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**RESEARCH ARTICLE**

**THE ROLE OF MICRO-FINANCE INSTITUTIONS IN ALLEVIATING POVERTY AMONG SMALL SCALE FARMERS IN KENYA: EVIDENCE FROM SMALL-SCALE WHEAT FARMING IN MOIBEN DIVISION, UASIN GISHU COUNTY**

**Keror Isaac Kipruto**

P.O BOX 4936, ELDORET, CODE 30100, KENYA

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**ABSTRACT**

This paper explores the role of micro-finance institutions in alleviating poverty among small-scale wheat farmers in Kenya. The paper discusses the utilization of loans from micro-finance institutions by small scale farmers in growing wheat to illustrate how farmers improve their living standards and to a large extent alleviate poverty among themselves. The paper uses data obtained in a six-months study carried out in five locations in Moiben Division, Uasin Gishu County, Rift Valley Province, Kenya. The data to which this paper is based were collected through survey method, Focus Group Discussion (FGD), informant interviews, observation, and secondary sources. A total of 200 small-scale wheat farmers selected using simple random sampling participated in this study. The data obtained were analyzed both qualitatively and quantitatively. The paper argues that although micro-finance institutions provide small-scale wheat farmers with opportunities to acquire loans, the loan amount being offered is inadequate for wheat production given the fact that wheat production mainly uses capital intensive technology. As a result, small-scale farmers use low quality seeds, fertilizers and chemicals which result into low yield, low revenue income and consequently low standard of living. The paper concludes that investing loans from micro-finance institutions in small-scale wheat production does not result in sufficient income revenue; hence tend to promote and not alleviate poverty.

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**INTRODUCTION**

In Kenya, agriculture accounts for 30% of the Gross Domestic Product, employs about 75% of the labour force, and is a major foreign exchange earner (Republic of Kenya, 1988). It also provides raw materials for the manufacturing sector and therefore stimulates industrial growth and non-farm incomes and employment. However, despite its importance, the full potential of the agricultural sector has not been realized. This is attributed to various reasons which include declining crop yields, decreasing farm sizes, inadequate use of appropriate technology, high cost of farm inputs and lack of land use policies (Ibid). As a result, Kenya is faced with various challenges including food shortages, unemployment crisis, increase in poverty and lack of capital all of which have resulted to the declining economic growth rate which reached a negative rate of 0.3% in the year 2000 (GOK, 2001). Wheat farming in Kenya goes back to the colonial era. It is grown both on large extensive lands and small-scale lands and it was introduced by Lord Dalame in the cool highlands of the Rift valley Province in Nakuru. Small-scale farmers grow wheat in small areas of less than 10 acres. Currently, Rift valley produces the bulk of the country's wheat output of more than 70% of the country's total output (Winfred and Mumu 2004). Uasin Gishu District in Rift Valley Province is basically an

agricultural district, producing more than one-third of the total wheat being produced in Kenya (DAO, 1996). Agriculture forms the main driving force for industrialization in the District and most industries within Eldoret (the headquarters of the District) are agro-based, utilizing raw materials from agricultural products (ibid).

Wheat production in Kenya and Uasin Gishu District in particular, has however declined over the years due to high production costs; high capital costs; lack of credit for production necessitated by withdrawal of Agricultural Finance Corporation (AFC), a government agency that offers credit from the seasonal credit programme; and the low level of technology utilization (DAO, 2001). To this end, Kenya has had to rely on wheat imports to meet the domestic and regional demand for wheat and wheat products. This has however worsened the situation given that increased wheat imports have led to a further decline in wheat production because imports dampen domestic prices, which is a disincentive to production. Kenya's exports of wheat products have also faced increased competition because of the high cost of domestic wheat. These factors combined reduce the progress of domestic manufacturing industry and consequently loss of employment and livelihood of many Kenyans, thus exacerbating levels of poverty. In an attempt to mitigate on the high capital costs and bridge the gap caused by the withdrawal of AFC from offering credit to farmers, micro-finance

