Islamic Philanthropy and Poverty Reduction in Indonesia: The Role of Integrated Islamic Social and Commercial Finance Institutions

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Abstract:
The recent studies about the role of Islamic philanthropy in addressing socio-economic problems have been growing and confirming its significant role in overcoming the problem. This is in line with the existence of regulations that support the effectiveness of its role in poverty reduction in Indonesia, such as Law No. 23 of 2011 on Zakat Management and Law No. 41 of 2004 on Waqf. This study has two objectives. First, to analyze the impact of Islamic philanthropy on poverty reduction as the socio-economic problems in Indonesia in the short and long run. Second, to analyze the effectiveness of integrated Islamic commercial and social-economic or finance
to address the poverty compared to unintegrated one. This study used Auto-Regressive Distributed Lag (ARDL) approach to analyze annual data for the period of 2002-2019 while investigating the long and short-run relationships among variables. It found that Islamic philanthropy reduces poverty both in the short and long run, particularly in the integration of Islamic social and commercial finance in a single model. The government should therefore include Islamic philanthropy or other Islamic social finances as a fundamental strategy for building financial stability and sustainable development.

**Keywords:**
Philanthropy; Integration; Social and commercial finance; Poverty

**Abstrak:**
dalam jangka pendek maupun jangka panjang. Pemerintah seyoginya menempatkan filantropi Islam sebagai kebijakan dan strategi fundamental dalam rangka mewujudkan stabilitas keuangan dan pembangunan berkelanjutan.

Kata Kunci:
Filantropi; Integrasi, Keuangan sosial dan komersial; Kemiskinan

Introduction
For more than two decades, research on Islamic economics and finance has gained prominence. A recent survey paper by Paresh Kumar Narayan et al.\(^1\) highlighted the development of Islamic economic or finance research while discussing the potential for future research in the field. The recent studies about the role of Islamic philanthropy system such as zakāt (payment made annually under Islamic law on certain kinds of property and used for charitable and religious purposes), infaq or ṣadaqah (voluntary charity), waqf (endowment) and others in addressing the socio-economic problems, most notably poverty and income inequality, have been growing and confirming its significant role in overcoming the problem.

This is in line with the existence of regulatory and statutory instruments that support the effectiveness of Islamic philanthropy’s role in poverty reduction in Indonesia. Two of which are Law No. 38 of 1999 and Law No. 23 of 2011 on Zakāt Management and Law No. 41 of 2004 on Waqf as a result of Indonesian Muslims’ struggle to strengthen regulations on zakāt since 1968. The former that was later updated with Law No. 23 of 2011 is considered very strategic and helpful to strengthen Islamic philanthropy. Meanwhile, the later that mainly aims to encourage the progress of waqf management is also considered able to support the maximization of waqf management in improving the socio-economic welfare of Muslim society.\(^2\)

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The existence of legal certainty and legal products is very important in supporting the implementation of zakāt, infaq, ṣadaqah, and waqf for improving people’s welfare and economic empowerment. Moreover, as a country with a Muslim majority population with 216.66 million people or 85 percent of its total population, Indonesia has Badan Amil Zakat Nasional (National Zakāt Agency of Indonesia) or so-called BAZNAS.

Islamic money and property management are supposed to bridge the gap between the have and the needy. Zakāt, for instance, enhances the circulation of wealth and ensures that the wealth does not idle and be hoarded. Nonetheless, from the macroeconomic perspective, zakāt is used to increase the aggregate demand due to the high spending of zakat recipients (mustaḥiq). Thus, it will boost economic growth and will encourage investment. It is also an instrument of fiscal policy that serves to ensure that economic activity can run at the level of primary needs fulfillment. Therefore, the governments of Muslim countries need to give serious attention to optimize zakāt as a source of growth and equitable distribution of wealth. There is a need for a big move to reconstruct the spirit of zakāt while preventing lack of focus as happened in past.

Some progress has been made toward achieving this goal in several countries. However, there are still many development programs that have not been successful. Many works in effective programs are also needed. In fact, as a part of efforts towards reducing poverty in Islamic countries, zakāt is an important form of

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6 Muhammad Nejatullah Siddiqi, Teaching Economics in Islamic Perspective (Scientific Publishing Centre, 1996).

