawls as a theorist, a social justice theory is a theory in which institutions are arranged to benefit the least advantaged and where individuals have fair access to opportunities and resources (Fishman & MacKay, 2019). In more detail, Rawls brings a concept of the “original position” and the “veil of ignorance” as the central tools in in his theory of justice, designed as hypothetical devices to ensure fairness and impartiality when selecting the principles that should govern society. In the “original position”, brings a hypothetical scenario where rational individuals choose the basic principles of justice for society to simulate a fair starting point, free from personal bias or self-interest (Chambers, 2021). Furthermore in the concept of “veil of ignorance”, has a concept to ensure that no one can tailor principles to benefit themselves at the expense of others, by removing knowledge of personal circumstance to prevent bias (Chambers, 2021). From this standpoint, Rawls argues, rational individuals would choose principles that protect the rights of the least advantaged members of society.

In economic terms, social justice theory is concerned with how resources, wealth, and opportunities are allocated within a society (Fleurbaey, 2019). A justice economic system is one that ensures all individuals have access to basic necessities and the opportunity yo participate in economic life (Prihartono et al., 2023). Thus, it opposes extreme disparities in income and wealth that prevent some people from living dignified lives while others enjoy excess. Under this framework, the pursuit of justice regarding the view of poverty is not merely

viewed as a lack of income, but as a condition that undermines justice. Thus, public policies must go beyond charity and instead focus on institutional mechanisms that promote fair access to resources, education, health, and employment (Ticona et al., 2025). Thus, instruments that foster redistribution and economic inclusion are central to the realization of justice.

The terms of the economic system, the aims of social justice have a similarity with the Islamic economic system. In the context of Islamic economics, there are some charity instruments, including zakat, which functions as a faith-based institutional mechanism that reflects the very principles articulated by social justice theory (Flores et al., 2025). Zakat mandates wealth distribution from the affluent to specific categories of recipients, most notably the poor (*fuqara*), and the needy (*masakin*). This system ensures that wealth does not accumulate only among the wealthy, in alignment with the Quranic verse:

“... so that wealth may not circulate solely among the rich among you.” (Qur'an 59:7)

Aside from responding to the material needs of the poor, zakat also aims to restore dignity, economic independence, and social inclusion (Machado et al., 2018). These objectives are strongly aligned with Rawlsian ideas about uplifting the least advantaged and securing equal opportunities for all. Thus, social justice theory offers a normative basis in order to evaluate the distributional role of zakat in society, to reduce inequality and promote collective well-being.

2.1.6 Poverty and Capability Approach

The topic of poverty is a multifaceted phenomenon that extends beyond the mere absence of income. United Nations define poverty as a lack of basic capacity to participate effectively in society (United Nations, 1998). This means, people who are facing poverty do not having enough food, clothes, access to school or clinic, or not having land to stay or a job to earn a living. According to the world bank, poverty is often measured using monetary thresholds, such as living on less than USD 3.00 per day (2025 international poverty line) (World Bank, 2025). However, income-based measurements are only one dimension of a more complex reality of poverty. To capture a broader context of poverty, Amartya Sen, introduced the capability approach, which seen poverty as the deprivation of basic capabilities rather than merely low income (Sen, 1990). According to Sen, individuals are poor when they lack the substantive freedoms to lead their lives, such as the ability to be healthy, to be educated, or to participate in community life (Sen, 1994). Moreover, Sen argues that although income is an

important means to achieving a better life, however, it is only one of many factors. Focusing solely on income can lead to confusion to understanding poverty, since wealth is mistakenly treated as the goal of development, rather than as a tool to enhance human well-being. Thus, instead of measuring poverty by income alone, Sen proposes about what individuals are able to do and to be, which he calls functionings.

From a policy perspective, the capability approach suggests that development efforts should focus on expanding the real freedoms and capabilities of individuals, especially those of the poor. Public policy must prioritize access to education, healthcare, legal, protection, and other enablers of human agency. Thus, since poverty is a multidimensional perspective, it encourages more comprehensive policy responses, and highlights the importance of social, relational, and structural factors in understanding and addressing poverty (Anand et al., 2021).

Efforts to reduce poverty have taken multiple forms across countries, reflecting philosophical foundations, policy priorities, and socio-economic contexts within countries. Many initiatives have been given by many institutions, whether the governments, non-governmental organizations (NGOs), faith-based institutions (including zakat institutions), or international agencies. However, in many developing countries, most approaches to reduce poverty still hang on income-based approaches, focusing on increasing the monetary resources, either through cash transfers, employment generation programs, or subsidies and microcredit schemes (Ayoo, 2022). While valuable, income-based approaches have been criticized for overlooking deeper structural and non-monetary dimensions of poverty. Nowadays, poverty reduction initiatives are much wider, with many institutions already adopting a basic needs approach, such as education, healthcare, clean water and sanitation, or shelter and nutrition (Theavy & Mardy, 2023).

The basic needs approach of poverty reduction is already, such as education, shelter, health, has been widely implemented in many developing countries, including Indonesia. In Indonesia context, this framework is also reflected in faith-based poverty reduction policies, including the management of zakat. The Law No. 23 of 2011 on Zakat Management institutionalized zakat as a national mechanism to support welfare of the poor. Moreover, the law allows for productive utilization of zakat funds for economic empowerment, especially for the poor and underprivileged. Article 27 of the law states that zakat distribution can be carried out not only through consumptive assistance but also through productive ventures, such as

micro-enterprises, skills training, or promoting education. This integration of zakat into a basic needs and empowerment model reflects a policy innovation that combines immediate relief with long-term poverty alleviation. While consumptive zakat addresses urgent needs, productive zakat aims to improve the recipients economic resilience, in line with both social justice principles (Hadi et al., 2023).

2.2 Previous Study

Based on the study by As-Salafiyah & Fatoni (2021), from 92 selected paper related to zakat policy, most popular keywords regarding the zakat policy is related to poverty alleviation and economic growth. One of the related article regarding this research is the study by Munandar et al. (2019) which explore the effect of zakat regulation on tax deduction to the zakat collection performance. In this paper, In this study, a cross-country analysis was conducted that relies on the availability of data related to zakat payments. The independent variables in this study are the zakat policy as a taxable income deduction and zakat as a tax rebate, to see how it affects tax payments. The result indicates that regulation affects zakat payment. However, the difference between zakat as a deduction for taxable income and zakat as a tax rebate does not show a significant difference. However, based on descriptive statistics, zakat payments in countries that implement zakat as a tax liability deduction are higher than zakat as a taxable income deduction.

In terms of linking zakat and poverty alleviation, study by Ahadish et al. (2024) have done this topic using Artificial Neural Network (ANN) analysis in Indonesia. The finding from this paper was there is a positive correlation between zakat distribution and GDP in Indonesia, which indicates higher zakat distribution gives significant economic growth. Furthermore, in observing zakat distribution with poverty, consistent with another study, there is a significant contribution from zakat disbursement on decreasing poverty alleviation.

Furthermore, to observe how is the effect of zakat on poverty alleviation, this research observes the role of zakat on poverty from past literature. Using the Autoregressive Distributed Lag (ARDL) Method, Akram & Muhammad (2014) in their research shows that the distribution of zakat in Pakistan has an inverse effect on poverty both in the short run and long run (Akram & Muhammad, 2014). The summary of previous research related to this study are shown as the table below.

Table 2. 2 Previous Study

Title	Author	Method	Variable	Result
Zakat Performance and Poverty				
Effect of zakat on the economic growth in Selected Islamic countries: empirical evidence	(Ben Jedidia & Guerbouj, 2021)	Generalized Method of Moment (GMM)	Dependent Variable: GDP per capita Independent variable: Zakat distributed Control Variables: Financial development, trade openness, population growth	The study investigates the impact of zakat on economic growth in eight selected Muslim countries from 2004 to 2017 using a dynamic panel data model. The results indicate that zakat distribution significantly stimulates economic growth, with a 1% increase in zakat leading to a 0.14% increase in real GDP per capita.
Dynamic Role of Zakat in Alleviating Poverty: A Case Study of Pakistan	Akram & Muhammad (2014)	Autoregressive Distributed Lag (ARDL)	Dependent variable: Head Count Index Independent variable: Zakat disbursement Control variables: GDP, GDP Deflator, Net school enrollment,	This study investigates the impact of the Zakat system on poverty alleviation in Pakistan. The study analyzes data from 1980 to 2013, employing the ARDL approach to cointegration to assess both short-term and long-term relationships between Zakat disbursement and poverty levels. The findings shows Zakat has a significant inverse

				relationship with poverty in short term as well as in the long term
The Impact of Zakat on Income-Inequality and Poverty in Malaysia: A Panel Data Analysis	Haq et al. (2015)	Generalized Method of Moment (GMM)	Dependent Variables: Gini Coefficient, Poverty Incidence, Hardcore Poverty Independent Variables: Zakat Collection & Zakat Disbursement Control Variable: GDP per Capita	Using Generalized Method of Moments (GMM) panel analysis for the period 2001-2012 across 14 Malaysian states. It finds that Zakat has significantly reduces both poverty incidence and hardcore poverty, with a 1% increase in Zakat collection and distribution leading to noticeable decreases in poverty rates. However, there is no significant effect on income inequality, although GDP per capita negatively correlates with the Gini coefficient, indicating that increases in GDP reduce income inequality.
Zakat, Economic Growth, and Poverty Alleviation: An Artificial Neural Network Analysis	Ahadish et al. (2024)	Artificial Neural Network Analysis	Zakat, Economic Growth and Poverty	Positive correlation between zakat distribution and GDP in Indonesia, which indicate higher zakat distribution contributes significantly to economic growth. Furthermore, there is negative correlation

				between zakat distribution and poverty alleviation.
Does Zakat and Government Social Expenditure Affect Poverty Level? Evidence from North Sumatra Indonesia	Yafiz & Dharma (2023)	Ordinary Least Square (OLS)	Government social expenditure, zakat distribution, poverty level,	This study explains that zakat and government social expenditure can influence poverty alleviation as one of the Islamic fiscal policies.
Zakat Policy and Poverty				
Does Regulation Increase Zakat Payment?	Munandar et al., (2019)	Regression	Zakat Payment, Regulation on zakat as tax deduction	Using three examples of countries (Kuwait, Saudi Arabia and Malaysia), this study shows the regulation on zakat as tax deduction affect the zakat payment. However, there is no significant difference between the regulation on zakat as taxable income deduction and zakat as tax rebates.
Zakat: Drawing Insights for Legal Theory and Economic Policy From Islamic Jurisprudence	Powell, (2009)	Qualitative and Descriptive Analysis	GDP and Voluntary vs Mandatory Zakat Policy	This study finds that the nations with voluntary & mandatory zakat approaches tend to have higher GDP. But for countries that do not have zakat approach, tend to the countries with lower GDP

An Investigation into Goodness of Zakat Laws in Selected Countries	(Obaidullah, 2017)	Qualitative analysis	-	This policy analysis concludes the complexity and quality of zakat laws significantly impact the mobilization and utilization of zakat funds for poverty alleviation between the compulsory and voluntary zakat regulation.
Zakat Policy and Regulation: An Overview	(As-Salafiyah & Fatoni, 2021)	Bibliometric and Descriptive Statistical Analysis	-	Zakat management in Indonesia is not yet have optimal outcomes. The management of zakat in private zakat institutions remains ineffective, since there is still overlap across institutions, which indicates the importance of zakat centralization
Discourses of Institutionalization of Zakat Management System in Contemporary Indonesia: Effect of the Revitalization of Islamic Economics	(Adachi, 2018)	Qualitative Analysis	-	The shift in understanding Zakat from a voluntary act of philanthropy to a mandatory obligation, driven by Muslim scholars, along with a more institutionalized approach to Zakat, has fostered the emergence of new areas for intervention in achieving

				sustainable development and eradicate poverty
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Source: Authors Compilation

From the table above, most of the existing studies on zakat management focus on evaluating the performance of zakat distribution or collection on economy or poverty reduction. Meanwhile, research that investigates the role of zakat policy itself, beyond merely observing its implementation, remains very limited. Thus, there is a research gap in empirically examining whether provinces or area with formal zakat policies achieve more effective poverty reduction. This research will fill the gap by presenting a study on the impact of zakat on welfare and poverty from an inter-provinces perspective in Indonesia through panel data.

