

A Report on
Economic analysis and supply chain of backyard pig rearing in Tribal households of Rangamati District



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Economic analysis and supply chain of backyard pig rearing in Tribal households of Rangamati District



A production report submitted as per approved styles and contents

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LIST OF ABBREVIATION

BCR - Benefit cost Ratio

BDT - Bangladeshi Taka

CVASU - Chattogram Veterinary and Animal
Sciences University

DVM - Doctor of Veterinary Medicine

Etc. - Et cetera

Et al. - et alia (and others)

Govt. - Government

Tk - Taka

% - Percentage

SD – Standard Deviation

Min. – Minimum

Max. - Maximum

ABSTRACT

This study investigates the economic analysis of pig farming on the livelihoods of tribal women at the Bilaichari Upazila of Rangamati district. The aim of the study is assessing how pig rearing improves the economic status of tribal women and enhances their knowledge of pig husbandry practices. Data were collected through a structured questionnaire using purposive sampling technique. The research employs a descriptive and econometric statistical analysis to evaluate the socio-economic characteristics and the profitability of pig farmers. The findings reveal most of the farmers are from Chakma community (66%) and 22% and 12% are from Tanchangya and Marma community, respectively. 72% of pig farmers are from age range of 21-30 and 31-40 which indicates participation young population in pig farming. The study shows that net return and gross margin were Tk.4836.8 and Tk.19332.12, respectively indicating profit of the farm. A benefit-cost ratio (BCR) of 3.14 for full costs and 3.09 for cash costs basis, indicating that pig farming is economically profitable and sustainable in the region.

Additionally, the study highlights the significant challenges faced by farmers, which could hinder the growth and sustainability of pig farming. The study concludes that pig farming plays an important role in improving the livelihoods of tribal women. Govt and non govt agencies should take further support for development and, enhance this sector sustainable and profitable.

Keyword: Tribal, Socio-economic, Pig farming, profitability.

Chapter 1: INTRODUCTION

1.1 Background of the study

Bangladesh is among the world's most densely inhabited nations and its primary industry is agriculture. Along with, livestock is also a crucial industry for Bangladesh in producing animal sourced protein, reducing unemployment, poverty, and generating empowerment. (Taylor and Roese, 2006; Cole 1996).

In the tribal and underprivileged sections of society, one of the most significant livestock that contributes to raising the socioeconomic standing is pig (Patra, Begum and Deka, 2014). Pigs are fast growing and one of the most prolific livestock breeds (Durranc 2008; Phookan et al. 2006; Prakash et al. 2008;). They are genetically better than ruminants in turning feed into meat (Patra, Begum and Deka, 2014). They are said to be twice as efficient as ruminants (Patra, Begum and Deka, 2014). For those who eat pork, pig is regarded as the most abundant source of animal protein at the lowest cost (Hossain et al., 2012; Patra, Begum and Deka, 2014).

Despite these characteristics, Pigs in Bangladesh have received little attention to date (Anower et., 2017). There hasn't been much focus on pigs because cultural and religious taboos have an impact on pig production in Bangladesh (Ausraful et al., 2021). As a result, only non-Muslim minorities in Bangladesh raise pigs. (Ausraful et al., 2021). Pig rearing is primarily carried out by underprivileged individuals in the districts of Rangamati and Khagrachari who lack the resources and know how to increase production. (Hossain M et al., 2011). The socio-economic status of hill farmers is an important issue for study as farmers in hills are dwelling in a complex, diverse and risk prone situation. They are usually practicing traditional ways of cultivation and animal husbandry activities which adds little to the input (Gcumisa S.T. 2013). The most common way to rear pig in those areas is by backyard farming which is unhygienic and not socially supportive. The production and profit from the pig rearing is unnoticed and less reported.

Pig rearing plays a significant role in the farming system since it is intimately linked to the other agricultural activities carried out by the tribal people for survival (Patra, Begum and Deka, 2014). Pigs do not contribute to the loss of pasture land, thus they can be raised in enclosures their entire lives (Patra, Begum and Deka, 2014). So, every ethnic group raises one or two pigs for domestic purposes (Dey et al., 2014).

