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The Housing Financing Policy and Its Impacts on Low-Income Communities and Indonesian Economy

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A b s t r a c t

The housing financing policy or the Liquidity Facility of Housing Financing (FLPP) aims to help low-income communities (MBR) access affordable and livable housing. Unfortunately, MBR's housing backlog is still high, affecting their productivity. The housing financing policy also leverages the changes in other sectors' activities, which can increase or contract economic performance. This study aims to analyze the impact of housing financing policies on MBR's welfare and the Indonesian economy's performance. The Recursive-Dynamic Computable General Equilibrium (RDCGE) and the Econometric Model capture economic resources reallocation at MBR and macroeconomic levels due to housing financing policies. The study results indicate that the FLPP can potentially increase the growth and development of housing and improve community welfare. In addition, the FLPP positively impacts economic performance, although it will make specific sectors worse off. The policy recommendations are related to the simultaneous improvement of the demand and supply sides, as well as improvement in the housing budget.

Keywords: FLPP; CGE; Welfare; Macroeconomy

Introduction

A livable home is everyone's dream, but it is often limited by financial means because owning a house involves large sums of money and often long installments. Until 2021, only 60.90% of households were able to access livable housing (BPS, 2021). The more households are able to access it, the more it will help the government to increase productivity and inclusive economic growth (Samad et al., 2015; Doling et al., 2013), improve health, and quality of life (Enterprise Community Partners, 2014).

Limited accessibility complicates the housing backlog (see Purnamasari, 2021). Based on data from the Ministry of Public Works and Housing (KemenPUPR, 2020), the housing backlog reached 7.6 million housing units in 2020. The government is trying to minimize it with the One Million Houses Program (PSR) so that it can decrease by 50% in 2024 (Petriella, 2020a). One of the real accelerations is by implementing a

housing financing policy or often called the Housing Financing Liquidity Facility (FLPP). This reason is relevant to the results of Bank Indonesia survey, in which, 75.38% of consumers use mortgage credit facilities (KPR) to buy houses (Bank Indonesia, 2021).

The rationale for FLPP to address the housing backlog includes increasing job vacancies (Turner & Whitehead, 2002), supporting people's physical lives, reducing the burden of rent and housing costs, ensuring equality of home ownership among households, increasing freedom of choice, improving the efficiency of the housing stock, protecting the real value of housing subsidies, and perpetuating the positive image of the government (Howenstine, 1986). The housing sector is characterized as a leading sector has a broad multiplier effect, involves many Micro, Small, and Medium Enterprises (MSMEs) ((Jawapos.com, 2021; Susanto, 2021; Petriella, 2020b), and absorbs 4.23 million workers.

Meanwhile, other arguments state that housing assistance can also reduce workers' income (Ong, 1998) and involves high-fidelity administration (Cunningham, 2003). Historically, the construction of houses via FLPP during 2015-2019, which reached 4.8 million housing units, has not been able to contribute to increasing the ratio of property to Gross Domestic Product (GDP) (Petriella, 2020b). The urgency of studying FLPP involving the vulnerability of MBR (Indarto & Rahayu, 2015) is very important. For this reason, the purpose of this study is to analyze the impact of FLPP on the MBR and Indonesia's economic performance, given that there are still few studies that comprehensively elaborate on it.

Research Method

The research data include (a) primary data derived from interviews, focus group discussions (FGDs) with the Indonesian Real Estate Association (REI), the Institute for Development of Economics and Finance (INDEF), Bogor Agricultural University (IPB), the National Development Planning Agency (Bappenas), the Ministry of Finance, and PT Bank Tabungan Negara, Persero, as well as questionnaires for 500 MBR in various sample provinces, and (b) secondary data derived from the 2016 Input-Output (I-O) Table, the Ministry of Public Works and Housing, the Central Statistics Agency (BPS), Bank Indonesia (BI), and research results.

The data analysis method uses the Recursive Dynamic Computable General Equilibrium (RDCGE) Model and Econometrics. The RDCGE model aims to capture the dynamics of FLPP impact at the national/sectoral level, while the Econometric Model elaborates on the micro-level welfare of MBR. The two approaches complement and confirm each other. The RDCGE Model can also illustrate the impact of FLPP on rural and urban households. The grouping of households is based on the proportion of labor from the 2008 Socio-Economic Balance Sheet (SNSE) data. The grouping of households includes (1) Rural 1: agricultural laborers in rural areas, (2) Rural 2: agricultural entrepreneurs in rural areas, (3) Rural 3: low-class free entrepreneurs, administrative personnel, itinerant traders, free workers in the transportation sector, personal services, and unskilled laborers in rural areas, (4) Rural 4: non-labor force and unclear groups in rural areas, (5) Rural 5: upper class freelancers, non-agricultural employers, managers, military, professionals, technicians, teachers, administrators and upper class sales in rural areas, (6) Urban 1: lower class freelancers, TU workers, peddlers, transport freelancers, personal services and unskilled laborers in urban areas, (7) Urban 2: non-agricultural workers and unclear groups in urban areas, and (8) Urban 3: upper class freelancers, non-agricultural employers, managers, military, professionals, technicians, teachers, administrators and upper class sales in urban areas. The grouping of households will illustrate income redistribution, but it is not yet specific to the welfare of FLPP households. Thus, an Econometric Model is needed.