2.3 Hypothesis Development

After understanding the theory and variables in this study, the author should design the hypothesis between variables in order to build a model. This research refers to the theory and the previous study to develop the hypothesis. The development of the hypothesis is as follows.

2.3.1 Zakat Distribution and Poverty Alleviation

The effective zakat management can provide immediate financial relief to those in need, thereby alleviating economic hardships. Studies from Indonesia and Bangladesh demonstrate that effective zakat programs can significantly reduce both poverty and income inequality, especially when managed by well-organized institutions and supported by government policies (Miah, 2021; Vegirawati et al., 2023). The performance of zakat collection and distribution is a derivation of zakat policy applied in the area, making these factors an important measurement to observe the influence of zakat policy on poverty. When zakat funds are collected and allocated efficiently, they can directly support essential needs for the needy, such as food, healthcare, education, etc (Vegirawati et al., 2023). This optimization of resources can empower recipients to improve their economic situations (Ahadish et al., 2024). Additionally, the regular and systematic provision of zakat can foster community resilience through empowerment, enabling families to withstand economic shocks and ultimately contributing to a sustained decrease in poverty rates (Abubakar, 2020).

Zakat distribution on poverty and prosperity also measure how well the zakat management system to ensure that recipients meet their basic needs and maximizing the utility of zakat

resources (Haq et al., 2015). Past research also highlights the importance of build a comprehensive strategies, targeting not only immediate consumption needs but also long-term empowerment through training and economic opportunities (Anfas, 2023). For instance, study in Organization o Islamic Cooperation (OIC) countries shows the significant role of zakat in addressing poverty, reduces unemployment, and promotes income equality by redistributing resources to help individuals meet basic needs, mitigating wealth concentration (Rusydiana et al., 2025). Futhermore, zakat's role extend beyond charity, with a role as structured fiscal tool if managed efficiently, to empower recipients and foster long-term economic self-sufficiency (Sugianto et al., 2024). Thus, the structured implementation of zakat distribution not only addresses immediate financial needs but also supports long-term poverty alleviation efforts and promotes prosperity, reinforcing the hypothesis of its negative correlation with poverty and supporting the quality of prosperity. Based on the justification as above, the following hypothesis are generated as below.

H1: Zakat distribution performance has a significant negative effect on poverty rate.

2.3.2 Provincial Zakat Policy and Poverty Alleviation

Regulatory frameworks can play a significant role in poverty alleviation by shaping an effective system of institutions involved in resource distribution, including the zakat management. This effect has shown in Brunei, where aligning legal and regulatory strategies with national development goals has highlighted strengths and challenges of poverty reduction efforts, emphasizing the need for adaptable regulations (N. Ahmad et al., 2024). Furhtermore, municipia interventions, including provincial regulation services, have also been shown to improve access to essential services and support community-based poverty alleviation initiatives (Wegelin & Borgman, 1995).

Government involvement in zakat management is crucial for ensuring effective collection, distribution, and governance of zakat funds. The government often establish legal frameworks and regulatory bodies to oversee zakat management, ensuring transparency, accountability, and efficiency in the collection and distribution of zakat funds (Mohamad & Muhamad Sori, 2023). This involvement is essential for ensuring that zakat fulfils its intended social and economic functions, particularly in poverty alleviation, promoting social justice and prosperity. Thus, a province with a zakat policy should have a greater poverty reduction compared to a province without derivating zakat policy on Laws no. 23 of 2011. Zakat

management performance should have a significant impact on poverty alleviation, since that is the main objective of zakat (Ahadish et al., 2024).

Furthermore, maximizing the optimization of zakat also being an important factor to achieve zakat goals in economic, in terms of poverty alleviation and increasing prosperity. Behind the Sharia of zakat lies a huge economic opportunity for society's well-being. Besides the obligatory aspect of zakat, increasing well-being and eradicating poverty is also one of the government's main objectives in economics as well as one of the Sustainable Development Goals (Aziz et al., 2020). Thus, building a linkage between zakat management with the social protection systems of a country could be a good initiatives to optimize the role of zakat to alleviate poverty. Thus, improving coordination between state institutions is important in order to enhance the function of zakat as a provider of social protection (Machado et al., 2018).

Based on this idea, the presence of zakat policy in a province should bring greater impact in poverty alleviation. Thus, the hypothesis is made as follows:

H2: The existence of formal provincial zakat policies significantly give a negative effect on poverty rate.

2.4 Control Variables

Control variable used to ensure the relationships observed between the main variables is not influenced by other factors, in terms of improving the accuracy and validity of research findings. Control variable can be understood as the variable whose effects on an outcome are statistically adjusted to estimate the independent effect of the main explanatory variable (Memon et al., 2024). The presence of a control variable will easier the interpretation of the relationship between the main variables being studied with another variable that might affect the exploratory variable (Stouli & Newey, 2018).

In terms of observing the relationship between zakat and poverty, control variable is needed due to ensure that the observed effect of zakat on poverty is not confounded by other influential factors, and to map how the effects of zakat differ from other factors on poverty. Many study shows that poverty is affected by a range of economic, social, and structural factors such as income levels, unemployment, inflation, education, health, and economic growth (Andrini & Auwalin, 2020; Mutmainah et al., 2024). Thus, even though this research focuses on the effect of zakat to decrease poverty, other economic factors need to be considered and

included in the regression model to obtain a comprehensive result. Other economic factors to be used in this research describe as follow.

2.4.1 GDP as control variable

The first control variable in this research is Gross Domestic Product (GDP) of Indonesia in each Province. GDP is a measure of the total value of all goods and services produced within a country over a specific period (Callen, 2008). GDP is commonly used as an indicator of a country's economic health and standard of living. Furthermore, the rise of GDP is a measurement of economic growth, which typically leads to increased production and business activity. Thus, this expansion creates more employment opportunities and raises income, which directly helps lift people out of poverty (W. A. Khan et al., 2024).

However, while GDP growth is generally associated with poverty reduction, its effectiveness depends on how inclusive the growth is. For instance, in some regions, such as Sub-Saharan Africa, the link between GDP growth and poverty reduction is weak, and factors like unemployment and inequality play a larger role (Atangana, 2022). Therefore, policies that ensure broad-based, equitable growth and address structural barriers are essential for maximizing the poverty-reducing impact of GDP growth.

In a Muslim country, the policy that can be used as an initiative to reduce poverty is zakat. The management of zakat can influence the GDP, where zakat is a system to create wealth distribution in Islamic finance (Razak, 2020). Zakat stimulates economic growth by increasing aggregate demand, as funds collected are directed toward consumption, investment, and government expenditure (Ben Jedidia & Guerbouj, 2021). This injection of resources into the economy can spur growth, making zakat an additional growth factor within the Islamic economic framework. Therefore, zakat is a part of GDP in the poverty-alleviation initiative. Based on this idea, this research takes GDP into account as a control variable to link with poverty. The GDP data obtained from the Indonesia Statistical Berau (*Badan Pusat Statistik*).

2.4.2 Human Development Index as control variable

Human Development Index (HDI) is a composite measure by the United Nations Development Programme (UNDP) to assess and compare levels of human development across countries. HDI consists of several indicators to set the development index, including health, education, and material living standard, into a single index value for each country (McGillivray

& White, 1993). HDI has a high contribution to the development of a country, through emphasizing that people and their capabilities should be the ultimate criteria of a country's development, aside from the economic growth (UNDP, 2024). The capabilities of a community measured in HDI consists of life expectancy at birth, expected years of schooling, mean years of schooling, and Gross National Income (GNI) per capita, with each component normalized and combined into a single index to rank and compare countries human development levels (UNDP, 2024).

Multiple studies consistently show that a higher Human Development Index (HDI) (which reflects improvements in education, health, and living standards) leads to a reduction in poverty (Ringga, 2024; Sastraningsih et al., 2020; Yusuf & Dai, 2020). This effect gained because the increasing value of HDI component will leads to a better living standard, which indicates that they improve their economic situation and reduce their vulnerability to poverty (Yudi Pardita et al., 2024). Thus, HDI will become one of the control variable in this research to maps its relationship with the decreasing of poverty rate. In this research, HDI obtained from the Indonesia Statistical Berau (*Badan Pusat Statistik*).

2.4.3 Unemployment as control variable

Unemployment is an antithesis of employment, where employment related to those of persons in working age who, during a short reference period, were engaged in any activity to produce or provide service for pay or profit (ILO, n.d.). In terms of measurement, based on International Labor Organization (ILO) definition, employment is measured by employment rate which is also known formally as employment-to-population ratio and expresses the number of persons who are employed as a percent of the total working age (15+) population. Meanwhile, unemployment rate is a key economic indicator that measures the percentage of people in the labour force who are actively seeking work but are unable to find a job.

In terms of poverty, unemployment and poverty are closely linked, with unemployment often increasing the risk of poverty. Unemployment is a major risk factor for poverty, as it limits individuals income and economic security, increasing their likelihood of falling below the poverty line (Tarigan et al., 2024). Unemployment can directly increase poverty by slowing economic growth, while higher labor force participation can reduce poverty both directly and indirectly (Tarigan et al., 2024). Therefore, unemployment is one of the control variable in this

research to address with poverty. The unemployment data is obtained from Indonesia Statistical Berau (*Badan Pusat Statistik*).

2.5 Research Framework

Based on the hypothesis of this research as explained above, this sub-chapter will show the variables in this research to gain the objective of this research. Merely using dependent and independent variables, this research also uses control variables to isolate the effects of the independent variable on the dependent variable. All of the variables used in this research as explained below.

Table 2. 3 Variable Description

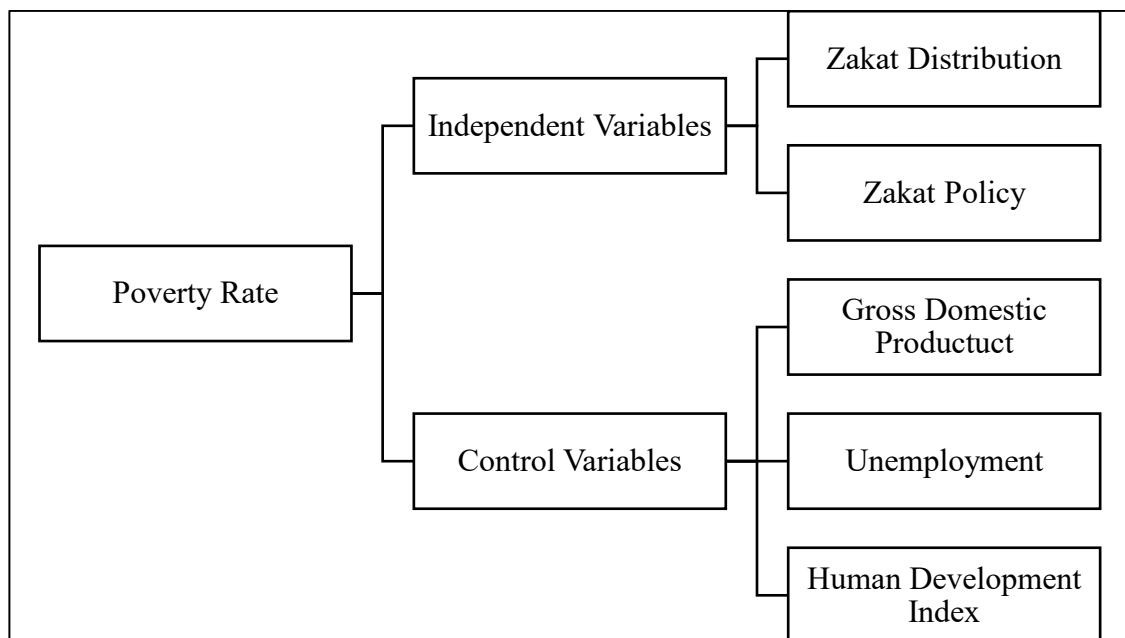
Variables	Abbv	Explanation	Measurements	References
Dependent Variable				
Poverty Rate	POV	The percentage of the population living below the poverty line based on Cost of Basic Needs (CBN) approach	Percentage	(Rodzi et al., 2013; Vegirawati et al., 2022)
Independent Variables				
Natural Logarithm of Zakat Distribution	Ln_DSB	The total amount of zakat funds distributed by zakat institutions in each province per year	Natural Logarithm of Indonesia Rupiah	(Ahadish et al., 2024; Khuluqo, 2016; Rodzi et al., 2013)
Zakat Policy	POL	Indicates whether a province has a formal zakat	Dummy Variable: 1 = has zakat policy, 0 = no policy	(Hammad, 2022; Mohamad & Muhamad Sori, 2023;

