



Literature on Efficiency Measurement and Mechanism Optimization of Rent Subsidy

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Abstract

Housing plays a special role in the social and political dialogue in most societies. It is a major component in creating stable and healthy communities, mainly is often the largest single household expense. Housing can be a sector for stimulus of the national economy, but housing conditions are often seen to be worse than they should be, given the national standards of living and societal values. For these reasons, almost all societies intervene in housing markets through an array of policies and subsidies intended to stimulate housing production or consumption by various groups. This research paper, the first stage of a larger project, studies efficiency measurement and mechanism optimization of rent subsidy for low-income residents in Uzbekistan. The paper trying to simulate policies, build different subsidy mechanism, use relevant methods to simulate and analyse the efficiency various subsidy mechanisms. Therefore, the paper also focus on to consider what the appropriate design of government policies towards rental housing subsidies would be in the absence of the long and mixed legacy of public intervention. Research paper found that the situation of rent subsidy as well as rent affordability to low-income households changed drastically after Uzbekistan proclaimed independence. Another interesting issue regarding housing situation in Uzbekistan has to do with house or room rentals. The government solves the housing problem of low income residents through public rental housing. Findings showed housing is subsidized in various ways. In the owner-occupied sector it takes place through the tax system which reduces the owner's costs of housing relative to other kinds of investment. Rental housing is subsidized by allowances that decrease with household income and increase with the rent level. Data indicated that housing is unaffordable to low-income households and they face extremely high rent burdens. We should transfer resources to those households so they can live in decent housing at expenditure levels they can afford. The design of the subsidy mechanism should encourage residents to make efforts in order to improve the efficiency of the subsidies.

Keywords: Housing subsidy; Efficiency measurement; Mechanism optimization; Rent subsidy; Uzbekistan

Introduction

Subsidies are one of the primary mechanisms that government uses to incentivize low income people. This research paper measures efficiency and analyses the subsidies on rental housing in Uzbekistan for low income households. It also literature on explores mechanism optimization of the rent subsidies for the poor and considers the income distribution effects on government subsidies. The primary goal of government subsidies is to solve the problem of fairness. However, because public funds are used,

efficiency should also be pursued, that is the same amount of funds should be used to solve the housing problem of more people. The determination of government subsidy standard is based on certain capital constraints, taking affordability as a benchmark, considering factors such as residents' income level and per capita living area. Therefore, the ratio of rent to residents' income is an important indicator to measure affordability, the ratio of subsidy amount to total rent is an important factor to judge the efficiency and fairness of subsidy. Getting housing services through leasing is the only way to solve the housing

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security of the poor. However, this approach is bound to face the problem of whether the poor can afford the housing rent. Government subsidies are the key to helping the poor solve the problem of affordability. The subsidy efficiency of public funds is an issue that government must consider. Previous researches indicated that the situation of rent subsidy and rent affordability to low-income households changed drastically after Uzbekistan proclaimed independence on August 31, 1991. The separation from the Soviet Union meant that the country was completely on its own in regard to dealing with its own economic, political, social and cultural issues, but without the necessary resources. The share of ownership and that of the private and social rental sector demonstrated in (Table 1). It shows that the numbers current share changing to has a relatively large social rental sector and a relatively small private rental sector. Data indicated that the current overall share of ownership in Uzbekistan is 51% and the social renting 34%.

Table 1: Share of forms of tenure in Uzbekistan during 2000-2020 (in %).