According to some studies, raising pigs was mostly done to generate emergency funds or provide food for domestic consumption (Patra, Begum and Deka, 2014). In Bangladesh, domestic breeds of pig are reared on garbage, kitchen waste and human excreta. Productivity of domestic breeds is low. As a result exotic breeds specially, Yorkshire, Landrace, Hampshire and Poland China are gaining popularity due to high growth potential (Johnson et al. 2001). Limited information is available regarding housing, feeding, breeding, disease prevalence, vaccination, bio-security, marketing and constraints of pig production under rural condition (Safranski 1999). An earlier study has reported that balanced feed was not supplied to pigs, veterinary service was not available in most cases, piglets died frequently and and pigs were suffering from different diseases.

Despite facing problems with raising pigs, still some people choose to raise pig. Additional income is earned from the sale of animals and importantly from their products. This additional income can be used to invest in farm assets, pay for school fees and medical treatments. Notably, a government-operated pig farm is located in the Rangamati Hill District, while wild relatives of indigenous pigs have been observed in forested regions (Rangamati and Hill Tracts). In the context of Rangamati, pig farming holds potential for enhancing social empowerment through improved livelihoods (Ritchil CH et al., 2013).

Due to the conventional production structure, there is still a significant imbalance between the supply and demand for pork (Patra, Begum and Deka, 2014). The approach will hold significant importance in empowering women through sustainable pork production and processing methods, which can lead to broader socio-economic benefits including food security and gender equality. There was no study yet to assess the profitability of tribal women through pig rearing in Rangamati district. So, the aim of this study is to measure the profitability of pig rearing of tribal women and marketing channel of pig in the Rangamati district which is the research gap.

1.2 Objectives of the study

So, the present study was conducted to evaluate the following specific objectives:

- I. To find out the socio-economic characteristics of pig farmers in the study areas.
- II. To assess the profitability of the pig farmers in the study area.
- III. To find out pig and pork marketing channel in the study area.
- IV. To identify the problems faced by tribal women during pig rearing.

Chapter 2: MATERIALS AND METHODS

2.1 Study area and duration

The study was conducted in the Bilaichhari Upazila of Rangamati district and it was carried out in the month of May, 2024. This area is purposely chosen on the basis of availability of pig farming in every households.

