

Regular charity giving behaviour among low-income households in Indonesia

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Abstract: How can a person in financial difficulty solve his problems? Islam gives the paradoxical solution of giving charity: the more you give, the more you get. Low-income earners should be encouraged to give charity as a means to free themselves from financial difficulties. This paper investigates the charity giving behaviour of low-income groups using an empirical study of factors affecting their regular charity giving. A total of 101 low-income households with monthly incomes of around USD80 in Jakarta were interviewed using the administered questionnaire approach. The data were analysed using logistic regression. The results highlight specific factors that significantly influence regular charity giving behaviour among the low-income households in Indonesia. This study hopes to provide important inputs to the relevant authorities and society on how to educate low-income households to manage their financial resources.

Keywords: Charity per income; debt service; Islamic finance; low-income households; regular charity giving.

Abstrak: Bagaimanakah seseorang mampu mengatasi kesulitan kewangannya? Islam telah mengajarkan kita bagaimana untuk memberi sedekah yang mana lebih banyak diberikan, lebih banyak pula diperolehi sebagai ganjarannya. Hal ini merupakan salah satu cara untuk melepaskan diri daripada kesulitan kewangan iaitu dengan memberikan sedekah. Oleh itu, orang yang berpendapatan rendah

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juga harus digalakkan untuk memberi sedekah demi membebaskan diri mereka daripada kesulitan kewangan. Kertas kerja ini menyelidik tabiat memberi sedekah daripada kalangan mereka yang berpendapatan rendah bagi memahami dan mengetahui faktor-faktor yang mempengaruhi isi rumah tersebut dalam tabiat memberikan sedekah secara rutin. Sebanyak 101 isi rumah yang berpendapatan rendah iaitu lebih kurang USD80 sebulan. Mereka tinggal di wilayah Jakarta dan telah ditemu bual menggunakan borang soal selidik. Data dianalisis dengan menggunakan regresi logistik. Hasil kajian menunjukkan bahawa terdapat faktor-faktor tertentu yang signifikan bagi mempengaruhi pemberian sedekah secara rutin dalam kalangan isi rumah yang berpendapatan rendah di Indonesia. Kajian diharapkan dapat memberikan input yang penting kepada mereka yang berkuasa dan berwajib serta masyarakat secara umumnya tentang cara mendidik isi rumah yang berpendapatan rendah untuk mengurus sumber kewangan mereka sewajarnya.

Kata Kunci: Sedekah setiap pendapatan; khidmat pemberian hutang; kewangan Islam; pendapatan isi rumah yang rendah; sedekah yang rutin.

Low-income households, like other income groups, need funds to fulfil their basic needs and finance various economic activities. Despite their genuine need for credit, low-income households have limited access to formal finance. In some cases, they have no access at all. This creates an opportunity for informal money lending institutions such as payday lenders, known in Indonesia as “rentenir” and in Malaysia as “loan sharks”, which exploit the poor. “Rentenir” comes from the word “rente” which means interest in Norwegian, and “-nir” which explains the subject; thus, “rentenir” implies a person who charges interest. The informal money lending system is based on a “pop-up” demand and trust. The payday lender comes to the poor or low-income neighbourhood as a “close-friend” or “angel-cover” offering desperately needed unsecured microloans. Since the loan is unsecured, no collateral is required; however, excessive interest rates are charged on the loan, resulting in over-indebtedness of the poor. This lands the poor in a vicious debt trap leading them to secure yet another loan to repay the current debt. What is initially an economic problem becomes a social problem due to the desperation of the indebted to pay back loans and threats to their safety when moneylenders are not paid (Hudoro, Findi, & El Ayyubi, 2014).

On the back of these issues, this study finds it highly relevant to build a sustainable model of debt and charity for low-income households.

Specifically, this study analyses factors affecting low-income households in regular charity giving and identifies the relationship between debt and charity among low-income households in Indonesia. Based on the low-income's debt perception and charity allocation, this study hopes to provide important inputs towards formulating effective financing education for low-income communities.

Literature review

In Islam, debt has many adverse consequences and is generally discouraged. It should be treated as the last resort to secure an asset, an idea that is contradictory to standard contemporary practice. More importantly, one should have a strong intention to pay back the debt. Brown, Garino, Taylor and Price (2005) found a positive relationship between one's financial expectations (or financial optimism) and amount of debt outstanding. Thus, the issue of debt is not only based on financial matters, but is also affected by other factors, including the psychological. Keese (2012) suggested that subjectively perceived debt burden may occur not only because of household budget reasons, but also by factors beyond financial matters such as psychological reasons like attitudes towards debt and financial expectations (Ahmed, Ismail, Sohail, Tabsh, & Alias, 2010; Brown et al., 2005; Keese, 2012). Indeed, for some individuals, the loan amount could be one of the indicators of financial satisfaction (Sahi, 2013).