\*Corresponding author: [keror2001@yahoo.com](mailto:keror2001@yahoo.com)

institutions have emerged and they are offering credit to both large and small-scale wheat farmers. Over the last 20 years, microfinance institutions (MFIs) in Kenya have largely developed through concerted grant funding. This situation prevailed up to the late 1990s when key donors started pushing MFIs to start moving towards sustainability in their operations (Macharia, 2001). These MFIs provide financial services to people dealing with small and micro-businesses or farmers that do not have access to loans from commercial banks. A micro finance institution can either be credit union, savings and credit co-operative (SACCOs), Non Governmental Organizations (NGOs), self help organizations, religious organizations or specialized banks (World Bank 1994). These institutions offer micro finance which refers to a movement that envisions 'a world in which as many poor and near-poor households as possible have permanent access to an appropriate range of high quality financial services, including not just credit but also savings, insurance, and fund transfers' (Christen, 2004:2-3).

Limited access to credit has been identified in a number of studies as one of the major constraints that hinder the process of empowering the poor to break out of the poverty circle. This has led governments worldwide to devise a number of strategies to provide finance to small-scale farmers in order to increase food security and generate more income (Dondo, 1999). For instance, the Kenyan government came up with micro-credit policies that gave rise to micro-finance institutions such as the Kenya Rural Enterprise Program (K-REP), Faulu Kenya, Faidi Kenya and Kenya Women Trust Fund among others (ibid). As Todaro (1998) argues, there is need for governments to seek ways of improving and developing small-scale farming because the core problems of widespread poverty, growing inequalities, rapid population growth and rising unemployment all find their origin in the stagnation and often retrogression of economic life in rural areas. The emergence of MFIs therefore, is expected to boost small-scale farming as farmers move through the stages in the evolution of agriculture production as described by Todaro (1998) in which the first stage is characterized by low productive subsistence farming where the main aim is to produce for food only; the second stage is characterized by mixed agriculture where part of the produce is grown for self-consumption and part for sale to commercial sector; and the final stage is characterized by modern farming whose aim is efficiency so as to produce high quality and quantity agricultural products using advanced levels of technology.

Initially, the small-scale farmers in Moiben division of Uasin Gishu District could not engage in wheat farming because they could not raise the minimum capital needed, given the fact that wheat farming is greatly mechanized. The small-scale farmers could not secure loans from the AFC; partly because of the small size of their farms, lack of security types needed by AFC and corruption by the management of the corporation. They were therefore, mainly involved in the production of maize for subsistence purposes but when the MFIs started giving out credit services to both large and small scale farmers, the small scale farmers reduced their involvement in maize production and engaged mainly in wheat production for commercial purposes. However, despite the fact that most small-scale farmers engage in wheat as opposed to maize farming through loans from the micro-finance institutions

(MFIs), Moiben division is currently experiencing food insecurity and to a large extent poverty. This paper therefore, discusses how micro-finance institutions have contributed to food insecurity and high poverty levels among small scale wheat farmers in Moiben Division.

## METHODOLOGY

This paper is based on a study carried out among small-scale wheat farmers in Moiben Division, Uasin Gishu District between May and October 2007. The Division is one of the division of Uasin Gishu District which extends between longitude 34° 50' and 35° 37' East and 0° 03' and 0° 55' North. The division has a total area of 778 km<sup>2</sup> with a population of 92,717 (District Statistic Office, Eldoret, 2001). The division consists of 10 locations and the study was carried out in five of the 10 locations namely; Moiben, Kaplolo, Koitoror, Sergoit and Mumetet. Various data collection methods were employed in the study. A total of 200 questionnaires were self administered to respondents selected using simple random sampling. The questions in the questionnaires pertained to demographic characteristics of the respondents; size of respondents' farms; micro-finance institutions respondents are allied to; and respondents' expenditure of loan secured from micro-finance institutions. The second data collection method was the Focus Group Discussion (FGD). The FGDs comprised of respondents ranging between 6 and 8. The participants for the five FGD sessions were selected using purposive sampling. The FGDs generated data on processes involved when engaging in wheat farming; role and operation of micro-finance institutions in small-scale farming; expenditure of micro-finance loans; adequacy of loans from micro-finance institutions; and the extent to which the respondents have alleviated poverty using loans from micro-finance institutions.