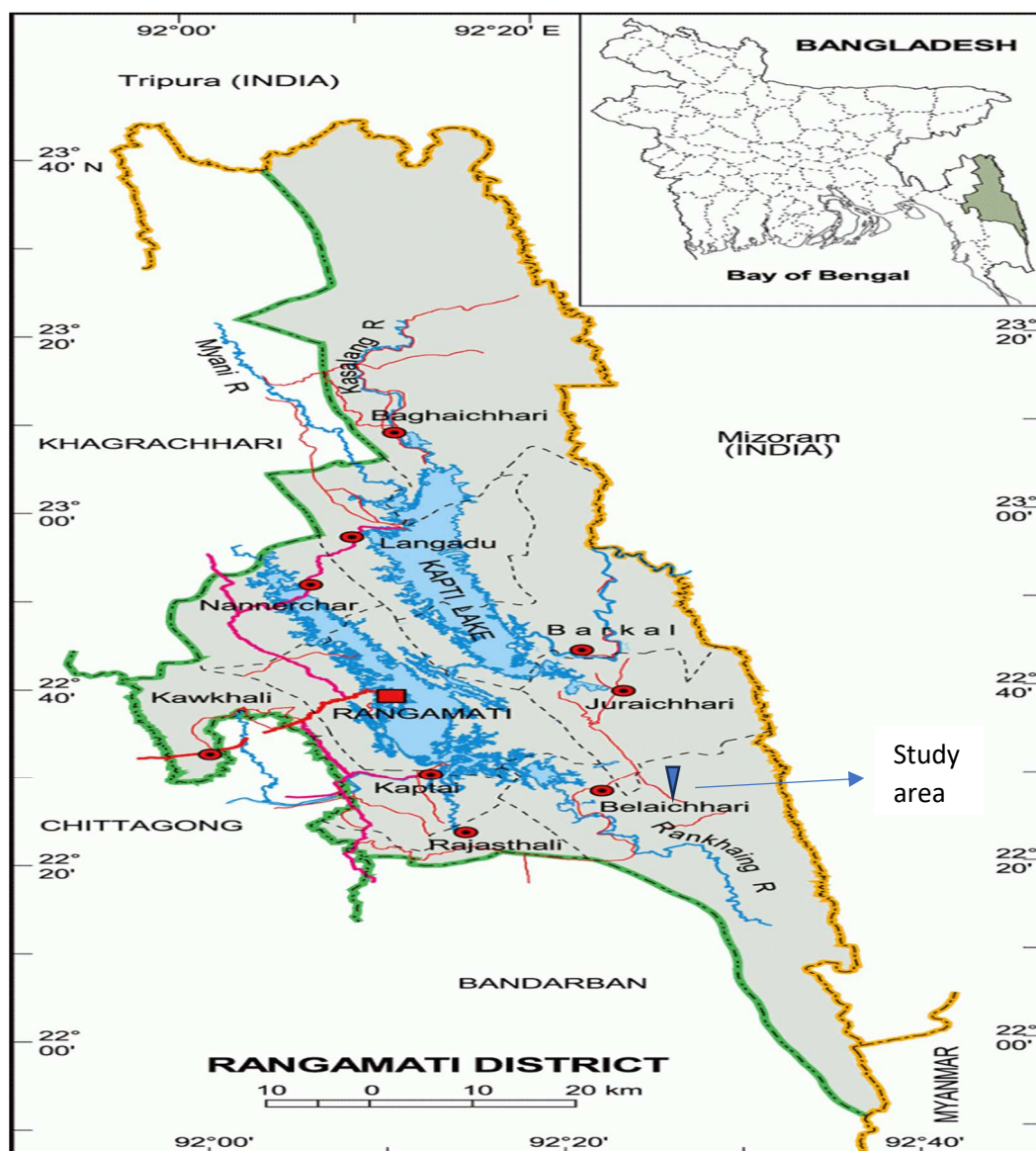


Figure 1. Study area of Bilaichhari Upazilla, Rangamati District

2.2 Selection of sample

Fifty tribal households were selected on a random process depending on the presence of pigs and each household rear at least one pig in the study area. The respondents are basically tribal women.

2.3 Preparation of questionnaire

The questionnaire was designed to gather information about the pig production system in accordance with the study's objectives. The socioeconomic characteristics of pig owners were the focus of its material, which included housing, feeding, breeding, marketing, and a crucial challenge with pigs' production, along with further data.

2.4 Collection of data

All associated data were obtained using a pre-tested questionnaire when visiting the households of pig farmers in the study. The farmers enthusiastically gave all the relevant data as they were given a brief idea about the purpose and impact of the study before interviewing.



Figure 2. Collection of data from the pig farmers.

2.5 Data coding, entry and analysis

Following data collection, the questionnaire was reviewed for completeness, cleaned, organized, and coded. After that, the data was entered into an MS-Excel spreadsheet and then transferred to STATA program (Stata,14, Statistical software) for analysis.

2.6 Statistical Analysis

Socio-economic characteristics and problems related to production were identified using descriptive method and farm profitability were analyzed by the following equations:

2.6.1 Estimation of costing

- i. Total Cost (TC) = Total variable cost (TVC) + Total fixed cost (TFC).
 - ii. Total operating cost (TOC) = (Feed cost + Purchase cost (piglet) + Veterinary cost + Labor cost + Miscellaneous cost).
 - iii) Total variable cost (TVC) = TOC + Interest on OC (where interest rate 7%) (1)
1. **Variable cost (TVC):** Variable cost includes the cost that are related to production such as feed cost, veterinary cost, labor cost, and miscellaneous cost.
 - a. **Feed cost:** Feed cost includes the total amount of feed consumed by the pig and multiplied by the market value of the feed.
 - b. **Veterinary cost:** It includes the cost related to animal health like vaccination, medication.
 - c. **Labor cost:** Family labor was considered as opportunity cost for the study.
 - d. **Miscellaneous cost:** It includes electricity cost, water and other cost.
 2. **Fixed cost (TFC):** Fixed cost includes depreciation of housing cost and depreciation of equipment cost.
 - a. Depreciation of housing and equipment:
 - b. It was calculated on the basis of straight-line method (Shiyani et al., 1989). The formula is as follow:

$$Depreciation = \frac{\text{Original value} - \text{Salvage value}}{\text{Life of the house or equipmetn}}$$