Islam encourages people to give charity, as a way for them both to avert and to tackle poverty. Instead of receiving funds from others, a person is encouraged to give charity in order to gain blessings and achieve rewards from Allah (S.W.T.) (Hafidhudin, 2007, p. 13; Zulfikar, 2011, pp. 295–296). In this study, the term “charity” is used interchangeably with the term “*sadaqah*”. Islam does not differentiate between the rich and the poor, as long as a Muslim has faith, his or her *sadaqah* will be rewarded. Stable charity giving behaviour may be influenced by religiosity (Wright, 2001), including those who live in low-income neighbourhoods. Oliveira, Eckel, and Croson (2012) explored the causes of individuals giving day-to-day charity among low-income Americans. They found that religiosity is among the main causes of one's perception of “doing the right thing”. This finding suggests that it is not impossible to build a system where charity becomes one of the sources of prosperity available in low-income societies. Prosperity here refers to the ability of

a household to fulfil their basic needs, comprising material and spiritual needs (Beik & Arsyianti, 2016). Drawing on relevant Qur'ānic verses, Beik and Arsyianti (2016) divided households into four categories: i.e. prosperous household (Qur'ān, 16:97), materially poor household (Qur'ān, 2:155–156), spiritually poor household (Qur'ān, 6:44), and absolutely poor household (Qur'ān, 20:124).

Another study done by Beik (2013) in the case of Indonesia, found that *zakāh*,¹ which is a form of compulsory charity in Islam, has a positive economic impact on the poor where they can be transformed from *mustahiqq*² (*zakāh* eligible recipients) to become *muzakkī*³ (*zakāh* payers) in the future. The Meranti Regency model that combined debt, savings, and charity, organised by the Regency Board of Zakat of Meranti (BAZNAS Meranti), provides a clear evidence that it is not impossible for low-income societies to build their prosperity system through their model of charity. The low-income households were presumably incapable of giving charity as they are pre-occupied in paying debt. Therefore, the perception about giving charity by the low-income households also needs to be re-assessed and fully understood in order to build a sustainable charity model for the low-income households.

Most of the studies on charity giving behaviour, unsurprisingly, focused on the high-income households or individuals. For example, Pharoah and Tanner (1997) found that there are various ways that household donors could give charity such as through standing order, direct debit, and deduction from pay. Kashif, Sarifuddin, and Hassan's (2015) study of charitable giving behaviour of individuals living in Kuala Lumpur found that past behaviour, injunctive norm, and intention to donate, contribute to the charity giving behaviour of the respondents.

The Qur'ān clearly states that charity is not an exclusive privilege of high-income households and that it is open to all (Qur'ān, 3:133–134). This idea challenges the common thinking that low-income households consider charity a burden and consequently, debt becomes the easiest way to acquire assets or fulfil basic needs. Mohammed (2011) stated that Muslims should be discouraged from incurring debt and encouraged to save due to the fact that, while savings restrain current consumption for better future consumption, debt brings future consumption to the current. From the economic perspective, current consumption based on financial optimism of better and higher future income can be quite

risky, as the financial improvements might not be realised due to various possibilities such as economic and financial shocks, or future uncertainties such as sickness and death.

Charity is commonly considered a burden, especially for the low-income group. In Indonesia, low-income households represent 40% of the total population of 254,454,778 (World Bank, 2015). This includes those living under the poverty line (with an income of USD2 per day). This group is struggling to live a decent life, particularly in Jakarta. The promise given by Allah can improve people's financial difficulties. The Qur'ān states, "And whosoever fears Allah and keeps his duty to Him, He will make a way for him to get out (from every difficulty). And He will provide him from (sources) he never could imagine" (65:2–3). Thus, charity can be given irrespective of whether one is in financial difficulties or not, suggesting that one does not have to be necessarily rich in order to give charity. Many success stories of Meranti BAZNAS entrepreneurs have proven that charity provides a solution to the debt problem.

Secondly, the common assumption is that the poor do not give charity because they are busy paying debt. Many of the poor are trapped in debt and become over-indebted (Schein, 2003). This is a risky situation in life and death. In Islam, Allah forgives sins but debts to others must be paid (Muslim, 33:180). Charity can be a solution as it releases them from (over) indebtedness. In the Qur'ān (3:134), a Muslim is praised for giving charity not only in times of prosperity but also in times of adversity. The importance of giving charity is also highlighted in verse 63:10 of the Qur'ān in which Allah has commanded the believers to give charity before the end of their life, because once they are in dying condition (*sakarāt al-mawt*) those who have never paid charity will regret and request Allah to delay their death so that they could fulfil their charity. Giving charity is further described in the Qur'ān (35:29–30) as trading that never suffers loss. These Qur'ānic verses could lead to the conclusion that charity giving is one of the effective ways to overcome indebtedness and other life difficulties faced by mankind, including the low-income group. In the light of these Qur'ānic verses underlining the importance of charity giving irrespective of one's economic condition, whether in prosperity or in adversity, the Indonesia National Board of Zakat has included charity giving as part of the *zakāh*-based empowerment programme

of the poor and the needy. The recipients of *zakāh* are taught to have charity commitment as a way to enhance their life condition and change their mentality from the receiver to the giver.