charitable funding.⁸ In the context of Indonesia, zakāt has promising potential for contributing to poverty and inequity reduction.⁹ This is clear from data on zakāt, infaq, and ṣadaqah in Indonesia that shows an increase in zakāt collection from 2002 to 2019 which is shown from table 1 below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Islamic Philanthropy (IDR Billion)</th>
<th>Growth (%)</th>
<th>GDP Per Capita (US Dollar)</th>
<th>Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>68.39</td>
<td>-</td>
<td>8,381,725.70</td>
<td>-</td>
</tr>
<tr>
<td>2003</td>
<td>85.28</td>
<td>24.70</td>
<td>9,140,209.04</td>
<td>9.05</td>
</tr>
<tr>
<td>2004</td>
<td>150.09</td>
<td>76.00</td>
<td>10,282,012.90</td>
<td>12.49</td>
</tr>
<tr>
<td>2005</td>
<td>295.52</td>
<td>96.90</td>
<td>12,259,877.14</td>
<td>19.24</td>
</tr>
<tr>
<td>2006</td>
<td>373.17</td>
<td>26.28</td>
<td>14,561,495.32</td>
<td>18.77</td>
</tr>
<tr>
<td>2007</td>
<td>740.00</td>
<td>98.30</td>
<td>17,002,285.26</td>
<td>16.76</td>
</tr>
<tr>
<td>2008</td>
<td>920.00</td>
<td>24.32</td>
<td>21,016,237.31</td>
<td>23.61</td>
</tr>
<tr>
<td>2009</td>
<td>1,200.00</td>
<td>30.43</td>
<td>23,494,217.33</td>
<td>11.79</td>
</tr>
<tr>
<td>2010</td>
<td>1,500.00</td>
<td>25.00</td>
<td>28,383,630.91</td>
<td>20.81</td>
</tr>
<tr>
<td>2011</td>
<td>1,729.00</td>
<td>15.27</td>
<td>31,951,073.85</td>
<td>12.57</td>
</tr>
<tr>
<td>2012</td>
<td>2,212.00</td>
<td>27.94</td>
<td>34,677,483.69</td>
<td>8.53</td>
</tr>
<tr>
<td>2013</td>
<td>2,639.00</td>
<td>19.30</td>
<td>37,910,608.80</td>
<td>9.32</td>
</tr>
<tr>
<td>2014</td>
<td>3,300.00</td>
<td>25.05</td>
<td>41,428,865.92</td>
<td>9.28</td>
</tr>
<tr>
<td>2015</td>
<td>3,650.00</td>
<td>10.61</td>
<td>44,609,441.72</td>
<td>7.68</td>
</tr>
<tr>
<td>2016</td>
<td>5,017.29</td>
<td>37.46</td>
<td>47,415,515.66</td>
<td>6.29</td>
</tr>
<tr>
<td>2017</td>
<td>6,224.37</td>
<td>24.06</td>
<td>51,350,980.38</td>
<td>8.30</td>
</tr>
<tr>
<td>2018</td>
<td>8,117.59</td>
<td>30.42</td>
<td>55,436,453.25</td>
<td>7.96</td>
</tr>
<tr>
<td>2019</td>
<td>10,070.00</td>
<td>24.05</td>
<td>58,508,674.98</td>
<td>5.54</td>
</tr>
<tr>
<td>Mean</td>
<td>2,682.87</td>
<td>36.24</td>
<td>30,433,932.73</td>
<td>12.23</td>
</tr>
</tbody>
</table>


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Table 1 shows that the collection of Islamic philanthropy including zakāt, infaq, or ṣadaqah (voluntary charity), waqf (endowment), and others increases every year from 17 years. In 2005 and 2007, there was an increase with almost 100 percent due to national disasters in the country (the Aceh Tsunami in 2004 and the Yogyakarta Earthquake in 2006). The average growth of the collection from 2002 until 2019 was 36.24 percent. Another important point is the high growth of Islamic philanthropy collection compared to GDP per capita growth (US Dollar). The increase in average annual Islamic philanthropy growth between 2002 and 2019 is higher than average GDP growth for the same period which only reached 12.23 percent.

Furthermore, the fact that the growth of Islamic philanthropy was not significantly affected by global economic shocks suggests that in the future, it has big potential to contribute to national development. Thus, national economic policy should include Islamic philanthropy in its efforts to reduce poverty or inequality while utilizing Islamic philanthropy as a fundamental strategy for financial stability and sustainable development.13

Using Indonesian experience, this paper will cover several aspects of Islamic philanthropy particularly in answering how Islamic philanthropy contributes to the socio-economic aspect, namely poverty reduction, and decrease income inequality in the country in both the short and long run. It, therefore, aims to contribute precisely in revealing the role of Islamic philanthropy in reducing poverty. Other than that, it aims to analyze the effectiveness of integrated Islamic commercial and social finance to build the welfare of people


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compared to unintegrated ones. Since relevant previous works have not yet thrown some light on such integration, this is the novelty of this paper.

Furthermore, this paper allows for possible symmetrical causality between the role of Islamic philanthropy and poverty reduction in Indonesia. The reason behind this is because Islamic philanthropy variants including zakāt, infaq, and waqf in Islam are largely working out to help people come out of poverty. In this sense, the combination between both commercial and social finance for this study is another novelty compared to the previous works that mostly focus on the social-economic/finance or commercial economic/finance only.

Moreover, in both classical and modern literature, zakāt collection is always seen as the responsibility of the government. It is regarded as an effective instrument to realize the purpose of financial goals that are expected to affect the development of the country as well as the social welfare of society as listed in al-Amwāl by al-Dawudi and Rawls' theory of social justice. Other previous studies were those of Irfan Syauqi Beik, Rahmatina A Kasri, and Qurroh Ayuniyyah et al. for the case of Indonesia; Fuadah Johari et al. for the case of a new convert (muallaf) in Malaysia; Hisham Handal

Abdelbaki\textsuperscript{19} for the case of Bahrain; Arif Widodo\textsuperscript{20} about the role of integrated Islamic commercial and social finance in reducing income inequality in Indonesia; and Naziruddin Abdullah et al.\textsuperscript{21} using the Basic Needs Deficiency Index (BNDI) in Pakistan.

