

Green House and *Ḥalāl* Budget Allocation for Sustainable Household Finance Realization

(*Green House* dan *Halal Allocation Budget* untuk Perwujudan Keuangan Rumah Tangga Berkelanjutan)

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Article history: Received September 19, 2023. Accepted; October 29, 2023.

Published; October 31, 2023

Abstract: This research aims first to describe household budget allocation and the realization of sustainable financial management in the household, both formulations of the greenhouse model and *ḥalāl* allocation budget in realizing sustainable finance for households in Indonesia. The research method used is a library study approach with secondary data sources. Data was obtained from BPS, OJK and observations in villages where the community allocated a budget for greenhouses and environmental health. The collected data was analyzed using Ibn Khaldūn's thoughts on Trade and Social Change. The results of this research are as follows: first, budget allocation considers the sources of income they have; households tabulate their needs and make a percentage budget allocation. In this budget allocation, not everything is used for consumption but also for savings and righteous charity activities. The realization of sustainable financial management is carried out using the greenhouse model and *ḥalāl* budget allocation. Greenhouses are realized by the community participating in waste banks, Sustainable Food House Areas or Climate Resilient Integrated Service Post (Postaklim). Through this, community economic empowerment occurs. Second, the greenhouse model collaborates with the *ḥalāl* budget allocation model so that there is no waste in household expenditure because sustainable finances in the household do not only talk about current financial existence but also financial existence in the future.

Keywords: Greenhouse; *Ḥalāl* Budget Allocation; Sustainable Finance.

Introduction

Financial digitalization policies have had an impact on changes in consumption in society, especially in households.¹ Consumption can be done in the palm of our hand, so it is not uncommon for a household to shop over budget just because of the lure of discounts.² Purchasing power or consumption patterns will indeed increase economic growth because it raises productivity in production activities.³ However, on the other hand, it will cause negative externalities in the form of environmental damage if consumption cannot be controlled.⁴

The high level of waste due to increased consumption has been proven to cause environmental unrest because food waste alone can cause greenhouse gas emissions, which can damage the environment, especially from other types of waste.⁵ Based on data from the National Waste Management Information System (SIPSN) of the Ministry of Environment and Forestry (KLHK) in 2020, food waste reached 40 percent of the total waste produced by the community in 199 districts/cities. According to the results of Kompas analysis, on average, every Indonesian throws away food equivalent to IDR 2.1 million per year, with the value of food waste in Indonesia reaching IDR 330 trillion per year. If correlated with research by the Barilla Center for Food & Nutrition, the value of Indonesia's food loss and waste index is at a bad level. This value is calculated if every Indonesian throws away 300 kilograms of food waste and is ranked among the worst countries, along with Saudi Arabia and the United Arab Emirates. Meanwhile, according to the National Development Planning Agency (Bappenas), research in 2021 stated that waste originating from the disposal of food before processing (food loss) and food waste (food waste) in Indonesia in 2000-2019 reached 23-48 million tons per year or the equivalent of 115-184 kg per capita per year. This fact is still from the food sector, not from other sectors.

The consumption patterns above correlate with the amount of expenditure made by households. It means that the waste data correlates with the amount of finance allocated to each household. Even though theoretically and according to

¹ Esih Jayanti, Nandang Bakti Karnnowati, "Digitalisasi UMKM dan Literasi Keuangan Untuk Keberlanjutan UMKM Di Kabupaten Cilacap", *Kajian Bisnis Sekolah Tinggi Ilmu Widya Wiwaha*, Vol. 31, No. 1(2023), p. 51-52.

² Media Kusumawardani et.al, "Strategi Hutang Aman dan Syariah Serta Cerdas Dalam Menyikapi Pinjol (Pinjaman Online)", *RESWARA: Jurnal Pengabdian Kepada Masyarakat*, Vol.4, No.1 (2023), p. 196

³ Khairul Akbar et.al, "Dampak Pandemi Covid 19 Pada Pertumbuhan Perekonomian Indonesia", *Jurnal Agriuma*, Vol.4, No.2 (2022), p. 88

⁴ Arif Sugitanata, "Integrasi Fiqh Lingkungan Terhadap Pembaharuan Konsep Maqashid Syari'ah", *Jurnal Studi Keislaman: El-Hikam*, Vol.6, No.2 (2021), p. 79-80

⁵ Aldodi Pratama, "Pengaruh Industrialisasi Terhadap Emisi CO₂ Di Indonesia", *Jurnal Ecodemica: Jurnal Manajemen dan Bisnis*, Vol. 6, No.1 (2022), p. 99-101

religious teachings, wasteful financial expenditure should be prohibited.⁶ Household finances should be managed by paying attention to the income received, but in fact, some households are trapped in fulfilling their lifestyle.⁷ So, debts and receivables are also intertwined in their daily lives.⁸ The impact of uncontrolled consumption is on the environment and health, as well as on household finances.⁹

This article offers a concept of sustainable household finance, which is a concept that integrates household financial management by paying attention to environmental, social and good governance aspects.¹⁰ The aim is to achieve prosperity in the household that is balanced with economic, social and environmental aspects.¹¹ Within the framework of the Indonesian national study, a sustainable finance study was launched by the Financial Services Authority through the 2015-2019 Sustainable Finance Roadmap since 2014. This roadmap is aimed at increasing community capacity and awareness in managing household finances in a sustainable manner.