Charity giving in Indonesia

Charity collection (excluding *zakāh*) by the National Board of Zakat of Indonesia (BAZNAS) is very unstable. The highest charity collection occurred during the 2005–2006 period, triggered by various natural disasters. However, it declined during the global financial crisis 2007–2008. Charity collection started to increase again in 2009 when an earthquake hit Padang (Beik, 2013).

The growth in charity collection declined as indicated in Table 1. On average, charity growth is 4.3% when including 2005, and 0.76% excluding 2005. Drawing a linear trend of charity growth rate via BAZNAS shows a declining trend, yet it does not mean that the charity amount decreases. The nominal amount of charity may increase but it is increasing at a smaller rate overtime.

Table 1. Charity amount and growth via BAZNAS

Years	Charity (in Rupiah)	Growth (%) ⁴
2001	34,087,961.29	
2002	241,844,931.33	6.09
2003	483,372,351.00	1.00
2004	598,055,649.00	0.24
2005	28,589,846,396.00	46.80
2006	11,942,688,769.00	(0.58)
2007	2,072,271,581.00	(0.83)
2008	2,230,150,821.00	0.08
2009	5,566,181,752.00	1.50
2010	3,127,314,375.00	(0.44)
2011	7,043,635,094.00	1.25
2012	9,805,812,317.00	0.39
2013	6,736,972,479.00	(0.31)
2014	11,505,498,847	0.71
Total	78,472,234,476.62	

Source: BAZNAS (2015)

One clear distinction between charity and *zakāh* is that *zakāh* is obligatory upon Muslims and is a pillar of Islam. If *zakāh* is obligatory for those whose income has exceeded the *niṣāb* (a threshold amount of *zakāh* payer's income), charity can be contributed by anyone, regardless of his or her income. Another distinction is that the Qur'ān has specified who is to receive *zakāh*, while it did not specify who should receive charity (9:60). Those who should receive *zakāh* are the poor (*faqīr*) and the needy (*miskīn*), *zakāh* administer (*'āmil*), those whose heart have been (recently) reconciled (*mu'allaf*), those who are in bondage, in debt, in the cause of Allah, and the wayfarer. Meanwhile, charity recipients can be anyone. *Zakāh* recipients must be a Muslim, while charity recipients can be anyone regardless of his or her religion.

BAZNAS of Meranti Regency is an inspiring example that shows how creative financial education, using a combination of charity and debt (*qard ḥasan*), can be used successfully in empowerment programmes of low-income households. The programme began with the disbursement of fund to *zakāh* recipients through the *qard ḥasan* scheme that aimed to educate them on their responsibility in managing the fund. *Zakāh* recipients were requested to pay monthly instalment through their own savings account in an appointed Islamic bank. They were also encouraged to give weekly charity. Whenever the *zakāh* recipients were able to pay off the full amount of their debt, the remaining money was eventually given back as *hibah* (charity) to them. A total of 136 households were helped with this programme and became *zakāh* payers. Therefore, financial education is crucial for them.

Lee and Miller (2012) summarised the best practices of the social marketing approach in financial education that influences a specific financial behaviour. They presented seven strategies as the best practices in several countries. First, the purpose and focus should be agreed upon. Second, the target audience should be identified and described. Third, specific behaviour should be selected. Fourth, audience barriers were understood and addressed. Fifth, the programme should consider 4P (product, price, place, and promotion). Sixth, partnership should be formed; and seventh, evaluation should be conducted and reported. The effectiveness of financial education programmes can be enhanced if these aspects are fully addressed.

Household behaviour in charity giving

Household charity giving has not been properly explored, especially in the case of Indonesia. Okten and Osili's work (2004) is the only study on charity giving in Indonesia. The authors found that urbanites would give more often and in higher amounts than those living in rural areas. More heterogeneous areas, those areas with a wide variety in the origins of its citizens (ethnic groups), would contribute less than homogenous areas. Other studies on charity in Asia focused on terrorism issues (Abuza, 2003), religion-based organisation development (Candland, 2001), and external charity to Southeast Asia (Carter & Carter, 2005). However, specific types of *sadaqah* such as *zakāh* and *waqf* have been studied widely (see for example Firdaus, Beik, Irawan, & Juanda, 2012; Beik, 2009; Nurrachmi, 2012; Yumna & Clarke, 2009). These studies focused on the effects of the charity, amount collected, and proposed models of charity. None have analysed the behavioural aspects of this issue.