		regulation or governor decree on zakat management		Fatimatuzzahro & Herianingrum, 2019; Liu et al., 2020)
Control Variables				
Gross Regional Domestic Product	Ln_GDP	The total amount of gross added value of economic output of a province per year	Natural Logarithm of Indonesia Rupiah	(As-Salafiyah & Fatoni, 2021; Powell, 2009)
Human Development Index	HDI	Composite index to measure quality of life including health, education, and living standard material	Index score (0- 100 scale)	(Ringga, 2024; Sastraningsih et al., 2020; Yusuf & Dai, 2020)
Unemployment Rate	UMP	The percentage of the individuals within the working-age (15 years and over) who are not working, are available for work, and are actively seeking employment.	Percentage	(Tarigan et al., 2024)

Source: Authors Compilation

Based on the variables explained above, this research uses two variables related to zakat management and its derivations, as well as three control variables. The use of natural logarithm for zakat distribution and GDP is a way to express the data as percentage changes. Thus, this measurement will ease the interpretation of the statistical results. The use of natural logarithm also used to handle large scale differences between variable, since GDP and zakat distribution are measured in large units (billions rupiah), while poverty is measured as percentage. Logging the large variables brings them into a comparable scale with other variables. To provide an understanding of the conceptual framework in this research, hereby show the conceptual framework of this research.

Figure 2. 1 Conceptual Framework



Source: Authors Compilation

CHAPTER III

RESEARCH METHODOLOGY

3.1 Method Approach

This research uses quantitative approaches, using the data obtained from various resources to test the developed hypothesis. To observe the research objective, this research uses quantitative data variables to measure and test the hypothesis and relationships between variables. Thus, this research uses various countries and various time periods as observation, which will be the panel data analysis. However, in this research model, the relationship between the independent variable and the dependent variable could be dynamic models since the effect of a policy could have an impact over time. Moreover, poverty as a dependent variable has a persistent nature, which needs to consider the lagged dependent variable in the model. Based on those conditions, this research will use dynamic panel data analysis using the Generalized Method of Moments (GMM) accordance with Blundell & Bond (1998) and Arellano & Boverb (1995) to controlling dynamic properties of the data and possible reverse causality and endogeneity problems.

3.2 Data Collection

The data used in this study were collected from several resources. Regarding the data on zakat distribution, data were obtained from BAZNAS, which are publicly accessible through BAZNAS official website (www.baznas.go.id) and from annual publications of National Zakat Management Report (*Laporan Pengelolaan Zakat Nasional*). This report contain detailed record of zakat fund collected and distributed by BAZNAS and registered zakat management institution (LAZ) at several scope of data, including data per province and type of fund. For the data per province, data has been available since 2018. Thus, the time periode of this study is following the availability of zakat data, which is from 2018 until 2024. For zakat policy data, the information on the presence of provincial zakat policies was gathered from official provincial government publications, regional regulations (*Peraturan Daerah*), and BAZNAS documents. Each province was coded with a dummy variable, where 1 for provinces with a formal zakat regulation, and 0 otherwise. In analyzing the zakat policy in each provinces, it is observed that, generally, most province in Indonesia did not experience significant changes in their zakat policies from 2018-2024. However, there are notable exceptions. Some provinces that have experienced changes are DKI Jakarta and Central Kalimantan which have had zakat

policies since 2019, through Governor Regulation Number 3 of 2019 concerning the Completion of the Implementation of Duties and Function of BAZIS DKI Jakarta, and Governor Circular Letter Number 188.5/721/Kesra/2019 regarding Optimalization of Zakat, Infak, and Alms Collection from State Civil Servant (ASN) in the Central Kalimantan Provincial Government Environment, following the Law No. 23 of 2011 in zakat management policy. Meanwhile, in Central Sulawesi, this province initially enacted Provincial Regulation No. 7 of 2012 on the Management of Zakat, Infaq, and Sadaqah (ZIS) for Civil Servants and Officials, which was later revoked by Provincial Regulation No. 27 of 2019. Consequently, from 2019 onwards, Central Sulawesi no longer had a provincial zakat policy.

For the Poverty Rate, GDRP, Unemployment Rate and HDI, the data were collected from the official data of *Badan Pusat Statistik* (BPS), as Indonesia's Central Statistics Agency. These data cover all 34 Indonesia provinces. In fact, in 2022 Indonesia makes an expansion into 38 provinces, where West Papua province was expanded into West Papua and Southwest Papua, while Papua province was expanded into Papua, South Papua, Central Papua and Papua Mountains. However, to provide complete data, the creation of a data panel follows the availability of provinces in Indonesia in 2018 which had 34 provinces.

3.3 Panel Data Analysis

Panel data is the combination between cross-section and time-series data. Panel data is data from several objects/individuals observed in a certain time period. If we have N individuals (where $= 1, 2, 3, \dots, N$) in the observation period during T time (where $= 1, 2, 3, \dots, T$), then with panel data we will have a total of NT observations. Panel data is divided into two, namely balanced panels and unbalanced panels. Balanced panels are panel data where the number of time periods is the same for each object/individual of observation. While unbalanced panels are panel data where the number of time periods is different for each object/individual of observation.

Based on Baltagi (2005), the use of panel data in a regression has several advantages:

- a. Panel data provides more complete and various information, which resulting greater degrees of freedom and increasing the precision of the estimation.
- b. Panel data is able to accommodate the level of heterogeneity of individuals that are not observed but can influence the results of the modeling (individual heterogeneity).

- c. Panel data is able to study the dynamics of data where the conditions of individuals at a certain time are compared to other times
- d. Panel data can measure the effects of time and observation objects and test models that are more complex than pure cross-section data or pure time series data.
- e. Panel data can minimize bias due to individuals aggregation from too many observations.

3.4 Dynamic Panel Data

Dynamic panel data models are used to describe the relationship between economic variables, which often dynamic in nature. The relationship between economic variables is basically dynamic, meaning that the variables are not only influenced by variables at the same time, but also influenced by variables at previous times. This dynamic panel model can be seen from the existence of the regressor variables. Therefore, the dynamic panel data model is more appropriate to use in economic analysis (Kripfganz, 2019).

In a model which contains a lag of the dependent variable, it may have a problem regarding the correlation between the variables Y_{it-1} as the function of uit . The use of static panel data estimation (such as OLS, fixed effect and random effect) in dynamic panel equations could be biased and inconsistent even though y_{it} does not have serial correlation (Baltagi, 2005). To address this kind of inconsistent problem, the Instrumental Variable (IV) estimation method can be used. However, this method only produces consistent parameter estimates, but still not efficient. Thus, Arellano and Bond suggest a Generalized Method of Moments (GMM) approach. GMM estimators can be used to obtain consistent parameters estimates in a wide range of applications (Bond, 2002). The GMM approach is used for two underlying reasons: first, GMM is a common estimator and provides a more useful framework for comparison and assessment. Second, GMM provides a simple alternative towards other estimator, especially to the maximum likelihood.

GMM estimators designed to run the model with “small T, large N”, meaning the model with fewer time periods but many observation groups (Roodman, 2009b). Furthermore, GMM is applied in the condition when independent variables are not strictly exogenous, which means that the variables are correlated with past and possibly current error; fixed effect; and heteroscedasticity and autocorrelation within individuals (Roodman, 2009b).

The example on the usage of GMM is showed by Arellano & Bond (1991) in the research used panel dataset from 140 UK firms surveyed from 1976 until 1984 with unbalance panel data (some firms having more observations than others). In the research, hiring and firing workers is costly, leads to employment expected to adjust with delay to changes in several factors such as firms capital stock, wages, and demand for the firms output. The process of adjustment to changes caused by these factors may depend on the passage of time, which indicates lagged versions of these factors as regressors. Furthermore, the difference between equilibrium employment level and the previous years actual level is also considered, which leads to dynamic model, where the lags of the dependent variable also take a role as regressors (Arellano & Bond, 1991).

From the example and consideration above, the assumption to use GMM in this study relies on the effect of zakat performance as regressor in influence the prosperity index. Some study shows that the effect of zakat to empowering community relies on time passage, due to many programs of zakat as applied as a long-term program to achieve better quality of life of the zakat recipients. One of the primary ways zakat contributes to prosperity and poverty reduction is through its role in funding development projects that generate sustainable income for beneficiaries. Zakat disbursement through productive initiatives provides long-term income generation as business capital enables recipients to establish or expand their enterprises (Mas et al., 2024). Research has shown that the allocation of zakat funds to productive initiatives can produce long-lasting socio-economic impacts, thereby empowering communities and creating stable livelihoods (Chotib et al., 2023).

3.5 Model Specification Test

The model specification test is used to determine that the dynamic panel data model with the GMM estimation is the most perfect method and meets the criteria of being unbiased, valid and consistent instruments.

3.5.1 Arellano Bond Test

To observe the consistency of the estimation results, an autocorrelation test will be conducted using the Arellano-Bond statistics $m1$ and $m2$ (Roodman, 2009b). This consistency is indicated by the significant statistical value of $m1$ and the insignificant statistical value of $m2$. Because v_{it} does not show the serial correlation to the error in first difference, thus $E(v_{it}v_{it-1})$ is not equal to zero. However, the consistency of the parameter estimates with GMM must

also satisfy the assumption that $E(v_{it}v_{it-1}) = 0$. Thus, with this assumption, the hypothesis is constructed that the autocovariance at the second order for all periods is zero.

3.5.2 Sargan Test

Sargan test is used to determine the validity of the use of instrument variables whose number exceeds the number of estimated parameters (overidentifying restrictions condition) (Blundell & Bond, 1998). The null hypothesis in sargan test is the overidentifying restrictions condition is valid estimation model, which means the instrument variable does not have correlation with error term. In addition, the results obtained will also be tested for the level of significance and the sign of each estimated coefficient obtained. The sign of this estimated coefficient will be analyzed whether it is relevant to the existing theory.

From the results of the estimation of the two approaches, the analysis will be conducted to answer the research hypothesis. In summary, some of the criteria that should be used to find the best dynamic model or GMM are:

- a. Unbiased. The estimator of pooled least squares is biased upwards and the estimator of fixed effects is biased downwards. The unbiased estimator is between these two estimator.
- b. Valid instrument. This validity checking is tested using Sargan Test. The instrument will be valid if the Sargan test cannot reject the null hypothesis.
- c. Consistent. The consistency of the estimator obtained can be checked from the Arellano-Bond statistic m1 and m2, which are calculated automatically in Stata. The estimator will be consistent if the m1 statistic indicates the null hypothesis is rejected and m2 indicates the null hypothesis is not rejected.

The GMM estimators should be valid, which means the instruments used are exogenous i.e. free from endogeneity problem (Roodman, 2009b). To ensure this validity, Sargan/Hansen test are used to test the validity of subsets of instruments, which also known as a C statistics (Roodman, 2009b). In Sargan test, a null hypothesis means the instruments as a group are exogenous. Thus, the higher p-value which means do not reject null hypothesis is better (Mileva, 2007). Therefore, the p-value result of Sargan test should be greater than 0.05.