The macroeconomic estimation is undertaken by constructing the RDCGE Model based on the Indorani and Wayang Models (Wittwer, 1999), including the parameter values and elasticity coefficients. Then, the specification of the system of equations is conducted by organizing it into blocks of equations. Meanwhile, the dynamic nature of the RDCGE Model is shown by the blocks of labor and capital stock equations. The operationalization of the model is assisted by the preparation of three policy simulation scenarios (Table 1). Furthermore, the micro-level analysis uses a one-way test to answer whether or not there is a change in welfare by the MBR. Respondents selected answers using a Likert scale of 1-5. The various variables used as welfare indicators are (a) income proxied by per capita expenditure of family members per month, (b) education from the average years of schooling of all family members aged > 18 years, (c) health proxied by health expenditure, (d) labor absorption proxied by the percentage of family members of working age (> 15 years) who are employed, and (e) quality of life proxied by access to electricity, clean water, and internet network infrastructure.

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Table 1
Policy Simulation Scenarios

Simulations	Description	Remarks
Sim 01	Realization of FLPP distribution	Annual growth of FLPP realization in 2016-2020 x share of government spending in 2020
Sim 02	Reduction in subsidized housing prices or increased accessibility of low-income households to housing	Price of subsidized vs commercial house type 21 in 2020
Sim 03	Realization of FLPP disbursement is accompanied by an increase in demand for the housing sector by MBRs	• Housing demand proxied by spending on housing to total GDP in 2020 • Annual growth of FLPP realization in 2016-2020 x share of government spending in 2020

Results and Discussion

The Results and Discussion section discusses two issues, namely the impact of FLPP on (a) economic performance, sectoral output, labor, investment, and household welfare and (b) changes in the welfare of the poor. Both subsections elaborate on the transmission based on the results of data processing, field findings, and other research results.

FLPP's Impact on Economic Performance

Table 2 shows the impact of the FLPP policy simulation, where the highest positive response of macroeconomic variables belongs to sim 01. However, sim 02 and 03 still have the potential to have a positive impact on GDP, including other macroeconomic variables. This finding is in line with Renaud's (1999) research, where housing finance has implications for economic growth, construction sector development, and even increased job creation.

On the other hand, FLPP also stimulates higher inflation and government spending (sim 01) than sim 02 and 03. An increase in inflation is not always bad for the economy because a measurable increase in inflation can be a stimulant for producers to increase their production. Meanwhile, the increase in government spending due to FLPP distribution plays an important role in improving allocative performance and redistribution of budget resources. FLPP distribution that encourages housing development will correlate with the potential increase in government revenue through taxes from each housing unit sold, such as Income Tax (PPh), Land and Building Tax (PBB), Value Added Tax (VAT), and Fees for Acquisition of Rights on Land and Buildings (BPHTB).

Table 2
Indonesia Impact of FLPP on Indonesia's Economic Performance

No.	Variables	GDP in 2019 (at current prices) IDR Billion	GDP in 2019 (2010=100) IDR Billion	Sim 01 (Δ%)	Sim 02 (Δ%)	Sim 03 (Δ%)
1.	GDP	15,833,943	10,949,244	2.8082	2.8058	2.7788
2.	Consumption	8,965,837	5,936,400	3.9067	3.9033	3.8834
3.	Investment	5,119,491	3,596,364	1.1847	1.1843	1.1491
4.	Inflation	-	-	2.7457	2.7433	2.7224
5.	*Gov. expenditure*	1,385,882	855,597	2.5682	2.5645	2.5292
6.	Export	2,914,636	2,267,120	0.9557	0.9549	0.9480
7.	Import	2,991,963	2,029,280	1.3356	1.3345	1.3346

Source: data processing results, 2021.
Description: sim 01: realization of FLPP distribution.
sim 02: a decrease in the price of subsidized housing for MBR.
sim 03: realization of FLPP disbursement is accompanied by an increase in demand for the housing sector by MBR.

The impact of policy simulation scenarios on the decomposition of GDP that increases most significantly is sim 01. The transmission shows that the simulation of increasing the budget for housing credit distribution through the FLPP scheme for MBR can reduce mortgage interest rates so that it becomes a deduction for the cost of buying a house. Housing subsidies have the tendency to distort the market prices faced by firms and households, thus, changing the equilibrium output in the housing market. This condition helps to increase people's accessibility to housing as the share of

expenditure on housing as a consumption good and asset is large. In Asian countries, housing takes up 20-50% of the total consumption and 40-70% of average household wealth (Yoshino & Helble, 2016). The wealth effect interrelates housing (including its financing) with the economy, in addition to the financial accelerator (Winkler, 2017).