A household's financial behaviour can be studied by reviewing the literature from economic psychology (Brown et al., 2005) or sociology. Studies using psychological variables have proven to have significant implications on charity behaviour. For example, in a study comparing the United States (US) and the Netherlands, Beldad, Gosselt, Hegner, & Leushuis (2015) studied the psychological, social, and economic determinants in predicting charity behaviour. They found that intentions to give charity vary between Americans and Dutch due to different cultural characteristics. Americans tended to help strangers, while the Dutch preferred to donate money. Another form of charitable behaviour was volunteering time. This was highest in the US comprising 73% of all donations compared with 43% for the Netherlands. Thus, the US was categorised as a masculine culture where people strongly sympathised and promoted the performance of society. Meanwhile, the Netherlands was categorised as a feminine culture where people believed that the able should assist the needy.

Meanwhile, Wright (2001) found that the philanthropic behaviour of Americans could be attributed to factors such as religion, humanity, age, and health reasons, while the British preferred to give international aid, research on medicine, human welfare, religion and care for

animals. Americans preferred to give donation publicly, while the British preferred to do it in private. Predominantly, Americans focused on particular philanthropic activities in which the donor was directly involved, while the British were more likely to give charity which did not directly involve the donor. Choi and Chou (2010) found that education level, ethnic affiliation, age, income, gender, marital status, and religious affiliation have significant influence on intention to donate in charitable organisations.

From the Islamic perspective, Prophet Muhammad (S.A.W.) discouraged Muslims from becoming parsimonious and being over-indebted (al-Bukhārī, 70:53).⁵ Giving charity is indeed a noble act and will be rewarded abundantly by Allah. It is as if one grew a seed which produced seven ears and each ear consists of a hundred grains (Qur’ān, 2:261). Moreover, the charity given should be in good condition (Qur’ān, 2:267). The Prophet was asked what a person should do if he has no money to give. The Prophet answered that a person should perform good deeds and refrain from evil deeds, both of which would be regarded as giving charity (al-Bukhārī, 24:48).

Research method

This section elaborates on the data source of the research and data collection process. Acquired data are analysed using model estimation based on data type. Data were collected through scheduled interviews with *zakāh* recipients from the BAZNAS main office in Jakarta. A total of 101 respondents were surveyed. Jakarta was selected because it is the capital city of Indonesia with a population of more than 40 million, and the centre of economic activity of Indonesia (“Central Board of Statistic,” 2010). Of the total respondents, only half were originally from Jakarta, while the rest came from various other cities.

The study uses cluster sampling since the population size is unknown. According to Cochran (1977), when there is no complete or up-to-date population, cluster sampling is more appropriate to solve the problem. According to BAZNAS, a complete database of *zakāh* recipients is not available since BAZNAS representatives from all provinces in Indonesia have yet to provide data to Central BAZNAS. The process of data collection from all Indonesia is still in the process. Respondents were selected during their visits to BAZNAS and the data collection was conducted in March 2015.

Data analysis

Collected data were analysed using the logistic regression method. Cox and Snell (cited in Hosmer and Lemeshow, 2000) highlighted that there are two primary reasons for choosing the logistic regression; first, from a mathematical point of view, it is an extremely flexible and easily used function, and second, it lends itself to a clinically meaningful interpretation. Variables are tested in groups; therefore, readers can compare the possibility between groups in giving charity regularly. Furthermore, logistic regression allows the model to measure the variables in groups instead of individually tested (*ceteris paribus*) in cross tab analysis. This allows researchers to see the impact of independent variables as a whole on dependent variables, as well as multicollinearity impact among the independent variables. Positive correlations within independent variables in logistic regression with a reasonable rate make their impact towards a dependent variable stronger as compared to individual impact analysis of each independent variable towards dependent variable. However, if the correlation rate is too high within independent variables, it will give bias to the results. Therefore, the correlation should be at a sound level.

Logistic regression also allows binary and ordinal data type to be analysed rather than numeric (continuous) data. Variables, such as gender and origin, are grouped together and can be analysed through this method. Following Beldad et al. (2015), the term “regularly” is used in order to explore the intention of the respondents to give repeated charity (whether there is any intention or not). The explanatory (or independent) variables considered are debt service, education level, age, marital status, number of dependants, employment, province of origin, religious activity, gender of household’s head, charity per income, future expectations of domestic economy, and level of income. The selection of these variables is in line with the earlier studies such as Okten and Osili (2004), Lammam and Gabler (2012), and Beldad et al. (2015).

