Developing a Shariah-Compliant Equity-based Crowdfunding Model towards a Malaysian Low-Carbon Consumer Society

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Abstract

Malaysian households' energy consumption increased by 6.9%. Meanwhile, energy supply increased by 6.1% from 1991 to 2006. If energy consumption continues to increase, it will put significant strain on the energy supply. The steady growth of electricity consumption in Malaysia is directly linked to CO_2 emissions and climate change, which directly increases annual temperature and temperature-related health problems. The development of a low-carbon society is important as Malaysia is experiencing increasing CO_2 emissions. A low-carbon society aims to reduce CO_2 and improve life. The use of PV solar energy can be an effective solution, but Malaysian households face several barriers to using solar energy in their homes, such as high price, lack of physical and financial means, in addition to a lack of awareness and social support. This study proposes a model that will benefit from PV solar panels with Shariah-compliant equity-based crowd financing. In this study, electricity usage and energy usage of households, their interest in solar energy and the obstacles they encounter in the use of solar energy are discussed. A total of 260 participants from Kuala Lumpur were surveyed. The majority of respondents (74%) claimed that electricity usage was between 0-3000 KWh. The findings of this study show that high initial costs, limited knowledge of renewable energy technologies, lack of the best possible price, and lack of awareness are the biggest obstacles to sustainable renewable energy development. Besides, 47% of respondents were willing to accept the proposed model to help them in using solar energy in their homes. Furthermore, a logit model was estimated to investigate the factors that may affect the willingness of the households to accept the model. The results of the logit model reveal that income, household size and knowledge about climate change affect significantly and positively the willingness of the households to accept the model. This study suggests that the government can take the initiative to raise awareness of the households about the need for renewable energy and low-carbon consumer society.

Keywords: Shariah-compliant equity-based crowdfunding, solar energy, low-carbon consumer society, obstacles

Introduction

Malaysian families used up approximately 20.2% of total energy use in 2011, an increase of 1.9% from 18.3% in 2007 (Tan, Ooi, & Goh, 2017). While energy consumption by household (direct and indirect) grew at 6.9% compared to the energy supply which grew at 6.1% from 1991 to 2006 (Chik, Rahim, Saari, & Alias, 2012). In this situation, we need to find alternative energy solutions. Should the existing energy supply level and the energy sources remain constant, there will be a shortage of energy supply if the energy consumption increases at the existing rate. Secondly, the steady increase in electricity consumption in Malaysia is directly related to CO2 emissions and climate change. Thirdly, climate change is expected to increase the mean annual temperature and the risk of heat-related medical conditions. It can also cause cardiovascular and respiratory diseases. This would increase the medical expenditure in society and reduce productivity levels in the workplace. In Malaysia, it is estimated that a reduction in air pollution could prevent 5,900 premature deaths.

Realizing these challenges, the government explored the potential of renewable energy (RE) from solar sources. Supporting this initiative, the Ministry of Energy, Green Technology, and Water launched the National Renewable Energy Policy and Action Plan (NREPAP) and passed the RE Act and SEDA Malaysia Act (Sustainable Energy Development Authority of Malaysia) in April 2011. Additionally, the Feed-in-Tariff (FiT) program was implemented under this Act to encourage the generation of RE and achieve a sustainable environment. Tan, Hashim, Lim, Ho, Lee, & Yan (2014) and Shafie, Mahlia, Masjuki, & Andriyana (2011) reported that the Malaysian government will face a growing shortage of renewable energy (RES). The budget for 2019 will increase sources of income by increasing allowances to electricity bills or reducing costs by optimizing FiT payments in different periods. The Malaysian government will face a growing shortage of renewable energy (RES). The budget for 2019 will increase sources of income by increasing allowances to electricity bills or reducing costs by optimizing FiT payments in different periods. Both methods will be challenging. In Malaysia, many barriers exist when it comes to local or regional energy production (Solangi, Kazi, Luhur, Badarudin, Amiri, Sadri, &

Teng, 2015). These barriers include financial barriers such as start-up cost, the high price of energy; social barriers such as lack of awareness, limited information on RE technology; physical barriers such as physical facilities, shortage of energy supply, lack of expertise on solar energy and human barriers such as health problems and increased medical expenditures. These days it is difficult to obtain a loan from a bank. Solar projects will have to invent smart ways to fund their initiatives and come up with solid business plans. Shariah-compliant crowdfunding could be an alternative approach to financing solar farms.