3.6 Model Spesification

In order to observe the effectiveness of zakat policy to the poverty rate with the variables and hypothesis explained above, first, this study will observe all of the sample in a single model. In this model, will be observe the effect of the policy compared to another policy on poverty. Thus, the effect of zakat performance on poverty also will be observe. The model specification of this research will be as follows:

$$(1) \text{POV}_{it} = \alpha_0 + \beta_1 \text{POV}_{it-1} + \beta_2 \text{POL}_{it} + \beta_5 \ln(\text{DSB}_{it}) + \beta_6 \ln(\text{GDP}_{it}) + \beta_7 \text{HDI}_{it} + \beta_8 \text{UMP}_{it} + u_{it}$$

Where:

POV_{it} : Poverty Rate

α : constanta

β : coefficient of variable

POL_{it} : Zakat Management Policy

$\ln(\text{DSB}_{it})$: Natural Logarithm of Zakat Distribution

$\ln(\text{GDP}_{it})$: Natural Logarithm of Regional GDP

HDI_{it} : Human Development Index

UMP_{it} : Unemployment Rate

u_{it} : Error terms

CHAPTER IV

RESULT & DISCUSSION

4.1 Data Analysis

In this research, data were collected from National Zakat Agency (BAZNAS) and *Badan Pusat Statistik* (BPS) / Statistics Indonesia. Data obtained from BAZNAS is related the zakat data, including zakat distribution in each province from 2018-2024, and to gain information regarding the provincial level of regulation regarding zakat management policy. Furthermore, the data obtained from BPS is economics data used in this study, including Poverty Rate, Human Development Index (HDI), Unemployment Rate and Gross Domestic Product (GDP). The zakat distribution is chosen instead of zakat collection, as the measurement on how zakat may have an impact to decreasing the poverty rate.

In proceeds the data regression, this study uses several option in the regression. In GMM, the number of instruments should be considered since too many instruments relative to the cross-sectional sample size can lead to biased coefficient and standard error estimates (Roodman, 2009b). A huge number of instruments can overfit endogenous variables and weaken the test of the instruments joint validity (Roodman, 2009a). In order to reduce the number of instruments, this research use “collapsing” approach by “collapse” command in Stata software (Kripfganz, 2019). The consideration to reduce the number of instruments is to avoid bias, obtain strength in the Sargan/Hansen test and avoid implausible p-values, which are caused by too many instruments (Arellano & Bond, 1991).

4.2 Variable Descriptive Statistics

This subsection presents the descriptive statistics of the variables used in this research. Descriptive statistics provide a summary of the data characteristics, including the mean of the variable, minimum value, maximum value, and the spread of the data with standard deviation. Additionally, given this study utilize panel data, the analysis further decomposes the variation into three component, which are overall, between, and within. The overall variation represents the total variability in the data, between variation captures difference across provinces, and within variation reflects the changes over time within each province. Understanding these descriptive patterns is important to identify the characteristics of the data distribution and to

verify whether significant differences exist between provinces and over time for the variables related to poverty, zakat distribution, zakat policy, and other control variables. The complete descriptive statistics are presented in the table below.

Table 4. 1 Statistical Descriptive of Variables

Variable	Descriptive	Mean	Std. Dev.	Min	Max
POV	Overall	10.357	5.33	3.47	27.74
	Between		5.37	4.13	26.53
	Within		0.51	8.17	11.92
ln_DSB	Overall	24.23	1.91	17.95	29.44
	Between		1.84	20.69	28.59
	Within		0.67	19.14	25.71
POL	Overall	0.55	0.49	0	1
	Between		0.49	0	1
	Within		0.16	-0.3	1.41
ln_GDP	Overall	12.47	1.13	10.5	15.11
	Between		1.13	10.71	14.92
	Within		0.16	12.03	13.01
HDI	Overall	71.68	3.94	60.06	83.08
	Between		3.86	61.96	81.47
	Within		1.01	66.54	74.30
UMP	Overall	4.75	1.60	0.88	10.12
	Between		1.49	2.63	7.97
	Within		0.61	2.88	7.42

Source: Authors Compilation

The table above represents the descriptive analysis statistics for the variable used in this study, including the mean, standard deviation, minimum and maximum values, along with the decomposition of variation into overall, between, and within value based on balanced panel data of 34 provinces in Indonesia over the period of 2018-2024. In fact, in 2022 Indonesia makes an expansion into 38 provinces, where West Papua province was expanded into West Papua and Southwest Papua, while Papua province was expanded into Papua, South Papua, Central Papua and Papua Mountains. However, to provide complete data, the creation of a data panel follows the availability of provinces in Indonesia in 2018 which had 34 provinces. In addition, the zakat data published by BAZNAS still refers to 34 provinces, so it is not possible to use data from 38 provinces.

The statistical description in the table above shows the Poverty Rate (POV) as the dependent variable, has an overall mean value of 10.36% with a standard deviation of 5.33. The poverty rate ranges from a minimum of 3.47% which is the poverty rate in DKI Jakarta in

2019, to a maximum of 27.74% as the poverty rate in Papua Province, in 2018. The between-province standard deviation of 5.38, while the within-province standard deviation is 0.52, suggests relatively small fluctuations in poverty rates within each province over time.

The first main independent variable, which is zakat distribution ($\ln_DSB$) expressed in natural logarithm, has an overall mean of 24.42 with a standard of 1.91. The minimum and maximum values are 17.95 and 29.44, respectively. In the between-province standard deviation, the value is 1.84 which is larger than the within-province standard deviation of 0.67, indicating the zakat distribution varies more across provinces than it does over time within the same province. Furthermore, the second independent variable is zakat policy (POL) as a dummy variable with a value of 1 if a province has a zakat policy at provincial level and 0 otherwise, has an overall mean of 0.555. This implies that approximately 55.5% of provinces in Indonesia had established a zakat policy during the observation period. The between-province standard deviation is 0.49, reflecting variation in policy adoption across provinces. The within-province standard deviation is 0.10, indicating that although the zakat policy status was relatively stable within most provinces, some provinces, which are Riau, DKI Jakarta and Sulawesi Tengah experiences changes in their zakat policy status during period 2018-2024.

For the descriptive statistics of control variable, the first control variable is Gross Domestic Product in natural logarithm ($\ln_GDP$), shows an overall mean of 12.48, with a range from 10.50 to 15.12. The between-province standard deviation is 1.14, while the within-province standard deviation is 0.16, indicating that GDP levels vary substantially across provinces but change gradually within provinces over time. Another control variable, which is Human Development Index (HDI), has an overall mean of 71.69 and a standard deviation of 3.95. The HDI ranges from 60.06, which is the minimum HDI score in Papua during the 2018 period, to 83.08, as seen in the DKI Jakarta score in 2024. The between-province variation is 3.85, exceeds the within-province variation of 1.02, suggesting the disparities in human development are more visible between provinces than yearly changes within the same provinces. The last control variable, which is Unemployment Rate (UMP), shows an overall mean of 4.75% with a standard deviation of 1.60. The unemployment rate ranges from 0.88% to 10.12%, where the lowest unemployment rate is in Bali, in the period of 2018, while the greatest unemployment rate belongs to Riau Islands in 2021. The between-province standard deviation is 1.50, while the within-province standard deviation is 0.61, indicating the

differences in unemployment rates are larger across provinces than over time within individual provinces.

4.3 GMM Model Determination

As dynamic panel data analysis, GMM consist of two different method, which are Different GMM and System GMM (Roodman, 2009b). Both difference and system GMM estimators are designed for dynamic panel analysis, with current value of the exploratory variable influenced by the past values (Roodman, 2009b). In dynamic panel data models, choosing between system GMM and difference GMM estimators is critical decision due to their differing properties, especially regarding data characteristics like persistence and endogeneity. System GMM has gained preference in many empirical analysis (Mehic, 2021), as it tends to yield less bias compared to difference GMM when dealing with highly persistent data series. This is particularly crucial in econometric modeling where the presence of lagged dependent variables introduces endogeneity typical in dynamic models . However, quality of estimation in econometric models can significantly vary depending on the approach utilized. For instance, the use of system GMM allowed for the incorporation of multiple moment condition, thus enhancing the robustness of their results compared to traditional fixed effects of pooled OLS methods, which can suffer from bias when lagged variables are included (Hayakawa & Ge, 2017). Furthermore, empirical comparisions often highlight the superior finite sample performance of system GMM over difference GMM, especially in the context of weak instruments (Lee & Yu, 2014).

Regarding the advantages of the system GMM as explained above, several conditions lead to the superiority of using the system GMM in this study, such as the limited sample available and the use of dummy variable, since difference GMM is not able to accommodate dummy variable. However, in choosing the best estimators between system and difference GMM, this study also conducted testing by comparing the coefficients from pooled OLS, fixed effects, and difference GMM. This method to determine between system and difference GMM has shown by Bond (2002). Before making an estimation using dynamic models of GMM, the autoregressive model should be initially estimated by pooled OLS and fixed effect approach. (Bond 2002). The coefficient of pooled OLS will be considered as an upper-bond estimate, while the coefficient from fixed effect estimation should be considered as lower-bond estimate. Thus, if the difference GMM estimation obtained is close to or below the lower-bond estimate,

this indicates that the former estimate is downward biased because of weak instrumentation, and a system GMM estimator is preferred (Bond, 2002). The result of the comparison between pooled OLS, fixed effect, and difference GMM presented in the table below.

Table 4. 2 Coefficient Estimator Comparison

Method	Coefficient	Notes
Pooled OLS	0.969	Upwards biased
Fixed Effect	0.424	Downwards biased
One Step Different GMM	0.557	Close to downwards biased
Two Step Different GMM	0.567	Close to downwards biased

Source: Authors Compilation

From the table above, the coefficient estimated using pooled OLS is 0,969, which is relatively high and considered upwards biased due to the omission of unobserved heterogeneity and potential endogeneity issues in the model. The fixed effect model reduces this bias, producing a lower coefficient of 0.424, which is typically downwards biased because it ignores the dynamic nature of the dependent variable and potential endogeneity. Meanwhile, the difference GMM further decreases the estimated coefficient to 0.557 for one step different GMM, and 0.567 for two step difference GMM which is close to the downwards biased estimate from the fixed effect model. This result reflects the estimator's attempt to address both endogeneity and unobserved heterogeneity but may still suffer from finite sample bias and weak instrument problems, especially in small samples.

The highlights of the result above is the fixed effect and difference GMM estimators yield lower coefficient estimates compared to pooled OLS, as expected to control for omitted variable bias and endogeneity. Moreover, this result highlights the coefficient of difference GMM, which is close to the fixed effect as the lower bound. Furthermore, this study include the dummy variable to measure the zakat policy, which is not able to be accommodated by difference GMM. Given this finding and the nature of the dynamic panel data model employed in this study, the next step is to further consider system GMM estimators to evaluate the model as better statistical properties.

4.4 Multicollinearity Test

One of the problem that can be arises when estimating the parameters is multicollinearity problem. Thus, the multicollinearity test is essential to ensure the reliability of the regression model. Multicollinearity is data problem when the explanatory variables are

highly correlated, which leads to the inaccurate parameter estimates (Vogelvang, 2005). Multicollinearity occurs when two or more independent variables in a regression model are highly correlated, which can distort the estimated coefficients and weaken the statistical significance of the predictors. In detecting the multicollinearity problems, Variance-Inflating Factor (VIF) is used to show how the variance of an estimator is inflated due to the presence of multicollinearity. The value of VIF can be seen as an indication of multicollinearity. If there is no multicollinearity, the value of VIF will be 1. The higher the value of VIF the more collinear the variable. The rule of thumb of maximum VIF is 10, which means if the VIF of variable exceeds 10, the variable is said to be highly collinear (Gujarati & Porter, 2009). The multicollinearity test result of this research is shown as the table below.