According to Abduh, Dahari, and Omar (2012), the dependent-independent relationship will be expressed in probability (p) function as follows:

$$\text{Log}(p/(1-p)) = [a + b_1X_1 + b_2X_2 + \dots + b_nX_n] \quad (1)$$

While

$$p = \exp[a + b_1X_1 + b_2X_2 + \dots + b_nX_n] / (1 + [a + b_1X_1 + b_2X_2 + \dots + b_nX_n]) \quad (2)$$

Equations (1) and (2) are used in estimating the probability or the effect of log-odds of independent to dependent variables of the model. The result of estimating model is shown in equation (3). Meanwhile, definition of each independent (X) and dependent (Y) variable are shown in Table 2. The odds ratio is defined as a natural log, e, to the exponent (2.71), b (estimated parameter), which is denoted by Exp (b).

If it is greater than 1, it implies that the independent variable increases the logit, thus increases the odds. If it is equal to 1, the independent variable has no effect towards dependent variable. If it is less than 1, the independent variable decreases the logit and so decreases the odds.

Table 2. Dependent and independent variables

Notation	Variable	Definition
Y	Regular charity giving (Beldad et al., 2015)	Intention of repeated donation or the donors' willingness to continue donating. The value of 1 denotes that the respondent is giving charity regularly, or at least once a month. Thus, 0 denotes that the respondent is not regularly giving charity on a monthly basis.
X ₁	Debt per income (Mohammed, 2011; Flores, 2013)	Debt portion of income (debt per income or debt service) should be maintained at a low level even though debt might be needed to fulfil basic needs and one way to acquire funds. Those who have lower income are most likely to have higher debt service. Lower income also means lower capability of giving charity. Thus, higher debt service may lead to lower intention to give charity.
X ₂	Level of education (Lammam & Gabler, 2012; Pharoah & McKenzie, 2013; Ministry of Education, 2015)	People with higher education were typically earning higher income and consequently contribute more to charity. Knowledge shapes people's behaviour in managing their budget and consumption. The hypothesis is the higher the education level, the more likely that the households are regularly giving charity. In 2013, Indonesia targeted high school level (SMA) as the basic education requirement for Indonesians.

X ₃	Age (Lammam & Gabler, 2012; Piper & Schnepf, 2007; Pharoah & Mckenzie, 2013)	Middle-aged workers (35–55 years old) have less disposable income available for charities due to other obligations that they must fulfil. Caring of dependants and paying off home and car loans weigh more heavily on a person during this stage of age. However, it is believed that older people are more likely to contribute to charity since most of their obligations are fulfilled. Therefore, the older the age, the more likely that people would give charity regularly than those who are at a younger age. This study uses a combined threshold where 45 years old is taken from the mean of approximate middle-aged workers range of 35–55 years old. Older people (above 45 years old) are hypothesised to contribute more regular in giving charity than those at a younger age.
X ₄	Marital status (Bekkers & Wiepking, 2007; Piper & Schnepf, 2007)	The portion of donors was similar between single and married people. However, in terms of amount given, married people tend to give higher amounts than single ones.
X ₅	Number of dependants (Lammam & Gabler, 2012)	The more the number of dependants a household has to take care of, the less likely that they will give charity regularly based on the simple logic that the financial burden is higher. In the case of Indonesia, the government has set a programme of family of four: parents and two children. The study assumes that other than a nuclear family, a household's head may take care of at least one parent or other person living in the house. In this case, the study chooses to have a threshold of four dependants. Therefore, if a household's head has more than four dependants, the household is less likely to give regular charity.
X ₆	Employment status (Pharoah & Tanner, 1997; Havens, O'Herlihy, & Schervish, 2002; Pharoah & Mckenzie, 2013)	Respondents are segregated into employed, either employed by others or self-employed and others (including those who are unemployed, or just have unstable jobs, moving from one job to another within a week). Employed people should have more financial resources than the unemployed. Those who have a job are expected to give charity regularly. On the other hand, the unemployed may give charity but not as regular as those who are employed.