The three primary participants of crowdfunding are crowdfunders, solar farms, and participating households. In this proposed Shariah-compliant equity-based crowdfunding model, solar farms can install PV solar panels at a lower price on the roofs of buildings using crowdfunding investment. The households would have the opportunity to use solar energy to reduce electricity bills and generate revenue by selling extra electricity to the electricity company. Then, the solar farm owner will allocate the payoff to the crowdfunders for the amount of the money they invested. In this way, crowdfunders can earn revenue based on their investment. This would also increase the electricity supply. Most importantly, by using this model, we can reduce CO_2 emissions and build a low-carbon society. The objective of a low-carbon society is to reduce CO_2 and develop a simpler life. The main idea of a low-carbon society is to decrease all carbon emissions without jeopardizing any developing needs. On this basis, the ultimate goal is to allow society to produce only that amount of carbon dioxide that can be absorbed by nature. Therefore, society will be carbon neutral. A low carbon society is unattainable if we continue to live our current lifestyle. The transition to a low-carbon society is vital for our planet and requires action not only from all countries and organizations but also from individuals. This study attempts to integrate sharia-compatible crowdfunding directly with the solar industry to develop a low-carbon consumer society.

Literature Review

Crowdfunding is defined as an open call over the Internet of financial resources in the form of donations, sometimes in exchange for a future product, service or reward (Kleemann, Rieder, 2008; Nordin et al., 2018). The mass investment platform can support both start-ups and existing small and medium-sized enterprises (SMEs). Massolution (2012) defines four categories of crowdfunding platforms (CFP):

crowdfunding based on equity, loans, donations, and rewards. It describes equity-based crowdfunding, in which sponsors receive compensation in the form of equity or income-based fundraising agreements or profit-sharing agreements. In his opinion, in crowdfunding, based on lending, sponsors receive a fixed periodic income and expect to return the original basic investment. In donation-based crowdfunding, sponsors contribute to projects they want to support without the expected reimbursement. Finally, in remuneration-based crowdfunding, donors 'main funding intent is to achieve non-financial rewards. Most crowdfunding platforms generate revenue by charging interest on funds paid to fundraisers. This commission is usually calculated from the total amount of funds raised and/or based on the achievement of the "fully funded" goal. In 2012, crowdfunding platforms raised a total of $ 2.7 billion, compared with $ 1.5 billion in 2011. Although crowdfunding is growing all over the world, the United States and Western Europe have attracted much more capital than platforms in other regions.

Taha & Macias (2014) define Islamic finance as a sector of finance that follows the rules of Shari'ah. Sharia recognized interests (riba), uncertainty (garar) and gambling (Maysir) as the basis that should be circumvented in business transactions. Following these prohibitions, Islamic banking differs in that it prohibits interest, uncertainty in established conditions and conditions, investment in certain types of economic activity (including the production of pork, alcohol, tobacco and weapons, gambling and entertainment for adults), the benefits and risks associated economic activities should be divided between all parties involved, and each financial transaction should be supported by a tangible asset (Volk and Pudelko, 2016). According to Islamic law, money must be used productively. In this context, making a profit is not prohibited, but is regarded as a mere reward.

El-Ashker and Wilson (2006) reported that Islamic banking should be based on the principle of separation of profits and losses (PLS), and not on interest. Pls can be applied either through mudaraba or through musharaka. Mudaraba is affiliate financing when a bank provides financing, and an entrepreneur or business manager spends his time and effort. Profit is distributed, but the bank is responsible for any losses. Musharaka is a type of joint venture, where all investors are divided into profit and loss. Taha and Macias (2014) stated that Islamic finance and crowdfunding conceptualize clients as investors and can potentially provide investment opportunities with higher returns. They concluded that since most crowdfunding

platforms charge a percentage fee to funds paid to fundraisers, they already apply the PLS formula. Besides, they both pay great attention to transparency, mutual participation, and trust. The PLS formula of Islamic finance can be equated to the category of crowdfunding based on stocks, and zakat - to crowdfunding based on donations. Crowdfunding based on remuneration, although not unique to Islamic finance, does not dispute its principles, since money is exchanged for non-financial rewards. On the other hand, lending-based crowdfunding must be interest-free to comply with Sharia.