Another insight emerges when comparing the three simulations, where sim 03 does not perform better than sim 01 and 02 on GDP. This result shows that the design and volume of the existing FLPP has not been able to accommodate the potential increase in housing demand. One of the central issues is the short-term nature of the source of housing finance funds that cannot reliably cover long-term mortgages (maturity mismatch). Dependence on the state budget makes the carrying capacity of housing development very limited and the state budget is only able to fulfill 30% of the total demand (Setiawan, 2021; Ika & Zein Nasution, 2019). Although the home financing program can also be complemented by various programs from the local government budget, the backlog is still difficult to reduce (Suryanto et al., 2019). During the Covid-19 pandemic, banks were very selective in channeling FLPP for fixed-income MBR (Mone, 2021). Whereas, there are many formal MBR (low-income people working in the unorganized, unregulated, and mostly legal but unregistered sectors, such as farm laborers, street vendors, fishing laborers, and so forth) and informal (the opposite of informal MBR, such as factory workers, lower-level company employees, and so on) who need a house.

Impact of FLPP on Sectoral Output Change

Table 3 presents the data processing results of the impact of FLPP on sectoral output changes. The transmission of FLPP distribution will stimulate increased access to housing for MBR. This condition encourages an increase in demand for housing by the MBR, giving a positive signal for developers to increase their output. Unfortunately, the signal is often difficult to respond to due to the challenges of limited land (Odoyi & Riekkinen, 2022; Bhellar et al., 2019), expensive building materials, and technological changes (Yoshino et al., 2016).

Sim 01 is a relatively superior simulation that increases the output of housing directly related sectors, particularly building, cement, real estate services, and banking financial services. The building and cement sectors provide the main raw materials for the construction of houses. Meanwhile, the real estate services sector facilitates MBR to access housing. The banking financial services sector is also directly related because FLPP is channeled through banks. According to the Chairman of the National Association of Commercial Banks (Perbanas), KPR performance is currently improving when it is able to meet MBR demand (Ayu & Elena, 2019).

Table 3
Impact of FLPP on Sectoral Output Change

No.	Sectors	Sim 01 (Δ%)	Sim 02 (Δ%)	Sim 03 (Δ%)
1.	Building	0.7779	0.7769	0.7441
2.	Clean water	0.6838	0.6831	0.6784
3.	Private education services	0.5538	0.5533	0.5248
4.	Other services	0.5552	0.5547	0.5218
5.	Rugs, ropes, and other floor coverings	0.4924	0.4919	0.5205
6.	Other household and personal goods repair	0.4635	0.4630	0.4377
7.	Electricity	0.4110	0.4106	0.4066
8.	Insurance	0.3929	0.3926	0.3788
9.	Household and office furniture other than metal	0.3715	0.3712	0.3721
10.	Air transportation services	0.3776	0.3771	0.3686
11.	Car and motorcycle repair and maintenance	0.3734	0.3731	0.3676
12.	Health services and private social activities	0.3907	0.3904	0.3640
13.	Real estate services	0.3706	0.3703	0.3552
14.	Garbage, waste, and recycling management	0.2447	0.2444	0.2443
15.	Land transportation services	0.2121	0.2120	0.2060
16.	Postal and courier services	0.1774	0.1773	0.1728
17.	Rail transportation services	0.1754	0.1752	0.1717
18.	Other financial institution services	0.1328	0.1327	0.1264

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19.	Automobile and motorcycle trading	0.1128	0.1127	0.1135
20.	Telecommunication services	0.1160	0.1159	0.1085
21.	Cement	0.1131	0.1135	0.0903
22.	Government health services	0.0706	0.0696	0.0672
23.	Banking financial services	0.0580	0.0580	0.0550
24.	Arts, entertainment, and recreation services	0.0700	0.0699	0.0542
25.	Government education services	0.0263	0.0253	0.0252

Source: data processing results, 2021.
Description: sim 01: realization of FLPP distribution.
sim 02: a decrease in the price of subsidized housing for MBR.
sim 03: realization of FLPP disbursement is accompanied by an increase in demand for housing sector by MBR.

Other sectors directly related to and complementary to the construction of houses also increased , such as clean water; rugs, ropes, and other floor coverings; repair of household and other personal goods; insurance; electricity; household and office furniture other than metal; real estate services; garbage, waste, and recycling processing; and banking finance. On the other hand, sectors that are not directly related to the construction of houses have also grown, including transportation services (air, land, and rail); postal and courier services; telecommunication services, trade in cars and motorcycles; and other financial institution services. These sectors support the existence of housing construction and facilitate residents' activities.

In addition to increasing output in the housing sector and other related sectors, FLPP disbursement also negatively affects the output of several sectors. The worse off sectors include the manufacturing sector (machinery; processed food; and pharmaceutical products), agriculture (salt, soybean, and rubber), mining (iron sand, iron, and tin ore), and services (other mining and quarrying services). This condition happens because the amount of resources is not infinite, so the provision of FLPP causes a reallocation of economic resources.

Impact of FLPP on Changes in Sectoral Labor Absorption

Table 4 presents the employment resulting from FLPP disbursement. The premise is that FLPP disbursement will reduce the cost of housing, thereby increasing MBR accessibility. Rational developers respond by increasing housing output and this requires additional inputs, one of which is labor. According to OECD (2011), the housing policy can also better match workers with their jobs and help the labor market recover from crises or shocks.