Years / Sectors	Owner-occupied sector	Private rental sector	Social rental sector	Other
2000	52	13	28	7
2005	55	17	25	3
2015	53	15	29	3
2020	51	11	34	4

Research rational

The paper concentrates on subsidies for rental housing. Housing is subsidized in various ways. In the owner-occupied sector it takes place through the tax system which reduces the owner's costs of housing relative to other kinds of investment. Rental housing is subsidized by allowances that decrease with household income and increase with the rent level [1]. In addition, rental housing may be subsidized at the supply side. By this we mean that rents may be lower than competitive market levels. The fluctuations in house prices, however, make it hard to isolate the structural component of this form of subsidization. Our analysis will also deal with these 'supply-side benefits' to the renter. They will be referred to as rent regulation benefits. Government subsidy is only a transitional institutional arrangement, which based on fair and temporary system. If intensive compatibility can be embedded in the subsidy mechanism it will also help reduce poverty and reduce the pressure of tight subsidy funds. Also, one of the root causes of the US financial crisis on the mortgage credit that the government encourage financial institutions to provide loans for low income families and support them to buy housing. According to this lesson from world financial crisis, providing rental subsidies to low income people instead of supporting them

buy houses can also be seen as a useful way to avoid big loses for financial institutions as well as to government. The down payment ratio is zero or a very low down payment.

Problem statement

It is necessary to construct the mechanism that the lower income, the higher the subsidy appropriately and the more efforts to increase the income, the more care can be obtained. Incentive compatibility should be properly integrated into the subsidy mechanism which is the charm of economics. Government subsidy is an institutional and historic arrangement to help low income people to get through difficult time. If the income is lower, the subsidy will be more, which may become a system of rewarding lazy people in disguise. Therefore, we should consider not only making those low income people unable to get subsidies after becoming middle income but also encouraging them to work as hard as possible. Some countries are more inclined to develop systems that stimulate private sector production of houses, while others prefer to work more through government or non-profit bodies. Some countries use housing subsidies to bring all households to a minimum housing consumption level, while others focus on subsidies for higher cost housing and serve only a small proportion of deserving households. Housing is one of the largest investments in an economy, often the most significant parts of a household budget, and a key barometer of social well-being. When societies urbanize and real incomes increase, housing expectations and standards also increase. But standard housing is expensive relative to household incomes or investor resources, and the degree of access to long and medium-term financing to pay for a house over time is especially important unless the state assumes that responsibility or pays for the housing asset directly. Therefore, the fact that the poverty threshold has been defined based on the cost of food does raise the question of why housing should get special consideration in assessing the share of a household's budget that it commands. One important reason is because housing is generally the largest single household expenditure, so if housing accounts for an excessive share of income, it will have a significant impact on the household budget. But perhaps more importantly, housing deserves special consideration because having a place to live almost always takes precedence over all other expenses. As Matt Desmond has succinctly put it what is "the rent eats first".

The research paper outline

Section 1 consists of introduction part which introduction to study, background of the research, significance of the paper, and research objectives, purpose of the study. This section shows the problems statement in research area and mention conceptual framework of the study. Apart from the introduction of the

research, Section 2 describes comprehensive literature review and presents literature findings on efficiency measurement and mechanism optimization of rent subsidy for low-income residents, in Uzbekistan. This is one the main part, several other studies have dealt with the subsidization of rental housing. Section 3 depicts the methodology of gathering the data, it will help to analyse and discuss research method, data analysis, limitation and sapling methods, and collection research data. Also, are showed the methodology of measuring subsidies, mainly the methodology of measuring the subsidy on rental housing. Section 4 will discusses the quantitative analysis, shows analysis data and research findings. Finally, section 5 provides an open discussion and the way forward to address subsidy efficiency and analyses the subsidies on rental housing, to simulate policies, build different subsidy mechanism, mainly use relevant methods to simulate and analyse the efficiency various subsidy mechanisms.