The three main differences between conventional and Islamic classifications are that the Shariah-class separation is socially responsible for investing in halal projects/products, sharing the risks of investment, and the absence of interest or *riba* (Marzban, Asutay, & Boseli, 2014). Asutay and Marzban (2012) identified many advantages of equity-based crowdfunding from an Islamic financial perspective. They suggested that it can develop the original form of finance based on a profit-and-loss sharing (musharakah) and reduce the financing incentive for a wide range of entrepreneurs. Additionally, it can introduce a new asset class for small and medium-sized investors and reduce the risk by opening limited capital to multiple new businesses. Hence, it can encourage innovation, retain skills locally and create business opportunities.

To ensure whether the equity-based crowdfunding is operating with Shariah-compliance, it has to ensure the following criteria:

- The platform has to be governed by a Shariah board or Shariah advisory
- Investments have to be socially responsible
- Start-ups have to operate in Shariah-compliant business and thus not generate income from none Shariah-compliant sources
- Start-ups should not raise interest-based debt, deposit cash and invest in non-compliant instruments
- The shareholder structure and investor protection requirements have to be designed to adhere to Shariah principles.

Abdullah et al. (2017) identified six platforms registered in Malaysia such as Alix Global, Ata Plus, Crowdonomic, Eureeca, pitchIN, and Propellar Crow. Among them, Eureeca is ready to host Halal SMEs, but there are additional Shariah requirements which need to be considered. Ata Plus adds several additional

Shariah-compliance filters such as the requirements that the business must be ethical and benefit the wider community. The Ata Plus platform seeks to provide support for socially responsible investments and give preference to social and environmental accountability. It also maintains the general philosophy of principle before profits.

Most publications on RE investment focus on evaluating the effectiveness and efficiency of RE policies such as feed-in tariffs, tax credits, and certificate systems (Kardooni, Yusoff, Kari, & Moeenizadeh, 2018). These publications include investigations through case studies, literature reviews (Couture and Gagnon, 2010) and numerical simulations (Palmer and Burtraw, 2005). Reuter et al. (2012) and Collins et al. (2017) are a few exceptions which quantitatively estimate the risk and return associated with renewable energy investment from the perspective of investors, but not crowdfunders. Although such reviews dealt with important aspects of the renewable energy situation in Malaysia and other ASEAN countries, very little information about renewable energy technologies and crowdfunding in Malaysia (Kardooni, Yusoff, Kari & Moeenizadeh, 2018)

The three primary participants of crowdfunding are crowdfunders, solar farms, and participating households. In this proposed Shariah-compliant equity-based crowdfunding model, solar farms can install PV solar panels at a lower price on the roofs of buildings due to available crowdfunding investment. The households would have the opportunity to use solar energy to reduce electricity bills and generate revenue by selling extra electricity to the electricity company. Then, the solar farm owner will allocate the payoff to the crowdfunders on the amount of the money they invested. Hence, crowdfunders can earn revenue based on their investment. It would also increase the electricity supply.

Developing a Shariah-compliant Equity-based Crowdfunding Model for Solar Energy

The proposed model seeks to integrate Shariah-compatible equity-based crowdfunding in the direct relationship with the solar farms to develop a low-carbon society. The proposed model has been illustrated in Figure 1. The model aims to integrate the crowdfunding exercise to assist solar farms and households. The model begins with the collection of ideas (Part I) followed by contributions from crowdfunders (part II) and the benefits of this exercise (III).

Part I

In the first phase, there is a solar company that requires Shariah-compliant financing and has a very good business idea that meets not only the goal of profit maximization and Shariah-compliance but also provides the basic social values based on the criteria of socially responsible investments. In this model, PV solar farms will send their innovative project ideas to the ECF platform. Here, the ECF platform is appointed as agents to manage the fund collection. The solar farms will prepare a wakalah agreement known as the Master Mudarabah Crowdfunding Agreement (MMCA) and shares it with the ECF platform. The ECF platform will review all documents per the requirements of Guidelines on Recognised Markets 2016 (GRM 2016) and the Shariah opinion before the approval of the documents. A proper legal framework for crowdfunding should ordinarily provide for all relevant procedures from incorporation to bankruptcy. The legal framework for equity crowdfunding in Malaysia is premised on GRM 2016 which replaced the Guidelines on Regulation of Markets earlier issued under Section 34 of the Capital Markets and Services Act 2007 (CMSA 2007). After the financing stage, if the idea of a PV solar farm project is successful, the proposal is published on the mass funding platform.