In implementing sustainable finance in households, there are several strategies, including; firstly, there must be an understanding of the differences between needs and desires and be able to prioritize budget allocation for basic and urgent needs, secondly; accuracy and transparency of all family income (income) and expenses (budget allocation), as well as making realistic and flexible monthly planning; third; prepare reserve funds to anticipate risks in the household, fourth; balance debt with ability to pay and avoid unproductive loans or consumer loans, fifth; income set aside for savings and investment, sixth; carry out environmentally and socially friendly financial transactions such as with sharia banks.¹²

Based on the facts and theories presented above, there needs to be more research between the data in the field and the concept of sustainable household

⁶ Bambang Hermanu, "Pengelolaan Limbah Makanan (Food Waste) Berwawasan Lingkungan Environmentally Friendly Food Waste Management", *Jurnal Agrifoodtech*, Vol.1, No.1 (2022), p. 35-48

⁷ Elisa Noviriani et.al, "Pengelolaan Keuangan Rumah Tangga Dalam Sudut Pandang Perempuan", *Jati: Jurnal Akuntansi Terapan Indonesia*, Vol.5, No.2 (2022), p. 157

⁸ Elinda, Ashlihah, "Sistem Hutang-Piutang Berantai Dalam Perspektif Islam Desa Manduro Jombang", *Izdihar: Jurnal Ekonomi Syariah*, Vol.1, No.1 (2021), p.83-85

⁹ Indri Ferdiani Suarna, Nugraha, Maya Sari, "Perilaku Keuangan Ibu Rumah Tangga Pengguna E-Wallet OVO Di Kecamatan Kedawung Cirebon", *Jurnal Ilmiah Manajemen Ubhara*, Vol.3, No.2 (2021), p. 42

¹⁰ Lydia Ivana Kumajas et.al, "Kontradiksi Sustainable Finance: Sebuah Literatur Review", *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, Vol. 10, No. 2 (2022), p. 1035-1036

¹¹ Abidah B Setyowati, "Governing Sustainable Finance: Insights From Indonesia", *Climate Policy*, Vol. 23, No.1 (2023), p. 108-121

¹² Iskandar, Razali, Syafruddin, "Integration of Islamic Social Finance and Commercial Finance to Support Indonesia's Sustainable Development", *Proceedings of International Conference on Social Science, Political Science and Humanities (ICoSPOLHUM)*, Vol. 3 (2022), p. 2-3

finances. Average expenditure facts according to BPS in 2021¹³ amounting to IDR 1,264,590 per month. This expenditure consists of two components, namely food and non-food consumption. The average expenditure on food consumption in 2021 is IDR 622,800, while non-food expenditure is IDR 641,790. Expenditures also differ between urban and rural areas. Expenditures in urban areas are IDR 1,481,000 per month, while in rural areas, it is IDR 941,400 per month. This data actually does not fall into the category of waste. However, as stated above, the food loss rate in Indonesia is relatively high, making there a gap in the concept of sustainable finance, which envisions a balance between the economy, society and environment, which is an interesting thing to discuss. It means that households in Indonesia, in managing consumption, need to pay full attention to environmental balance and safety.¹⁴

This study is, of course, not the first research carried out by academics. Even though research related to sustainable finance is still rarely carried out by academics, there have been several researchers who have studied it and used it as a literature review in this research. In terms of international studies, it is still rare to study sustainable finance in households. However, in general, many people have studied sustainable finance, such as Abidah B. Setiyowati in 2023, who discussed sustainable finance in the government sector. Setiyowati's research examines that the sustainable financial roadmap must be in sync with government development programs.¹⁵ This roadmap involves various financial institutions in Indonesia and is able to reduce carbon emissions, which are polluting life. Setiyowati's research is general regarding sustainable finance. Likewise, Yi Shuai et al.'s research in 2023 discussed sustainable finance and blockchain by providing a general model of sustainable finance and a blockchain concept.¹⁶ This research has yet to discuss sustainable finances in the household.

However, research from Rusdiana in 2023 has discussed household finances, but from the managerial side, it has yet to discuss sustainable finances from the household side. Research on household management was also conducted by Eliza Noviriani et al. in 2022. This research discusses household financial management from the perspective of women's opinions.¹⁷ The research results of Novirini et al. stated that household financial management according to women

¹³ <https://www.cnbcindonesia.com/news/20221101131753-4-384180> accessed 18 October 2023.

¹⁴ Abbie Yunita et al., "Making Development Legible to Capital: The Promise and Limits of 'Innovative' Debt Financing For The Sustainable Development Goals in Indonesia", *Environment and Planning E: Nature and Space*, (2023), p. 25

¹⁵ Abidah B Setiyowati, "Governing Sustainable Finance: Insights From Indonesia", *Climate Policy*, Vol. 23, No.1 (2023), p. 108-121

¹⁶ Yi-Shuai Ren et al., "Sustainable Finance and Blockchain: A Systematic Review and Research Agenda", *Research in International Business and Finance*, Vol.64 (2023), p. 101871

¹⁷ Elisa Noviriani et.al, "Pengelolaan Keuangan Rumah Tangga Dalam Sudut Pandang Perempuan", *Jati: Jurnal Akuntansi Terapan Indonesia*, Vol.5, No.2 (2022), p. 157

follows the planning stages, income and expenditure plans, control stages and evaluation stages. Research on financial management was also carried out by Mustikowati et al. in 2022, which discussed planning management and household financial management.¹⁸ Service-based research conducted by Mustikowati et al. in 2022 resulted in homemakers' understanding of household financial management, from planning to the evaluation stage. Based on existing research, there needs to be research that specifically discusses sustainable finance in the household. In fact, the issue of sustainable finance is one of the important issues in economic development in Indonesia. So, the discussion on this theme is interesting to use as study material in this research.

This research is research that has an output in the form of a model offering for realizing sustainable household finances. Because household finances should not stop at one time but continue to be sustainable in accordance with the human life cycle, wasteful consumption patterns will result in changes from an environmental and financial perspective. Hence, a model needs to be created to realize sustainable finance in households.¹⁹ Based on the explanation above, this article has the first objective to describe household budget allocation; the second is the realization of sustainable financial management in the household; three formulations of the greenhouse model and *Halāl* Allocation Budget in realizing sustainable finance for households in Indonesia.

Research methods

This research approach uses a library research approach (library study) because the main source comes from secondary data originating from the Central Statistics Agency (BPS), the Financial Services Authority (OJK), and previous research data. Apart from that, researchers obtained data by observing villages where the people allocated budgets to greenhouses and environmental health, for example, Binor Village Probolinggo Regency.

In obtaining data, researchers used a literature review and source analysis. The validity of the data was checked using several literature sources. The data results were analyzed using Ibn Khaldūn's thoughts. Based on this analysis, a sustainable financial model was created in the household using a greenhouse model and financial management based on *halāl* budget allocation.

