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Access to credit for fish farming: A case study of fish farmers, Bihar, India

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Abstract

Access to credit plays a vital role in the growth and sustainability of fish farming operations. It enables farmers to invest in essential inputs such as quality seeds, feed, equipment, and infrastructure. Adequate financing supports improved operational efficiencies, enhances productivity, and helps farmers to scale their businesses. Rank Based Quotients (RBQ) was used to study the constraints faced by fish farmers of Kishanganj district. Creditworthiness and Documentation, Lack of financial literacy, Uncooperative behavior of Bankers and complex application procedure for credit, were identified as constraints faced by fish farmers of Kishanganj district to avail the institutional credit facilities.

Keywords: Fish farming, access to credit, institutional credit

Introduction

The term 'Credit' comes from a Latin word '*Credo*' which means 'I believe'. Professor Galbraith viewed the Credit as a temporary transfer of asset from one who has to the other who has not. In other words, Credit / loan is certain amount of money provided for certain purpose on certain conditions with some interest, which can be repaid sooner (or) later. Credit is based on trust between the borrowers and the lenders. So, to maintain the trust between the borrowers and lenders, there is a requirement of some documents against the credit, which is called as security for providing the credit and this type of credit is termed as secure loan. Most of the credits given by Institutions are secure loans (institutional credit) and the non- institutional credit sources may not require to pledge any security documents but it may be very exploitative.

Indian agriculture including fisheries is predominantly a smallholder agriculture with an average land holding size of 1.08 ha (2015-16). Eighty-six (86) percent of all holdings are of less than 2 hectares, accounting for about 47 percent of operated area. Therefore, timely and adequate credit at a reasonable cost to the farmer is crucial in increasing agricultural production and farm incomes. Without adequate credit, farmers cannot ensure optimal usage of inputs for farm operations (Gulati & Bathla, 2002) ^[1].

Fish farming, or aquaculture, is an essential component of the agricultural landscape in India, particularly in states like Bihar, where vast water bodies provide opportunities for freshwater fish cultivation. Kishanganj district, known for its diverse fish species, has emerged as a potential hub for aquaculture. However, access to credit remains a significant

hurdle for the fish farming community, affecting their ability to adopt modern practices, improve production, and achieve economic stability.

Access to credit plays a vital role in the growth and sustainability of fish farming operations. It enables farmers to invest in essential inputs such as quality seeds, feed, equipment, and infrastructure. Adequate financing supports improved operational efficiencies, enhances productivity, and helps farmers to scale their businesses. According to the National Bank for Agriculture and Rural Development (NABARD), the aquaculture sector requires substantial capital investment, highlighting the importance of timely and accessible credit facilities.

Bihar is predominantly an agricultural state where a significant part of the population relies on farming and allied activities, including fisheries. As mentioned above the average landholding capacity of the state is small, in order to utilize the available land potentially, institutional credit is crucial for farmers engaged in fisheries, which require substantial investment in terms of inputs and infrastructure. Despite the efforts made by the government post-1969 to enhance agricultural credit through nationalization and initiatives like NABARD, challenges persist. Many farmers, particularly in Kishanganj district, struggle to procure institutional credit, leading them to rely on non-institutional sources such as local money lenders. These alternative sources often charge exorbitant interest rates, exacerbating the financial strain on farmers. With this concern, the Present study focuses on Institutional credit for fisheries development in the Kishanganj district of Bihar.

Although, institutional credit assumes utmost importance in

increasing agricultural productivity, the role of formal credit delivery system in the State of Bihar has not been quite encouraging (Srivastava, 2017) [8]. Kishanganj is a district that comes under the Seemanchal region of Bihar. Majority of the population depends on Agriculture and allied activities. Fisheries and Makhana are also cultured in Kishanganj, requiring relatively higher input costs. So, Institutional credit may play an important role in the fisheries development in Kishanganj District of Bihar. According to Rajagopalan- “agricultural credit may be defined as the amount of investible funds made available for the purpose of development and sustenance of farm productivity.