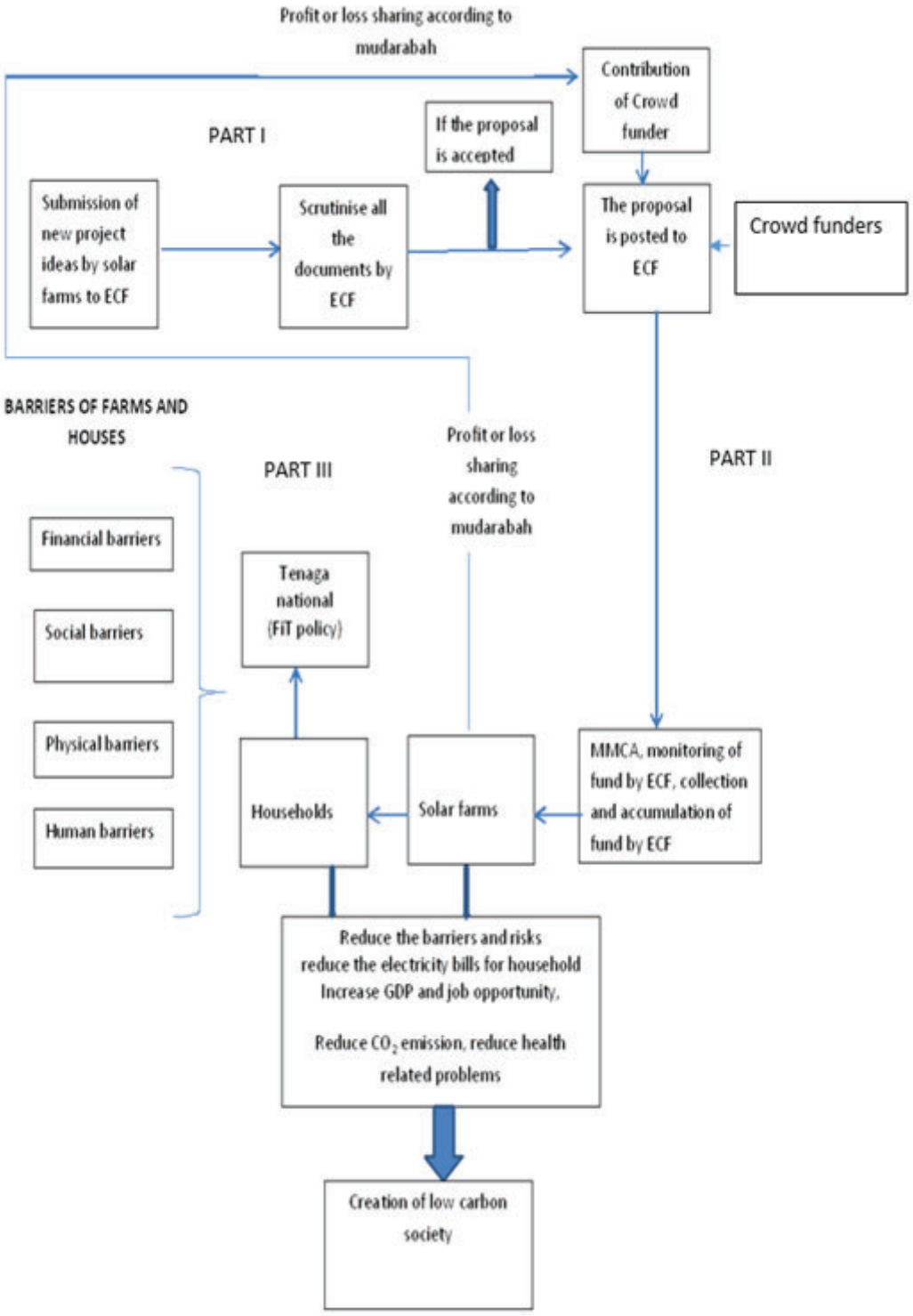

Figure 1: Proposed Shariah Compliant Equity-Based Crowd Funding Model for PV Solar Energy