In general, sim 01 is dominant in labor absorption when compared to sim 02 and 03. This condition is in line with the results on output changes discussed in the previous subsection, where sim 01 is the simulation that has the highest positive impact on the increase in housing sector output. Dynamics emerge when elaborating on each sector affected by FLPP. Some sectors are consistently in the same rank, such as the building sector, drinking water, other financial institution services, government health services, and government education services. This aspect means that when the sector's output increases by a certain value, its labor absorption also increases proportionally.

Table 4
Impact of FLPP on Labor Absorption

No.	Sectors	Sim 01 (Δ%)	Sim 02 (Δ%)	Sim 03 (Δ%)
1.	Building	1.2230	1.2231	1.1687
2.	Clean water	1.1471	1.1461	1.1383
3.	Real estate services	0.9908	0.9900	0.9450
4.	Other household and personal goods repair	0.8393	0.8384	0.7915
5.	Insurance	0.7274	0.7268	0.7009
6.	Private education services	0.6875	0.6870	0.6508
7.	Rugs, ropes, & other floor coverings	0.6144	0.6138	0.6505
8.	Other services	0.6816	0.6811	0.6406
9.	Car and motorcycle repair and maintenance	0.6197	0.6191	0.6104
10.	Electricity	0.5488	0.5483	0.5454
11.	Health services and private social activities	0.5438	0.5434	0.5038
12.	Land transportation services	0.5076	0.5072	0.4929
13.	Household and office furniture other than metal	0.4467	0.4464	0.4463

14.	Air transportation services	0.3243	0.3239	0.3170
15.	Garbage, waste, and recycling management	0.2626	0.2621	0.2627
16.	Automobile and motorcycle trade	0.2055	0.2054	0.2074
17.	Postal and courier services	0.2126	0.2124	0.2071
18.	Other financial institution services	0.1869	0.1868	0.1771
19.	Rail transportation services	0.1403	0.1402	0.1377
20.	Cement	0.1170	0.1176	0.0823
21.	Arts, entertainment, and recreation services	0.1088	0.1087	0.0700
22.	Telecommunication services	0.0691	0.0691	0.0600
23.	Government health services	0.0548	0.0537	0.0519
24.	Banking financial services	0.0522	0.0522	0.0485
25.	Government education services	0.0051	0.0040	0.0048

Source: data processing results, 2021.
Description: sim 01: realization of FLPP distribution.
sim 02: a decrease in the price of subsidized housing for MBR.
sim 03: realization of FLPP disbursement is accompanied by an increase in demand for housing sector by MBR.

The building sector is still the highest employment sector when FLPP is distributed. Meanwhile, the real estate services, cement, and banking financial services sectors also still show positive changes. When examined more deeply in these four sectors, the average employment of unskilled workers reached 0.70% and the absorption of semi-skilled workers (administration to machine operators and assemblers) amounted to 0.48%. This condition shows that employment due to FLPP distribution is still dominated by unskilled workers and provides opportunity for unskilled workers to continue working. Good hopes are also contained in the National Medium-Term Development Plan (RPJMN) for 2020-2024 where the government will increase the contribution ratio of the housing sector (KPR) to the economy (GDP), from 2.9% (2017 base) to 4% so that it is predicted to increase employment by 4.34 million people (Rachmahyanti, 2021).

In addition to labor directly related to the housing sector, other sectors that are not directly related also show an increase in employment with varying magnitudes. This condition shows that FLPP has a fairly broad labor multiplier impact, both backward linkage and forward linkage. Some sectors that are part of the backward linkage of housing include the building sector; cement; electricity; clean water; waste management; rugs, ropes, and other floor coverings; and household and office furniture other than metal. Meanwhile, the forward linkages include, among others, transportation services; real estate services; financial services (banking and others); postal and courier services; telecommunication services; trade services (cars and motorcycles); insurance; car and motorcycle maintenance repairs; and education and health services

Impact of FLPP on Sectoral Investment Changes

Table 5 presents the impact of FLPP on changes in sectoral investment. The investment perspective usually involves an element of time to calculate the benefits to be gained. Output and employment by producers require planning, consideration of prospects, and responding to positive signals to manage consumer demand and generate maximum profit. Producing goods/services requires resource allocation, where FLPP disbursement will provide incentives for housing sector producers to increase their production and positive signals for MBR to increase their consumption. The interest rate, as one of the investment considerations, offered in the FLPP of 5% will provide certainty in accessing housing and at the same time provide space for producers to manage their risks. Therefore, Sim 01 still has a superior impact on increasing investment, in addition to increasing output and employment.