Need of credit in Fisheries

Fisheries credit is one of the most crucial inputs for fisheries development.

The fish farmers and fishers need credit for many fisheries activities, such as-

- Buying fisheries inputs like crafts, gears, implements, seeds, fertilizers, crop protection pro-biotics, feed etc.
- Supporting their families in those years when the landings/ crops have not been good.
- Buying additional crafts/land, to make improvements on the existing boats /land, to clear old debt and purchase costly machinery.
- Increasing the fishing efficiency as against limiting

resources i.e. hiring of skilled labour and machinery.

- Developing infrastructure in farm or establishment of new fish farms.
- Establishment of hatcheries in their farm.

There are two sources of Agricultural finance in India. These sources are broadly classified as:

- 1. Institutional Credit Sources:** The institutional agencies include Government, Co-operative banks, the Reserve Bank of India, Regional Rural Banks, the National Bank for Agriculture and Rural Development (NABARD) and Commercial Banks.
- 2. Non-Institutional Credit Sources:** These include the private sources of credit and include moneylenders or Mahajans, landlords, traders and commission agents and other sources including loans from friends and relatives. Of all the private agencies the Moneylender is the most important source of agricultural finance in India. They account for 64 percent of the non-institutional sources of finance.

Institutional Credit Structure for Fisheries

Since, non-institutional credit is generally exploitative and insufficient. So, Institution credit was much needed to fulfil the credit need in agriculture and allied sectors. The typical institutional credit structure is shown in Fig-1.

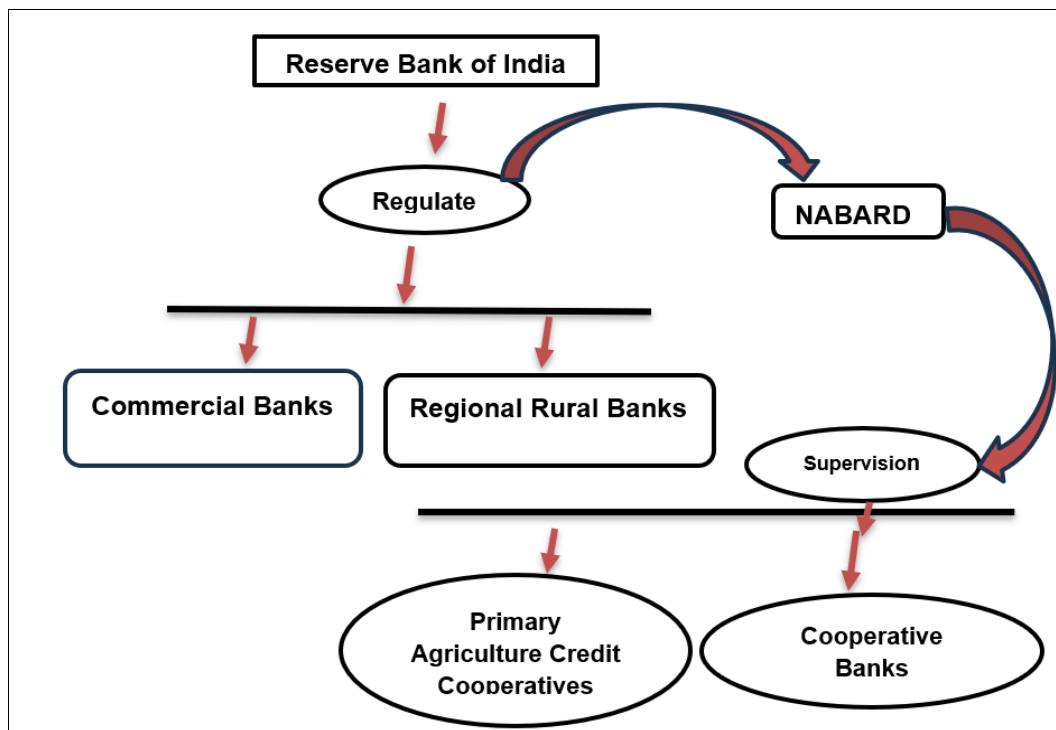


Fig 1: Structure of Institutional Credit

Methodology

Location of the study: Kishanganj is a city and district

headquarters of Kishanganj district in Purnia division of Bihar state, India.



