

The Impact of Urban Sprawl on the Livelihood of Fringe Farmers in Mekelle, Ethiopia

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Abstract

The city of Mekelle is experiencing high population growth and haphazard settlement expansion resulting in urban sprawl¹. City authorities have responded with periodic expropriation of adjacent rural land to extend the urban limits and, effectively, provide more land for development. Between 2005 and 2008, about 9883 farmer households were expropriated from their farms as a result of the rapid expansion of the city. Due to the poor administration of the acquisition and the follow-up utilization of the acquired land, displaced farmers are not only losing their livelihood but the compensation due is delayed and insufficient to prepare them for a decent shift in life. Again, the absence of a scientific method of valuation leads to dissatisfaction on the part of many affected farmers. This paper looks at the evolving picture of unfair displacement of families whose main source of livelihood is subsistence agriculture from their small land holdings resulting in complete deprivation and destitution. Material for putting together this paper came from an ongoing doctoral research study². Primary data was obtained from a survey of 250 expropriated farmers. Findings show that the city is, indeed, sprawling into the nearby rural communities due to the uncontrolled and unauthorized acquisition and occupation of farmlands; a phenomenon that clearly has its roots in the poor land administration practices of Mekelle City Administration. The paper is structured into four parts: part one deals with the introduction covering the background, problem and objective; part two relates to review of literature and Ethiopian laws pertaining to the subject; part three covers the methodology adopted in writing the paper; part four delves into the findings; and part five is conclusion.

Keywords: sprawl, expropriation, compensation, livelihood

Introduction

Mekelle is the capital city of Tigray National Regional State with a total area of about 200 km² and total population of 215,914 (CSA, 2007). It was founded in the 14th century on the western side of the 'Endayesus' mountain ranges. The city flourished and later served as the national capital during the reign of Emperor Yohannes IV between 1872 and 1888. The geographic location of the city is latitude 13^o32'N and longitude 39^o28'E and it is 783 kilometers north of Addis Ababa. The city comprises seven autonomous sub-cities as well as an ecological land use located on the northeastern highlands of the country traversed by seasonal streams that flow into the catchment basin of River Tekeze. The average annual rainfall is about 620 mm and the mean monthly temperature is 17.6^o centigrade.

Problem Statement

The city is rapidly growing and, in the absence of effective land use control, settlements are spreading, haphazardly, into the fringe farmlands and rural communities. The fringe farmlands and communities are becoming part of the city's expansion zones, having been legally expropriated under a statutory provision that permits periodic additions from neighboring rural land to the city's overall land size for future needs. The expropriated lands often continue in the possession and occupation of the farmers until when the city needs it and at that time compensation is calculated and paid to the affected farmers in exchange for their immediate vacation. Expropriated and duly compensated lands are made available as new settlement zones for development. Unfortunately, the land conversion process is slow and the volume of supply compared to the demand is ceaselessly inadequate resulting in a long backlog of people waiting, sometimes for years, to get access to a piece of formally-allotted plot for development. The situation creates much discomfort and gives rise to the

¹ Refers to unplanned and often inefficient use of urban land

² 'Urban Sprawl in Mekelle (Ethiopia): Causes, Consequences and Management Strategies.' By the same author.

growth of informal land markets. The amount of compensation given to the expropriated farmers is not enough to sustain their livelihood. There is little/no support and follow-up by the municipality to rehabilitate the expropriated farmers. This paper is therefore intended to examine the magnitude of urban expansion and its resulting consequences on the expropriated fringe farmers.

Objective

The objective of this paper is to examine the effects of urban sprawl on the livelihoods of expropriated farmers in the fringe areas of the city. Specifically, the paper looks at the following issues:

1. evaluating the extent and direction of land expansion in the city
2. examining the magnitude of the fringe farmers expropriation
3. examining the rehabilitation support provided to the expropriated farmers
4. evaluating the post-expropriation living condition of the farmers

Literature Review

The world has witnessed unprecedented growth in urban populations since the end of World War II. The attractions of the good life offered an irresistible magnet pulling large populations from rural areas. Of course, a considerable proportion of the increase was also accounted for by high natural birth rate in most urban centers. The increasing population made demands on urban functions and services including housing, factories, commerce, and other social amenities which, in turn, put great pressure on cities to make land available for spatial growth. Angel (2010:10) states that the total urban population of the world will increase from 3 billion in 2000 to 5 billion in 2030, and that the total population of urban areas in the developing countries will double over the same period. Angel continues that over the same period the total urban *land* area is expected to expand from about 400,000 km² to more than one million km² during the period while, in the case of developing countries, the built-up areas will show a threefold increase.