X ₇	Origin (Okten & Osili, 2004); Pharoah & McKenzie, 2013)	This study uses origin as an indicator of respondents' original province, whether they come from outside Jakarta or originally from Jakarta. Jakarta is a big city where the citizens come from all over Indonesia. It is hypothesised that people who come from outside Jakarta would be more involved in indirect philanthropy activities via charity organisations.
X ₈	Religious factor (Pharoah & McKenzie, 2013; Wright, 2001)	Those who are bonded due to religious belief would feel obligated to help others and be rewarded for their good deeds. This study uses performing prayer five times a day as an indicator to represent religiosity since it is one of the pillars of Islam.
X ₉	Gender (Piper and Schnepf, 2007)	Median of men in charity amount was higher than women. When the frequency of charity giving is high and/or when the number of recipients of the given charity is quite large, women tend to share smaller amounts of money in each donation.
X ₁₀	Charity per income (Piper & Schnepf, 2007)	The higher the frequency of charity giving, the less amount of charity given. This study assumes that frequent charity giving is reflected by the greater number of times that the respondent giving charity. The threshold is taken from a minimum percentage charity required by Islam, i.e. 2.5%. Those who are giving charity portion from their income in less than 2.5% are more likely to give charity regularly.
X ₁₁	Expectations of future household (domestic) economic situation (Flores, 2013)	Optimistic people are more likely to give charity than those who are pessimists. Pessimistic households would tend to give priority to their needs since it has never been enough for them, thus it would have never been enough for others due to lack of "awareness of need". Unworried households are expected to give charity on regular basis.
X ₁₂	Income (Lammam & Gabler, 2012)	The greater the income, the more likely the low-income households will be involved in regular charity giving since they have ample money to be given compared with those who have lower income. By not having enough money, those with lower income would deem it difficult to find ways in giving charity frequently. The threshold income of 80 US dollar per month is chosen based on the poverty line per household according to Badan Pusat Statistik ("Central Board of Statistic," 2015).

Results

We use SPSS 17 to estimate the model. The Hosmer-Lemeshow test suggests that we do not reject the null hypothesis (H_0) which states that the model does not lack fit. The result shows that the p-value is greater than 0.05 (confidence level is 95%), suggesting that the model is in good predictive value (not lack of fit). The model estimator shows that Nagelkerke R-squared is 0.287, which means 28.7% variability of the data is explained by the model. The model also classifies 75.2% of the cases correctly as can be seen in Table 3.

Table 3. Case classification

Observed		Predicted		
		Charity-giving frequency		Percentage Correct
		Do not give charity frequently	Frequently give charity	
Charity-giving frequency	Do not give charity frequently	53	9	85.5
	Frequently give charity	16	23	59.0
Overall Percentage				75.2

Table 4 shows the results of frequency per category of variable. Among the 12 variables, only three have a relatively skewed description, namely, the gender of a household's head, perception about the economic prospect of households, and charity per income. According to Table 4, being female, pessimist, and having a low portion of charity are the dominant respondent's socioeconomic and demographic characteristics in this study.

Table 4. Chi-square test for charity behaviour and selected variables

Variable	Category	No charity	Regular charity	Total	X ²	df	p
Praying	Do not pray 5 times a day (0)	34	21	55			
	Pray 5 times a day (1)	28	18	46			
Total		62	39	101	0.010	1	0.922

Education level	Other (0)	34	18	52			
	Graduate from high school (1)	28	21	49			
	Total	62	39	101	0.723	1	0.395
Age	Younger than 45 (0)	32	19	51			
	45 and above (1)	30	20	50			
	Total	62	39	101	0.080	1	0.777
Marital status	Others (0)	17	16	33			
	Married (1)	45	23	68			
	Total	62	39	101	2.015	1	0.156
Dependant	More than 4 dependants (0)	31	13	44			
	4 or less dependants (1)	31	26	57			
	Total	62	39	101	2.705	1	0.100
Employment status	Others (0)	34	24	58			
	Employed (1)	28	15	43			
	Total	62	39	101	0.440	1	0.507
Origin	Jakarta (0)	25	25	50			
	Outside Jakarta (1)	37	14	51			
	Total	62	39	101	5.416	1	0.020
Gender of household's head	Female (0)	56	34	90			
	Male (1)	6	5	11			
	Total	62	39	101	0.244	1	0.622
Income	USD80 per month and less (0)	31	16	47			
	More than USD80 per month (1)	31	23	54			
	Total	62	39	101	0.775	1	0.379
Economic prospect of households	Worried (0)	50	31	81			
	Not worried (1)	12	8	20			
	Total	62	39	101	0.020	1	0.887
Charity per income	2.5% and above (0)	9	10	19			
	Less than 2.5% (1)	53	29	82			
	Total	62	39	101	1.940	1	0.164

Debt per income	50% and above debt income ratio (0)	45	17	62			
	Less than 50% debt income ratio (1)	17	22	39			
	Total	62	39	101	8.489	1	0.004

The results of cross tab and chi-square test of the variables are shown in Table 4. As individually tested variables (*ceteris paribus*), only two variables show significant effect on regular charity giving, with confidence level 95%. Those variables are origin and debt per income. However, if we test the variables using logistic regression, four variables that have significant relationships with regular charity giving, while the other eight showed it did not have a significant relationship (Table 5). These four variables are debt per income, origin, charity per income, and income. Although charity per income and income variables seem to have a multicollinearity issue, the correlation matrix table shows that all values are less than the tolerance value of 0.75, thus there is no issue of multicollinearity (Hair, Black, Babin, Anderson, & Tatham, 2006), or the level of multicollinearity is reasonable. The correlation value between charity per income and income is -0.185.