Table 4. 3 Multicollinearity Test Result

Variable	VIF
Ln_DSB	2.53
POL	1.11
Ln_GDP	2.19
HDI	1.45
UMP	1.28
Mean VIF	1.71

Source: Authors Compilation

From the table above, it can be seen all of the variables used in this study have the VIF value below the threshold of 10, even have a value below 5 which indicates the good result of multicollinearity test. From the result above, all of the variables do not have a perfect collinearity and free from multicollinearity problems.

To complement the multicollinearity diagnosis, a correlation matrix was also examined to identify the strength and direction of linear relationships between the independent variables. The correlation matrix is presented as follows:

Table 4. 4 Correlation Matrix Result

	POV	Ln_DSB	POL	Ln_GDP	HDI	UNMP
POV	1.0000					
Ln_DSB	-0.3458	1.0000				
POL	-0.0186	0.2859	1.0000			
Ln_GDP	-0.3447	0.7088	0.1377	1.0000		
HDI	-0.6171	0.5455	0.0928	0.4497	1.0000	
UMP	-0.2368	0.4007	0.0715	0.4519	0.2653	1.0000

Source: Authors Compilation

The correlation matrix above shows the several notable relationships. From the table above, the correlation between variables is vary between 0.018 to 0.708. The greatest correlation is lies between Gross Domestic Product and Zakat Distribution which has the value of 0.708. This indicates a strong positive linear relationship between the two variables, meaning that if Zakat Distribution is increases, the GDP is also tends to increase.

4.5 Model Specification Result

After selecting the system GMM as the preferred estimator based on the earlier comparison coefficient estimates, the regression analysis was conducted to examine the effect of the independent variables on the dependent variable. In this research, several models were created to determine the robustness of the designed model and to determine the effect of the absence of some variables. Five different model specifications were estimated to observe the stability and robustness of the relationship between zakat distribution, zakat policy and poverty rate. The results are presented in the table below.

Table 4. 5 Estimation Result

Variable	1	2	3	4	5
POV L1	1.078*** (0.12)	1.192*** (0.174)	1.118*** (0.063)	0.945*** (0.087)	0.984*** (0.006)
Ln_DSB	1.334*** (0.337)	1.660*** (0.421)	1.307*** (0.351)	1.535*** (0.325)	0.028 (0.022)
POL	-0.963* (0.520)	-1.754* (0.989)	-0.990* (0.550)	-0.732 (0.463)	0.007 (0.065)
DSB*POL					
Ln_GDP	- 1.812*** (0.394)		- 1.852*** (0.376)	- 1.911*** (0.435)	
HDI	-0.040 (0.981)	-0.243* (0.122)		-0.116** (0.053)	
UMP	0.375*	0.397*	0.432***		

	(0.190)	(0.218)	(0.145)		
Constant	-9.183 (7.605)	-26.023 (15.621)	- 11.549** (4.948)	-4.285 (4.925)	-0.693 (0.569)
AR(1)	0.018	0.009	0.013	0.061	0.001
AR(2)	0.416	0.478	0.357	0.604	0.806
Sargan Prob	0.154	0.638	0.255	0.004	0.000
Hansen Prob	0.594	0.851	0.726	0.159	0.126
Wald Test Prob	0.000	0.000	0.000	0.000	0.0843

Note: The standard error values are in parentheses. The variables with “Ln” in the initial naming are in logarithmic form. *, **, * Significant at 1, 5, and 10 percent, respectively.**

Based on the regression results above, the dynamic effect across all model specifications indicates by POV_L1 as the lag of dependent variable shows positive and highly significant at the 1% level. The coefficient range from 0.945 to 1.192, indicating strong persistence in performance outcomes, meaning current performance of poverty index is heavily influenced by past performance, which is a typical characteristic in dynamic panel models. Second, for the zakat distribution (Ln_DSB) results in model 1, 2, 3 and model 4, this variable appears significant at the 1% alpha with the coefficient vary from 1.307 to 1.660. It means, if the zakat distribution increase by 1%, it has correlation with the poverty rate to increase 1.3% until 1.66%. However, after excluding the control variables, the results insignificant with the coefficient of 0.028.

The second variable is the presence of zakat management policy (POL) in each provinces, which from the results above, generally shows a negative effect on the poverty rate in several models. In models 1, 2 and 3, the coefficient of POL is negative and statistically significant at the 10% level, suggesting that the implementation or presence of zakat policy in a province is associated with a reduction in poverty rates. The strongest effect appears in Model 2, where zakat policy reduces the poverty rate by 1.660%. However, in models 4 and 5, the effect of zakat policy becomes statistically insignificant, indicating that after controlling for additional variables or different model specifications, the evidence of a consistent relationship weakens. This finding appears counterintuitive because zakat distribution is expected to reduce poverty.

For the first control variable which is GDP, the results shows a positive and significant impact in model 1, 3 and 4, indicating that higher national income associated with lower poverty rate. The second control variable which is HDI shows a negative and significantly associated with poverty rate as in models 2 and 4 with the coefficient range from -0.04 to -1.91 at the confidence level of 90% and 95%, respectively. This reflects that the province with higher HDI tend to achieve better poverty alleviation, and this result align with mainstream economic theory, which suggests that as a country improves its human development, poverty rates should decrease (Yudi Pardita et al., 2024b). However, the effect size is smaller and less consistent than GDP, suggesting that while important, HDI direct measurable on poverty may be moderated by other factors. The last control variable is unemployment, which has positive and statistically significant effect on poverty. In Models 1 to 3, higher unemployment rates consistently lead to higher poverty rates, confirming that joblessness directly affects household welfare and poverty levels.

For the diagnostic test, the AR(1) test for first-order serial correlation in the first differenced errors shows a p-value below 0.05 in almost all models, except the model 4 which is significant at 10%, indicating the expected presence of AR(1) autocorrelation, which is typically acceptable in dynamic GMM models. Thus for AR(2) test results a p-value between 0.357 to 0.806, indicating no evidence of second order autocorrelation, satisfying a key assumption for the validity of the GMM estimation. Regarding the Hansen test, it shows a p-value between 0.126 until 0.159 for all the models, suggesting that the instruments used in the model are valid and not correlated with error term. Finally for Wald test yield a range of p-value of 0.000 in the model 1, 2, 3 and 4, indicating that the explanatory variables jointly have a statistically significant effect on the dependent variable. However in model 5, the wald test has the probability of 0.08 which is significant at 10%, indicating the zakat distribution and zakat policy only gives a small impact on poverty rate.

4.6 Hypothesis Test Result

4.6.1 Hypothesis 1: Zakat Distribution and Poverty Rate

In the first hypothesis, zakat distribution would have a negative effect on poverty rates in Indonesian provinces. The rationale behind this hypothesis is based on the function of zakat as a social redistribution mechanism in Islamic economic systems, where to social goal is to alleviate poverty by transferring wealth from the individuals who have excess wealth to those

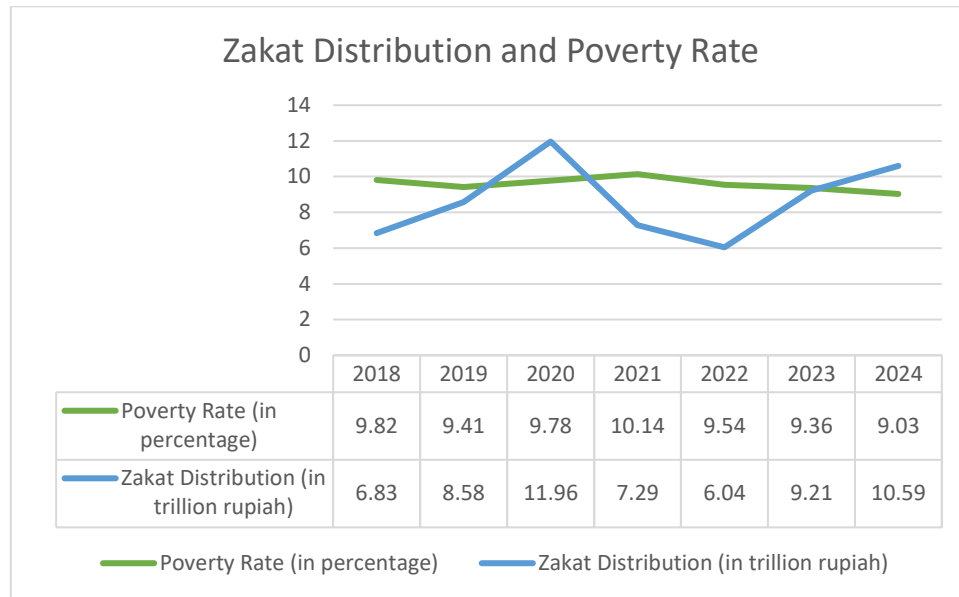
in need (Rusydiana et al., 2025; Sugianto et al., 2024). Thus, theoretically, higher zakat distribution should reduce poverty levels by increasing the financial capacity of vulnerable people to meet their basic needs, improve their welfare, and reduce economic inequality.

Based on the statistical result in this study, it was found that the zakat distribution which is $\ln_DSB$ variable, consistently comes up with positive and statistically significant coefficient with 1% alpha in models 1 to 4, before becoming not significant in model 5. In model 1, the coefficient of 1.334 indicates that 1% increase in zakat distribution is associated with 1.334% increase in poverty rate, holding other variables constant. This positive coefficient even becomes stronger in model 2 with the coefficient of 1.660, model 3 with the coefficient 1.307, and model 4 with the coefficient of 1.535, before it loses statistical significant at model 5 as the model without control variables, with the coefficient of 0.028. basically, models 2 to 4 is the model with adjusted control variables, compared to model 1, with all the control variables is included. Thus, the effect of zakat distribution is minimize when controlling the GDP, Human Development Index, and Unemployment Rate.

However, these findings contradict the original hypothesis and theoretical explanation. From a statistical standpoint, the positive and significant relationship in the first four models suggest the higher zakat distribution is correlated with higher poverty rates. Meanwhile, from the perspective of utilitarian theory, zakat distribution should ideally increase social utility by improving the welfare of the poor, and reducing poverty (Baujard, 2013; Khuluqo, 2016). In this context, a negative relationship was expected, as redistributing tools to the poor.

However, the positive coefficients observed in this study could be explained by several contextual factors. Firstly, the positive correlation between zakat distribution and poverty rate observed in the regression results can be contextualized by considering the economic disruptions caused by the Covid-19 pandemic, particularly between 2020 and 2021, as seen in the figure as follows.

Figure 4. 1 Trend of Zakat Distribution and Poverty Rate



Source: BPS & BAZNAS

From the figure above, zakat distribution in Indonesia experienced an increasing trend during the pandemic, from IDR 8.58 trillion in 2019 to IDR 11.96 trillion in 2020, before declining to IDR 7.29 trillion in 2021 and IDR 6.94 trillion in 2022. This significant rise in zakat distribution in 2020 can be address as the emergency response initiatives by zakat management institutions to address the hard economic condition faced by vulnerable communities during the pandemic. The increasing trend of zakat and donation during covid also shown in other countries such as Pakistan, Egypt and Morocco, where both charitable contributors and recipients view zakat as especially important during crises, with increased charitable giving supplementing state welfare efforts (Gallien et al., 2023). Furthermore, in Indonesia itself, zakat institutions and agencies such as BAZNAS, rapidly implemented emergency aid programs to address the sudden economic and social disruptions caused by pandemic, and put a focus on direct relief for those most affected (Amanda et al., 2021). However, despite the increase in zakat disbursement, the national poverty rate also increased, from 9.41% in 2019 to 9.78% in 2020, and further to 10.14% in 2021. This indicates that, during the Covid-19 crisis, the increase in zakat distribution was unable to offset the economic impact of the pandemic on poverty level. Therefore, this trend supports the notion that during crisis periods, zakat distribution often becomes reactive, respond to poverty rates rather than

preventing them. As such, the rise in zakat distribution during the Covid-19 period coincided with the increase of poverty rates, rather than give a cause to poverty rates.