The dual phenomena of urban population increase and spatial expansion is changing very fast in Africa, though at different rates. For example, Accra (Ghana) grew by 50 percent in population from 1.8 million in 1985 to 2.7 million in 2000 while its land area expanded by more than 150 percent from 130 km² to 330 km² (Angel et al, 2011:39). The land area of Addis Ababa has increased 30-fold from 18 km² in the 1930s to 540 km² in 2000. In the same time, its population increased 25-fold from 100,000 to 2,495,000 between (Feyera, 2005:19-23).

Rapid spatial expansion leads, inevitably, to the encroachment of urban activities into adjacent rural lands which may result ultimately to urban sprawl. The conversion of rural land for urban use involves a process of land transaction which, often in the developing world, is by compulsory expropriation without owners' rights to legally claim. The expropriation of farmlands due to urban sprawl is more common in developing countries because a significant proportion of the population depends on agriculture, and the number of farmlands and farmers affected by expropriation has been increasing as urbanization advances. Below is a schematic diagram of the alarming process of 'urban-rural land grab' by the uncontrollable consequences of urbanization.

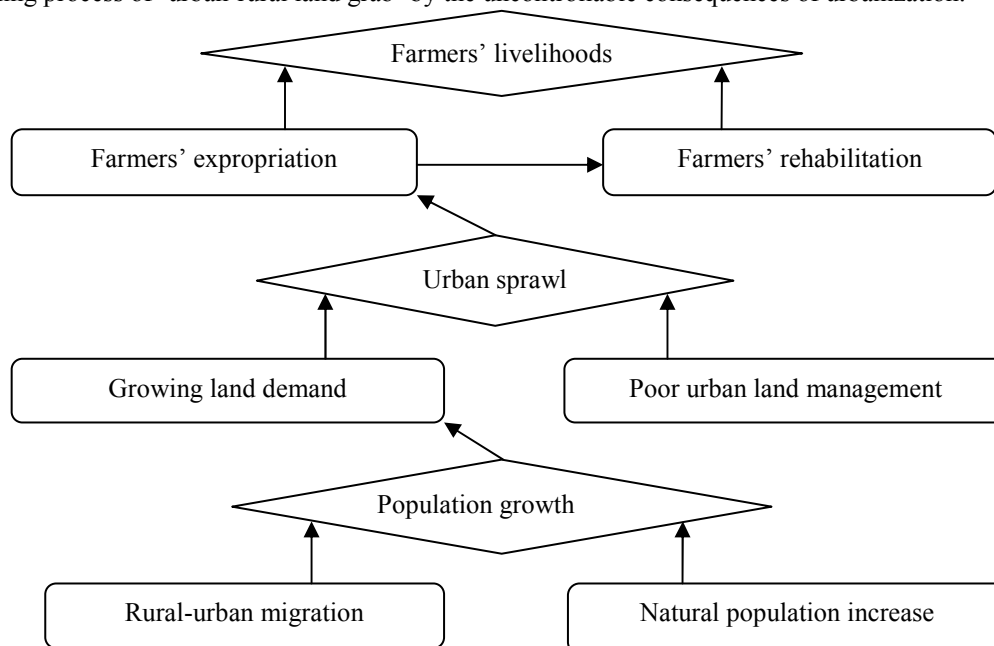


Figure 1: Schematic diagram showing the effect of urbanization
 Source: Adapted from ongoing doctoral research

The history of compulsory expropriation and compensation dates back at least to the 1789 French declaration on human and civic rights and the 1791 Fifth constitutional Amendment United States. Article 17 of the 1789 French declaration on human and civil rights; states that no one shall be expropriated from their property in the name of public interest unless just compensation is paid prior to the expropriation. A few years later, the 1791 Fifth Amendment of the United States Constitution acknowledged that private property shall not be taken for public use without just compensation. Both the French and United States centuries old proclamations show that, long years before, governments have a legal acquisition right while the property owners have right to claim due compensation.