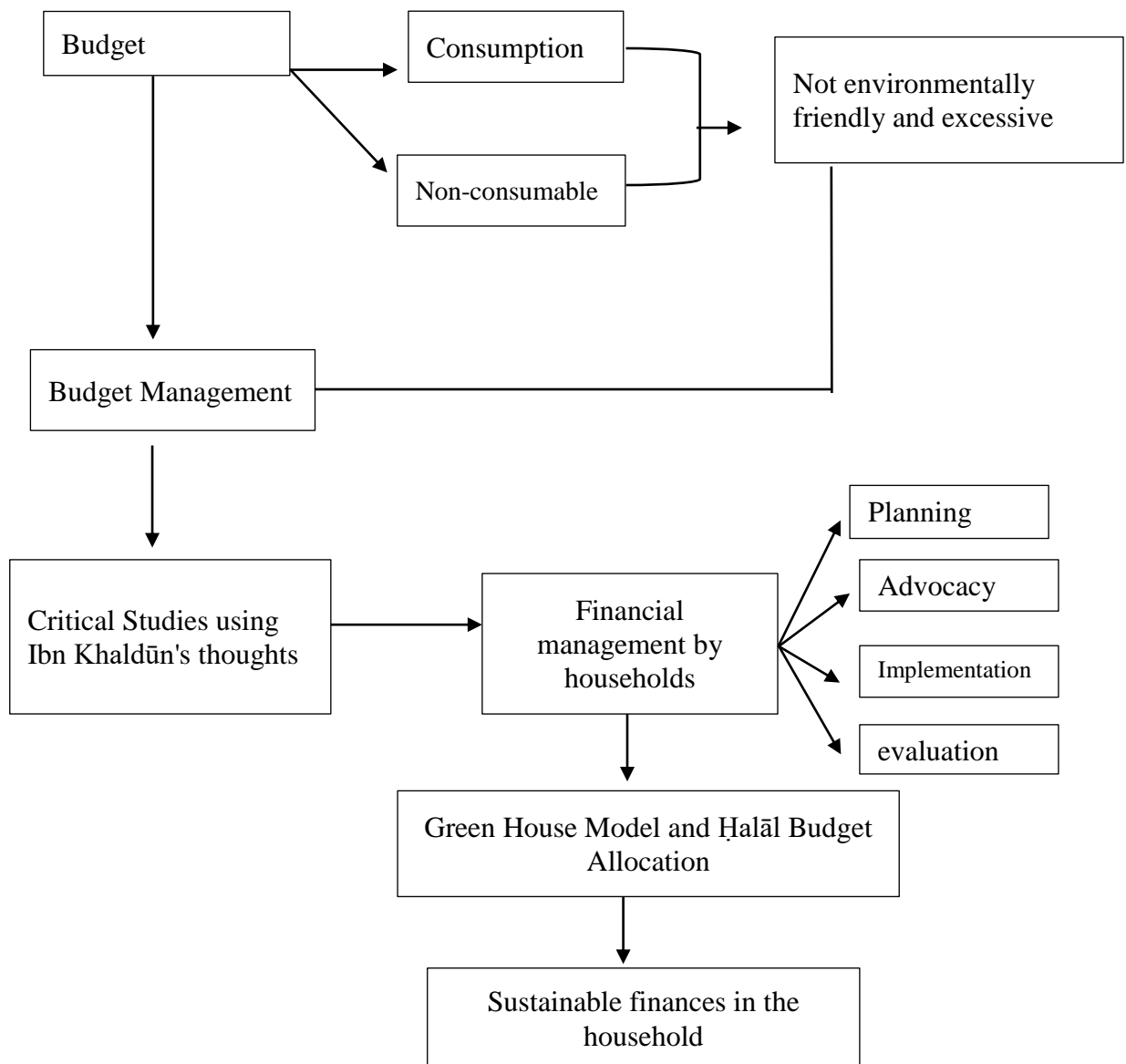
The data obtained was analyzed using the book; "*Muqaddimah*" by Ibnu Khaldūn, the chapter that discusses trade and social change. So, the analysis produces a model offer for the phenomenon that is occurring. Based on the theory of social change contained in the *Muqaddimah*, Ibn Khaldūn opposes excessive

¹⁸ Rita Indah Mustikowati, M.Yusuf Kurniawan, Fitria Ariyani, "Manajemen Perencanaan dan Pengelolaan Rumah Tangga untuk Meningkatkan Kesejahteraan Keluarga", *Bhinneka Publishing: Jurnal Pengabdian Masyarakat Bhinneka (JPMB)*, Vol.1, No.2 (2022), p.104-108

¹⁹ John Gerring et al., "Regimes and Industrialization", *World Development*, Vol. 152 (2022), p.5

consumption and environmental damage.²⁰ According to Ibnu Khaldūn, economic growth should not be accompanied by environmental damage, especially related to carbon emissions.²¹ It is hoped that the results of this critical study of Ibn Khaldūn's thoughts will provide a new model for preventing excessive consumption.²² So, the flow of this research is conceptualized as follows:

Figure 1. The flow of thinking in research



²⁰ L Patoni, "Kontribusi Pemikiran Ibnu Khaldun dalam Ekonomi Modern", *el-Qist: Jurnal of Islamic Economic and Business*, Vol.1, No.1 (2021)

²¹ Ibnu Khaldūn, *The Muqaddimah: An Introduction to History*, diterjemahkan oleh Franz Rosenthal. (London: Routledge & Kegan Paul, 1967), 168

²² Wawan Hernawan, "Ibnu Khaldūn Thought: A Review of Al Muqaddimah Book", *Jurnal Ushuluddin*, Vol. 23, No.2 (2015), p.173-174

The research flow above uses the thinking of Ibn Khaldūn, who thought that consumption must be carried out according to needs,²³ and based on the *al-Qur'ān* so as not to exaggerate.²⁴ There must be financial management so that finances can be sustainable for the future. If a Muslim is trapped in consumption today, then in the future, he will have no savings or investments. So, according to Ibnu Khaldūn's thoughts, finances must be allocated for things that are *ḥalāl* and environmentally friendly.²⁵

Research Result

Budget Allocation in Indonesian Households

The term allocation budget is interpreted the same as budget allocation. A household budget needs to be made to design expenses so that they do not occur; “*besar pasak daripada tiang*”. According to the Central Statistics Agency, 60.37% of the main source of income in the Indonesian household sector comes from wages and salaries. Other sources of income come from business, transfers, rent and interest. This income reflects the economic conditions of households in Indonesia as well as the level of welfare of each household. Based on the income obtained, the majority of household expenditure is intended for consumption, amounting to 54.42% of total GDP in 2021.²⁶ Consumption expenditure includes food, clothing, housing, health, education, transportation, communication and recreation.