Table 5
Impact of FLPP on Sectoral Investment Change

No.	Sectors	Sim 01 (Δ%)	Sim 02 (Δ%)	Sim 03 (Δ%)
1.	Clean Water	3.4967	3.4934	3.4691
2.	Rugs, Cords, and Other Floor Coverings	2.2334	2.2314	2.3571
3.	Air Transportation Services	2.2963	2.2938	2.2402
4.	Electricity	2.0389	2.0369	2.0131
5.	Private Education Services	1.8489	1.8470	1.7582
6.	Real Estate Services	1.7073	1.7058	1.6387
7.	Household and Office Furniture Other than Metal	1.6283	1.6273	1.6369
8.	Rail Transportation Services	1.5658	1.5645	1.5287
9.	Private Health and Social Services	1.5385	1.5369	1.4447
10.	Building	1.3495	1.3495	1.2971

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11.	Waste Management, Waste and Recycling	1.2545	1.2530	1.2497
12.	Automobile and Motorcycle Repair and Maintenance	0.9362	0.9352	0.9200
13.	Insurance	0.9524	0.9514	0.9189
14.	Government Education Services	0.8737	0.8700	0.8375
15.	Postal and Courier Services	0.8149	0.8141	0.7931
16.	Other Household and Personal Goods Repair	0.8189	0.8179	0.7779
17.	Telecommunication Services	0.7296	0.7289	0.6909
18.	Government Health Services	0.6968	0.6939	0.6671
19.	Land Transportation Services	0.6536	0.6531	0.6349
20.	Cement	0.6131	0.6148	0.5230
21.	Other Financial Institution Services	0.4692	0.4687	0.4506
22.	Banking Financial Services	0.3488	0.3484	0.3356
23.	Arts, Entertainment, and Recreation Services	0.2973	0.2970	0.2628
24.	Other Services	0.2734	0.2731	0.2594
25.	Automobile and Motorcycle Trade	0.1557	0.1556	0.1541

Source: data processing results, 2021.
Description: sim 01: realization of FLPP distribution.
sim 02: a decrease in the price of subsidized housing for MBR.
sim 03: realization of FLPP disbursement is accompanied by an increase in demand for housing sector by MBR.

The main sectors directly related to housing, namely building, real estate services, cement, and banking financial services show positive figures. These four were not the sectors that benefited the most in terms of investment when FLPP disbursements were made. The clean water sector is actually the sector that has the highest investment impact. The availability and affordability of clean water (including sanitation) is an important aspect that supports the lives of residents in their homes and neighborhoods, especially health. According to Serlin & Umilia (2013) and Kalesaran et al. (2013) accessibility to clean water is an important consideration for people choosing a house location. On the other hand, the Regional Drinking Water Company (PDAM) has limitations in distributing clean water to certain areas, so it is not uncommon for developers to build clean water supply and/or treatment systems independently. The cost may or may not be included in the selling price of the house, depending on the agreement between the two parties.

Table 5 suggests why the backlog of home ownership is still quite high. The building and real estate services sector is not the main sector to invest in. Alternatively, the high backlog is due to the high demand for housing, but low supply capacity and access to financing. This condition is due to problems in the distribution of FLPP, namely (a) government funds for FLPP are limited, where the APBN only meets 30% of the total demand for subsidized housing, (b) the availability of affordable land is increasingly limited in urban areas so that the location tends to be in the suburbs. This condition creates new problems in the form of additional costs, and (c) undeveloped basic infrastructure due to the location of housing that is disconnected or marginalized from urban areas, such as clean water, electricity, health, and education (Setiawan, 2021; Lambiri & Rovolis, 2014 in Pulungan, 2021).

Impact of FLPP on Household Welfare

Table 6 shows the impact of FLPP on household income (welfare) in general, both in rural and urban areas. The results of data processing show that all groups of households appear to have gained additional income from the FLPP.

Table 6
Impact of FLPP on Household Income

No.	Households	Sim 01 (Δ%)	Sim 02 (Δ%)	Sim 03 (Δ%)
1.	Rural 1	2.8181	2.8156	2.7853
2.	Rural 2	2.8243	2.8219	2.7924
3.	Rural 3	2.8256	2.8231	2.7938
4.	Rural 4	2.8346	2.8321	2.8033
5.	Rural 5	2.7784	2.7760	2.7496
6.	Urban 1	2.8378	2.8353	2.8071
7.	Urban 2	2.8147	2.8122	2.7853
8.	Urban 3	2.9120	2.9095	2.8853

Source: data processing results, 2021.
Description: sim 01: realization of FLPP distribution.
sim 02: a decrease in the price of subsidized housing for MBR.

sim 03: realization of FLPP disbursement is accompanied by an increase in demand for housing sector by MBR.

In sim 01, it can be seen that urban 3 households benefit the most, followed by urban 2 and third-ranked rural 4. Meanwhile, rural 5 experienced relatively smaller income changes. The same thing happened in sim 02, where the largest additional income was experienced by three groups of households, namely urban 3, urban 1, and rural 4. Meanwhile, rural 5 experienced a relatively smaller increase in income than other households. The increase in income has a unidirectional trend, both in sim 01 and 02. This result shows that both FLPP and the decline in the price of subsidized housing for MBR are responded with an increase in housing demand. Furthermore, the property sector made an adjustment by increasing housing production. This aspect encourages an increase in demand for various building raw materials to supporting services as indicated by an increase in sectoral output. The increase in output has an impact on increasing labor absorption so that household income will increase (Table 6).