Part II

Then, the crowdfunder or investor enters into the MMCA with the solar farms where the ECF platform acts as an agent to manage the whole process of collection of funds. Crowdfunders consist of the individuals in the society, firms even non-government organizations who choose to invest funds. They will receive profit or loss based on their investment according to a mudarabah Shariah-compliant contract. Once the funding goal is met, and after the expiration of the fixed date, the funds are released to the solar farms subject to the applicable conditions stipulated in the GRM 2016. The PV solar producing farms can install PV solar panels at a lower price on the roofs of the buildings of the households due to available crowdfunding investment. The Shariah aspects of the operation of the process above, including the proposed MMCA, are not comprehensively outlined in the GRM 2016, but they are explained here to ensure the entire process of obtaining financing through equity crowdfunding is Shariah-compliant.

Part III

For the past thirty years, the Malaysian government has been applying energy policy such as the ‘Four Fuel Diversification Policy', ‘Fifth Fuel Diversification Policy' and the ‘Renewable Energy Act 2011' with the main purposes to confirm energy safety, utilize energy resulting from renewable sources and intensification of the share of renewable energy in electricity production, respectively. The Feed-in-Tariff (FiT) instrument was recognized under the Renewable Energy Act to deliver for the establishment and implementation of a different tariff system to expedites the generation of RE (Petinrin & Shaaban 2015). Malaysia is implementing its 500 megawatts (MW) of capacity for net energy metering (NEM) beginning 2016 until 2020, with 100MW capacity limit a year in Peninsular Malaysia and Sabah. It is a new mechanism designed to replace the Feed-in Tariff which already closed for registration since 2016. NEM allows self-consumption of electricity generated by solar photovoltaic (PV) system users while selling the excess energy to Distribution Licensee at prevailing Displaced Cost. The energy generation by NEM households will be consumed first which implies less energy import from the utility. The more energy generated from the Solar PV system is self-consumed, the more NEM consumers can save their utility cost. In this NEM system, solar array converts

energy from sunlight into electricity. The inverter converts the electricity produced by the solar array from direct current (DC) to alternating current (AC) for use in the houses and measures the energy produced by the solar array. The energy is used in the houses and the NEM Meter records energy usage and excess energy produced. Excess energy not used by the property will go back to the electric grid. Instead of buying and installing solar panels on your home or property, you subscribe to a piece of a large local solar project built nearby, often along with a few dozens to a few hundred other people who live in the same area. A portion of the electricity generated by these projects gets credited directly to your utility bill, you get a discount on electricity, and you don't have to pay anything to join. Community solar allows households, small businesses, and places of worship to receive the benefits of solar energy without the cost or hassle of a rooftop installation. Roughly half of the residences in the U.S. can't host a solar installation because the occupants don't own the property, or because the roof is too old, too shady, or facing the wrong way for optimal sun exposure. Community solar eliminates these issues, making solar power more accessible to more people than ever before. To be eligible, a resident must live in the same electric utility zone as the project. This might seem like a limiting factor, but it also ensures that the project a group of subscribers is supporting is a local one and that all the energy produced is going into the local grid system. And because this local, clean electricity generation helps out with things like transmission losses and congestion on the grid, potentially alleviating the need for costly grid upgrades, this energy is highly valued and that's passed on to subscribers in the form of savings.

After receiving the assistance provided by the crowdfunders, solar farms will be able to reduce their financial barriers and risks. This model will also help households to reduce electricity bills and earn extra electricity. Thus, solar energy farms, households, and TNB will contribute to increased added value, profitability, employment, and productivity, resulting in a reduction in CO_2 emissions and an increase in national income or gross domestic product (GDP). Moreover, the reduction in CO_2 will help the government to create a low-carbon society.