The third data collection method was key informant interviews which were conducted on respondents selected using purposive sampling. The key informants included location chiefs, community elders and opinion leaders from the five selected locations. The topics covered in the key informant interview guide revolved around the extent to which the respondents have alleviated poverty using loans from micro-finance institutions. The fourth data collection method used in the study was observation. The method was used to observe and ascertain how the wheat farms were faring. Finally, secondary data were also gained from personal and institutional libraries, archives and information offices at the District level. Data on which this paper is based were analyzed and presented both qualitatively and quantitatively. The quantitative analysis involved deriving statistical descriptions and interpretation of data using descriptive statistics. The quantitative data were analyzed using the SPSS. Findings from the data analyzed using SPSS are presented using description, frequency table and subsequently discussed. Qualitative data analysis involved looking for themes and contents in the qualitative data generated from the sets of questionnaire used in the study, key informant interviews, observation data and focus group discussions. The results of the qualitative data analysis are triangulated with quantitative expressions to explain patterns emerging from the descriptive statistics. The findings of the study are presented and discussed next.

## RESULTS AND DISCUSSION

### Processes of Credit Acquisition from Micro-finance Institutions and their Adequacy to Small-Scale Wheat Farmers

The study revealed that the main approach to credit in MFIs is through solidarity groups. This is in consonant with studies carried out by Helmu and Mosley (1996). It was established that solidarity groups in Moiben Division comprise of members between 15-60. Any group member in need of a loan must first get approval from the Group members given the fact that the solidarity groups are jointly liable for the loan of each group member. As Yunus (1999:112) argue, the 'social collateral' is designed to reduce the risks of lending and ensuring high repayment rates. All the solidarity groups in Moiben Division were all found to be registered with the social service department as non-registered groups are ineligible for loans in MFIs. Micro-finance institutions operating in Moiben Division provide loans to clients based on the amount the individuals have deposited with the institutions. There are two types of payments: shares and savings. A member of a group can only qualify for a loan whose value is thrice the amount available in the member's savings account. The payments for both savings and shares are made weekly. It was revealed that shares are usually Kshs 100 while savings depend on an individual's capability but it does not go below Kshs 100. It was revealed that once loans are given to members of a solidarity group, the recipients of the loan are given a grace period of one month after which they start repaying the loan on a weekly basis for a period not exceeding 52 weeks.

In order to monitor payment of savings and shares amounts as well as repayment of loans, officials from the micro-finance institutions meet with their respective groups once in a week. Failure to repay a loan without proper reason is punishable by a fine which is usually double the normal price. In the event of a loan default by any member of a group, the entire group's shares are used to recover the loan. As a result, the solidarity groups only approve loans for members who are capable of repaying their loans. According to the findings, there were six MFIs operating in Moiben Division at the time of the study. This is shown in Table 1 below:

**Table 1: The Micro Finance Institution the Respondents are allied**

	Frequency	Percentage
Faulu Kenya	78	39.0
Kenya Rural Enterprise Program (K-REP)	36	18.0
Kenya Women Trust Fund (KWTF)	16	8.0
Family Finance	22	11.0
Kadet	26	13.0
Faidi	22	11.0
Total	200	100.0

The study revealed that the loans the small-scale wheat farmers obtain from the MFIs provide them with a capital base that enables them to purchase farm inputs such as seeds, fertilizers and even empower them with the money needed to hire a tractor and also lease more land. However, it was established that some members do not invest the whole loan

amount on wheat production after acquiring such funds. Some members were said to be using part of the money in either alcohol or just using it on personal needs. Such farmers therefore, invest very little on wheat farming thereby reducing wheat production and income. This explains why some farmers cannot meet their basic necessities after the wheat have been harvested.