Land expropriation often results in the loss of assets and livelihood of the affected parties. Hence it needs resettlement and rehabilitation support based on the extent and severity of the expropriation. World Bank (2004:40) recommends that providing replacement land or cash compensation will be enough if the total land loss of the expropriated farmer is less than 20 percent of the total land holding. However, if the total land loss is more than 20 percent of the total land holding the type of compensation should include other rehabilitation packages in addition to the land replacement or the cash compensation (ibid). The World Bank adds that, if more than 80 percent of the total land holding is subject to expropriation the remaining 20 percent should also be compensated because it is no longer economically viable.

Based on the above compensation and rehabilitation options different countries follow different support programs to improve the livelihood of their expropriated citizens. Some of the major rehabilitation support programs include land reallocation, alternative job creation, skill training, alternative housing, and social security provisions. For example, the Chinese government negotiates with respective industries located on expropriated land to provide permanent employment for the expropriated farmers. As a result, about 14 percent of total workforce employed in the industries in Shanghai between 2000 and 2001 comprised those affected by land acquisition (McDowell and Morrell, 2012:98).

Land tenure in Ethiopia has gone through many reformations over several millennia following the changes in governments and ideologies. Pre-1974 the imperial system of government oversaw a feudal-type of tenure which viewed all land as the legal property of the emperor and individual holdings or interests in land issued directly from the 'throne'. During that period two major types of interests existed, namely 'Rist' and 'Gult'. Rist referred to communal interest where the holder's right to the land was based on kinship to an ancestor (Frew, 2013:131). Gult, on the other hand, was interest granted by imperial decree and in addition to exercising ownership control also entitled the holder, usually a person from the nobility, to levy and collect national taxes from the settlers (ibid). In 1974 the millennia-old imperial system was overthrown in a military coup-d'état which established a socialist-oriented government that came to be popularly known as the Derg.

The Derg nationalized land across the country by promulgating two distinct laws; Proclamation No. 31/1975 transferred the administration of rural land to peasant associations with the right to distribute land to tenants in their localities (Daniel, 2012:4). Proclamation No. 47/1975 dealt with urban land and the 'extra houses' issue by which owners of more than one house were made to surrender all of the extra units without compensation. These multiple home owners were permitted to own and live in one house and, where they were involved in business, to carry on the business in another (Hawaz, 2010:13). The proclamations restricted the sale, exchange, mortgage, donation and transfer by inheritance.

The FDRE government that replaced the Derg in 1991 introduced far reaching reforms to the rather extreme and draconian provisions of the nationalization proclamations of a decade and half earlier. The 1995 Constitution, article 43/1 declared land, "as one of the natural resources, is the common property of the nations, nationalities and peoples of Ethiopia and the right to ownership of land as well as natural resources is exclusively vested in the state and the peoples of Ethiopia". Though basic ownership and administration of the land stayed with Government, it must be recognized that the land tenure situation was nevertheless dramatically transformed by the 1995 Constitution. Article 40 expanded the rights of citizens to acquire, use and transfer private property. However, according to Article 40/8, the government retained the power of eminent domain to compulsorily expropriate property from owners if and when needed for public purpose subject, of course, to payment in advance of compensation commensurate to the value of the property.

Methodology

This paper was put together from observations and findings of an ongoing doctoral research into a much larger and broader subject on land administration in Mekelle. That study conducted a questionnaire survey and interviews to construct a primary data base for analysis. In addition, relevant secondary data from spatial and non-spatial sources at various levels of city administration was collected. Conclusions of this paper, therefore, identify fully with location circumstances from that study.

Findings

The paper found that land administration in Mekelle City is poor and the manner by which the need for new land

was estimated and acquired into the city stock was unscientific. Between 1994 and 2005 the city's land area increased threefold increase from 23 km² to 74 km² as a direct consequence of the unscientific land acquisition process. During the same period, the population increased by only 67 per cent from 96,938 to 161,828. As a result, the gross population density decreased by half from 4215 people per km² in 1994 to 2189 people per km² in 2005. Statistical evidence showing the gross mismatch between the population growth and expansion of Mekelle City's land area is presented in Table 1.