Table 5. Estimation result of logistic regression

Giving charity frequently (Y)	Coefficient	p-value	Odd ratio
Debt per income (X1)*	1.244	.020	3.470
Education level (X2)	.135	.798	1.145
Age (X3)	.690	.182	1.993
Marital status (X4)	-.883	.166	.414
Number of dependants (X5)	.256	.646	1.291
Employment (X6)	-.845	.109	.429
Origin (X7)*	-1.100	.031	.333
Religious activity (X8)	.301	.566	1.351
Gender of household's head (X9)	-.007	.993	.993
Charity per income (X10)*	-1.229	.047	.292
Economic prospect of households (X11)	-.485	.459	.616
Income (X12)**	1.073	.080	2.925
Constant	.281	.764	1.325

Note: * significant at 5% level, and ** significant at 10% level

Discussions

Debt per income (or debt service ratio) has a positive relationship with regular charity giving because of the variable $X_1(1)$, that the debt per income variable denoted by 1 represents the respondent has less than 50% debt income ratio. Thus, a positive sign would explain that the respondent with less than 50% debt income ratio will likely give regular charity than those whose ratio is 50% and above. This means that the respondents with debt service ratio of 50% or above are less likely to give charity than those whose debt service is less than 50%. The results of the logistic regression suggest that low-income households with lower debt service are 3.470 times more likely to give regular charity than those who have higher debt service. This finding implies that higher debt service household heads are more focused on repaying their debt than giving regular charity. However, it does not negate their intention to give charity (if it is not done regularly), because in this study, the focus point is regularity. Higher debt service households may give charity but not as regularly as those with lower debt.

The results also indicate the importance of place of origin in affecting frequent charity giving. This study shows that low-income households from outside Jakarta, are less likely to give charity frequently than those originally from Jakarta. Jakartans have a higher probability to give regular charity with 3.003 (1 divided by 0.333) times more than outsiders. This finding is surprising since studies have shown that urbanites are more individualistic compared to those from rural areas (Veenhoven, 1999). However, Schroeder (2008) showed that since neighbourhoods that are not dense are less populated places, and more spread out, they are thus unlikely to have any “surrounding neighbourhoods”. This may make non-Jakartans less likely to have interaction with their neighbourhood. As studied by Okten and Osili (2004), in Indonesia, urban residents give more often and higher amounts.

Charity per income in low-income society is shown to be statistically significant in affecting regular charity giving. This result encourages the low-income households to be involved in the social sector (Oliveira et al., 2012) because of the variable $X_{10}(1)$, that charity per income variable denoted by 1 represents the respondent with less than 2.5% charity per income ratio. A negative sign, thus, would explain that the respondent with 2.5% and above charity per income will likely give

charity more regularly than those with less than 2.5%. The higher the charity per income, the more likely they give regular charity. The probability of giving regular charity is 3.425 times more than those who have less charity per income. The result is not really surprising since the more frequent a household gives charity per month, the bigger the proportion of charity per income they spend.

Furthermore, the higher the income of low-income household, the more likely they give regular charity. Empirically, households that earn more than USD80 per month are 2.925 times more likely to give regular charity compared to those who earn less.

Meanwhile, education level, age, marital status, number of dependants, employment status, religious activity, gender of the household's head, and the economic prospect of households do not have statistically significant effects on regular charity giving. Respondents are split into two levels of education. The heads of low-income households have only basic education. Most are worried about their economic prospects since they earn low incomes. However, optimistic households (around 20%), i.e. households that have no anxiety about their future economic prospect, still exist, even though their income is low.

Half of the respondents are 45 years old and above. Most of the respondents are married. Some are separated and 11 are widowed. As much as 89.11% of respondents are women who confessed to have a dominant role in household's financial decisions.

Regarding the number of dependants, 44 households have more than four dependants with the remainder having less. Almost half of the respondents have already passed their middle age, so they have settled their family. Meanwhile, according to the collected data, 52 (most of them) are tenants or do not yet own a house. These statistics indicate that low-income households are either still struggling in their endeavour to buy a house, or they have a plan to return to their hometown.

Only 43 household heads are employed and have regular work hours. They are either employed by the government, private corporation, or self-employed such as traders and farmers. Toppe, Kirsch, and Michel (2002) studied giving and volunteering in the US and found that in terms of portion of charity, the employed respondents contribute less compared to the unemployed.

Only 45.54% or 46 household heads perform the full five daily prayers. This was strengthened by the fact that most of them said they would perform their prayer at home, even though the *musholla* (as spelled in Bahasa Indonesia, referring to “prayer room”) is just a step away and their waiting time in BAZNAS could not be predicted. This happened during the entire period of survey.