The earlier works have indeed made a huge contribution to the works of zakāt and the formulation of a coherent policy on zakāt, yet there are certain aspects that can further be developed. Given that most of the studies on the role of zakāt conducted by using primary data at the micro level, Irfan Syauqi Beik\textsuperscript{22}, for instance, focused on the Jakarta area as an object of study, while Qurroh Ayuniiyah et al.\textsuperscript{23} studied the effectiveness of zakāt distribution both for consumptive and productive purposes in three different regions in West Java. Hence, they have not yet covered the broader areas. This implies the need for using data that covers as many areas as possible aiming to provide a comprehensive analysis, especially from the macro context.

Accordingly, the previous works seem to focus mainly on the social aspect of Islamic finance like zakāt while excluding Islamic commercial finance in the analysis.\textsuperscript{24} In regard to this, Ascarya\textsuperscript{25} has stressed the fundamental principle which has been deeply embedded in the Islamic finance framework. Ascarya\textsuperscript{26} explained that Islamic finance cannot accept the difference between social and commercial

\textsuperscript{22} Beik, Economic Role of Zakah in Reducing Poverty and Income Inequality: A Case Study in the Province of DKI Jakarta, Indonesia.
\textsuperscript{25} Ascarya, “Integration of Islamic Commercial and Social Finance in Micro-Small Scale” (Surabaya, 2016).
\textsuperscript{26} Ascarya.
finance in the system as applied to a conventional system. Thus, it is urgently needed to address the question of the surging inequality problem by considering the integration between these two aspects in Islamic finance.  

On the other hand, Nazamul Hoque et al. shows that developing entrepreneurship through zakāt for poverty reduction is a new approach to consider because instead of financing and resources, the cause of poverty is the lack of entrepreneurship. Another previous study by Nazamul Hoque et al. investigated how the Gross Domestic Product of a Region (GDPR) and the zakāt index can contribute to poverty reduction.

Accordingly, recent studies by Choiriyah et al. investigated the significance of Indeks Kesejahteraan (Welfare Index) BAZNAS (IKB) as a measure of impactful zakāt towards poverty reduction at the provincial level in Indonesia. IKB is an instrument used by BAZNAS to identify how impactful zakāt distribution for the recipient of zakat (mustahiq) wellbeing is. The panel-data analysis in Choiriyah et al. (2020)’s study found that impactful zakāt is strongly linked to the reduction of poverty headcount ratio. The study found the role of zakāt contributing to improve human capital and quality of life of the poor and vulnerable. Such improvement can be seen in the provision of education, health facilities, and social services. In other words, zakāt has already played a big role in reducing the population living below the poverty line even though the IKB is still found not significant yet in improving the quality of life of the needy at the provincial level in Indonesia.

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Method

To analyze the impact of Islamic philanthropy on poverty reduction as the socio-economic problems in the case of Indonesia both in the short and long run and as well as analyze the effectiveness of integrated Islamic commercial and social-economic or finance to address the poverty compared to unintegrated one, the study used annual data from the BAZNAS, Statistics Centre Agency of Indonesia (Badan Pusat Statistik, BPS), Financial Services Authority of Indonesia (Otoritas Jasa Keuangan, OJK), and the World Bank. The data set spans from the period 2002 to 2019.

One reliable measure of Islamic philanthropy is the total amount of zakāt, infaq, and ṣadaqah (ZIS) as Islamic philanthropy or charity collected by BAZNAS. It consists of individual zakāt māl (property alm), zakāt fitr\(^{31}\) (annual basic alm), infaq or ṣadaqah\(^{32}\), Corporate Social Responsibility (CSR), and other socio-religious funds. Another focus variable is poverty. The study measures the poverty using headcount ratio at national poverty lines (%).\(^{33}\)

In addition to this one core variable, the use of Islamic domestic credit or financing to the private sector such as murābaha\(^{34}\)

\(^{31}\) It is another smaller charitable obligation which is mandatory for all Muslims, male or female, little or adult as long as he or she has the means to do so. Traditionally, it is paid at the end of the fasting in the Islamic holy month of Ramadan.

\(^{32}\) It is an Arabic word meaning spending or disbursement but also carrying the sense of doing so simply to please God without asking for any favor or hoping for any return.

\(^{33}\) The poverty headcount ratio is measured based on national poverty lines. This may vary across rural and urban areas, across the different costs of living, or across differences in diets and consumption baskets. Poverty estimates at national poverty lines is computed from household survey data. National poverty lines reflect local perceptions of the level and composition of consumption or income needed to be non-poor. Almost all national poverty lines are inflation-adjusted and anchored to the cost of a food bundle - based on the prevailing national diet of the poor - that provides adequate nutrition for good health and normal activity, plus an allowance for non-food spending. Source: https://www.indexmundi.com/facts/indicators/SI.POV.NAHC.

\(^{34}\) It is originally a term of fiqh (Islamic jurisprudence) for a sales contract when the buyer and seller agree on the markup (profit) or "cost-plus" price for any successfully sold item(s).
working as a capital and investment scheme for Micro, Small, and Medium Enterprises (MSMEs) as a proxy of commercial finance also works. Financing to MSMEs provides more benefits to people in the area because one of its characteristics is that MSMEs tend to be labor-intensive rather than capital intensive. It expects the coefficient associated with financing MSMEs to be negative and significant. The Islamic domestic credit used in this study is not only from the Sharia Commercial Banks but is also extended to Sharia Business Units as this indicator measures the role of financial institutions in channeling funds to fund users in bank-based type.