According to Mustikowati et al., every household needs to manage its finances to improve family welfare.²⁷ Household management begins with budgeting or budget allocation. Through budget allocation, we can know that the budget that will be allocated will come from our income. So, there is no excessive spending. Based on data provided by the OJK in 2019, the household financial literacy index in Indonesia was 38.03%, while the household financial inclusion index was 76.19%. The results of this OJK survey show that around 60% of households in Indonesia have a monthly budget, but only around 40% record their expenses and income regularly.²⁸

Budget allocation carried out in Indonesia includes consumption and non-consumption. However, 60% of the budget owned by households is allocated to consumption, and some households even allocate 100% of their budget to consumption activities. This behavior causes there to be no budget for saving or

²³ Ahmadie Thoha, *Muqaddimah Ibnu Khaldūn* (Jakarta: Pustaka Firdaus, 2011), 71

²⁴ H Pertaminawati, “Analisis Pemikiran Ibnu Khaldūn Tentang Mekanisme Pasar dan Penetapan Harga Dalam Perekonomian Islam”, *Koordinat: Jurnal Komunikasi antar Perguruan Tingkat Agama Islam*, Vol. 15, No. 2 (2016), 15

²⁵ Muzakkir Muzakkir, “Kontruksi at Tas’ir Al’Adl dalam Dialektika Pemikiran Ibnu Taimiyah dan Ibnu Khaldūn”, *TAWAZUN: Journal of Sharia Economic Law*, Vol. 2, No.2 (2019), p. 147

²⁶ <https://databoks.katadata.co.id/datapublish/2021/11/01/> accessed 18 October 2023

²⁷ Rita Indah Mustikowati, M.Yusuf Kurniawan, Fitria Ariyani, “Manajemen Perencanaan dan Pengelolaan Rumah Tangga untuk Meningkatkan Kesejahteraan Keluarga”, *Bhinneka Publishing: Jurnal Pengabdian Masyarakat Bhinneka (JPMB)*, Vol.1, No.2 (2022), p.104-108

²⁸ <https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Documents/Pages/Survei-Nasional-Literasi-dan-Inklusi-Kuangan-Tahun-2022> accessed 18 October 2023

good deeds such as alms, zakat and so on. Thus, quite a few households experience a condition where the stakes are larger than the poles, meaning that expenses are greater than income.

Based on this data, there are several things that need to be considered in budget allocation, these include: first; knowing the source and amount of household income precisely and regularly, secondly; compiling a list of household needs and desires realistically and in accordance with priorities, third; determine the allocation percentage for each expense item, such as 50% for basic needs, 20% for savings and investments, 10% for debt, and 20% for lifestyle, fourth; record and supervise every expenditure and household income transaction in a regular and disciplined manner, fifth; adjust budget allocations according to conditions and changes that occur in the household.²⁹

Realization of Sustainable Financial Management in the Household

The data above shows that Indonesian people actually have literacy in financial management but still need to be disciplined in practicing it. So, it is not uncommon for households to be trapped in debts and receivables. Financial management is divided into elements of financial planning, implementation, reporting and evaluation.³⁰ In reality, these activities are realized as follows:

Table 1. Series of embodiments of financial management

Aspect	Explanation
Financial planning	<ol style="list-style-type: none"> 1. Recognize our financial condition 2. Determine needs 3. Determine desires 4. Preparation of a household budget
Implementation	Carrying out consumption and non-consumption activities
Reporting	Recording the income and expenses made
Evaluation	Evaluation is carried out by looking at our financial health

Source: processed from the family financial planning book by OJK³¹

The table above shows the embodiment of general financial management. In financial management, the planning aspect is the main thing for allocating the budget owned by each household. The planning process includes recognition of financial conditions. In identifying financial conditions, we need to pay attention to the following things: household assets and debts. The next plan is to determine needs. The way to determine this is by tabulating priority needs. So it is

²⁹ David Rey et al., "Vaccine Allocation Policy Optimization and Budget Sharing Mechanism Using Reinforcement Learning", *Omega (United Kingdom)*, Vol. 115 (2023), p. 102783

³⁰ Very Andrianingsih, Dessy Laras Asih, "Pengaruh Literasi Keuangan Terhadap Pengelolaan Keuangan Pada Ibu Rumah Tangga", *Jurnal Manajemen dan Bisnis Indonesia*, Vol.8, No. 1 (2022), p. 121-127

³¹ <https://sikapiuangmu.ojk.go.id/> accessed 18 October 2023.

determined that *darūriyāt* needs come first, then *hājīyāt* and *taḥsiniyāt* needs.³² Next, determine the desires that will be achieved, both the main desires and desires that are not a priority.³³

Based on this planning, income is then allocated to consumption and non-consumption.³⁴ Consumption is indeed a priority compared to non-consumption, but not all of the budget is spent on consumption. Then we have to record it regularly. Existing records are evaluated by checking the financial health of the household.³⁵ For example, how to see a household's financial health using instruments as follows:

Table 2. Measures of financial condition

No	Indicator	Explanation	Healthy	Unhealthy
1	Cash on hand	Have reserve funds or emergency funds in the form of cash and savings.	The balance reaches four times the monthly routine expenditure or even more.	The amount of savings is less than four times routine expenses.
2	Debt installments every month	Every month, we only commit to paying loan installments according to our ability. These installments include home loans, vehicle loans, cooperative loans, credit card debt and loans.	At most, only 35% of monthly income.	Greater than 35% of monthly income or even above half of total income.
3	Savings	Every month, be able to set aside a portion of our income for savings.	At least 10% of monthly income.	Less than 10% of our monthly income or even nothing left at the end of each month.