In addition to structural economic factors and crisis events such as the Covid-19 pandemic, the relationship between zakat distribution and poverty rate can also be understood through ethnographic perspective on poverty behavior. Ethnographic studies in development economics highlight that poor households often face structural limitations in managing financial resources effectively, due to the limited financial literacy, and lack a foundational understanding of financial principles which they tend to prioritize short-term satisfaction over strategic fiscal planning (Fan & Henager, 2022). For instance, studies have observed that financial knowledge impacts investment behavior, suggesting that without appropriate financial education, households tend to choose consumptive practices that do not sustain in the long-term security of their finances (Kachepa & Mumtaz, 2023). As noted in ethnographic research by Banerjee & Duflo (2011) in *Poor Economics*, financial decisions made by the poor are frequently driven by short-term necessities rather than strategic planning. This pattern becomes a barrier in utilizing the potential of financial assistance programs, to produce sustainable poverty reduction outcomes (Banerjee & Duflo, 2011). This behaviour helps to explain the condition where zakat distribution increased during Covid-19, however, the poverty rates may not decline as expected. Furthermore, the zakat distribution during Covid-19 was dominantly disburse in a emergency needs rather than long-term poverty alleviation initiatives (Amanda et al., 2021; Muhari, 2023).

Beyond the pandemic effect, another important justification relates to the inefficiency in the utilization of zakat fund by recipients. In line with previous discussion where zakat beneficiaries lack financial literacy and poor financial decisions, a portion of zakat funds that they received may be diverted to non-productive or even harmful consumption, such as online gambling. This concern is supported by data from PPATK, which shows a dramatic increase in total online gambling transaction turnover in Indonesia, rising from Rp2 trillion in 2018 to nearly Rp360 trillion in 2024, as can be seen in the figure below.

Figure 4. 2 Total Online Gambling Transaction Turnover in Indonesia



Source: (PPATK, 2025)

From the figure above, the total online gambling transaction is increasing rapidly. However, the figures above are based on transactions analyzed by PPATK, and the number of transactions reviewed has also significantly increased over time, from 666,104 transactions in 2018 to 209,572,573 transactions in 2024. Therefore, the rising gambling turnover may be influenced by the broader scope of data coverage. Nevertheless, the trend still raises legitimate concerns about the vulnerability of online gambling player. Furthermore, based on the findings from PPATK (2025), 80 percent of online gambling participants come from low income groups. This suggest that online gambling has penetrated among the poor.

From the perspective of poverty alleviation, this issue brings a serious concern, as it has the potential to undermine the effectiveness of social assistance programs, including the role of zakat in reducing poverty. Even though zakat as social assistance programs aim to alleviate poverty by providing financial resources, however, a significant challenge arises from the tendency of some beneficiaries to misallocate these funds towards unethical, or even harmful expenditure such as online gambling. Several studies demonstrate that the struggle with poverty often leads to bad economic decision-making. Sharman *et al.* note that financial hardship can bring a tendency to addictive behaviors, such as gambling, with homelessness being a critical context (Sharman et al., 2016). The gambling behaviour among the poor is driven by the hope of financial gain, and the psychological effects of poverty (such as stress)

(Vandenberg et al., 2022). Similar with the study by Sharman, Wieczorek *et al.* also highlight that individuals facing poverty may engage in gambling as a perceived mechanism to escape their economic hardships (Wieczorek et al., 2019). Moreover, Matheson *et al.* found that gambling behaviors can develop from early life experiences of deprivation and may often serve as a strategy for those facing adverse conditions (Matheson et al., 2021). All of those studies shown how individuals living in poverty, including the zakat recipients, often exhibit ineffective financial decisions, especially in how they allocate monetary. In the context of zakat distribution, this behavioral tendency becomes relevant. As a result, this behavior could limit the effectiveness of zakat distribution in achieving its intended objective of poverty alleviation.

4.6.2 Hypothesis 2: Zakat Policy and Poverty Rate

The second hypothesis is to observe the existence of formal zakat policies at the provincial level and the relationship which would have a negative effect on poverty in Indonesia. The rationale for this hypothesis lies in the belief that regulatory frameworks strengthen zakat governance, improve the effectiveness of zakat management institutions, which should contribute effectively to poverty alleviation (Miah, 2021; Mohamad & Muhamad Sori, 2023; Vegirawati et al., 2023).

Based on the regression results presented in table 4.5, indicate that the provincial zakat regulation as coded by POL, consistently carries a negative coefficient in models 1, 2 3 and 4, with statistically significance at the 10% in models 1, 2 and 3. The greatest coefficient lies in the model 2 with the coefficient of -1.754, suggests that province with a formal zakat regulations tend to have lower poverty rates at 1.754% than those without such policies, controlling for other factors, which are Human Development Index and Unemployment. In model 1 where all of the control variable is included, the coefficient of the variable is -0.963, which means the province with zakat management policies, tend to lower the poverty rate at 0.963%, controlling a condition of GDP, Human Development Index, and Unemployment Rate. In the model 3 where the HDI is excluded, the coefficient lies at -0.990 which means the province with the zakat management policy, tend to lower the poverty rate at 0.9%, controlling the GDP and Unemployment. Meanwhile in model 4, with the smaller coefficient of -0.732, it is no longer statistically significant. Model 4 is generated without excluding unemployment rate. With this result, unemployment rate is an important control variable in assessing the effect of zakat policy on poverty rate. Furthermore, in Model 5, the coefficient of POL changes

direction becoming positive with a very small effect at 0.007 and statistically insignificant. These unexpected results indicates that, the model need to includes many control variables from the economics factors, since the presence of the zakat policies and zakat distribution performance alone does not correspond with lower poverty rates.

From the theoretical standpoint, this results is align with the hypothesis brings in this study, where zakat policy give a significant and negative impact to the poverty rate, align with the GDP, HDI and unemployment rate as the control variables (N. Ahmad et al., 2024; Powell, 2009; Yahya, 2020). The significant negative relationship found in models 1 to 3, suggests that zakat policies, when effectively implemented, function as institutional mechanisms for wealth distribution, thereby increasing the welfare of society's, especially in the most vulnerable groups since the result is significant in decreasing the poverty rate. By formalizing zakat management, provincial governments create regulatory support for impactful zakat performance in achieving its goal.

The loss of statistical significance in model 4 and the reversal of the coefficient direction in model 5 implies that the influence of zakat policy is highly dependent to the other variables. The effectiveness of zakat policies likely interacts with other factors such as the actual volume of zakat distribution, regional economic capacity (as captured by $\ln_GDP$), human development index (HDI), and unemployment rates (UMP). This finding emphasize that policy presence alone is not sufficient without complementary factors such as effective implementation mechanisms measured by sufficient zakat performance, and supportive economic structures. This also highlights the importance of strengthening not only the regulatory frameworks but also the application and integration of zakat management system with broader poverty alleviation strategies.

CHAPTER V

CONCLUSION

5.1 Conclusion

This study aimed to evaluate the impact of zakat distribution performance and provincial zakat policies on poverty alleviation in Indonesia. Using panel data from 34 provinces in the time period of 2018 to 2024, and utilize the Generalized Method of Moments (GMM) dynamic panel estimation technique, this research has an objective to provide empirical evidence on how the zakat regulation influence poverty rates at the provincial level, while controlling for macroeconomic indicator including Gross Domestic Product (GDP), Human Development Index (HDI), and unemployment rates.

The regression analysis resulted in this study found several findings. First, the presence of formal zakat policies at the provincial level shows a negative and significant relationship with poverty rates in Models 1 (controlling for GDP, HDI, and Unemployment Rate), Model 2 (controlling for HDI and unemployment), and model 3 (controlling for GDP and unemployment) with the 10% alpha significant level. These findings supports the initial hypothesis that regulatory frameworks can strengthen zakat management governance, thereby contributing to poverty reduction. From a theoretical perspective, this results aligns with Utilitarian Theory, which takes a position that public policies that support equality in the community should have an outcome to maximize social welfare. By formalizing zakat management, provincial governments create structured systems that maximize the potency of zakat distribution, increasing social benefit through poverty alleviation initiatives. However, the significance of zakat policy diminished in model 5, which suggest the presence of zakat policy alone is not sufficient to guarantee poverty reduction, and its effectiveness is depends on broader socio-economic environment.

Furthermore, unexpectedly, the regression analysis result revealed a consistently positive and significant relationship between zakat distribution performance and poverty rates in models 1 to 4, and then become not significant in model 5 as the model where all the control variables is excluded. This outcome directly contradicts the study's initial hypothesis, which

predicted a negative relationship from the zakat distribution as a redistributive mechanism to alleviate poverty. Several justifications could explain these results.

Firstly, the positive correlation appears to be influenced by the economic disruption of the Covid-19 pandemic, since this study takes a time period of 2018-2024 following the availability of the data. The covid-19 crisis led to the economic hardship, job lossess, and a substantial rise in poverty levels. During this period, zakat management institutions in Indonesia prioritized short-term, emergency, and consumptive aid to rapidly support affected communities (Muhari, 2023). While this was a necessary response in the crisis period, it limited zakat's potential to generate long-term poverty reduction outcomes. The short-term and reactive nature of zakat distribution during pandemic crisis leads to a condition, although the disbursement volume increased, the majority of funds disbursed allocated immediate relief rather than a long-term program, which could escalate the living conditions of the poor. Consequently, increased zakat distribution during the pandemic align with rising poverty rates, due to the scale of distribution was insufficient to counterbalance the broader economic downturn.

Secondly, further explanation of these results can be supported by an ethnographic perspective on poverty behavior. Numerous studies have emphasize that poor households often experience severe financial constraints, limited financial literacy, and daily survival pressures that lead them to allocate financial assistance, including zakat, toward consumptive needs in a short-term (Fan & Henager, 2022; Kachepa & Mumtaz, 2023). Without accompanying and enhancing their financial education and generate an opportunities for income generation, zakat disbursements are unlikely to lift recipients out of poverty. Additionally, the limited fiscal scale of zakat distribution in Indonesia relative to regional economic capacity and poverty gaps, becomes further constrain in macroeconomic impact. Despite the annual growth of zakat disbursement shows a positive trend, the absolute zakat value is relatively small compared to provincial GDP and the financial requirements necessary for poverty reduction. As a results, zakat distribution alone without considering other variables, especially when focused on short-term goal, lacks the financial power to produce a decline in poverty rates.

5.2 Suggestion

The findings of this study present several implication for improving the effectiveness of zakat management in Indonesia and optimizing its role as a poverty alleviation as the instrument of Islamic social finance. First, the significant relationship between zakat policy and poverty reduction highlights the critical role of good legal frameworks in improving zakat governance. Provincial governments are encouraged to formulate and adopt a comprehensive zakat management policies. Thus, policy standardization at the provincial level should be pursued to ensure the consistency in zakat management practices across Indonesia's diverse regional context. Furthermore, the findings from this research also notes the necessity for the zakat institutions (BAZNAS and LAZ) to optimize their zakat distribution with a comprehensive strategy to alleviating poverty. The integration between zakat institution and government initiative could be a strong synergy to utilize the social function of zakat, to enabling mustahik or zakat recipients to achieve financial independence and sustainable livelihoods.

Second, this research also suggest the importance of strengthening financial literacy and behavioral change for zakat recipients. Ethnographic insights regarding the poverty behavior indicate that poor households often lack the financial knowledge and planning capacity to manage financial resources effectively. Therefore, alongside zakat disbursement, institutions should implement financial education initiatives and mentoring programs that empower mustahik or zakat recipients to make them have a better financial decisions.