Background of the Research

Many studies have focused on efficiency measurement and mechanism optimization, evaluation of housing subsidies for Low-income residents. Some of them are quoted in this paper. For a general overview and country examples, the reader should consult [2-5]. These studies essentially analyze how the efficiency of subsidies fit low income families, what is the best mechanism optimization of Rent subsidy, and who captures the subsidies, often with the purpose of reforming the housing subsidy systems for the poor. Subsidies are often perceived as the giving or receiving something for free. The cost and the characteristics of housing vary among countries. Differences in housing reflect differences in government policies, geography, culture, history, demographics, and other factors. The rental housing stock is often divided into components based on ownership, types of occupants, types of structures, or other distinctions. Subsidies can essentially be aimed at one of three targets: (1) lowering monthly payments, (2) lowering the initial purchase price, or (3) providing down payment assistance. Monthly payments for a home include paying the mortgage principal, interest, property taxes, and maintenance costs. The primary avenue for subsidizing monthly payments is an interest rate subsidy, which reduces the cost. This can be achieved directly through subsidized loans, or more broadly through the tax code. Payments are usually measured relative to income, with a ratio of monthly mortgage payment to monthly gross income commonly used (gross income is income before taxes and withholding for benefits; net or “take home” income is generally 25-30 percent lower). As a higher percentage of income goes to housing payments, unexpected non-housing expenses or temporary drops in income reduce the borrower’s ability to make mortgage payments, potentially leading to default. Some countries subsidize monthly housing payments for targeted low income renters more directly, rather than through interest rates or

the tax code [6]. To improve the efficiency of government subsidies and mechanism optimization of rent subsidy for Low-income households, also to focus on rent affordability and provide access to better living conditions for low-income households, the Government of Uzbekistan implements a range of targeted programs. The most significant is the State Program on Construction of Model Detached Housing in Rural Areas, which supports the substantial rural population. In addition, this program was launched in 2009, and was joined in 2011 by the ADB, which provided USD 500 million in subsidized loans to individual developers with average/below-average incomes from 2012-2015. Also, a key demographic characteristic of Uzbekistan is the high percentage of young people, with some 60.2 percent being younger than age 30. For this group, the Government has a subsidized mortgage program with an interest rate equal to the refinancing rate of the Uzbekistan Central Bank. As of September 2014, this amounted to 10 percent per year for 15 years, including a grace period of three years, with an initial payment of not less than 25 percent.

Significance of the research

The fundamental housing problem facing low-income households is the high cost of rental housing and the high rent burdens these households face. Rent affordability is increasingly an issue in housing and is at the center of several Governments’ strategies in every economy, also in Uzbekistan. It has been argued that housing affordability (regarding renting cost) plays a key role in the housing problems of today, whilst several European countries have recently agreed that new housing should include a proportion of affordable housing [7]. The ‘Affordable Housing Supply Program’ from the Government plans to deliver at least 30,000 affordable homes by 2021 - a 43.7% increase in the affordable housing supply, from which 19,000 will be for social rent in order to support people on low/modest incomes to rent high quality accommodation at affordable prices. Rent affordability plays a crucial role in tackling poverty. Most people in Uzbekistan do not earn much money to cater for their families’ basic needs, especially decent accommodation (average income 500\$ per month). This has therefore resulted to the development of slum, poor and inhumane housing conditions in the country. Nowadays, yet as much as 29 percent of the population in Tashkent lived in a household where total housing costs represented more than 40 percent of total household disposable income [8-11]. This is indicated to refer “housing cost overburden” and it is also the measure uses to signal the lack of housing affordability. The housing cost overburden is especially high for single households (47-53 percent of total household disposable income). The major challenge for national governments is how to induce local governments to implement policies to expand housing development suitable for lower-

income households. Few countries have been successful in doing so. National governments may make access to housing subsidies conditional upon regulatory changes and improvements in land right and registration systems. Another approach may be the training of local governments in housing and land market analyses to improve their understanding of the consequences of poor regulatory systems and the lack of new legal low-income housing construction.

Subsidies are always necessary though nonetheless, what should be subsidized and how a household's own resources can be leveraged remains in question. Often governments subsidize the entire new house package for this income segment since savings and incomes are too low to pay for the house and credit options are not available (e.g., South Africa, Mexico, Brazil, Egypt and Chile all subsidize between seventy to ninety percent of the total low-income housing costs). Such deep subsidies limit the scale of government programs and create inequities since only a fraction of deserving households will receive a subsidy.