Last but not least, the study also includes one control variable in its model. The control variable is a growth rate of annual percentage GDP per capita since it is highly correlated with poverty (see for instance by Clarke, Xu, and Fou38). Another reason for using per capita GDP is because poverty relates to the person instead of aggregate, though a more accurate measure is when all funds allocated for public and potentially brings positive impact to the poor.39

In order to examine the relationship between Islamic philanthropy and poverty, we propose following long-run estimation model that can be shown by equation 1:

\[
POV = \alpha + \beta_1 IPT_1 + \beta_2 ICF_1 + \beta_3 (IPT + ICF)_1 + \beta_4 GDP_1 + \epsilon_1
\]  

35 It is a partnership or trust financing contract (similar to the Western equivalent of General and Limited Partnership) where a partner (rabb-ul-māl or “silent partner” or financier) gives money to another (muḍārib or “working partner”) for investing it in a commercial enterprise.
36 It is the one without any collateral. However, some Islamic scholars deem it as a form of interest-free loan (fungible, marketable wealth) that is extended by a lender to a borrower based on benevolence (iḥsān).
37 It is a term of fiqh (Islamic jurisprudence) and product in Islamic banking and finance. In traditional fiqh, it means a contract for hiring persons or renting/leasing any services or the “usufruct” of a property, generally for a fixed period and price.
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Where $POV$ represents a proxy for poverty, $IPT$ represents Islamic philanthropy, $ICF$ is Islamic Commercial Finance, and $GDP$ represents the annual percentage growth rate of GDP per capita. All variables used in Equation (1) are in natural logarithm form for consistent and reliable results. The log-linear specification provides better results because the conversion of the series into logarithm reduces the sharpness in time series data.\(^{40}\)

Before proceeding with long-run estimation, we ascertain that our variables are cointegrated. To do so, we use ARDL bounds test approach for cointegration. The ARDL approach as developed by M. Hashem Pesaran, Yongcheol Shin, and Richard J Smith\(^{41}\) can be applied irrespectively of whether the variables are I(0) and/or I(1). Thus, we use the following specification for ARDL bounds test for cointegration with the estimation model which can be shown by Equation 2, 3, and 4:

\[\Delta POV_t = \alpha + \beta_1 POV_{t-1} + \beta_2 IPT_{t-1} + \beta_3 GDP_{t-1} + \beta_4 \Delta POV_{t-1} + \beta_5 \Delta IPT_{t-1} + \epsilon_t\]  
\[\Delta POV_t = \alpha + \beta_1 POV_{t-1} + \beta_2 ICF_{t-1} + \beta_3 GDP_{t-1} + \beta_4 \Delta POV_{t-1} + \beta_5 \Delta ICF_{t-1} + \epsilon_t\]  
\[\Delta POV_t = \alpha + \beta_1 POV_{t-1} + \beta_2 (IPT * ICF)_{t-1} + \beta_3 GDP_{t-1} + \beta_4 \Delta POV_{t-1} + \beta_5 \Delta (IPT * ICF)_{t-1} + \epsilon_t\]  

The study also uses the F-test statistics obtained from the bounds test in order to examine the long-run relationship between poverty or inequality and Islamic philanthropy. The F-test statistics examine the joint significance of the null hypothesis, that is $H_0: \beta_1 = \beta_2 = \beta_3 = 0$. The obtained F-test statistic is then compared against the upper and lower critical value bounds provided by Paresh Kumar Narayan.\(^{42}\) If the obtained F-test statistic exceeds the upper critical bound (UCB), then the series are cointegrated; if it is below the


lower critical bound (LCB), there is no cointegration. Likewise, if the calculated F-test statistic is between the UCB and the LCB, then a decision about cointegration is inconclusive.

For each application, there is a band covering all the possible classifications of the variables into I(0) and I(1). However, according to Paresh Kumar Narayan, the existing critical values in Pesaran, Shin, and Smith cannot be applied for small sample sizes as they are based on large sample sizes. Hence, Paresh Kumar Narayan provides a set of critical values for small sample sizes, ranging from 30 to 80 observations. The critical values are 2.496 - 3.346, 2.962 - 3.910, and 4.068 - 5.250 at 90%, 95%, and 99%, respectively.

Discussion and Results

The term philanthropy comes from Greek, namely philos (loving) and anthropos (mankind). Literally, philanthropy is the conceptualization of the practices of voluntary giving, services, and association to help other people who are in need as an expression of the feeling of love. In general, philanthropy is defined as voluntary action for the public’s good. There are two most common models of philanthropy, namely traditional philanthropy based on charity and social justice philanthropy.

Islam as a religion that teaches humans to love each other show affection and sympathy has a configuration of charity or philanthropy from its teachings. Among the teachings are in the forms of orders to give infaq, šadaqah, zakat, and waqf, which can increase faith in God, foster a high sense of humanity, eliminate miserly greedy and materialistic human nature, foster peace of life, clean and develop possessions, and overcome various problems in

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43 Narayan.
social life, economy, education, even environment.\textsuperscript{48} This role is expected to overcome the economic shocks and facilitate the whole society, especially Muslims, to participate in contributing to recover these shocks.