If we put binomial data (X can be replaced by 0 or 1 only) into simulation to the model as explained in Equations (1) and (2) and add the coefficient from the result, the simulation model will be in the following form:

$$\text{Log}(p/(1-p)) = 0.281 + 1.244X_1(1) + (-1.1)X_7(1) + (-1.229)X_{10}(1) + 1.073X_{12}(1) \quad (3)$$

Where:

p is the probability of low-income household to have frequent charitable giving. $X_1(1)$ = having debt service less than 50%. $X_7(1)$ = non-Jakartans. $X_{10}(1)$ = less than 2.5% portion of charity per income. $X_{12}(1)$ = having income more than USD80 per month.

Table 6 gives the example of the simulation. The highest probability of regular charity giving figure in the model is 93.02%. It occurs when households have debt service less than 50%, the household’s head is Jakartan, giving charity 2.5% per income or more, and has more than USD80 income per month. The lowest, which is 11.49%, occurs when the household is originally from outside Jakarta, giving charity less than 2.5% per income, having debt service ratio 50% and above, and has income USD80 per month or less.

Table 6. Simulation example of regular charity giving probability in logit model

Scenario	Intercept	X1	X7	X10	X12	log	e	e^log	p	%
	0.281	1.244	-1.1	-1.229	1.073					
1	0.28	1	0	0	1	2.60	2.71	13.33	0.93	93.02
2	0.28	1	0	0	0	1.53	2.71	4.57	0.82	82.06
3	0.28	1	0	0	0	1.53	2.71	4.57	0.82	82.06
4	0.28	0	1	1	0	-2.05	2.71	0.13	0.11	11.49
5	0.28	0	1	0	1	0.25	2.71	1.29	0.56	56.30
6	0.28	0	1	0	0	-0.82	2.71	0.44	0.31	30.65
7	0.28	0	1	0	0	-0.82	2.71	0.44	0.31	30.65
8	0.28	0	0	1	1	0.13	2.71	1.13	0.53	53.11

Conclusion

There are 12 socioeconomic and demographic predictors used in this study to predict the probability behaviour of low-income households in giving charity on a regular basis. The predictors are debt per income (X1), education level (X2), age (X3), marital status (X4), number of dependants (X5), employment status (X6), origin (X7), religious activity (X8), gender of household's head (X9), charity per income (X10), economic prospect of households (X11), and income (X12).

Frequent giving of charity is statistically proven to be affected by debt per income (X1), origin (X7), charity per income (X10), and income (X12). A logit regression model is developed to predict the highest and lowest probability a low-income household would have in giving charity regularly. The highest probability is given by households with debt service less than 50%, the household's head is Jakartan, giving charity 2.5% per income or more, and has more than USD80 income per month. Meanwhile, the lowest probability may occur if the household's head is originally from outside Jakarta, giving charity less than 2.5% per income, having debt service ratio 50% and above, and has income USD80 per month or less.

The research has implications for non-profit organisations as well as society to educate the low-income households in how to manage their financial resources. Non-profit organisations can further promote their programme to Jakartans as they may give greater contributions. They should also educate the low-income households to have less debt and give more charity; since, having more debt per income would discourage regular charity giving behaviour. The government should be aware of this by supporting financial education programmes launched by charity organisations.

This study has a limited sample that could hardly be generalised since the model itself has a low degree of R-squared. Studies on charity in Indonesia are very rare. Further study needs to be done to enrich the collected data and cover more regions in Indonesia so that the result would reflect deeper information. Other studies in confirming the theory of relationship between charity and debt or related behaviours are also needed. Giving charity is one of the most virtuous acts a Muslim could do. This research will hopefully help promote an increase in charity giving, not only among the Muslims of Indonesia, but also among the citizens of the world.

Endnotes

1. *Zakāh* is a charity giving obligatory for Muslims whose wealth have exceeded specific amount called *niṣāb*. Present perfect sentence here is used because the wealth also needs to be held within specific *ḥawl*, i.e. one year.
2. *Mustahiqq* comprises eight groups of people as stated in the Qur’ān, 9:60. They are the poor, the needy, the officials (appointed) over them, those whose heart are made to incline (to truth) or *mu’allaḥ*, the ransoming of captives, those in debts, those in the way of Allah and the wayfarer.
3. *Muzakkī* is a *zakāh* payer, who must be a Muslim.
4. Growth is equal to $(\text{charity}_t - \text{charity}_{t-1})/(\text{charity}_{t-1})$, where t is the year.
5. “O Allah! I seek refuge with You from, having worries sadness, helplessness, laziness, miserliness, cowardice, from being heavily in debt and from being overpowered by other persons unjustly” (al-Bukhārī, 70:53).

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