Table 1: Urban expansion in Mekelle between 1984 and 2005

Year	Total land area in Km ²			Total Population			Population density	Land per capita
	Area	Area Change	percent	population	Number	Percent		
1984	16	-	-	61,583	-	-	3849/km ²	260 m ²
1994	23	7	44	96,938	35355	57	4215/ km ²	237 m ²
2005	74	51	221	161,828	64890	67	2189/ km ²	457 m ²

Source: Mekelle City Administration (constructed from documents)

The alarming rural land conversion into urban use is now threatening the agricultural sector. In the study, the paper found that from 1964 there had been a visible reduction in adjacent rural land stock from as high as 93 percent 1964 to a little more than 26 percent of the total urban area in 2005 as shown in Table 2. On the other hand, the urban built-up area which accounted for less than 7 percent of the total land area in 1964 had dramatically increased to more than 73 percent in 2005. Clearly, based on the recorded trend the city is not only acquiring more than the land it needs, but also the premature phenomenon is converting rural farmlands much too fast and affecting agricultural productivity.

Table 2: Land use change between 1964 and 2005

Land use type	1964		1994		2005	
	Area in km ²	percent	Area in km ²	percent	Area in km ²	percent
Built up area	7	6.95	24	23.8	74	73.6
Cultivated land	66	65.6	56	55.7	-	-
Forest/grass land	27	26.8	20	19.9	-	-
Others	0.65	0.65	0.65	0.65	-	-
Total	100.65	100	100.65	100	100.65	100

Source: Adapted from Mengistu, 2006 and Mekelle City Administration

Another finding from the study was the absence of proper physical planning and land use control in the City. Planned as well as unplanned settlement is spreading uncontrolled in all directions - southwards to Aynalem and Debri of Hadinet Sub-city, westwards to the Adishumdhun and Adiha of Hawelti and Ayder Sub-cities respectively, and northwards to the Lachi and Feleg-Daero of Semen sub-city. The southward expansion towards Aynalem and Debri agricultural areas is faster mainly because of better topography and better infrastructure and is suitable for residential and mixed-residential use. The westward expansion of the city is due to the availability of gentle agricultural land suitable for urban settlement. The northern expansion area is used for industrial, residential and urban agriculture activities.

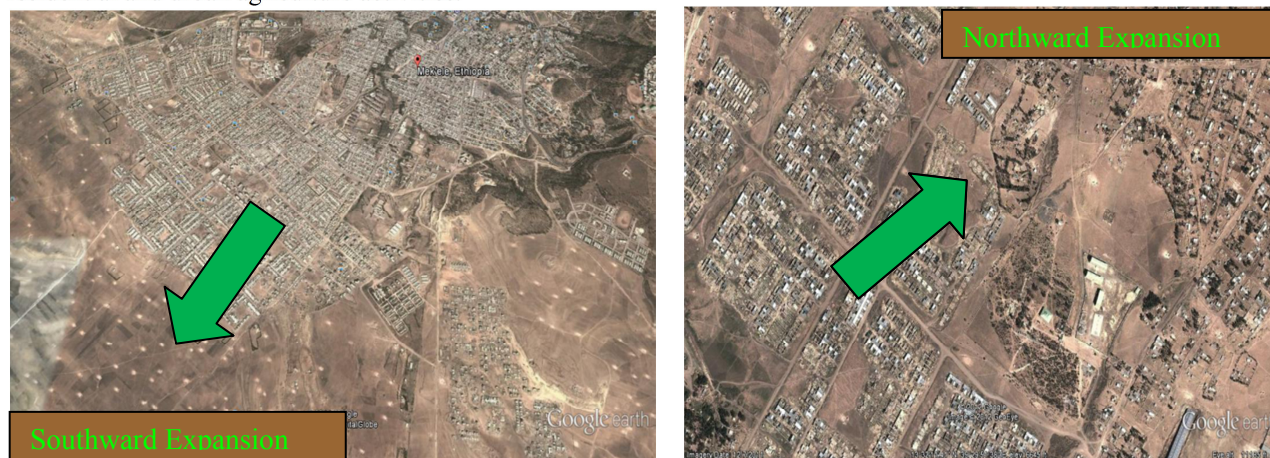


Figure 4.1 Debri-aynalem (left) and Lachi-Felegdaero (right) expansion areas

Source: Google earth 2011; last accessed April 2014

In spite of the inefficient utilization of the earlier acquisitions, the number of expropriated farmers had been on

their compensation in a way that improves their livelihood. In the study, 75.2 percent of the respondents said that they had spent their compensation money to buy food items (chart 1). About 10.4 percent started new businesses and another 8.8 percent bought/construct homes. Clearly, most expropriated farmers were not putting their compensation to good use and the study established in was traceable to the lack of organized rehabilitation schemes that would build capacity in the farmers for their future.