In the basic concept of zakāt and poverty reduction, Islam regulates the practice of income redistribution. According to Magda Ismail A Mohsin and Magda Ismail,\textsuperscript{49} zakāt aims to eradicate usury and eliminate hardship from Muslim society at micro and macro levels through its role in the state sector. Throughout the history of Islam, zakāt has been an important instrument of philanthropy in Muslim countries.

During the Caliphate of Umar bin Khattab and Umar bin Abdul Aziz, for instance, poverty was overcome through effective and efficient zakāt distribution. The population reached a standard of living above the poverty line so that the distribution of zakāt to the poor was not required because the population’s basic needs had been met.\textsuperscript{50} Thus, zakāt is an economic instrument in Islam that aims to build people’s welfare as well as being an instrument of income equality.\textsuperscript{51} Eventually, the role of zakāt will be able to guide in creating a better and more prosperous life.\textsuperscript{52}

In Indonesia, zakāt institution is served separately with Baitul Māl wa al-Tamwīl (house of wealth and property) although both are under the category of Islamic social finance. The Baitul Māl is an Islamic microfinance institution (IMFI) registered as an Islamic cooperative in Indonesian financial regulation. Islamic social finance\textsuperscript{53}

\begin{thebibliography}{99}
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\bibitem{Mohsin2012} Mohsin and Ismail; Ahmed, “Zakah, Macroeconomic Policies, and Poverty Alleviation: Lessons from Simulations on Bangladesh.”
\bibitem{Aninatin2009} Evi Aninatin, Ni’matul Choiriyah, Abdul Kafi, Irma Faikhotul Hikmah, “Zakat and Poverty Alleviation in Indonesia: A Panel Analysis at Provincial Level.”
\bibitem{social2013} It is a category of financial services in the Islamic frame that aims to leverage private capital to address challenges in areas of social and environmental
\end{thebibliography}
is under the management of its *Baitul Māl* division while Islamic commercial finance is managed in the *Bait al-Tamwīl* division. Islamic commercial finance is commonly offered by Islamic banks and Islamic rural banks as a part of the national banking industry.

The *Baitul Māl* division manages social funds including *zakāt*, *ṣadaqah* (voluntary charity), cash *waqf* (Islamic endowment), and other social funds. It acts as a cooperative IMFI for collecting deposits from its members for initial capital (principal and compulsory deposits) and saving deposits. When funding is in the short term, *Bait al-Tamwīl* can serve as a financial intermediary from external funding sources such as an Apex institution, Islamic banks, or foreign sources which provides liquidity for microfinance institutions.

The integration of Islamic commercial and social finance under one institution brings more benefits to stakeholders and may solve some most common problems of Islamic financial institutions like what the following figure shows.

![Figure 1. The integration of Islamic social and commercial finance in BMT. Source: Ascarya](image-url)


57 Ascarya.
Figure 1 illustrates the integration of Islamic social and commercial finance in BMT. BMT, certified as zakāt personnel (‘āmil), collects and manages zakāt, infaq, and ṣadaqah (ZIS) funds from members, employees, and the community. Afterward, it uses the funds accordingly for their designated purposes through various consumptive and productive programs including training, technical assistance, and qard (benevolent lending) financing to make the recipients (the poor and needy) as self-sufficient micro-entrepreneurs.

In another role as a certified administrator (nazir), BMT collects either directly or indirectly cash waqf and deposits funds. Direct cash waqf (X+Y in Figure 1) is used for non-profit generating assets (X) such as developing Islamic schools, hospitals, or mosque or generating profit assets (Y) such as investment in financial/real assets. Meanwhile, indirect cash waqf (Z) is used in commercial financing for micro and small enterprises or other purposes.

To mitigate the risks, waqf investments are insured by micro takāful. Profits from waqf investments are partly used to fund social programs, while the other part is for reinvestment as cash waqf. The integration of Islamic social and commercial finance is helpful not only for zakāt and waqf recipients (mawquf ‘alayh), but also for other recipients such as IMFIs with stronger financial standing. As a result, these IMFIs would be able to provide members with cheaper financing so that they would be more resilient to financial crises.

In the preliminary analysis, this study looks at some common descriptive statistics of all variables (namely POV, INE, IPT, ICF, and GDP) used in it. More specifically, we report mean, median, Standard Deviation (SD), Skewness, Kurtosis and Jarque-Bera test statistics for all variables in Panel A of Table 2. This table reports selective descriptive statistics of all variables in Panel A. All data are taken in natural logarithm form. Finally, * and ** denote statistical significance at 1% and 5% levels.