The findings of the study also reveal that small-scale wheat farmers do not access adequate loan amount from the MFIs. This is attributed to low savings by the individual members of the solidarity groups. It was established that most of the small-scale wheat farmers do not have alternative sources of income except that from the farm production; hence are unable to save much with the MFIs thus leading to low borrowing power. This is manifested by the fact that only 5% of the small-scale wheat farmers interviewed were eligible to access loan worth Ksh 40,000-100,000. This information is shown in Table 2 below:

**Table 2: The Amount of Credit the Respondents Received from MFIs in 2006**

	Frequency	Percentage	Cumulative Percentage
5000-10000	18	9.0	9.0
11000-20000	42	21.0	30.0
21000-30000	78	39.0	69.0
31000-40000	52	26.0	95.0
Above 40000 and below 100,000	10	5.0	100.0
Total	200	100.0	

The results reveal that majority (95%) of the respondents were eligible for up to Kshs 40,000 as loans from MFIs. With low borrowing power, small-scale wheat farmers are unable to cultivate high quantity of wheat during harvesting time; hence earn inadequate income that is not sufficient to improve their living standards.

### Stages and Expenditure Involved in Wheat Production: From Planting to Marketing

The study reveals that majority (83%) of small-scale wheat farmers in Moiben Division own/use 4-6 acreage of land to grow wheat. This information is summarized in Table 3 below:

**Table 3: The Size of Land Owned/Utilized by Small-scale Wheat Farmers in Acres**

	Frequency	Percentage	Cumulative Percentage
1-3 Acres	92	46.0	46.0
4-6 Acres	74	37.0	83.0
7-9 Acres	32	16.0	99.0
10-12 Acres	2	1.0	100.0
Total	200	100.0	

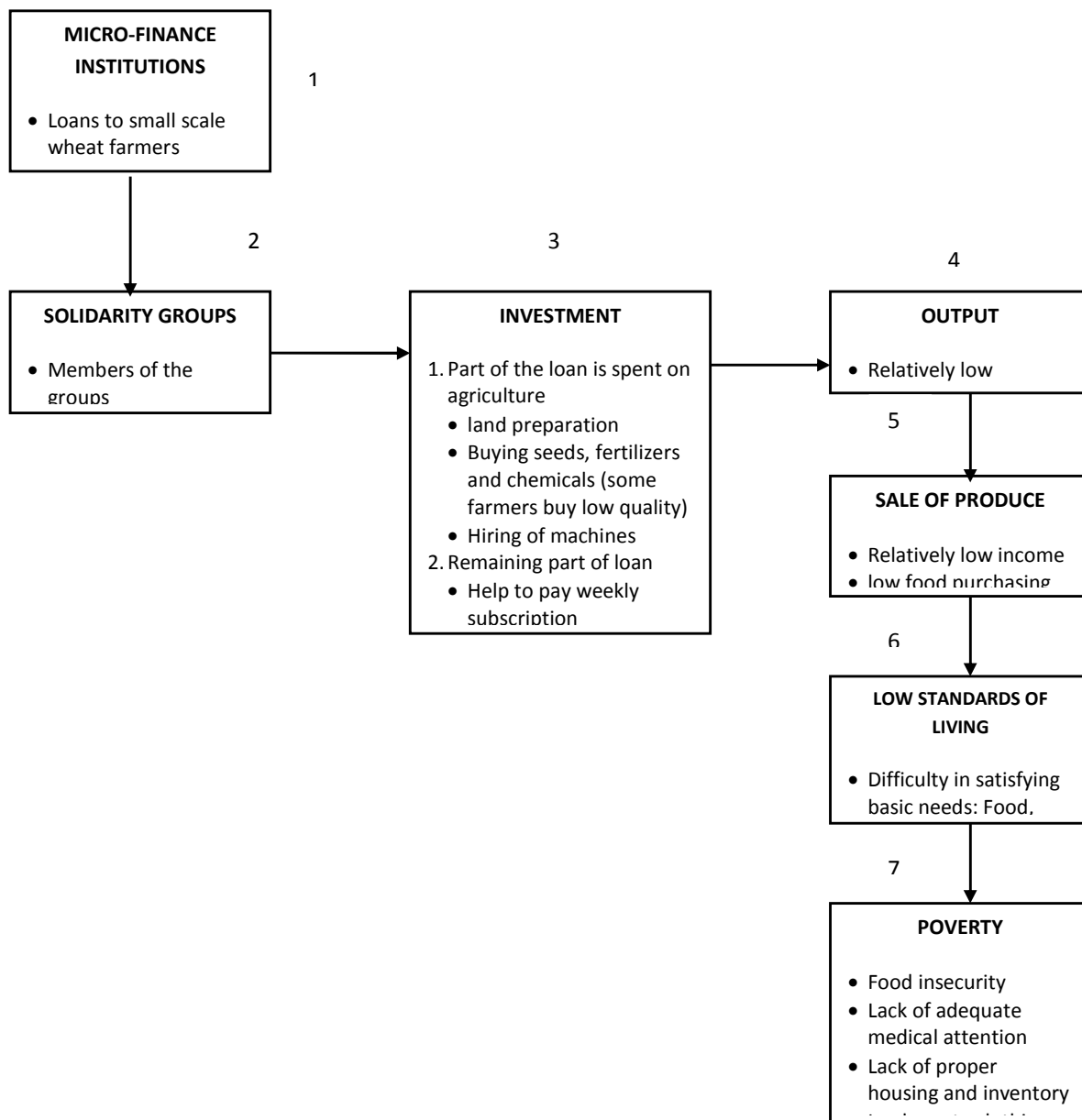
The results show that on average, small-scale wheat farmers in Moiben Division own/use an average of four acres of land to grow wheat. This section therefore, analyzes the stages and expenditure involved to grow wheat on a four acreage land. Production of wheat starts with the preparation of land which begins in March of every year. Small-scale wheat farmers in Moiben Division usually hire tractors from the large-scale farmers. Averagely, given the variation in fuel prices, tractors