Fig 2: Kishanganj district Map

The Data: Primary data were collected from 125 fish farmers of Kishanganj district by using pre-tested interview schedule. Stratified random sampling method were applied for data collection. Analysis was completely done in Microsoft excel.

Materials and Methods

Primary data collected from fish farmers were analyzed in excel by using Descriptive statistics and Rank Based Quotients for identifying the major constraints faced by fish farmers of Kishanganj District.

Rank Based Quotients (RBQ): In order to identify the constraints faced by fish farmers of Kishanganj district during access of Institutional credit, Rank Based Quotient (RBQ) method was used and it is given by:

$$RBQ = \frac{\sum f_i(n + 1 - i) \times 100}{N \times n}$$

Where,

f_i= No. of wholesaler reporting a particular constraint under ith rank.

n= No. of constraints identified

N= Total No. of wholesaler

r = No. of Rank

Result and Discussion

Existing Financial Mechanisms for fish farmers of Kishanganj District: Many government and non-governmental credit institutions provide credit to fish farmers. The major credit institutions for fish farming in Kishanganj district are described in the following figure 1.

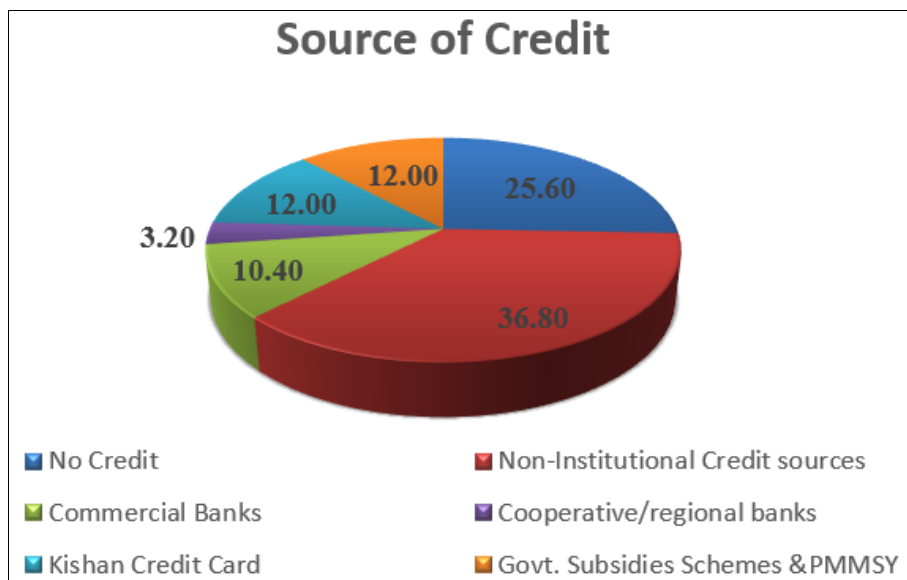


Fig 3: Access to credit by fish farmers of Kishanganj

- A. Non-Institutional Credit:** Non- Institutional credit sources include- Credit from Friends/ Relatives, Credit from Pawn brokers, Credit from money lenders etc. In India especially in rural areas, non-institutional Credit is one of the most important sources of agriculture credit. About 52% fish farmers avail non-Institutional Credit for fish farming in Bihar.
- B. Scheduled Commercial Banks:** Scheduled Commercial banks are those banks which are included in second schedule of Reserve bank of India Act, 1934. Scheduled Commercial Bank are also an Important source of credit. Almost all the Scheduled commercial banks provide credit for agriculture and allied activities like Fisheries at certain terms and conditions. About 16% of the fish farmers of Kishanganj district avail credit from Scheduled Commercial Banks.
- C. Kishan Credit Card (KCC):** The Government of India introduced Kisan Credit Card scheme by banks during 1998-99. The scheme was designed by NABARD. KCC aims at adequate and timely support from the banking system to the farmers for their short-term production credit needs in cultivation of crops, purchase of inputs etc. in a flexible and cost-effective manner. Credit limit on the card may be fixed on the basis of operational holding, cropping pattern and scale of finance as recommended by the District Level Technical committee (DLTC) / State Level Technical committee (SLTC). About 16% of the fish farmers of Kishanganj district avail the credit from KCC Scheme. KCC scheme is gaining popularity among fish farmers of Kishanganj district. In near future, KCC scheme may play a crucial role for the fisheries development in the district.