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58 It is a cooperative system of reimbursement or repayment in case of loss which is organized as an Islamic or sharia-compliant alternative for conventional one which is considered to contain riba (usury) and garār (excessive uncertainty).
Table 2. Descriptive Statistics and Unit Root Test

Panel A: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>IPT</th>
<th>ICF</th>
<th>GDP</th>
<th>POV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>6.941875</td>
<td>11.10188</td>
<td>17.07000</td>
<td>2.370625</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>1.120180</td>
<td>1.265887</td>
<td>0.591642</td>
<td>0.625188</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.972708</td>
<td>-0.467040</td>
<td>-0.427199</td>
<td>-0.331669</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>2.806585</td>
<td>1.961022</td>
<td>1.851242</td>
<td>1.657270</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>2.548037</td>
<td>1.301321</td>
<td>1.366428</td>
<td>1.495293</td>
</tr>
<tr>
<td>Probability</td>
<td>0.279705</td>
<td>0.521701</td>
<td>0.504991</td>
<td>0.473480</td>
</tr>
</tbody>
</table>

Panel B: Unit Root Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF Test</th>
<th>PP Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t-statistic</td>
<td>Prob.*</td>
</tr>
<tr>
<td>Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPT</td>
<td>-0.496185</td>
<td>0.9723</td>
</tr>
<tr>
<td>ICF</td>
<td>2.166656</td>
<td>0.9885</td>
</tr>
<tr>
<td>GDP</td>
<td>-2.703652</td>
<td>0.2495</td>
</tr>
<tr>
<td>POV</td>
<td>-2.186604</td>
<td>0.4646</td>
</tr>
<tr>
<td>1st Difference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPT</td>
<td>-4.509023</td>
<td>0.0177**</td>
</tr>
<tr>
<td>ICF</td>
<td>-2.865233</td>
<td>0.0074</td>
</tr>
<tr>
<td>GDP</td>
<td>-3.745292</td>
<td>0.0490**</td>
</tr>
<tr>
<td>POV</td>
<td>-2.012713</td>
<td>0.5451</td>
</tr>
</tbody>
</table>

Based on Table 2 Panel A, the mean of IPT, ICF, GDP, POV, and INE for Indonesia over the period 2002-2019 are 6.94, 11.10, 17.07, 2.37, and 3.60. Moreover, according to Skewness and Kurtosis statistics, none of all variables follow a normal distribution. In addition, we also conduct the Jarque-Bera (JB) test which examines the null hypothesis of “normal distribution.” Specifically, we report JB test statistics and their corresponding p-values in the last two rows. For all variables, p-values are greater than 0.1 which implies that we do not reject the normal distribution of the null hypothesis. Therefore, we conclude from JB test results that IPT, ICF, GDP, POV, and INE follow a normal distribution.

Standard unit root tests, meanwhile, were conducted before running the estimation. The unit root test guides to ascertain whether
ARDL is applicable or not because it is only applicable to the analysis of variables integrated of order zero [I(0)] or order one [I(1)]. It is not applicable when higher order of integration such as I(2) variable is involved. Testing the stationarity of the variables is important to avoid spurious regression. Thus, the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) test techniques were used to investigate the stationarity of the variables. The ADF and PP test results are showed in Panel B of Table 2. The null hypothesis of the unit root problem is rejected at the first difference.

This shows that all variables are found to be stationary at 1st difference implying that variables are integrated at I(1) and all variables used in this study are integrated of the same order, hence one may employ the ARDL approach to test for cointegration. Should we find one cointegration vector (i.e. the underlying equation), we will re-parameterize the ARDL model of the cointegration vector into ECM. This will provide us with the short-run dynamics (i.e. traditional ARDL) and long-run relationships of the variables of a single model. The re-parameterization is possible because the ARDL is a dynamic single model equation and of the same form as the ECM.

Finally, we discuss the results of the bounds cointegration test with the following approach: Each of the three variables from Equation (1) enters Equation (2) as a dependent variable in order to calculate F-statistics. This results in two cointegrating ARDL models that we report the results in Table 3.

**Table 3. ARDL Bound Test for Cointegration**

<table>
<thead>
<tr>
<th>Model Specification</th>
<th>ARDL order</th>
<th>F-statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>$F_{POV}(POV</td>
<td>IPT, GDP)$</td>
<td>ARDL(2, 3, 3)</td>
</tr>
<tr>
<td>$F_{POV}(POV</td>
<td>ICF, GDP)$</td>
<td>ARDL(4, 1, 3)</td>
</tr>
<tr>
<td>$F_{POV}(POV</td>
<td>IPT * ICF, GDP)$</td>
<td>ARDL(4, 3, 3)</td>
</tr>
</tbody>
</table>

We note the model specification in the second column where the first variable refers to the dependent variable followed by explanatory variables. We also report lag orders of ARDL model specification the ARDL bounds tests F-statistics in columns 3 and 4 respectively. In order to examine the null hypothesis of no
cointegration, these F-statistics are compared against the critical values generated by Paresh Kumar Narayan.59

Results of the study are not surprising. Significant evidence has found in cointegration in one out of two ARDL model specifications. More specifically, we find evidence of cointegration where we consider POV as a dependent variable and the other variables, namely IPT, ICF, IPT*ICF, and GDP, as explanatory variables in Equation (1). This finding supports our long-run empirical framework where POV is considered to be dependent variable.