Third, Indonesia should put a great attention to the fiscal capacity of zakat sector relative to the scale of poverty and regional economic needs. Even though zakat collection and distribution in Indonesia has grown steadily, its total contribution remaind relatively small when compared to the financial resources required for the poverty alleviation. According to estimates from BAZNAS (2024b), Indonesia's annual zakat collection currently captures only around 10% of its total potencial, leaving a gap in utilizing the potency of zakat. To address this, policymakers and zakat management institutions should insentify efforts to broaden the zakat payer (muzakki) base and improve the collection system.

As conclusion, to maximize zakat's potential as an Islamic social finance instrument for poverty alleviation, Indonesia must adopt a holistic approach that combines strong policy frameworks, strategic program design, expended collection capacity, and supporting behavioral

finance of the poor. Implementing these recommendations will ensure that zakat management in Indonesia to contribute not only in short-term welfare improvements, but also could give an impact in poverty reduction.

5.3 Research Contribution

This study offers several contributions to the academic literature, policy development, and practical implementation of zakat management, particularly within the Indonesian context. First, this research contributes to the literature on the socio-economic impact of zakat by quantitatively examining the dual effect of zakat distribution performance and zakat policy on poverty reduction. While previous studies have focused on either evaluating zakat performance or qualitatively describing policy implementation, this study integrates both dimensions into a single empirical model using a panel data approach. Thus, it provides new insights into how policy frameworks interact with zakat distribution outcomes in influencing poverty rates at the provincial level in Indonesia.

Second, this study addresses an important gap in zakat research, which often lacks cross-provincial comparative evaluations. By utilizing panel data from 34 provinces over the 2018-2024 period and employing the Generalized Method of Moments (GMM) estimation technique, this research provide a comprehensive quantitatives evaluation of decentralized zakat management in Indonesia, with the findings shows how policy presence and institutional arrangements at the provincial level can leads to poverty reduction outcomes.

This research also provide a contribution for government and policymakers at the national and provincial levels, as the evidence-based recommendations on the importance of formal zakat policy frameworks in enhancing zakat governance and poverty reduction outcomes, since the findings highlights that provinces with zakat policies tend to resulting a better poverty reduction performance.

5.4 Policy Recommendation

Based on the findings of this research, several policy recommendations can be proposed to strengthen the role of zakat in poverty alleviation in Indonesia, both at the institutional and regulatory levels. First, for the government, this study suggest to improve the quality, transparency, and comprehensiveness of zakat data reporting. Although the

government, through BAZNAS, has publishing zakat statistics, but it still remains a gap in capturing informal zakat transactions.

Second, considering the decentralized nature of Indonesia's governance, the central government should encourage and facilitate the formulation of provincial zakat policies in all regions. Technical and administrative support should be provided, especially to provinces that have not yet established formal zakat regulations, in order to improve coordination and alignment with national objectives.

Third, the integration of zakat into the national social protection framework needs to be explored more seriously, to utilize the social-economic role of zakat to reduce poverty. Such integration would require inter-institutional collaboration and clear guidelines to ensure that zakat distribution still complies with Sharia principles while maximizing economic function and contributing to long-term social welfare outcomes.

For zakat management institutions, both BAZNAS and LAZ should prioritize productive zakat programs that aim to build the long-term capabilities of mustahik, in accordance with the capability approach. While consumptive zakat remains important for addressing urgent needs, sustainable poverty reduction requires programs that empower beneficiaries through vocational training, micro-entrepreneurship support, or education support. Stronger alignment between zakat disbursement programs and socio-economic profile of beneficiaries is essential to ensure the effectiveness and relevance of zakat utilization.

5.5 Research Limitation

While this study provides an insight regarding the relationships between zakat distribution, zakat policy and poverty alleviation at provincial level in Indonesia, it also has several limitations that should be acknowledged in future research. First, this research was limited by the availability of provincial zakat data. Although Indonesia provides relatively better access to zakat statistics compared to many other Muslim majority countries, however, the time period of zakat data in a provincial level is still limited to data available from 2018 period. Since this study covering 2018-2024 period of time, the time frame of this study includes the economic disruption of covid-19 pandemic, which may temporarily affect poverty trends and zakat distribution patterns in a way to not fully represent normal socio-economic condition. Thus, as Indonesia moves to the post-pandemic recovery phase, future research

should re-examine zakat's role in poverty alleviation under more stable economic circumstances and assess the long-term effects of zakat programs.

Second, this study utilize the zakat policy variable as a dummy variable, capturing only the presence or absence of provincial zakat policies without differentiating the nature, objective, and the scope of the policies. This conditions limit the interpretation of zakat policy effects to a binary framework, which may overlook the qualitative differences in how policies are formulated, enforced, and operationalized across provinces. Thus, future studies could develop more deeper zakat policy measurement into categorical variables to classify provincial zakat policies based on certain criteria.

Third, although this study utilizes zakat data published by the official regulator (BAZNAS), which covers zakat managed by both state institutions (BAZNAS) and private zakat institutions (LAZ), it still faces the potential issue of measurement error. The publicly available data from BAZNAS does not account for zakat collected and distributed informally, which is zakat paid directly by individuals to beneficiaries or through unofficial channels such as mosques or informal community groups. This data limitation may lead to underreporting, especially at the provincial level, and consequently, the zakat figures used in this study might not fully reflect the actual amount of zakat mobilized and distributed in each region. As a result, caution is needed in interpreting the magnitude of the impact of zakat effect on poverty reduction.

Lastly, the scope of this research was geographically limited to Indonesia, which actually provides a valuable national case study. However, this condition limits the generalizability of the findings to other Muslim majority countries with different zakat governance.

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APPENDIX

Appendix 1 Descriptive Statistics

```
. xtsum POV ln_DSB POL ln_GDP HDI UMP
```

Variable		Mean	Std. dev.	Min	Max	Observations	
POV	overall	10.35798	5.33217	3.47	27.74	N =	238
	between		5.375232	4.132857	26.53	n =	34
	within		.5199874	8.177983	11.92513	T =	7
ln_DSB	overall	24.23723	1.912934	17.95564	29.44232	N =	232
	between		1.841282	20.69605	28.59651	n =	34
	within		.6741246	19.14252	25.71405	T-bar =	6.82353
POL	overall	.5546218	.4980549	0	1	N =	238
	between		.4933255	0	1	n =	34
	within		.1041629	-.302521	1.411765	T =	7
ln_GDP	overall	12.47731	1.133968	10.50421	15.11825	N =	238
	between		1.136698	10.71646	14.92601	n =	34
	within		.1628303	12.03796	13.00363	T =	7
HDI	overall	71.68857	3.945822	60.06	83.08	N =	238
	between		3.861764	61.96714	81.47143	n =	34
	within		1.01678	66.54857	74.30857	T =	7
UMP	overall	4.750504	1.600157	.88	10.12	N =	238
	between		1.496766	2.637143	7.97	n =	34
	within		.6139319	2.886218	7.426218	T =	7

Appendix 2 Pooled OLS

```
. reg POV l.POV ln_DSB POL ln_GDP HDI UMP
```

Source	SS	df	MS	Number of obs = 202		
Model	5381.27378	6	896.878963	F(6, 195)	=	5260.04
Residual	33.2490899	195	.170508153	Prob > F	=	0.0000
				R-squared	=	0.9939
				Adj R-squared	=	0.9937
Total	5414.52287	201	26.9379247	Root MSE	=	.41293

POV	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
POV						
l1.	.9690341	.0069831	138.77	0.000	.9552621	.9828062
ln_DSB	.0392953	.0260181	1.51	0.133	-.0120176	.0906082
POL	.000744	.0623108	0.01	0.990	-.1221456	.1236335
ln_GDP	-.0587724	.039159	-1.50	0.135	-.136002	.0184572
HDI	-.015135	.0106938	-1.42	0.159	-.0362254	.0059554
UMP	.0321934	.020932	1.54	0.126	-.0090887	.0734756
_cons	.8564406	.7487933	1.14	0.254	-.6203325	2.333214

Appendix 3 Fixed Effect

. xtreg POV l.POV ln_DSB POL ln_GDP HDI UMP, fe
note: POL omitted because of collinearity.

Fixed-effects (within) regression	Number of obs	=	202
Group variable: ID	Number of groups	=	34
R-squared:			
Within	=	0.5711	
Between	=	0.9429	
Overall	=	0.9351	
Obs per group:			
	min	=	4
	avg	=	5.9
	max	=	6
	F(5, 163)	=	43.41
corr(u_i, Xb) = 0.8631	Prob > F	=	0.0000

POV	Coefficient	Std. err.	t	P> t	[95% conf. interval]	
POV						
L1.	.4240291	.0639123	6.63	0.000	.2978263	.550232
ln_DSB	.0942415	.0593925	1.59	0.115	-.0230364	.2115194
POL	0 (omitted)					
ln_GDP	-.0596502	.3730212	-0.16	0.873	-.7962271	.6769266
HDI	-.2429487	.0675756	-3.60	0.000	-.3763851	-.1095122
UMP	.1523578	.0400927	3.80	0.000	.0731898	.2315257
_cons	20.99222	2.883706	7.28	0.000	15.29798	26.68646
sigma_u	2.6131816					
sigma_e	.34406799					
rho	.9829594	(fraction of variance due to u_i)				

F test that all u_i=0: F(33, 163) = 3.57 Prob > F = 0.0000

Appendix 4 One Step Difference GMM

```
. xtabond2 POV l.POV ln_DSB POL ln_GDP HDI UMP, gmm(l.POV,) iv(POL GDP HDI) nodiffsargan robust nolev
> eleq small
```

Favoring space over speed. To switch, type or click on [mata: mata set matafavor speed, perm.](#)

POL dropped due to collinearity

Warning: Two-step estimated covariance matrix of moments is singular.

Using a generalized inverse to calculate robust weighting matrix for Hansen test.

Dynamic panel-data estimation, one-step difference GMM

Group variable: ID	Number of obs	=	167
Time variable : YEARS	Number of groups	=	34
Number of instruments = 17	Obs per group: min	=	2
F(5, 34)		avg =	4.91
Prob > F		max =	5

	POV	Coefficient	Robust std. err.	t	P> t	[95% conf. interval]	
	POV						
	L1.	.557914	.2141916	2.60	0.014	.1226243	.9932037
	ln_DSB	.7108213	.2451263	2.90	0.006	.2126646	1.208978
	ln_GDP	-3.501478	1.939833	-1.81	0.080	-7.443693	.4407366
	HDI	.2857763	.2762787	1.03	0.308	-.2756896	.8472421
	UMP	.4050453	.1227836	3.30	0.002	.1555189	.6545716

Instruments for first differences equation

Standard

D.(POL GDP HDI)

GMM-type (missing=0, separate instruments for each period unless collapsed)

L(1/6).L.POV

Arellano-Bond test for AR(1) in first differences: z = -2.71 Pr > z = 0.007

Arellano-Bond test for AR(2) in first differences: z = -0.70 Pr > z = 0.481

Sargan test of overid. restrictions: chi2(12) = 16.12 Prob > chi2 = 0.186
(Not robust, but not weakened by many instruments.)

Hansen test of overid. restrictions: chi2(12) = 12.27 Prob > chi2 = 0.424
(Robust, but weakened by many instruments.)