Literature Review

"Affordability" is clearly the most compelling rationale for policies subsidizing rental housing. The high cost of rental housing, relative to the ability of low-income households to pay for housing, means that these households have few resources left over for expenditures on other goods – food, clothing, medicine – which are also necessities. Because housing represents a large share of household expenditures in market-based economies – for the middle class as well as the poor – small changes in the rent burdens faced by households can have large effects upon their levels of well-being. Direct cash housing subsidies, house prices, housing starts, income, inflation rate and real GDP growth rates in an ordinary least squares (OLS) regression to examine their relationship with housing affordability. It also can be recognized as the on-going mortgage costs or rental payments which relative to household income, affordability issues for example, owning first home, the inability to meet housing costs after paying for other expenses, or having problem of an income that is too low or house prices that are too high. There is no one universally accepted definition of rent affordability in the literature. Different definitions depend on the purpose of each study, the person (household type and income) and the property (type, size and location of dwelling). However, all definitions agree that affordable housing should secure affordable rents for a given standard of housing in terms of quality. The National Planning Policy Framework (NPPF) defined affordable housing for rent as follows: "meets all of the following conditions: (a) the rent is set in accordance with the Government's rent policy for Social Rent or Affordable Rent, or is at least 20% below local market rents (including service charges where applicable); (b) the landlord is a registered provider, except where it is included as part of a Build

to Rent scheme (in which case the landlord need not be a registered provider); and (c) it includes provisions to remain at an affordable price for future eligible households, or for the subsidy to be recycled for alternative affordable housing provision". The threshold ratio between rent and household income has often been at the Centre of attention of housing associations, policy makers and stakeholders. This ratio is used to distinguish between affordable and unaffordable housing. According to the National Housing Federation, this ratio should not exceed 25% in affordable housing. The low supply of houses has led to some landlords charging exorbitant rents. This has further led to scarce money used in renting accommodation. Rent affordability is an important aspect of several long-term Government strategies of Uzbekistan. As rent is a substantial component of costs of living, there are two specific actions mentioned in the poverty delivery plan to 2017-2021, to ensure that future affordable housing supply decisions support our objective to achieve a real and sustained impact on poverty and to work with the social housing sector in 2018 to agree the best ways to keep rents affordable. The approach to housing supply beyond 2021 will need to consider affordability across all tenures, as well as the role of social and affordable housing in particular. To this end, the construction of proper but low-priced housing to the ordinary people has form part of the core mandate of Uzbekistan government's roles and responsibilities in governance. Research findings indicated that there are several reasons for subsidy intervention in the housing sector: (i) Improving public health, (ii) Improving fairness and justice and societal stability, i.e. redistributing income, (iii) Overcoming market inefficiencies that yield monopoly profits or poor housing quality or insufficient volume of new construction, particularly in the low-income sector, (iv) "Stimulating economic growth". In most countries, the foremost reason to subsidize housing is (or was initially) to make sure that housing conditions, including water and sanitation quality, will not cause outbreaks of disease. In countries where large segments of the population, particularly in urban areas, live in substandard housing and neighbourhoods deprived of adequate services, this is easily the highest priority for housing subsidies. A second objective of housing subsidies is to improve the income or wealth distribution in society. Housing subsidy is often used to redress the sources of societal inequality (often referred to as "fairness") because it is felt that housing conditions affect people's opportunity to improve their chances of success in life, e.g., having better transport to job-opportunities, better infrastructure to provide electricity so kids can complete homework, lower crime and fear in neighbourhoods, better access to good schools in other neighbourhoods, better access to housing finance, etcetera. In other words, housing subsidies may be used to make sure that people have fair opportunities to improve their lives. The tendency to rent is also related to household size. Renter ship