Table 3 above reports ARDL bound test results for cointegration. The bounds cointegration test is examined by considering all variables as dependent one at a time within the above ARDL specification. The ARDL model specification is provided in column 2. We use the Akaike Information Criterion (AIC) to choose optimal lags of variables that enter the ARDL specification. We use the $F - \text{test}$ statistics obtained from the bounds test. More specifically, the $F - \text{test}$ statistics examine the joint significance of the coefficients on the one period lagged levels of the variables in the above ARDL model, that is $H_0: \beta_1 = \beta_2 = \beta_3 = 0$. Critical values are obtained from Narayan (2005). Finally, *, ** and *** denote statistical significance at 1%, 5% and 10% level.

This study discusses results obtained using the short and long-run estimation frameworks. The first is focusing on long-run elasticity by estimating Equation (1). Long-run estimation results in Panel A of

Table 4.

**Table 4.** The short and Long-run Relationship

Panel A: Long-run elasticity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPT</td>
<td>-0.406292</td>
<td>0.0084*</td>
<td></td>
</tr>
<tr>
<td>ICF</td>
<td>-2.58638</td>
<td>0.0611***</td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>0.239696</td>
<td>0.0027*</td>
<td>1.926300</td>
</tr>
<tr>
<td>IPT*ICF</td>
<td>0.63111</td>
<td>0.0569***</td>
<td></td>
</tr>
</tbody>
</table>

Panel B: Short-run elasticity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(POV(-1))</td>
<td>-0.38377</td>
<td>0.0233*</td>
<td>-0.53269</td>
</tr>
<tr>
<td>D(POV(-2))</td>
<td>0.104713</td>
<td>0.3786</td>
<td>0.22457</td>
</tr>
<tr>
<td>D(POV(-3))</td>
<td>-0.35081</td>
<td>0.054***</td>
<td>0.10128</td>
</tr>
<tr>
<td>D(ICF)</td>
<td>-0.29058</td>
<td>0.094***</td>
<td></td>
</tr>
<tr>
<td>D(IPT)</td>
<td>-0.09749</td>
<td>0.1443</td>
<td></td>
</tr>
<tr>
<td>D(IPT (-1))</td>
<td>0.33851</td>
<td>0.0029*</td>
<td></td>
</tr>
<tr>
<td>D(IPT (-2))</td>
<td>0.546597</td>
<td>0.00128</td>
<td></td>
</tr>
<tr>
<td>D(GDP)</td>
<td>1.6058</td>
<td>0.0138**</td>
<td>-2.76486</td>
</tr>
<tr>
<td>D(GDP(-1))</td>
<td>1.158171</td>
<td>0.0528***</td>
<td>-1.10589</td>
</tr>
<tr>
<td>D(GDP(-2))</td>
<td>1.743992</td>
<td>0.0275**</td>
<td>-0.77621</td>
</tr>
<tr>
<td>D(IPT*ICF)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D(IPT*ICF (-1))</td>
<td></td>
<td></td>
<td>-0.2771</td>
</tr>
<tr>
<td>D(IPT*ICF (-2))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECT(-1)*</td>
<td>-0.76603</td>
<td>0.0013*</td>
<td>-0.2855</td>
</tr>
</tbody>
</table>

Based on table 4, particularly in model 1, this study found that Islamic philanthropy has a statistically significant and positive effect on poverty reduction in the long run. In other words, we conclude
that Islamic philanthropy helps in reducing poverty in Indonesia. For instance, 1% increase in Islamic philanthropy collected from the richer people may lead to a poverty reduction in Indonesia by 0.41%. In contrast, the control variable such as growth does significantly affect poverty, withstanding the positive coefficient of the annual percentage growth rate of GDP per capita.

The significant impact of zakāt on tacking socio-economic problems such as poverty obtained in this study supports previous works by Irfan Syauqi Beik⁶⁰ and Qurroh Ayuniyyah et al.⁶¹ in Indonesia, as well as those of Johari, Ab Aziz, and Ali⁶² in Malaysia among muallaf (newly Moslem converts), even though their works were conducted using primary data in micro perspective. In other words, promoting in tackling poverty and promoting the welfare of the beneficiaries is qualitatively and quantitatively proven, even when the study is conducted from the macro perspective (growth).

Moreover, since zakāt collected from those in the middle and top income who have assets and income that exceed a certain threshold (2.5 percent) is defined as tax by some Islamic scholars as to the redefinition of zakāt in the contemporary era (see Latief⁶³), the result of this study is in agreement with the proposal of progressive taxation introduced by Thomas Piketty and Emmanuel Saez.⁶⁴ They argue that global capital taxation may certainly reduce the concentration of wealth among the few. Similarly, Anthony B Atkinson⁶⁵ brings forward the income and wage taxation.

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⁶⁰ Beik, Economic Role of Zakah in Reducing Poverty and Income Inequality: A Case Study in the Province of DKI Jakarta, Indonesia.
⁶² Johari, Ab Aziz, and Ali, "The Role of Zakat in Reducing Poverty and Income Inequality among New Convert (Muallaf) in Selangor, Malaysia."
Model 2 then puts a great emphasis on the role of commercial finance for poverty reduction, as clear from the data that financing is able to cause a marked decline in poverty with its negative sign of the coefficient. Furthermore, when the commercial and social finance are integrated as in model 3, the finding demonstrates the same: an increase of 1 percentage point in the interaction between zakāt, Islamic financing and integrated Islamic finance such as BMTS causes a decrease of 0.843 percent in poverty. It indicates the superiority of the integrated model over the separated model.