were being hired at Kshs 2000 per acre during the initial ploughing at the time of the study. The land is then harrowed twice by use of tractors at a cost of Kshs 1500 per acre. Planting after the second harrowing of land is also done by use of a tractor. This is prompted by the fact that wheat planting does not require spacing, so it would be tedious to use human labour. The farmers therefore plant wheat seeds by use of a tractor at a cost of Kshs 1500 per acre. Varieties of wheat seeds do exist and choice of the one to use depends on early maturity, resistance to pests and diseases and high productivity. Initially, farmers were planting *Kongoni* or *Tembo* seed varieties that were taking four months to mature, but due to change of climate, the two varieties could not be sustained by the low rainfall; hence resulted into low productivity. As a result, a new variety seed, *Kenya Mwamba* which matures within three months was introduced; others that mature after two and a half months such as *Kenya Paka*, *Duma*, *Njoro one* and *two*, *Chiriku* and *Kwale* were also introduced. However, at the time of the study, the farmers were using *Mwamba* and *Njoro one* and *two* as they do better even in areas of low rainfalls. It was established that wheat seeds are bought from Kenya Seeds Limited but some farmers acquire them from their farm's produce. The farmers also choose on which type of fertilizer to apply during planting. The quantity of fertilizers to be used depends on the acreage of land as well as on the farmers' financial resources. The recommended quantity is 50 kg per acre. The farmers were using Di Ammonium Phosphate (DAP) which was being sold at Kshs 3900. Apart from DAP, some farmers were also using 23-23 which cost Kshs 2600, MAP 11-52 at Kshs 1900, or Mavuno that cost Kshs 1650. After planting, the farmers use chemicals to eradicate weeds. This is done some weeks after planting. One can opt to use a tractor-sprayer at a cost of Kshs 3000 per acre or use a knapsack sprayer. The sprays are mixed with water in the ratio of about 1:80, where one litre of spray is mixed with 80 litres of water. The sprays are of different varieties as some of them such as *Murphamine 72%* costs Kshs 1500 for every five litres and can spray a five-acre farm. There is also a five litre *Buctric MC* which is sold at Kshs. 6000 and can spray a five acre farm. It was revealed that after one and a half months, wheat crops are again sprayed or top dressed to control crop pests and diseases. This can be done by either a tractor at a cost of Kshs 3000 per acre or human labour. The different types of sprays used at this stage include five litre *Tilt* which goes for Kshs 8300 and one litre *follica* which goes for either Kshs 1600 or Kshs 2000. The spraying of the wheat crops for the control of pests and diseases is done after every fourteen days depending on the availability of rain. After the maturity of the crop which depends on the type of seed used, farmers prepare for the harvesting. Preparation for harvesting involves buying sacks at Kshs 40 and thread at Kshs 100. Harvesting is done using a combine harvester which is hired at Kshs 1500 or Kshs 1600 per acre. Averagely, it was established that one acre of land produces 10-15 bags of wheat. The labour cost for carrying each sack of wheat from the farm is Ksh 10. The yield can be sold immediately after harvest or later depending on the individual farmer or terms of loan repayment. During disposal, it was revealed that the wheat produce at the time of the study were being sold to either middlemen at Kshs 2000/2500 or to millers who include *Unga Limited* (Ksh2820 per sack), *Dola Limited* (Ksh 2800) and *Mombasa Millers* (Ksh 2800). In addition, the cost of transporting the harvest to the millers was found to be Ksh