Appendix 5 Two Step Difference GMM

```
. xtabond2 POV l.POV ln_DSB POL ln_GDP HDI UMP, gmm(l.POV,) iv(POL GDP HDI) nodiffsargan twostep robu
> st noleveleq small
Favoring space over speed. To switch, type or click on mata: mata set matafavor speed, perm.
POL dropped due to collinearity
Warning: Two-step estimated covariance matrix of moments is singular.
Using a generalized inverse to calculate optimal weighting matrix for two-step estimation.
```

Dynamic panel-data estimation, two-step difference GMM

Group variable: ID	Number of obs	=	167
Time variable : YEARS	Number of groups	=	34
Number of instruments = 17	Obs per group: min	=	2
F(5, 34)		avg =	4.91
Prob > F		max =	5

	POV	Coefficient	Corrected std. err.	t	P> t	[95% conf. interval]	
	POV						
	L1.	.5672719	.2414891	2.35	0.025	.0765071	1.058037
	ln_DSB	.796524	.2068335	3.85	0.000	.3761877	1.21686
	ln_GDP	-3.764905	2.265838	-1.66	0.106	-8.369641	.8398314
	HDI	.3125024	.332517	0.94	0.354	-.3632535	.9882584
	UMP	.3157124	.1257209	2.51	0.017	.0602168	.571208

Instruments for first differences equation

Standard

D.(POL GDP HDI)

GMM-type (missing=0, separate instruments for each period unless collapsed)

L(1/6).L.POV

Arellano-Bond test for AR(1) in first differences: z = -2.06 Pr > z = 0.039
 Arellano-Bond test for AR(2) in first differences: z = -0.69 Pr > z = 0.489

Sargan test of overid. restrictions: chi2(12) = 16.12 Prob > chi2 = 0.186
 (Not robust, but not weakened by many instruments.)

Hansen test of overid. restrictions: chi2(12) = 12.27 Prob > chi2 = 0.424
 (Robust, but weakened by many instruments.)

.

Appendix 6 Multicollinearity Test

```
. vif
```

Variable	VIF	1/VIF
ln_DSB	2.53	0.395437
ln_GDP	2.19	0.456906
HDI	1.45	0.690343
UMP	1.28	0.781475
POL	1.11	0.904934
Mean VIF	1.71	

Appendix 7 Correlation Matrix

```
. correl POV ln_DSB POL ln_GDP HDI UMP
(obs=232)
```

	POV	ln_DSB	POL	ln_GDP	HDI	UMP
POV	1.0000					
ln_DSB	-0.3458	1.0000				
POL	-0.0186	0.2859	1.0000			
ln_GDP	-0.3447	0.7088	0.1377	1.0000		
HDI	-0.6171	0.5455	0.0928	0.4497	1.0000	
UMP	-0.2368	0.4007	0.0715	0.4519	0.2653	1.0000

Appendix 8 System GMM - Result with Control Variables

```
. xtabond2 POV l.POV ln_DSB POL ln_GDP HDI UMP, gmm(l.POV, collapse) iv(POL GDP HDI) nodiffsargan twos
> tep robust orthogonal small
Favoring space over speed. To switch, type or click on mata: mata set matafavor speed, perm.
Warning: Two-step estimated covariance matrix of moments is singular.
Using a generalized inverse to calculate optimal weighting matrix for two-step estimation.
```

Dynamic panel-data estimation, two-step system GMM

Group variable: ID	Number of obs	=	202
Time variable : YEARS	Number of groups	=	34
Number of instruments = 10	Obs per group: min	=	4
F(6, 33) = 405.65	avg	=	5.94
Prob > F = 0.000	max	=	6

POV	Coefficient	Corrected std. err.	t	P> t	[95% conf. interval]	
POV						
L1.	1.078716	.1204092	8.96	0.000	.8337413	1.32369
ln_DSB	1.334827	.3379084	3.95	0.000	.6473471	2.022307
POL	-.9634508	.5202216	-1.85	0.073	-2.02185	.094948
ln_GDP	-1.812278	.3941844	-4.60	0.000	-2.614253	-1.010304
HDI	-.0401287	.0981691	-0.41	0.685	-.2398553	.1595979
UMP	.3755602	.1909315	1.97	0.058	-.0128928	.7640132
_cons	-9.183879	7.605779	-1.21	0.236	-24.65795	6.290195

Instruments for orthogonal deviations equation

Standard

FOD.(POL GDP HDI)

GMM-type (missing=0, separate instruments for each period unless collapsed)

L(1/6).L.POV collapsed

Instruments for levels equation

Standard

POL GDP HDI

_cons

GMM-type (missing=0, separate instruments for each period unless collapsed)

D.L.POV collapsed

Arellano-Bond test for AR(1) in first differences: z = -2.37 Pr > z = 0.018

Arellano-Bond test for AR(2) in first differences: z = -0.81 Pr > z = 0.416

Sargan test of overid. restrictions: chi2(3) = 5.25 Prob > chi2 = 0.154
(Not robust, but not weakened by many instruments.)

Hansen test of overid. restrictions: chi2(3) = 1.90 Prob > chi2 = 0.594
(Robust, but weakened by many instruments.)

```
. test ln_DSB POL ln_GDP HDI UMP
```

(1) ln_DSB = 0

(2) POL = 0

(3) ln_GDP = 0

(4) HDI = 0

(5) UMP = 0

F(5, 33) = 12.50

Prob > F = 0.0000

Appendix 9 System GMM - Without HDI as Control Variable

```
. xtabond2 POV l.POV ln_DSB POL ln_GDP UMP, gmm(l.POV, collapse) iv(POL GDP HDI) nodiffsargan twostep
> robust orthogonal small
Favoring space over speed. To switch, type or click on mata: mata set matafavor speed, perm.
Warning: Two-step estimated covariance matrix of moments is singular.
Using a generalized inverse to calculate optimal weighting matrix for two-step estimation.
```

Dynamic panel-data estimation, two-step system GMM

Group variable: ID	Number of obs	=	202
Time variable : YEARS	Number of groups	=	34
Number of instruments = 10	Obs per group: min	=	4
F(5, 33) = 496.39	avg	=	5.94
Prob > F = 0.000	max	=	6

POV	Coefficient	Corrected std. err.	t	P> t	[95% conf. interval]	
POV						
L1.	1.118856	.0636522	17.58	0.000	.9893547	1.248358
ln_DSB	1.307316	.35182	3.72	0.001	.5915331	2.023099
POL	-.9908272	.5505469	-1.80	0.081	-2.110923	.1292688
ln_GDP	-1.852639	.3768604	-4.92	0.000	-2.619367	-1.085911
UMP	.4329777	.1453059	2.98	0.005	.1373505	.7286048
_cons	-11.54976	4.948468	-2.33	0.026	-21.6175	-1.482031

Instruments for orthogonal deviations equation

Standard

FOD.(POL GDP HDI)

GMM-type (missing=0, separate instruments for each period unless collapsed)

L(1/6).L.POV collapsed

Instruments for levels equation

Standard

POL GDP HDI

_cons

GMM-type (missing=0, separate instruments for each period unless collapsed)

D.L.POV collapsed

Arellano-Bond test for AR(1) in first differences: z = -2.49 Pr > z = 0.013

Arellano-Bond test for AR(2) in first differences: z = -0.92 Pr > z = 0.357

Sargan test of overid. restrictions: chi2(4) = 5.33 Prob > chi2 = 0.255
(Not robust, but not weakened by many instruments.)

Hansen test of overid. restrictions: chi2(4) = 2.05 Prob > chi2 = 0.726
(Robust, but weakened by many instruments.)

.

```
. test ln_DSB POL ln_GDP UMP
```

(1) ln_DSB = 0

(2) POL = 0

(3) ln_GDP = 0

(4) UMP = 0

F(4, 33) = 14.88

Prob > F = 0.0000

Appendix 10 System GMM - Without Unemployment Rate as Control Variable\

```
. xtabond2 POV l.POV ln_DSB POL ln_GDP HDI, gmm(l.POV, collapse) iv(POL GDP HDI) nodiffsargan twostep
> robust orthogonal small
Favoring space over speed. To switch, type or click on mata: mata set matafavor speed, perm.
Warning: Two-step estimated covariance matrix of moments is singular.
Using a generalized inverse to calculate optimal weighting matrix for two-step estimation.
```

Dynamic panel-data estimation, two-step system GMM

Group variable: ID	Number of obs	=	202
Time variable : YEARS	Number of groups	=	34
Number of instruments = 10	Obs per group: min	=	4
F(5, 33)		avg =	5.94
Prob > F		max =	6

	POV	Coefficient	Corrected std. err.	t	P> t	[95% conf. interval]	
	POV						
	L1.	.945809	.0875087	10.81	0.000	.7677711	1.123847
	ln_DSB	1.53559	.3251422	4.72	0.000	.8740832	2.197097
	POL	-.732336	.4631216	-1.58	0.123	-1.674564	.209892
	ln_GDP	-1.911199	.4356868	-4.39	0.000	-2.797611	-1.024788
	HDI	-.1169044	.0537359	-2.18	0.037	-.2262309	-.0075778
	_cons	-4.285658	4.925519	-0.87	0.391	-14.3067	5.735386

Instruments for orthogonal deviations equation

Standard

FOD.(POL GDP HDI)

GMM-type (missing=0, separate instruments for each period unless collapsed)

L(1/6).L.POV collapsed

Instruments for levels equation

Standard

POL GDP HDI

_cons

GMM-type (missing=0, separate instruments for each period unless collapsed)

D.L.POV collapsed

Arellano-Bond test for AR(1) in first differences: z = -1.87 Pr > z = 0.061

Arellano-Bond test for AR(2) in first differences: z = -0.52 Pr > z = 0.604

Sargan test of overid. restrictions: chi2(4) = 15.26 Prob > chi2 = 0.004
(Not robust, but not weakened by many instruments.)

Hansen test of overid. restrictions: chi2(4) = 6.59 Prob > chi2 = 0.159
(Robust, but weakened by many instruments.)

```
. test ln_DSB POL ln_GDP HDI
```

```
( 1) ln_DSB = 0
```

```
( 2) POL = 0
```

```
( 3) ln_GDP = 0
```

```
( 4) HDI = 0
```

```
F( 4, 33) = 6.47
```

```
Prob > F = 0.0006
```

```
.
```

Appendix 11 System GMM - Without GDP as Control Variable

```
. xtabond2 POV l.POV ln_DSB POL HDI UMP, gmm(l.POV, collapse) iv(POL HDI) nodiffsargan twostep robust
> orthogonal small
```

Favoring space over speed. To switch, type or click on [mata: mata set matafavor speed, perm.](#)

Warning: Two-step estimated covariance matrix of moments is singular.

Using a generalized inverse to calculate optimal weighting matrix for two-step estimation.

Dynamic panel-data estimation, two-step system GMM

Group variable: ID	Number of obs	=	202
Time variable : YEARS	Number of groups	=	34
Number of instruments = 9	Obs per group: min	=	4
F(5, 33) = 456.43	avg	=	5.94
Prob > F = 0.000	max	=	6

	POV	Coefficient	Corrected std. err.	t	P> t	[95% conf. interval]	
	POV						
	L1.	1.192326	.174457	6.83	0.000	.8373905	1.547262
	ln_DSB	1.660754	.4214844	3.94	0.000	.8032378	2.518271
	POL	-1.754182	.9898282	-1.77	0.086	-3.768002	.2596389
	HDI	-.2431665	.1229715	-1.98	0.056	-.493354	.007021
	UMP	.3977847	.2184094	1.82	0.078	-.0465727	.842142
	_cons	-26.02367	15.62186	-1.67	0.105	-57.80659	5.759249

Instruments for orthogonal deviations equation

Standard

FOD.(POL HDI)

GMM-type (missing=0, separate instruments for each period unless collapsed)

L(1/6).L.POV collapsed

Instruments for levels equation

Standard

POL HDI

_cons

GMM-type (missing=0, separate instruments for each period unless collapsed)

D.L.POV collapsed

Arellano-Bond test for AR(1) in first differences: z = -2.61 Pr > z = 0.009

Arellano-Bond test for AR(2) in first differences: z = -0.71 Pr > z = 0.478

Sargan test of overid. restrictions: chi2(3) = 1.70 Prob > chi2 = 0.638
(Not robust, but not weakened by many instruments.)

Hansen test of overid. restrictions: chi2(3) = 0.79 Prob > chi2 = 0.851
(Robust, but weakened by many instruments.)

```
. test ln_DSB POL HDI UMP
```

```
( 1) ln_DSB = 0
```

```
( 2) POL = 0
```

```
( 3) HDI = 0
```

```
( 4) UMP = 0
```

```
F( 4, 33) = 15.21
```

```
Prob > F = 0.0000
```

```
.
```