As noted earlier by Ascarya, the integrated finance model could benefit low-income families and those in need through consumptive and productive programs to stimulate consumption, distribute income more equitably, and at the same time through product distribution and encouragement of entrepreneurship. Hence, an Islamic bank that seems to focus on the business to gain more profit, through this model, can contribute substantially to combat income disparity. The stimulating idea of managing zakāt funds for socio-economic development is suggested also by Jennifer Bremer in the case of Middle Eastern countries, notably Egypt, despite the debate among Muslim jurists (‘ulamā) regarding the possibility of zakāt to be distributed in such a scheme.

Through table 4, the study reported for long-run and short-run relationships in Panels A and B respectively. In the case of the short-run estimation model, we have included ECT which is simply the residual obtained from the long-run estimated model. In all estimations, we use Newey-West standard errors to control for autocorrelation in the residuals. Finally, *, **, and *** denote statistical significance at 1%, 5% and 10% levels respectively.

This study uses the ARDL lag order as stated in Table 3. Previously, this study has reported evidence of cointegration in the

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model specification where POV is considered as the dependent variable with IPT, ICF, IPT*ICF, and GDP as explanatory variables. Therefore, now we have estimated the error correction model (ECM) within an ARDL framework. This study found that in the short run, there is evidence of the statistically significant relationship between Islamic philanthropy and poverty as socio-economic problems in Indonesia.

It also reveals that in the contemporaneous effect, one-lag of Islamic philanthropy, current of integrated of Islamic social and commercial finance and two-lag of integrated of Islamic social dan commercial finance have a statistically negative significant effect on poverty. On the other side, commercial finance has also a statistically negative significant effect on poverty.

In the pursuit of model consistency, it is necessary to undertake several sensitivity checks with different specifications though the model is still based on the baseline model. Table 4 below shows the results for long-run elasticities. We have used three estimators, namely FMOLS, DOLS, and CCR, in Cointegration Regression Estimation. Finally, * and ** denote statistical significance at 1% and 5% levels, respectively.

**Table 5. Robustness Checks**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPT</td>
<td>-0.411</td>
<td>-0.502</td>
<td>-0.294</td>
<td>-0.411</td>
<td>-0.502</td>
<td>-0.294</td>
<td>-0.411</td>
<td>-0.502</td>
<td>-0.294</td>
</tr>
<tr>
<td>ICF</td>
<td>-0.819</td>
<td>-0.732</td>
<td>-0.657</td>
<td>-0.819</td>
<td>-0.732</td>
<td>-0.657</td>
<td>-0.819</td>
<td>-0.732</td>
<td>-0.657</td>
</tr>
<tr>
<td>GDP</td>
<td>0.299</td>
<td>0.669</td>
<td>0.568</td>
<td>0.341</td>
<td>0.615</td>
<td>0.489</td>
<td>0.242</td>
<td>0.546</td>
<td>0.440</td>
</tr>
<tr>
<td>IPT*ICF</td>
<td>-0.403</td>
<td>-0.327</td>
<td>-0.307</td>
<td>-0.403</td>
<td>-0.327</td>
<td>-0.307</td>
<td>-0.403</td>
<td>-0.327</td>
<td>-0.307</td>
</tr>
</tbody>
</table>

All specifications provided in Table 5 above are arranged systematically according to equation (2) which focuses solely on
Islamic philanthropy and mainly concerns the performance of Islamic financing and the integrated model with the interaction between social and commercial in equation (3). This confirms that the ARDL long-run elasticity coefficient is to be used in the formal analysis. Table 5 shows the estimation results as based on estimators include Fully-modified (FMOLS) and Dynamic OLS (DOLS) and Canonical Cointegration Regression (CCR) Models of the performance of Islamic philanthropy in addressing poverty in Indonesia respectively. The findings exhibit consistent coefficients as in the baseline model, indicating the role served by Islamic philanthropy in reducing poverty.

Conclusion
This study found that: (i) an increase in Islamic philanthropy will lead to a reduction in Indonesia’s poverty number both in the short and long run; and (ii) when the Islamic commercial and social finance are integrated into a single model, poverty can be reduced more effectively. Therefore, it is highly crucial for several institutions encompassing regulatory authority, in this case, are Bank Indonesia and BAZNAS, to enact the regulation and pursue the collaborative endeavors. Encouragement for Islamic banks—which do not have Baitul Māl yet-- and any zakāt institution to establish Baitul Māl as mandated in Islamic Banking Act No. 21/2008 is also needed. Meanwhile, two interrelated limitations characterize this study. First, due to the unavailability of data, this study is constrained by a small sample period that restricts the analysis from using additional control variables. Second, future studies should consider alternative measures of poverty and Islamic philanthropy such as waqf whose data is still difficult to access. Given these limitations, this study should be treated as preliminary on which future studies may develop.

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Johari, Fuadah, Muhammad Ridhwan Ab Aziz, and Ahmad Fahme Mohd Ali. “The Role of Zakat in Reducing Poverty and Income Inequality among New Convert (Muallaf) in Selangor,


Piketty, Thomas, and Emmanuel Saez. “Optimal Labor Income