- D. Cooperative Banks:** Co-Operative Banks are small financial institutions that offer lending facilities to small businesses in both urban and non-urban regions. These are monitored and regulated by the Reserve Bank of India (RBI) and come under the Banking Regulations Act, 1949 as well as the banking laws act, 1965. About 1.6% of the fish farmers of Kishanganj district avail credit for fish farming from Cooperative banks.
- E. Regional Rural Banks:** The Government of India appointed a working committee under the chairmanship of Sri. M. Narasimham to study the financial assistance rendered to the weaker sections in the rural areas. The Government of India accepted the recommendations of Sri. Narsimham committee and regional rural banks came in to existence through regional rural banks ordinance on 26th September, 1975. Authorized share capital of each RRB is Rs. one crore, contributed by central government, state government and sponsoring commercial bank in the ratio of 50:15:35. Issued capital for each RRB is Rs. 25 lakhs. The rate of interest charged by RRBs on the loans is same as that of Primary Agriculture Credit Societies (PACS), but they are allowed to offer 0.5 percent interest more than that of commercial banks on its deposits. About 3.2% of the fish farmers of Kishanganj district avail the credit for fish farming through Regional Rural Banks.
- F. Pradhan Mantri Matsya Sampada Yojna (PMMSY):** The Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying,

Government of India is implementing Pradhan Mantri Matsya Sampada Yojana – A scheme to bring about ecologically healthy, economically viable, and socially inclusive development of the Fisheries sector of India. Under PMMSY, Funds are being provided for different fisheries related activities like- Bio floc aquaculture, Re- Circulatory Aquaculture, Cage culture, Fish transportation, Ornamental fish rearing unit, Fish/ Shrimp hatchery, Fish feed mill etc. About 1.6% of fish farmers of Kishanganj district avail funds under PMMSY.

- G. Governmental Subsidies Schemes:** There are many subsidies’ schemes of state as well as central government for fisheries related activities. Under the subsidy schemes, funds are provided for renovation of ponds, Establishment of hatchery units, Construction of ponds, Establishment of bio floc unit, Establishment of fish feed mill etc. About 8.8% of fish farmers of Kishanganj district get subsidies for fisheries related activities from government schemes.

Credit availed from credit Institution by the fish farmers of Kishanganj

It was found that about 67% fish farmers of Kishanganj district have applied for credit from Institutional credit while about 32% fish farmers have never applied for any Institutional credit as shown below in fig 2.

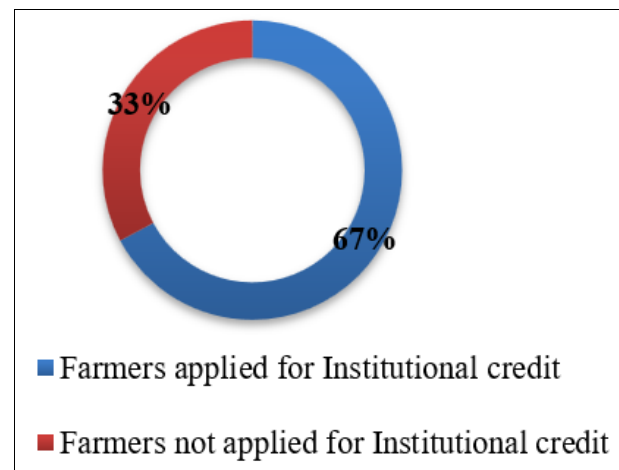


Fig 4: Application for institutional credit by fish farmers

As far as benefit from institutional credit system are concerned, only 28% fish farmers got benefit from institution credit as shown below.