2.6.2 Estimation of return

$$\pi = TR - TC$$

$$= QP - (TVC + TFC) = NR \dots \dots \dots (2)$$

$$GM = TR - TVC \dots \dots \dots (3)$$

$$BCR \text{ (full cost basis)} = TR/TC \dots \dots \dots (4)$$

$$\text{BCR (cash cost basis)} = \text{TR}/\text{TVC} \dots\dots\dots (5)$$

Where,

π = Profit

Q= Output (pig)

P=Sale Price

NR = Net return

TVC = Total Variable cost

TC = Total cost

TR = Total return

GM = Gross margin

BCR = Benefit cost Ratio

2.6.3 Marketing Channel of pig and pork

Marketing channel of pig refers to the group of people, organizations, and actions that work together to move pig and pork products from producers to the consumers.

Chapter 3: RESULTS

3.1 Socio-economic characteristics of the farmer

Several socio-economic statuses of the farmers such as age, education, occupation, experience, training, family size, monthly income etc. were calculated and presented below:

- 1. Age (years):** The age distribution of farmers shows that 36% are in the 21-30 and 31-40 age groups, indicating young farmer in pig production. Only 18% are aged group 41-50, and a smaller percentage (10%) falls into the 51-60 age group.

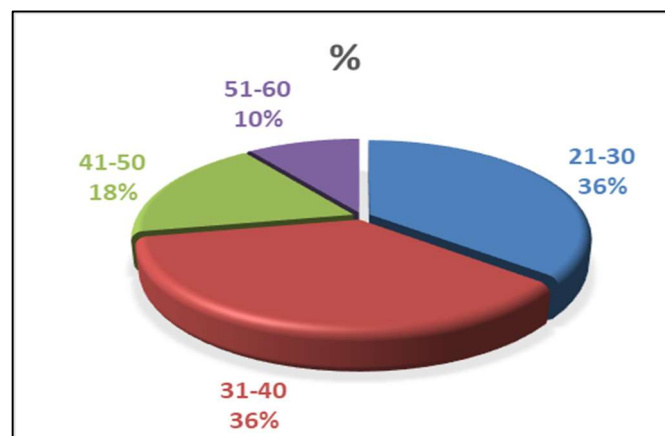


Figure 3. Age (Years) of the pig farmers.

2. Marital Status

A significant majority (84%) of women are married, while 16% are unmarried, suggesting that farming is predominantly a family-oriented occupation in this area.

Table 1. Marital status of pig farmers.

Marital status	Frequency(n=50)	Percentages
Unmarried	8	16
Married	42	84
Total	50	100

3. Occupation

The primary occupation of the farmers includes housewives (40%) and farmers (30%), with a few engaged in other occupations such as labor, shopkeeping, and tailoring, reflecting a diverse economic engagement.

Table 2. Occupational status of pig farmers.

Occupation	Frequency	%
Farmer	15	30
Housewife	20	40
Labor	3	6
Shopkeeper	5	10
Student	3	6
NGO Job	1	2
Tailor	1	2
Politician	1	2
Cleaner	1	2
Total	50	100

4. Other Household Income:

The table also lists other sources of household income, with agriculture being the most common occupation (40%), followed by labor (30%) and shopkeeping (10%).

Table 3. Other household income of the pig farmers.

Other Household Income	Frequency	%
Agriculture	20	40
Shopkeeper	5	10
Day Labor	15	30
Driver	5	10
Institutional Cook	1	2
Other Livestock	4	8
Total	50	100

3.1.1 Other Socio-economic characteristics of the pig farmers in the study area.

Table 4. Other Socio-economic characteristics of the pig farmers in the study area.