Source: Family financial planning book by OJK³⁶

³² Kusnan, Osman M, Khalilurahman, "Maqashid Al Shariah in Economic Development", *Millah: Journal of Religious Studies*, Vol. 21, No. 2 (2022), p. 583–612

³³ Ahmad Jalili, "Teori Maqashid Syariah Dalam Hukum Islam", *TERAJU: Jurnal Syariah Dan Hukum*, Vol. 3, No. 2 (2021), p. 71–80.

³⁴ Very Andrianingsih, Dessy Laras Asih, "Pengaruh Literasi Keuangan Terhadap Pengelolaan Keuangan Pada Ibu Rumah Tangga", *Jurnal Manajemen dan Bisnis Indonesia*, Vol.8, No. 1 (2022), p. 121-127

³⁵ Mardiana Astuti Handayani et.al, "Pengelolaan Keuangan Bisnis dan UMKM di Desa Balairejo", *SULUH ABDI: Jurnal Ilmiah Pengabdian Kepada Masyarakat*, Vol. 4, No.1 (2022), p. 01-07

³⁶ <https://sikapiuangmu.ojk.go.id/> accessed 18 October 2023.

The data above illustrates that financial management must go through this process. To realize sustainable financial management, planning, implementation, reporting and evaluation have an environmental basis. So, after the planning point, there is an advocacy point.³⁷ This advocacy is carried out in order to find the reasons why financial management cannot be carried out by households in a sustainable manner. Sustainable financial management should not only offer financial management concepts for the present but also the future.³⁸ Therefore, a manifestation of sustainable financial management is a sector that does not damage the environment.

This fact demands the existence of policies related to the implementation of greenhouses in each household. This greenhouse begins with making the home environment a green environment by planting the environment with vegetables, medicinal plants and so on. At least it can fulfill our daily needs. So expenses can be minimized.³⁹ Apart from that, the greenhouse also applies 3R (Reduce, Reuse and Recycle) in managing household waste.⁴⁰ Even though it does not create a waste bank, every house has a greenhouse and the flow of used goods is not immediately thrown away, but there is a sorting process.⁴¹ Of course, this cannot be done alone. Cooperation between households must be formed. This greenhouse will be able to increase income and provide employment opportunities. So that Halāl Budget Allocation will be achieved, namely financial allocation that is not excessive and does not cause waste.⁴²

The Halāl Allocation Budget concept consists of the elements of consumption, saving, investment, *zakāh*, *infāq*, and *ṣadaqah*. Not all of the budget is allocated for consumption because it will lead to waste, but there must be a budget that is used for savings for precautionary purposes and investment.⁴³ This saving can be in the form of savings, insurance, deposits and so on, which shows that our budget is sustainable. Greenhouses and Halāl Budget Allocation must go hand in hand because, in this concept, there are the concepts of *zakāh*, *infāq*,

³⁷ Rita Indah Mustikowati, M.Yusuf Kurniawan, Fitria Ariyani, "Manajemen Perencanaan dan Pengelolaan Rumah Tangga untuk Meningkatkan Kesejahteraan Keluarga", *Bhinneka Publishing: Jurnal Pengabdian Masyarakat Bhinneka (JPMB)*, Vol.1, No.2 (2022), p.104-108

³⁸ Fitri Sukmawati, Alfi Nurfitriani, "Pengaruh Transparansi dan Akuntabilitas Terhadap Pengelolaan Keuangan Keuangan Desa: Studi Pada Pemerintah Desa di Kabupaten Garut", *Jurnal Ilmiah Bisnis, Pasar Modal dan UMKM*, Vol.2, No.1 (2019), p. 52-66

³⁹ N Carvajal-Mena et.al, "Effect of a turmeric-based Fertilizer on Tomato Production at Green House Level", *Agro Sur*, Vol. 50, No.3 (2023), p. 1-13

⁴⁰ Lim Shun Jinn et al., "KAP Model of Reduce, Reuse, Recycle (3Rs): A Case Study of Malaysia", *AIP Conference Proceedings* (2023).

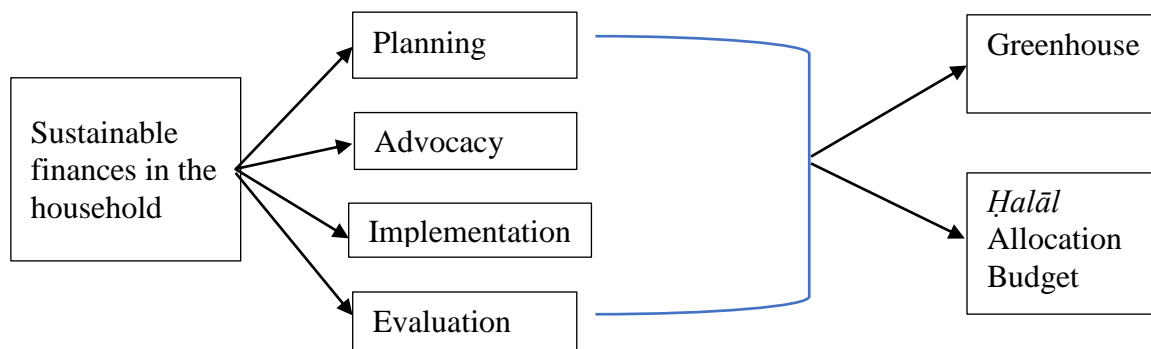
⁴¹ Nelson Tanjung et.al, "Tinjauan Pengelolaan Sampah Dengan Sistem Reduce, Reuse, Recycle dan Replace Di Desa Sampun Dusun 2 Kecamatan Dolat Rayat Kabupaten Karo Tahun 2022", *Syntax Literate: Jurnal Ilmiah Indonesia*, Vol.8, No. 3 (2023), p. 1894-1910

⁴² Yang Ding et.al, "Budget-Constrained Service Allocation Optimization for Mobile Edge Computing", *IEEE Transactions on Services Computing*, Vol. 16, No.1 (2023), p. 147-161