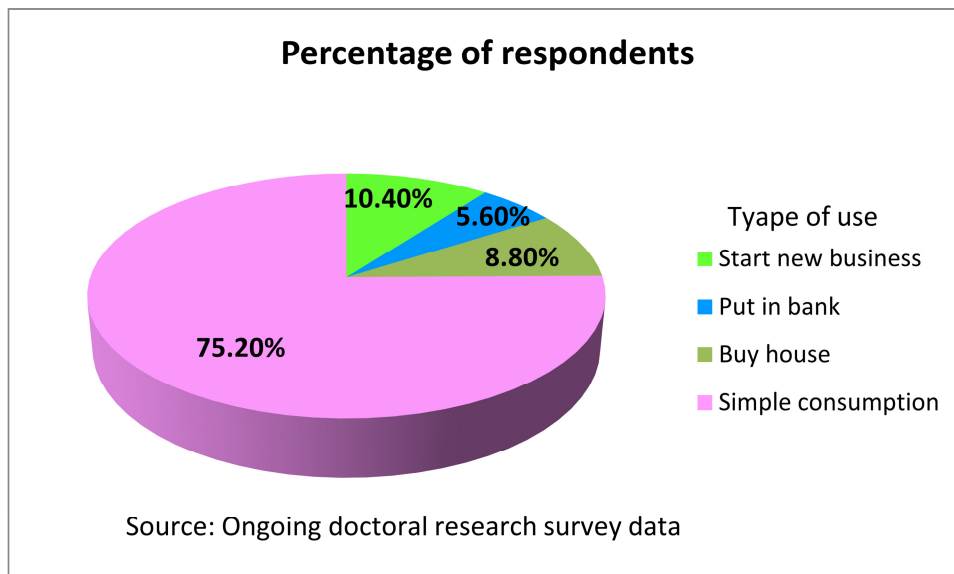


Figure 1: Spending of compensation money

Theory and good practice of compulsory acquisition of rural land stress the need for support and rehabilitation beside cash compensation. Such support is in the form of skills training, personal financial planning advice, business building support, and so on. In the study, it was found that expropriated farmers were literally abandoned once they received cash compensation and the evidence is that a large percentage of them overwhelmed by the sheer size of the amounts and having no tangible plan in hand, wasted it in no time and quickly joined the urban poor statistic. Table 3 shows a very frightening situation where 86 percent of respondents saw their wealth position decline below the level they were before the acquisition. On the contrary, a small percentage of 17 percent who did receive some form of additional institutional support such as a residential plot with building permit, responded that their overall livelihood improved. This is unequivocal proof that the more the support the better the chances of improving the livelihood of the expropriated farmers.

Table 3: Level of support and overall income of farmers

Level of support	Overall income					
	Improved		No change		Declined	
	Freq	Percent	Freq	Percent	Freq	Percent
1 Good	13	17.8	4	7.5	3	2.4
2 Fair	29	39.7	11	20.8	14	11.3
3 Poor	31	42.5	38	71.7	107	86.3
Total	73	100	53	100	124	100

Source: Ongoing doctoral research survey data

Usually, in the absence of extra institutional support and follow-ups farmers who have no non-farm skills and no experience in urban life, most return to agriculture as sharecroppers on lands belonging to other farmers. As a result their new source of income, though substantially reduced, continues to be agriculture. Table 4 shows 60.4 percent of expropriated farmers still engaged in agriculture. It must be emphasised, though, that a sizable proportion of farmers affected in these cycles of expropriation were found in the retirement age range of 60 and above and with very little interest in changing vocation.

Table 4: Major source of income after expropriation

Source of income	Number of respondents	
	Frequency	percent
1 Share cropping	151	60.4
2 Daily labor	43	17.2
3 Employment	6	2.4
4 Own business	19	7.6
5 Not Engaged	31	12.4
Total	250	100

Source: Ongoing doctoral research survey data

Again, only 10 percent were able to relocate into urban vocations, a clear sign that farmers cannot on their own compete for opportunities in the city. Sadly, many resort to using their compensation funds on daily maintainance until it is completely exhausted at that time they simply swelled up the ranks of the urban poor in the city.