Furthermore, sim 03 has a smaller impact on increasing people's income. In urban group 3, the increase in income that occurred was only 2.88% or smaller than the increase in income in sim 01 and 02. Similarly, for other household groups, the increase in income in sim 03 was lower than the increase in income in sim 01 and 02. This result shows that the increase in demand for the housing sector by MBR has less impact on improving sectoral output. This finding implies that currently to encourage the acceleration of housing sector demand, various incentives, including fiscal, are needed that can have a direct impact on the purchasing power of the MBR. According to Bang & Kwon (2022), several factors that can be considered as incentives include an increase in the debt to income ratio, a loan to value (LTV) limit, an acquisition tax reduction, a transfer tax deregulation, deregulation of the housing subscription policy, and a housing purchase right transfer.

The Impact of FLPP on the Well-being of the Poor: Survey Results

The impact of FLPP is further analyzed at the micro level (MBR). Before explaining the details, a description of the survey results from MBR respondents is presented. Most MBR respondents live in West Java Province and the lowest in West Kalimantan Province. Meanwhile, the distribution of MBR respondents based on their expenditure level per month is mostly below Rp3 million.

Figure 1 presents data on the responses of MBR respondents. In general, MBR respondents assessed that their conditions had improved after FLPP. The aspects that respondents assessed as "better" after FLPP were access to electricity, family health, and family income. On the other hand, access to clean water and internet infrastructure support still need attention because more than 5% of MBR respondents rated them as not having improved.

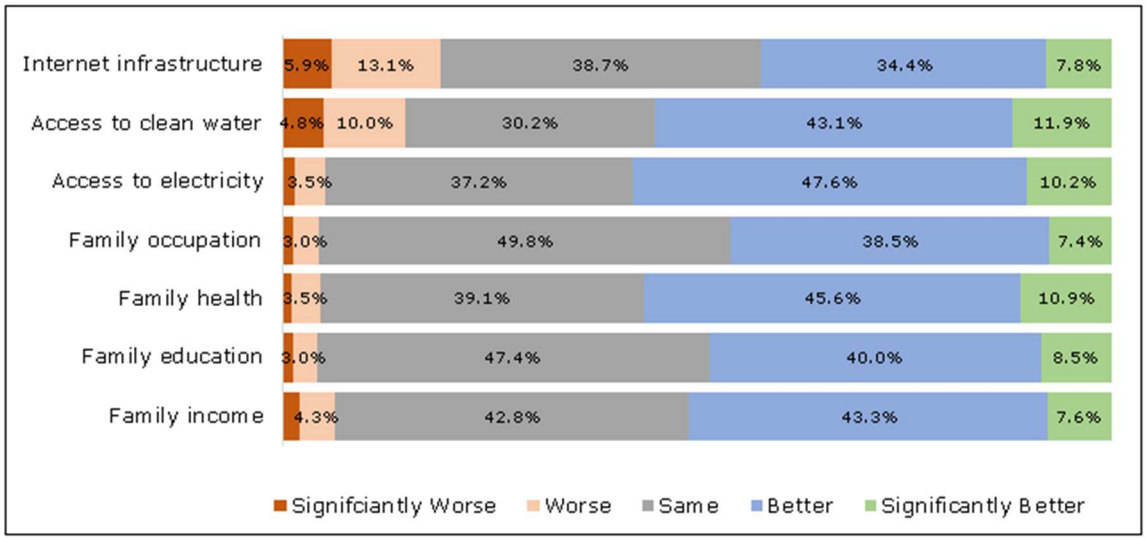

Figure 1: Exploration of MBR Responses on Socio-Economic Conditions after Obtaining FLPP
Source: survey data processing results, 2021.

Based on the results of the t-test on the seven socioeconomic indicators, there was an improvement in each indicator (Table 7). This condition is indicated by the p-value, which indicates a decision to reject H0, meaning that there is an improvement in the welfare of the MBR. The

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impact of FLPP allows people to allocate a larger portion of their income for other purposes, such as health, education, and other important needs. The higher the average in a socioeconomic aspect, the more respondents perceive an improvement in welfare. The highest average was found for family health (3.62), followed by access to electricity (3.61), family education (3.52), family income (3.50), access to clean water (3.47), and internet infrastructure (3.25).

Table 7
Socio-economic Impact of the MBR: T-test Results

No.	Socio-Economics	Average	t values	p-*values*	Conclusions
1.	Family income	3,50	14,93	0,000	Welfare improvement proxied by family income
2.	Family education	3,52	16,29	0,000	Welfare improvement proxied through the aspect of family education
3.	Family health	3,62	18,91	0,000	Improved welfare proxied through the aspect of family health
4.	Family employment	3,48	15,17	0,000	Improved welfare proxied by family employment
5.	Access to electricity	3,61	18,43	0,000	Improved welfare proxied by the aspect of access to electricity
6.	Access to clean water	3,47	11,10	0,000	Improved welfare proxied through the aspect of access to clean water
7.	Internet infrastructure	3,25	5,92	0,000	Improved welfare proxied by internet infrastructure

Source: survey data processing results, 2021

Conclusions

FLPP has a positive impact on Indonesia's economic performance, which is reflected through positive macroeconomic variables. The transmission spreads to various joints of the economy, both via money and goods market channels. The aggregated impact was shown in the value of GDP.

The positive impact is consistently evident at the sectoral level. FLPP boosts output in various sectors, both directly and indirectly related to housing. In addition, labor absorption and investment performance are also leveraged with different main sectors.