Parameter	Category	Frequency	Percentage	Mean
Year of schooling	0 to 4	29	58	4.81
	5 to 10	16	32	
	11 to 16	4	8	
	17 to above	1	2	
Income of women	1000-5000	48	96	3270
	6000-10000	1	2	
	11000-12000	1	2	
Family size	1 to 5	35	70	4.5
	6 to 10	15	30	

The table 4 presents following socio-economic parameters of the pig farmers involved in the study:

1. Year of Schooling:

The educational background reveals that 58% of farmers have completed 0 to 4 years of schooling, while 32% have 5 to 10 years. Only a small fraction (10%) has more than 10 years of schooling, indicating limited educational attainment among the farmers.

2. Income of Women:

The income data shows that a vast majority (96%) of women earn between 1000-5000, with very few earning higher amounts, indicating a low-income level among women in the community.

3. Family Size:

Most families (70%) have a size of 1 to 5 members, while 30% have 6 to 10 members, suggesting a relatively small family structure.

3.1.2 Experience of the pig farmers:

Experience in farming is predominantly between 1 to 10 years (58%), with fewer farmers having more extensive experience (11 to 20 years at 36% and 21 to 30 years at 6%).

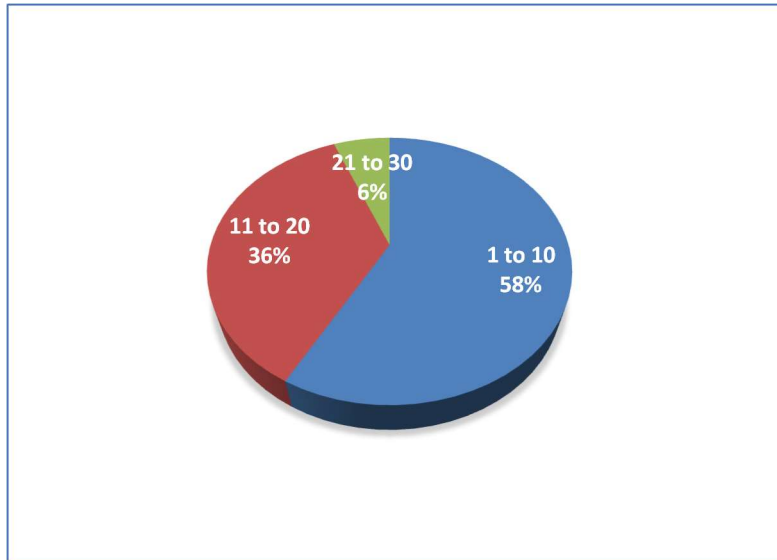


Figure 4. Experience of farming of the sample farmers.

3.1.2 Tribal affiliation of the pig farmers

Figure 4. indicates that Majority of the pig farmers are from Chakma community (66%), while 22% and 12% are from Tanchangya and Marma community, respectively.

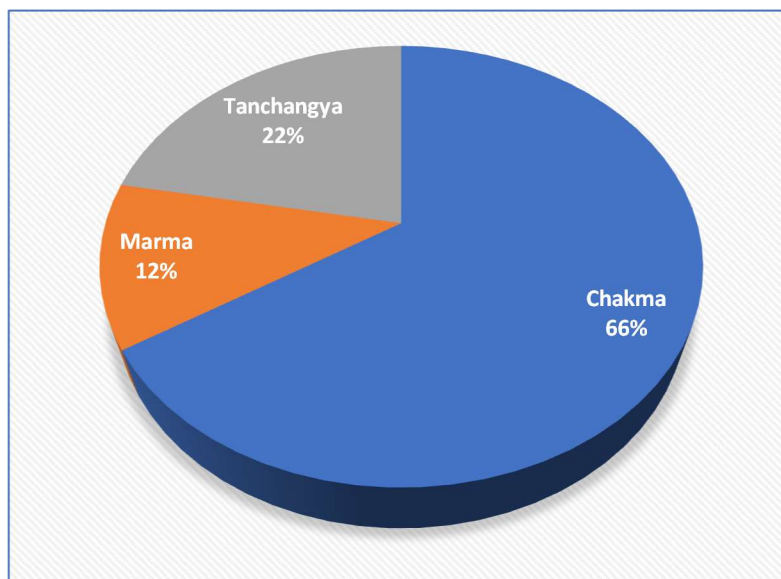


Figure 5. Tribal affiliation of the sample farmers

3.2 Cost analysis of per pig in the study area

The cost analysis of pig farming is crucial for understanding the economic viability of farming management. The cost structure in pig farming typically includes various components such as piglet cost, feed cost, housing cost, veterinary care, and labor cost. These costs can significantly impact the overall profitability of pig farmers in the study area.