⁴³ Ramzani Rahman et al., "Zakat Management and Distribution by Zakat, Sedekah and Wakaf (Zawaf) Unit at Universiti Teknologi Mara Perlis Branch", *International Journal of Academic Research in Business and Social Sciences*, Vol. 13, No. 2 (2023), p. 44-54

ṣadaqah and *waqf*, which can be allocated to poor households.⁴⁴ Therefore, a policy regarding the existence of a greenhouse is needed so that *Ḥalāl* Budget Allocation can be achieved so that household finances can be sustainable. This idea can be summarized as follows:

Figure 2. The realization of sustainable finance in the household



Discussion

Formulation of the Green House Model and *Ḥalāl* Budget Allocation in Realizing Sustainable Finance for Households in Indonesia

As discussed above, this research offers a formulation of an investment model through green house and *ḥalāl* allocation budget to minimize excessive consumption patterns in households, especially in food, in order to realize sustainable finances in households in Indonesia. The greenhouse is a model offering that combines the concept of a greenhouse with the principles of sustainable finance. A greenhouse can be interpreted as a house that is designed and built based on environmental aspects, for example, energy efficiency, saving water, reducing waste and using environmentally friendly materials. Environmental, social and economic aspects are the main focus in realizing a greenhouse. It means that financial management not only has an economic impact but also has an environmental health impact and an impact on social life.⁴⁵ In this case, the greenhouse is realized through:

1. Implementation of architectural designs that are appropriate to local climate and conditions. For example, houses use flat roofs, natural ventilation, natural lighting and building orientation that prioritizes health aspects, not all designs use glass.
2. Select environmentally friendly building materials, for example, wood, bamboo, brick, cement, glass and paint, that do not contain harmful substances.

⁴⁴ Fauzi Yati, Putri Rahmani, "Efektivitas Pelaksanaan Secara Online: Studi Badan Amil Zakat Nasional Kota Padang", *Turats: Jurnal Penelitian dan Pengabdian*, Vol. 10, No.2 (2022), p. 133-150

⁴⁵ Jiansheng W et al., "Impact of Urban Green Space on Residential Housing Prices: Case Study in Shenzhen", *Journal of Urban Planning and Development*, Vol. 141, No. 4 (2014), p. 46

3. Use of energy-saving technology, for example, solar panels, LED lights, solar water pumps and electricity-saving electronic equipment.
4. Use a water management system that is economical and efficient, for example, using rainwater reservoirs/rain cisterns, installing automatic faucets, using water-saving toilets and managing waste recycling.
5. Reducing waste production and composting or recycling organic and inorganic waste
6. Plant plants that can provide benefits for the environment and health, for example, medicinal plants, vegetables, fruit, flowers and shade plants.

This greenhouse model is a follow-up to that offered by the green economy concept. So far, the green economy has been a solution to general environmental damage that occurs in various parts of the world.⁴⁶ A green economy is an economic approach that aims for human welfare and social welfare by reducing environmental risks. Through Surah Al Hijr verse 19 and Surah Al A'raf verse 56, it is stated by Allah SWT that the environment is a gift from Allah SWT to humans. Human behavior towards the environment is to protect it.⁴⁷ Allah SWT has also created everything on this earth according to its own size.

In the concept of environmental jurisprudence, life is closely related to *maqāṣid al-sharī'a* because caring for the environment has an element of *maṣlahah*. *Maṣlahah* is an intermediary goal to achieve *falāḥ* (prosperity in this world and also in the afterlife). In its implementation, *maqāṣid al-sharī'a* has five (*kulliyāt al-khamsah*), namely; **first** guarding religion (*hifẓ al-dīn*); **second** guarding the soul (*hifẓ al-naḥs*); **third** maintaining reason (*hifẓ al-'aql*); **fourth** looking after offspring (*hifẓ al-nasl*); **fifth** guarding wealth (*hifẓ al-māl*).⁴⁸

Based on this, the environment is the goal of Sharia, so it is necessary to maintain the preservation of life, especially in relation to other living creatures. Environmental sustainability has always been linked to humans. Because a healthy environment will have an impact on people's daily lives, if the environment is damaged, it will also damage human lives. It means that environmental sustainability contains universal benefits, not partial or individual benefits.⁴⁹

So, the green economy does not exist as mere discourse. However, it needs to be manifested in environmental awareness movements, poverty alleviation movements and so on. As stated in the document The Future We Want, it is stated that a green economy in the context of sustainable development and poverty alleviation must contribute to the achievement of important goals. The main priorities relate to poverty alleviation, food security, marine management,

⁴⁶ L Domaracká, Seňová A, Kowal D, "Evaluation of Eco-Innovation and Green Economy in EU Countries", *Energies*, Vol.16, No.2 (2023), p.962

⁴⁷ Piotr Misztal, Pawel Dziekański, "Green Economy and Waste Managements as Determinants of Modeling Green Capital of Districts in Poland in 2010-2020", *International Journal of Environmental Research and Public Health*, Vol. 20, No. 3 (2023), p. 2112

⁴⁸ Abū Ishāq As- Syātibī, Al-Muwāfaqāt Fī Uṣūl Al-Syarī'ah, (Beirut: Dar Al-Kutub Al-Ilmiyah, 2004).

⁴⁹ Arif Sugitanata, "Integrasi Fiqh Lingkungan Terhadap Pembaharuan Konsep Maqashid Syari'ah", *Jurnal Studi Keislaman: El-Hikam*, Vol.6, No.2 (2021), p. 79-80

improving preparedness for natural disasters and public health, human resource development, and inclusive and equitable growth that generates employment.⁵⁰

The green economy is a tool to achieve sustainable development. It is designed to protect and increase the value of the natural resource base, increase resource efficiency, encourage sustainable or environmentally friendly production and consumption patterns, and push the world towards low-carbon development. Therefore, green economy policies and measurements must be designed to improve the integration between economic development and environmental sustainability, especially those related to the economic structure and level of development.