FLPP has a positive impact on aggregate household welfare. Lower- and upper-class households in urban areas benefit more from FLPP than households in rural areas or are biased towards MBR in urban areas. At the micro-level analysis, most MBRs stated that their welfare was better off after FLPP distribution.

Policy recommendations related to FLPP and housing, namely (a) FLPP needs to be continued by increasing the budget for MBR housing. FLPP needs to expand its categorization for MBR with income below Rp1.5 million per month and even those with irregular income (demand side), (b) socialize the application of the Housing Subsidy Mortgage Information System (SiKasep), Developer Pool Information System (SiKumbang), and Construction Monitoring System (SiPetruk) to facilitate MBR access (demand side), (c) utilizing contractual saving funds as a source of long-term funds, (d) developing a secondary market for housing finance, (e) collaborating with the business sector, including SOEs/SOEs, to provide housing (supply side), and building public facility infrastructure around housing to develop residential areas.

FLPP encourages the reallocation of economic resources so that some sectors experience better off and others worse off. This condition can be dealt with by (a) improving ease of business based on Law No. 11 of 2020 concerning Job Creation, especially related to the cluster of simplifying business licensing and land acquisition, (b) encouraging the construction of vertical houses with the concept of Transit Oriented Development (TOD), (c) encouraging co-living concept for millennials, and (d) encouraging the role of local governments in building PSU and MBR housing.

References

Ayu, I., & Elena, M. (2019). Kenapa bank lebih memilih FLPP dibanding KPR nonsubsidi? https://finansial.bisnis.com/read/20191023/90/1162134/kenapa-bank-lebih-memilih-flpp-dibanding-kpr-nonsubsidi.

Bang, D. W., & Kwon, H. S. (2022). Policy impact analysis of housing policies using housing cycles. SAGE Open, 12(3), 1–14. https://doi.org/10.1177/21582440221113844

Bank Indonesia. (2021). Survei harga properti residensial di pasar primer-triwulan III 2021. Bank Indonesia.

Bhellar, M. G., Kalwar, S., Memon, I. A., & Das, G. (2019). Housing need and supply gap affects housing affordability. Engineering Science and Technology International Research Journal, 3(4), 116–120. https://doi.org/https://www.researchgate.net/publication/343239455.

BPS. (2021). Tujuan pembangunan berkelanjutan. https://www.bps.go.id/indikator/indikator/view_data/0000/data/1242/sdgs_11/1.

Cunningham, L. E. (2003). A structural analysis of housing subsidy delivery systems: Public housing authorities' part in solving the housing crisis. Source: Journal of Affordable Housing & Community Development Law, 13(1), 95–121. https://doi.org/https://www.jstor.org/stable/25782673.

Doling, J., Vandenberg, P., & Tolentino, J. (2013). Housing and housing finance-A review of the links to economic development and poverty reduction (No. 362; ADB Economics Working Paper Series). https://www.adb.org/sites/default/files/publication/30348/ewp-362.pdf.

Enterprise Community Partners. (2014). Impact of affordable housing on families and communities: A review of the evidence base. https://www.communitycommons.org/entities/8147fc85-11af-4dae-8d7f-b01d47c292be.

Howenstine, E. J. (1986). The consumer housing subsidy approach versus producer housing subsidies, International experience. Cities, 3(1), 24–40. https://doi.org/https://doi.org/10.1016/0264-2751(86)90004-1.

Ika, S., & Zein Nasution, L. (2019). Policy scheme for housing provision in improving welfare: A case study on ASN (State Civil Apparatus). Jurnal Ekonomi Pembangunan (JEP), 17(1), 73–97. https://doi.org/https://doi.org/10.22219/jep.v17i1.9429

Indarto, K. D., & Rahayu, S. (2015). Dampak pembangunan perumahan terhadap kondisi lingkungan, sosial dan ekonomi masyarakat sekitar di Kelurahan Sambiroto, Kecamatan Tembalang. Teknik PWK, 4(3), 428–439. https://doi.org/https://doi.org/10.14710/tpwk.2015.9119.

Jawapos.com. (2021). KPR BTN, Backlog perumahan dan pemulihan ekonomi di tengah pandemi. https://www.jawapos.com/ekonomi/properti/18/02/2021/kpr-btn-backlog-perumahan-dan-pemulihan-ekonomi-di-tengah-pandemi/.

Kalesaran, R. C. E., Mandagi, R. J. M., & Waney, E. (2013). Analisa faktor-Faktor yang mempengaruhi keputusan konsumen dalam pemilihan lokasi perumahan di Kota Manado. Jurnal Ilmiah Media Engineering, 3(3), 170–184. https://ejournal.unsrat.ac.id/index.php/jime/article/view/4278.

KemenPUPR. (2020). Rencana strategis Kementerian Pekerjaan Umum dan Perumahan Rakyat tahun 2020-2024. Kementerian Pekerjaan Umum dan Perumahan Rakyat. https://pu.go.id/assets/media/1927846278Buku Renstra Kementerian PUPR 2020-2024.pdf.