100. The findings of the study reveal that wheat farming is highly mechanized and requires resources if high quantity is to be maintained. From the description above, it is evident that averagely, land preparation of an acre of land by use of a tractor takes Kshs 5000; Planting costs Kshs 1500, spraying for weed control costs Kshs 3000, spraying for pest and disease control costs Kshs 3000 and harvesting costs Kshs 1500 making a total cost of Kshs 14000. In addition, the cost of fertilizer for an acre of land is Kshs 3900 and the cost of weed spray is Kshs 6000 (*Buctril*) while that of diseases and pests spray is Kshs 8300. On average, weed spray is applied twice thus the cost for second spraying is Kshs 6000 (*Buctril*). The seeds are bought at an average cost of Kshs 1000 and the cost of buying 15 sacks for storage is Kshs 600 and transporting the sacks to the vehicle is Kshs 100 while transportation cost to the millers is averagely Kshs 400. Thus, the total cost of wheat production for an acre of land adds up to Kshs 40,300. As revealed in Table 2 of this paper, majority (95%) of the small-scale wheat farmers in Moiben Division can only qualify for up to Kshs 40,000 and since the cost of wheat production in one acre is Kshs 40,300, this shows that the farmers are obliged to look for more funds from other sources to supplement the loan amount. Alternatively, it was established that some small-scale farmers resort to cheap seeds, fertilizers and chemicals which results in poor quality productivity; hence low income revenue. The results of the study therefore, reveal that most small scale farmers are unable to grow wheat on more than one acre of land from the loans acquired from MFIs. From the calculations above, it is evident that the total selling price of 15 bags of wheat is Kshs 42000. This therefore, reveals that small-scale wheat farmers make a net profit of only Kshs 1700 per acre which is not sufficient to meet the basic needs of small-scale farmers; yet small-scale farmers perceive growing of wheat as more lucrative than that of food crops. This explains why the small-scale wheat farmers in Moiben Division experience food insecurity and high levels of poverty.

## Conclusion

The findings of the study reveal that although micro-finance institutions provide small-scale wheat farmers with opportunities to acquire loans, the loan amount being offered is inadequate for wheat production given the fact that wheat production is highly mechanized and the cost of production is high due to high cost of farm inputs as well as hiring of farm machineries. As a result, small-scale farmers use low quality seeds, fertilizers and chemicals which eventually result into low yield; hence low income and consequently low standard of living. The fact that loan repayment is done weekly after a one month grace period and that wheat production takes a minimum of three months to dispose, small-scale farmers find it difficult to repay back the loan; hence are forced to look for alternative sources of money or use the loan amount to repay the loans which are usually charged at a high interest. Investing loans from MFIs in wheat production therefore, does not result in sufficient income revenue as an acre only earns a net profit of Kshs 1,700. Thus, small-scale wheat production is expensive and denies farmers adequate income revenue to meet their basic needs and necessities; hence tend to promote and not alleviate poverty. This is illustrated in the conceptual framework in Figure 1 below:



**Figure 1:** Conceptual Framework on how the use of micro-finance promotes poverty among small-scale wheat farmers

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