rates by household size are given in lines 13 to 18. In all of these countries, single-person households were more likely to be renters than households with 2 to 4 people. In about half of the countries, households with 5 or more people were also more likely to be renters than those with 2 to 4 members. Young householders are generally more likely to be renters than older householders. In countries where young adults tend to form their own households (e.g., Sweden), that raises the renter ship rate. On the other hand, where young adults tend to live with their parents (e.g., Italy), it tends to reduce the overall renter ship rate. Among the main factors that affect rent affordability are macroeconomic factors, such as over-consumption of housing and supply shortages; labor markets, and housing factors, especially through shortage of supply and the balance between supply and demand [12,13]. Therefore, to tackle the problem of unaffordable housing a combination of housing policies and other policies is needed. This part of the studies existing policies with an impact on rent affordability in Uzbekistan. In Uzbekistan, there is no central rent intervention policy. It is up to social landlords (and landlords in general) to determine the balance between rents and housing needs of the local communities, with the general idea that rents should remain affordable to low-income households without the only viable way to be through housing benefits. Some of the policies are supporting low-income households with rent payments and addressing rent affordability. In 2015, there were about 1.8 million renter households who lived in “severely inadequate housing,” representing almost 19 percent of renter households. By 2019, the last year for which comparable data are available, the number of inadequately housed households by this standard declined by six percent. And the fraction of renters living in severely inadequate housing was less than 3.5 percent of the population. Among dwellings “affordable” to the poorest households (earning less than 30 percent of the local Area Median Income, AMI), the fraction of “severely inadequate” housing was about 5.3 percent in 2015. Among dwellings “affordable” to low-income households (earning between 50 and 80 percent of local median income), the fraction classified as severely inadequate was 2.9 percent. Physically inadequate housing is certainly a concern for some households, especially the poorest renters. But for the very poorest households, only five percent of those who pay less than 30 percent of their incomes on rent live in “severely inadequate” housing conditions. Apart from the two main economic criteria of efficiency and equity, which relate to allocation and distribution respectively, other public finance criteria are often used to analyze subsidy programs. Those criteria vary and may bear different names from one author to another. For example, gives “the five desirable characteristics of any tax system”: economic efficiency, administrative simplicity, flexibility, political responsibility, and fairness. However Stiglitz’s categories are broad and each one encompasses different

notions. A very thorough discussion of some of these and other criteria to evaluate housing subsidies. Based on those two studies, evaluate five housing programs in Indian cities based on five criteria: targeting, efficiency, transparency, administrative simplicity and sustainability. In, who presents evaluations of housing finance and subsidies in transitional countries, subsidies are judged according to the following criteria: openness and transparency, precise targeting, improved access, cost-effectiveness, administrative simplicity, cost control, and development impact (Figure 1).

Thus, based on the literature on evaluation of policy programs, the closest metaphor would be that of a “rainbow” of criteria: trying to cover the whole spectrum of interesting issues, many criteria arise, the number of which is somewhat arbitrary, and with a certain degree of overlapping between them [14-19].



Figure 1: The rainbow of criteria - Proximity and overlapping between proposed criteria for assessing housing subsidies programs.

Research Methodology

Our aim is to compute the measures of subsidization for different income groups. We therefore need specific information on the characteristics of households. An important source of information for our research is the Housing Needs Survey. This survey is organized once every 4 years. We will use the edition that was held in 2016, which covered more than 600,000 households. They are meant to be representative for all households in the country. We employ a model called MIMOS [20,21]. This model is used to make forecasts about the development of incomes and purchasing power. It incorporates detailed information about income taxation and the latest insights about expected economic growth. However, self-employed persons are excluded from MIMOS. The data will collect primary and secondary data for conducting this paper. Questionnaires which include individual, focus group and key-informant interviews with housing delivery experts, renters, contractors, project consultants and prospective buyers were used to collect the needed primary data for this research study. All secondary sources are gathered figures, statistics and facts collected to get information, such our secondary data gathered from various literatures, it may include

electronic sites, books, different journal, and research papers. Data collection instruments made use of semi-structured questionnaires, interview guide and observations via close interactions with research subjects. The data is collected from state statistical reporting, the results of regularly conducted sample surveys of economic activity of individual entrepreneurs and household income and expenditure surveys. Also, summarized data collected from the Central Bank, Ministry of Finance, Extra budgetary Pension Fund and the State Tax Committee of the Republic of Uzbekistan, World Bank database used as well.

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