Mone, A. (2021). Peran asosiasi pengembang dalam pembangunan bidang perumahan dan permukiman melalui skema FLPP (tidak dipublikasikan). FGD Kajian Dampak Sosial Ekonomi FLPP, 29 Juli 2021 diselenggarakan oleh ITAPS, IPB.

Odoyi, E. J., & Riekkinen, K. (2022). Housing policy: An analysis of public housing policy strategies for low-income earners in Nigeria. Sustainability (MDPI), 14(4), 1–27. https://doi.org/10.3390/su14042258

OECD. (2011). Economic policy reforms 2011, Going for growth. OECD Publishing. https://doi.org/10.1787/growth-2011-en

Ong, P. (1998). Subsidized housing and work among welfare recipients. Housing Policy Debate, 9(4), 775–794. https://doi.org/10.1080/10511482.1998.9521318.

Petriella, Y. (2020a). Basuki targetkan backlog rumah berkurang 50 persen pada 2024. https://ekonomi.bisnis.com/read/20201215/47/1331426/basuki-targetkan-backlog-rumah-berkurang-50-persen-pada-2024.

Petriella, Y. (2020b). Kontribusi properti ke PDB masih rendah, Ini pandangan pengembang. https://ekonomi.bisnis.com/read/20200923/47/1295750/kontribusi-properti-ke-pdb-masih-rendah-ini-pandangan-pengembang.

Pulungan, A. M. (2021). Efektivitas kebijakan Fasilitas Likuiditas Pembiayaan Perumahan (FLPP) di Indonesia (tidak dipublikasikan). FGD Kajian Dampak Sosial Ekonomi FLPP, 29 Juli 2021 diselenggarakan oleh ITAPS, IPB.

Purnamasari, L. (2021). Effect of government's policy to build 1 million houses on performance of housing and apartment credits of banks listed in Indonesia stock exchange during Period 2015-2017. Jurnal Ilmiah Ilmu Administrasi Publik: Jurnal Pemikiran dan Penelitian Administrasi Publik, 11(1), 40–50. https://doi.org/https://doi.org/10.26858/jiap.v11i1.19777

 DOI: https://doi.org/10.29313/mimbar.v0i0.9663

Rachmahyanti, S. (2021). Pertumbuhan sektor perumahan diprediksi serap tenaga kerja hingga 4,34 juta orang. https://www.idxchannel.com/economics/pertumbuhan-sektor-perumahan-diprediksi-serap-tenaga-kerja-hingga-434-juta-orang.

Renaud, B. (1999). The financing of social housing in integrating financial markets: A view from developing countries. Urban Studies, 36(4), 755–773. https://www.jstor.org/stable/43084626

Samad, T., Hoang, H. T., Brhane, M., Mcvitty, J. E., Nguyen, H. M., Harrison, D. H., Nohn, M., Hassler, O., Payne, G. K., Huynh, D., Dang, V. H., Nguyen, T. T., La, H. A., Bui, K. V., & Tran, T. N. (2015). Vietnam-affordable housing: A way forward. In World Bank Group (Issue 2). World Bank Group. https://doi.org/10.1162/DAED_a_01797

Serlin, M. A., & Umilia, E. (2013). Faktor-faktor yang mempengaruhi masyarakat dalam memilih lokasi hunian peri urban Surabaya di Sidoarjo. Jurnal Teknik Pomits, 2(2), 143–148. https://ejurnal.its.ac.id/index.php/teknik/article/view/4328.

Setiawan, K. B. (2021). Dukungan Bank BTN dalam penyaluran KPR FLPP bagi MBR (tidak dipublikasikan). FGD Kajian Dampak Sosial Ekonomi FLPP, 29 Juli 2021 diselenggarakan oleh ITAPS, IPB.

Suryanto, Rusli, B., Karlina, N., & Candradewini. (2019). Analysis of housing finance policies for low-income community in West Bandung, West Java Province, Indonesia. Humanities and Social Sciences Reviews, 7(4), 1038–1045. https://doi.org/10.18510/hssr.2019.74142

Susanto, V. Y. (2021). Hingga 2020, Realisasi program sejuta rumah mencapai 965.000 unit. https://industri.kontan.co.id/news/hingga-2020-realisasi-program-sejuta-rumah-mencapai-965000-unit.

Turner, B., & Whitehead, C. M. E. (2002). Reducing housing subsidy: Swedish housing policy in an international context. Urban Studies, 39(2), 201–217. https://doi.org/10.1080/0042098012010292.

Winkler, S. (2017). Housing, finance, policy and the wider economy. Journal of Management and Sustainability, 7(2), 45–64. https://doi.org/http://doi.org/10.5539/jms.v7n2p45

Wittwer, G. (1999). WAYANG: A General Equilibrium Model adapted for the Indonesian economy. In Centre for International Economic Studies, University of Adelaide (ACIAR Project No. 9449). https://www.researchgate.net/publication/2592315.

Yoshino, N., & Helble, M. (2016). The housing challenge in emerging Asia: Options and solutions. Asian Development Bank Institute.

Yoshino, N., Helble, M., & Aizawa, T. (2016). A simple model of housing policies. In N. Yoshino & M. Helble (Eds.), The housing challenge in emerging Asia: Options and solutions (pp. 17–61). Asian Development Bank Institute.