Data Collection Procedure and Sample

This study used surveys as the primary tool for collecting data. Twenty participants were pre-tested in Kuala Lumpur to modify the questionnaire according to their understanding. The survey questionnaire has three parts. Part A consists of socioeconomic information about participants including gender, age, income, education, and housing. Part B contains a selection of general topics, such as "Are you interested in using solar energy?" "How can you heat your water?" "What is the current status of your renewable energy use?". Part C consists of questions designed to measure the barriers and willingness to use the solar energy of the households. Data were collected using a purposeful sampling method in Kuala Lumpur. For the sample size, this study uses Yamane's (1967) formula. This formula is given below:

$$N = \frac{N}{1 + N(e)^2}$$

where: n =the desired sample size N=the population size e = the level of precision or the sampling error (the sampling error in this study is 5%). By applying the formula, the total desired sample size or n became 400. It was calculated based on a 95% confidence level and a 5 per cent error. Questionnaires were sent to 400 households. In total, 260 questionnaires were returned, of which 240 (92.31 %) were usable for data analysis purposes.

Results and Discussion

A total of 260 questionnaires were returned of which 240 (92.31%) questionnaires were usable. Table 1 shows the socioeconomic information of the respondents. Male (53%) respondents are slightly more than female (47%) respondents. The majority of the respondents are young. The respondents' ages ranged from 20 to 30 years (56%), followed by those aged 31 to 40 (19%) years, and those above 40 (25%) years. A significant figure of 56% of the respondents is still single while 39% married. The highest education level of the respondents is Bachelor (54%), followed by secondary school (16%) and Diploma (15%). Many respondents earn between RM1000 to RM3000 (32%), followed by those earning less than RM1000 (29%), and RM3001 to RM4000 (27%). The majority (59%) of the

respondents stayed in rented houses while the remaining respondents (41%) stayed in their own houses. The average household size is 4.

Table 2 shows that 21% of participants use less than 500 kilowatts of electricity each month. However, 79% of respondents claimed that their monthly electricity usage is above 500 kilowatts. Table 3 shows the energy use of a water heater by household. A high figure of 51% of respondents uses electricity for water heaters, followed by electric and gas combinations (23%), solar (17%) and gas (9%). It seems that the lack of interest in renewable energies in Malaysia is mainly due to the lack of technology available for mass use such as solar panels. Next, the respondents were asked about the attitudes towards the use of solar energy to develop a low-carbon consumer society (Table 4). The majority (76%) of the respondents are interested in solar energy. Reflecting on this high interest, the use of solar energy has high potential.

Next, respondents were asked regarding the challenges they faced and the underlying reasons that prevent potential consumers from using solar energy. Table 5 shows the obstacles households faced in using solar energy. The most important factors that obstruct households from using solar energy are led by the initial cost (91%), limited information on renewable energy (84%), limited financial information (74%), obtaining the best possible price (64%), lack of access to the technology (51%) and lack of awareness (49%).

Finally, this study examines the willingness of respondents to accept the proposed model of PV solar energy in their homes. Upon request, many of the respondents (47%) stated that they were ready to accept the model. According to the Malaysian government's energy policy, about 60% of the current energy price is subsidized by the government. Against this background, a study was conducted to study the public interest in purchasing solar panels and using electricity on solar batteries in their homes. After the participants asked about the problems they encountered when installing solar energy in their homes, participants were offered a proposed model that can help prevent barriers and help Malaysia to create a low carbon society. The respondents were informed about the advantages of the system/devices based on PV solar energy, how these devices work, how the electricity bill is reduced, about its low cost and the experience of other users. Later they were asked if they were ready to accept the proposed model. 47% of respondents were willing to accept the model. This result proves that Malaysia has a

large solar market, if initial installation costs can be reduced and if customers receive accurate information about the process of buying and installing solar energy devices. It is hoped that the proposed model will benefit society.

In this study, a logit model was used to investigate the factors that affect the willingness of the households to accept the model. If the households are willing to accept the model, it is counted as 1 and 0 otherwise. Therefore, in this study, each household's decision to accept the model is a dummy variable defined as follows:

$Y_i =$ 1 if the household is willing to accept the model

0 if the household is not willing to accept the model

The if p_i is defined as the probability of acceptance of the model, then $(1-p_i)$ is defined as the probability of no acceptance. So, $\frac{p_i}{1-p_i}$ is the odds ratio in favour of acceptance that is the ratio of the probability that a household is willing to accept the model to the probability that it will not accept. The logistic regression model shows that the log of the odds ratio is not only linear in x but also linear in parameters, as shown in equation (1)

$$L_i = \ln\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1 x_i \quad (1)$$

where L_i is the log of the odds ratio β_0, β_1 are the parameters and x_i are the independent variables. The independent variables are presented in Table 2. Maximum likelihood method was used to estimate the parameters. In this study, data analysis was done using Statistical Package for the Social Science (SPSS) version 16.0.