Apart from that, the real manifestation of the greenhouse model is the presence of waste banks in various rural and urban areas, as well as the Sustainable Food Home Area Program (KRPL) and the Climate Resilient Integrated Service Post (Postaklim). Waste banks are a solution for turning waste into money. According to Bappenas, this program has been implemented in Indonesia since 2020 as a solution to overcome the accumulation of waste and the presence of dengue fever, which has an increasing graph. The Waste Bank was conceptualized and implemented using the 3R principle (Reduce, Reuse and Recycle). Through the waste bank program, a household can sort its waste into organic and inorganic waste.⁵¹

The KRPL program is also an embodiment of the greenhouse model. This KRPL is realized by creating a living pharmacy in a residential area. So, every household plants its environment with vegetables, and after being harvested, the vegetables are made into healthy food and marketed. So, apart from using land for reforestation, KRPL also provides additional income for households, as well as making the environment green, and it is hoped that there will be no empty land that will not be used. KRPL can become a center for community economic empowerment, both in rural and coastal areas. This KRPL is designed to collaborate the use of yards with the principles of sustainable finance, food diversification, preserving local plants and improving community welfare.

This program goes hand in hand with the existence of Postaklim, which is aimed at combining Posyandu activities with the principles of food security, environmental health and community empowerment. Postaklim aims to improve the welfare of families, especially pregnant and breastfeeding mothers, by providing balanced nutrition and sustainable environmental health. This post-acclimation is also aimed at reducing diseases caused by diseases due to climate change. In Indonesia, the Postaklim that is successful and can become a model is the Postaklim in Binor Village, Paiton District, Probolinggo. This post-acclimation has been able to reduce stunting rates for free, as well as to be able to increase family income by developing micro-businesses such as handicrafts, processed food and fish farming.

⁵⁰ Kui Liu et al., "Do Smart Cities Promote a Green Economy? Evidence From A Quasi-Experiment of 253 Cities in China", *Environmental Impact Assessment Review*, Vol.99 (2023), p. 107009

⁵¹ Kementerian PPN/Bappenas dan Asian Development Bank, *Pembangunan Ketahanan Masyarakat Miskin Kota* (Philippina: ADB,2021)

Meanwhile, KRPL that have been running well in Indonesia include; KRPL Serai Village, Kintamani District, Bangli Regency, Bali. In 2021, we succeeded in developing the KRPL program for the observation and reforestation of village forests, development of tourist villages, healthy village houses in preventing child and community stunting, village government training in creating inclusive village programs and so on. Furthermore, Margsosari Village, Pagelaran Utara Subdistrict, Pringsewu Regency, Lampung, received the best KRPL at the provincial level in 2021. The program carried out to develop a bank for the poor and needy targets the provision of business capital assistance, rice and necessities. Several other KRPLs have received awards and have a role in society.⁵²

The greenhouse model above goes hand in hand with the *ḥalāl* allocation model, which is conceptualized from Sharia economics, namely financial management with the values taught in the Qur'an. This model provides signs that in preparing the budget, it must be realistic and detailed by paying attention to family income and expenses, meeting *darūrriyāt* needs, before *ḥājjiyāt* and *taḥsiniyāt*, avoiding waste and exaggeration, saving for the future and urgent needs, paying *zakāh*, *infāq*, *ṣadaqah*, and avoid usury-based debt.⁵³

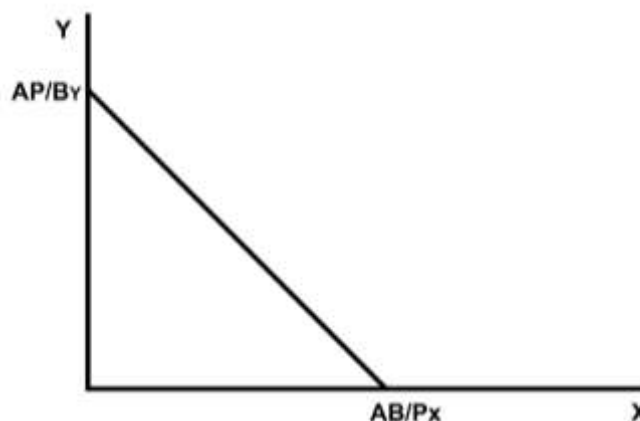
This *ḥalāl* budget allocation is a consumption limit for households with the formula for consumer income being (I), income that is ready to be consumed (I_c), which is part of total income. Meanwhile, there are other allocations of income, namely for saving or investment (I_s) and good deeds (I_A) so that:

$$I = I_c + I_s + I_A$$

$$AB \geq I_c$$

The net amount that can be consumed (Allocated Budget) is the part of income that is ready for consumption. Furthermore, the amount of income that has been set aside is called AB (Allocated Budget) or the budget that has been allocated for consumption. As shown in the following budget curve:

Figure 3. Budget Curve



⁵² Observations and Interview Results.

⁵³ S Sarah, Isyanto N, "Maqashid al-Syariah Dalam Kajian Teoritik dan Praktek", *Tasyri': Journal of Islamic Law*, Vol. 1, No. 1 (2022), p. 69-104

Based on picture above, there are two goods to be consumed, namely X and Y, with prices P_x and P_y , respectively. If AB's entire budget is used to buy X, we will get X in the amount of AB/P_x . Vice versa, if the entire budget is used to buy Y, then Y will be obtained in the amount of AB/P_y . Therefore, if the consumer wants a combination of purchases X and Y, then the following budget will be obtained:

$$AB = P_x X + P_y Y$$

Curve AB has a decreasing slope; this can be seen from the relationship between the number of goods Y purchased in relation to goods X purchased, the less the number of goods Y that can be purchased. So, the slope of the budget curve decreases. This equation can be formulated as:

$$AB/P_y - (P_x/P_y) X = Y$$

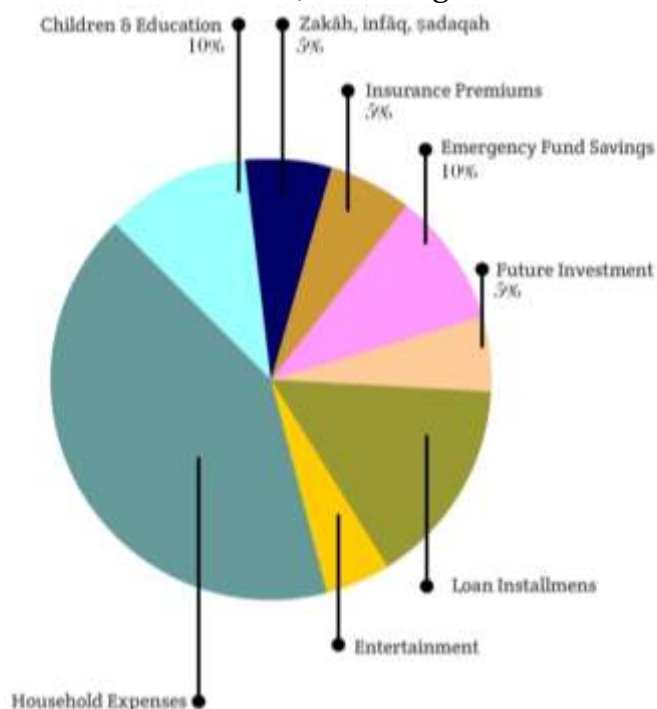
The slope of this line is obtained by taking the first derivative of Y with respect to X, thus obtaining the formula:

$$dY/dX = \text{Slope AB} = - (P_x/P_y)$$

Meanwhile, it can be explained that AB/P_y is a constant (the point of intersection of the curve with the Y axis) of the budget curve.

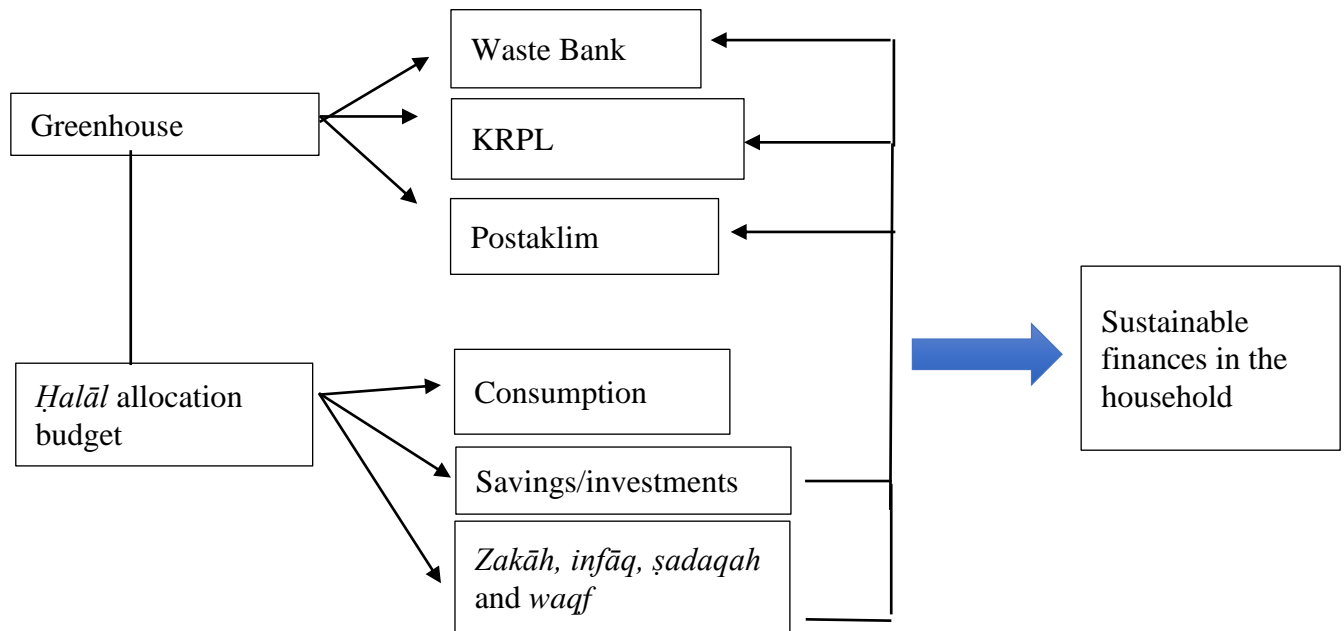
From the explanation above, it can be concluded that our budget must be allocated to *halāl* things so that it can prevent waste. The behavior of Muslim households is not just about allocating goods that are permitted by the Sharia but also not getting caught up in hedonism and consumerism, which tends to lead to waste and waste. Thus, the greenhouse model and *halāl* allocation budget have continuity in realizing sustainable household finances. This model is in accordance with the analysis of Ibnu Khaldūn's thoughts which originate from his work in the *Muqaddimah* book, that there must be a balance between income and expenditure, there must be productivity in investment, charity and *zakah*. So, as to produce ideal expenditure posts, here is the picture:

Figure 4. Green House Model and *Halāl* Budget Allocation Percentage



Greenhouse model and *ḥalāl* budget allocation in realizing sustainable finance:

Figure 5. Green House Model and *Ḥalāl* Budget Allocation



Source: processed by the author

Based on the figure above, it can be understood that the greenhouse, which is realized in the Waste Bank, KRPL, Postaklim, is correlated with the *ḥalāl* budget allocation in terms of savings and investment. Apart from that, in terms of economic empowerment to increase income, which will not only increase consumption but also increase savings/investment and increase giving of *zakāh*, *infāq*, *ṣadaqah* and *waqf*. These two things can make sustainable finances in the household a reality.

Conclusion

Based on the objectives of this research, two things can be found. First, the budget allocation in the majority of Indonesian households is divided into two, namely, allocation for consumption and allocation for non-consumption. The allocation for consumption is the majority allocation compared to non-consumption allocations. The realization of sustainable financial management in the household is correlated with the theory of green economics and Sharia economics, so the form given in the greenhouse model is correlated with *ḥalāl* budget allocation. Second, the greenhouse model, which is realized through the Waste Bank, KRPL and Postaklim, is a model of economic empowerment where the budget is allocated from households. The *ḥalāl* allocation budget is intended to

fulfill ḥalāl consumption productive savings/investments and is spent on *zakāh*, *infāq*, *ṣadaqah* and *waqf*.

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