As the expropriated farmers try to adjust to the new urban lifestyle and compete for existing urban opportunities; their overall income deteriorates. The study showed that 49.6 percent respondents have experienced huge income declines while 21.2 percent have had their income unchanged after the expropriation. This means that less than 30 percent of the respondents overall income has shown an increase after expropriation (chart 2).

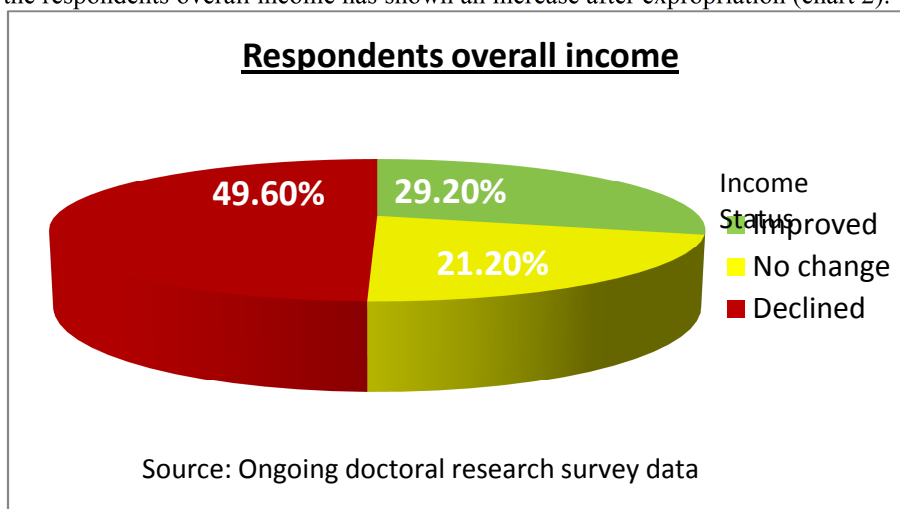


Chart 2: Respondents overall income status after expropriation

The paper’s final finding comes in the form of ‘a collective judgment’ on the process which the farmers consider terrible and an unfair deprivation of their longtime livelihood and lifestyle. Table 5 holds very grim statistics indicating that for 87.7 percent of the study population life after the expropriation is not improving but declining.

Table 5: Farmers livelihoods after expropriation

Description	Farmers livelihood status					
	Improved		No change		Declined	
	Freq	percent	Freq	percent	Freq	percent
1 Overall income	73	29.2	53	21.2	124	49.6
2 House condition	10	4.0	239	95.6	1	0.4
3 House equipment	22	8.8	228	91.2	0	0
4 Household diet	28	11.2	170	68.0	52	20.8
5 Household clothing	21	8.4	219	87.6	10	4.4
Average		12.3		72.7		15

Source: Ongoing doctoral research survey data

Conclusion

Mekelle is rapidly expanding as a city and the number of expropriated farmers is also increasing as a direct consequence of the rapid expansion of the city. The conversion of rural farmlands into urban land use is not only expropriating fringe farmers but also depriving them of their livelihood. The compensation paid is not enough because the valuation method does not reflect current land market and cost of living. In addition compensation expropriated farmers need rehabilitation support because they lack skill and experience to compete urban

opportunities. As a result the overall income and livelihood of the fringe farmers is declining as a result of the rapid expansion of the city and conversion of farmlands.

Recommendation

1. The city has to exhaustively and economically utilize existing land stock within its planning boundary before statutorily acquiring additional land from nearby rural areas,
2. The statutory acquisition of fringe land should be based on scientific predictions, and once the land is acquired proper inventory should be kept and well managed to avoid squatting and land speculation,
3. Future compulsory land acquisition plans should consider the livelihood of the affected community, and the environmental and economic contribution of agriculture ,
4. The method of land valuation and amount of compensation has to consider current land market condition and cost of living. Hence the existing valuation and compensation laws need to be revised in a manner to reflect these,
5. The city administration needs to establish rehabilitation programs to support expropriated farmers. The support programs may include skill training, financial planning advice, business building support, providing plots to run business among others

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