The results of the logit model on the determinants of households' willingness to accept the model are presented in Table 7. We find that income, household size and knowledge about climate change affect significantly and positively the willingness of the households to accept the model. Furthermore, age and education also have positive impacts on the households' willingness to accept the model but they are not significant variables.

Conclusion

The implementation of the proposed model to find participants and investors of funds will potentially provide more benefits for households, solar farms, energy service providers (Tenaga National, SESB, SEB) and crowdfunders. The results of this study show that it will not be enough to introduce the proposed system to attract more households to adopt the proposed model. Households need to develop the belief that accepting the proposed model will benefit them. The government, therefore, needs to focus on the development of these households' beliefs. The government can assist households by organizing awareness campaigns and offering tax incentives for individual households. According to the findings of this study, if the costs of solar panels are reduced, the potential to reach the solar energy target improves significantly. Therefore, the realization of these proposals will help Malaysia to increase solar energy usage to reach the 65 MW target in Malaysia's solar energy production. The research shows that the government can start small-scale projects to raise awareness of renewable energy and include the renewable energy curriculum in academic curricula of higher education institutions. Also, greater efforts and resources should be invested in sustainable renewable energy development, government initiatives, private sector participation, and user awareness.

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Appendix

Table 1: The Socio-economic Information of the Households

	Frequency	Percentage
Male	127	53
Female	113	47
Age		
20-30	134	56
31-40	46	19
41-50	31	13
Above 50	29	12
Marital status		
Single	134	56
Married	94	39
Divorced	12	5
Educational Level		
No education	5	2
Secondary school	38	16
Diploma	36	15
Bachelor	130	54
Post Graduate	31	13
Income level		
Less than 1000	70	29
1000-2000	36	15
2001-3000	41	17
3001-4000	38	16
4001-5000	26	11
More than 5000	29	12
Type of house		
Rented	142	59
Owned	98	41

Table 2: Monthly Electricity Usage of the Households

Average electricity use (kW/month)	Frequency	Percentage
Below 500KWh	50	21
500–1000KWh	72	30
1000–3000KWh	55	23
3000–5000KWh	24	10
5000–10000KWh	19	8
More than 10000 KWh	19	8
total	240	100

Table 3: Monthly Energy Usage of the Households' Water Heater

Energy	Frequency	Percentage
Electricity	122	51
Gas	22	9
Electricity and Gas	55	23
Solar	41	17
Total	240	100

Table 4: The levels of Public Interest in Solar Energy for Developing Low Carbon Consumer Society

Opinion	Frequency	Percentage
Agree	182	76
Disagree	17	7
No opinion	41	17
Total	240	100

Table 5: The Obstacles faced by Households to Use Solar Energy

Public Obstacles	Most Important		Important		Least important		No Response	
	Yes	%	Yes	%	Yes	%	Yes	%
Limited information on Renewable energy	190	79	11	5	6	3	33	13
Initial cost	210	86	12	5	5	3	13	5
Limited financial information (i.e. ROI)	160	67	17	7	8	8	19	8
Obtaining the best possible price	140	58	15	6	14	5	71	30
Lack of awareness	100	42	16	7	12	5	112	47
Lack of access to technology	98	41	25	10	32	13	85	35

Table 6: Description of the Independent Variables

Variables	**Description**
Age	Age in years
Education	Highest level of schooling attained by the head of the household. 1= none, 2=primary, 3=secondary, 4=college. 1 if educated and 0 otherwise.
Income	In RM
Household size	Number
Knowledge about climate change	If the head of the household knows the impacts of climate change. If yes 1, otherwise 0.

Table 7: Logit Regression of Determinants of Willingness to Accept the Model

Variables	Coefficient	Standard error	Z-value	Sig
Age	.420	.545	0.91	.420
Education	.223	.243	1.41	.160
Income	.014	.017	2.73	.005
Household size	.539	.117	3.46	.000
Knowledge about climate change	.051	1.411	3.00	.003
Pseudo R-square	0.436			