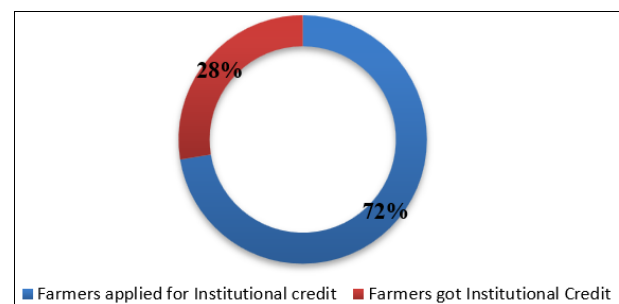


Fig 3: Comparison of farmers applied for and received institutional credit

There are many factors responsible for low percentage of institution credit in Kishanganj District like lack of knowledge and awareness about schemes of Institution credit, Lack of document required for institutional credit etc.

Constraints in accessing Credit by the fish farmers of Kishanganj District

Rank Based Quotient was used to find out the major constraints faced by fish farmers of Kishanganj district in getting credit from institutional credit sources: The major constraints are described below:

- 1. Creditworthiness and Documentation:** This is one of the most important constraints in getting credit from institutional credit sources. Some documents are necessary to get credit from institutional credit system. Due to lack of these documents, many farmers cannot provide the necessary documentation to prove their income or collateral, leading to a lack of trust from financial institutions.
- 2. Lack of Financial Literacy:** This is second most important constraints in getting credit from credit institutions. Many fish farmers lack knowledge about existing financial products and schemes, making it difficult for them to navigate the formal lending landscape. So, there is a need to create awareness about different credit schemes for fish culture and related activities so that they may avail the credit facilities of Institutional credit.
- 3. Uncooperative Behavior of Bankers:** This is third most important constraints faced by fish farmers of Kishanganj district in getting credit from credit institutions. In many places, Banker's behavior is not supportive. In such credit institution, farmers hesitate to go for credit. In addition to that some banker's used to take some money for sanction of farmer's credit which also de-motivate the farmers in getting institutional credit.
- 4. Complex application procedure for Credit:** This is the fourth most important constraints. Most of the credit institutions have complex application procedure for credit which makes getting credit difficult for small and illiterate fish farmers.

Recommendations for Improving Credit Access

To enhance access to credit for fish farmers in Kishanganj district, several recommendations can be made:

- 1. Capacity Building and Financial Literacy Programs:** Conducting workshops to educate farmers about financial products, budget management, and loan application processes.
- 2. Strengthening Self-Help Groups:** Encouraging the formation and strengthening of SHGs focused on aquaculture can provide a platform for collective bargaining and resource pooling.
- 3. Partnerships with Financial Institutions:** Establishing partnerships between local cooperatives, NGOs, and banks to create tailored financial products for fish farmers.
- 4. Awareness Campaigns on Government Schemes:** Implementing outreach programs to educate farmers about existing government schemes and the process to avail of them.

- 5. Improving Infrastructure and Market Access:** Investing in local infrastructure to facilitate better market access can enhance farmers' income potential, improving their creditworthiness.
- 6. Flexible Loan Products:** Developing loan products with flexible repayment terms aligned with fish farming cycles can alleviate the pressure on farmers.
- 7. Credit application process for agriculture credit should be made simple easier so that farmers can easily apply for institutional credit.**

Conclusion

Access to credit is a crucial factor determining the success and sustainability of fish farming in Kishanganj district. By addressing the challenges surrounding credit accessibility and leveraging existing financial mechanisms, stakeholders can promote aquaculture practices that benefit local economies and contribute to overall food security. A multi-faceted approach, involving government, financial institutions, and community organizations, is essential for creating a robust support system for fish farmers in the region.

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