Table 5. Cost of per pig production

Cost items	Mean $\pm$ SD	Min.	Max.
Piglet cost	4906 $\pm$ 227.15	4000	5000
Labour cost	101.25 $\pm$ 30.64	62.5	125
Feed cost	3017 $\pm$ 493.8	2100	4200
Medicine cost	332 $\pm$ 56.93	200	500
Miscellaneous cost	118.4 $\pm$ 15.95	100	150
Total operating cost	8474.65 $\pm$ 557.2	7125	9825
Interest on operating cost	593.23 $\pm$ 39.004	498.75	687.75
Total variable cost (TVC)	9067.88 $\pm$ 596.2	7623.8	10512.8
Housing cost	85 $\pm$ 18.52	33.3	116.7
Equipment cost	30.16 $\pm$ 6.74	22	50
Total fixed cost (TFC)	115.2 $\pm$ 6.74	65.3	152.67
Total cost (TVC+TFC)	9183.04 $\pm$ 595.4	7770.42	10638.8

Piglet cost

Among the costs piglet cost is the major cost where average cost is Tk. 4906. The lowest cost recorded is Tk.4000, and the highest is Tk.5000 as shown in Table 5. This indicates that purchasing piglets is a significant expense, and the costs are relatively stable since the SD is small.

Labour cost

Average labour cost is Tk.101.25 with a standard deviation of Tk.30.64. This shows that the labour cost is low, as family labor was considered as an opportunity cost in this study.

Feed cost

Feed is often the largest expense in pig farming. Pigs require a balanced diet to grow efficiently, and the cost of feed can fluctuate based on market prices and availability. This aspect is particularly important as pigs are noted to be more efficient than ruminants in converting feed into meat, which can influence overall costs and returns. Here in table 5. Average cost for feed is Tk.3017 with a standard deviation of Tk.493.8.

Medicine cost

Another crucial cost is veterinary care and medication cost where Average cost is Tk.332 with a standard deviation is Tk. 56.83 explains that pig farmers give a very little attention to pig health. So, it can be said that Veterinary cost is not very significant in this study.

Housing and equipment cost

Proper housing is essential for pig farming to ensure the health and productivity of the animals. But in Table 5. shows a very low housing cost as pig farmers rear pig in backyard in free ranging system.

In summary, a comprehensive cost analysis is essential for pig farmers to enhance their profitability and improve their economic conditions, especially in the context of the socio-economic challenges faced by underprivileged communities.

3.3 Profitability Analysis

The profitability of pig farming in Bilaichari Upazila was estimated by calculating gross margin, net return, and benefit cost ratio.

Table 6. Profitability of per pig production

Parameters	Mean $\pm$ SD	Min.	Max.
Total cost (TC)	9183.04 $\pm$ 595.4	7770.42	10638.8
Total return (TR)	28400 $\pm$ 4956.96	20000	40000
Gross margin (GM)	19332.12 $\pm$ 4836.8	10503.8	30677.63
Net return (NR)	19216.96 $\pm$ 4824.75	10367.8	30527.63
BCR (Full)	3.09 $\pm$ 0.52	2.08	4.2
BCR (Cash)	3.14 $\pm$ 0.53	2.1	4.3

For sustainable farming, measuring profitability is essential. Profitability of a farm can be estimated by calculation gross margin, net return and BCR. In Table 6. it shows that Net return and gross margin were Tk.4836.8 and Tk.19332.12, respectively indicating profit of the farm.

Benefit Cost Ratio Analysis (BCR)

BCR is the ratio of total return and total cost. Figure 5. represent BCR of cash cost and BCR of full cost basis for per pig.

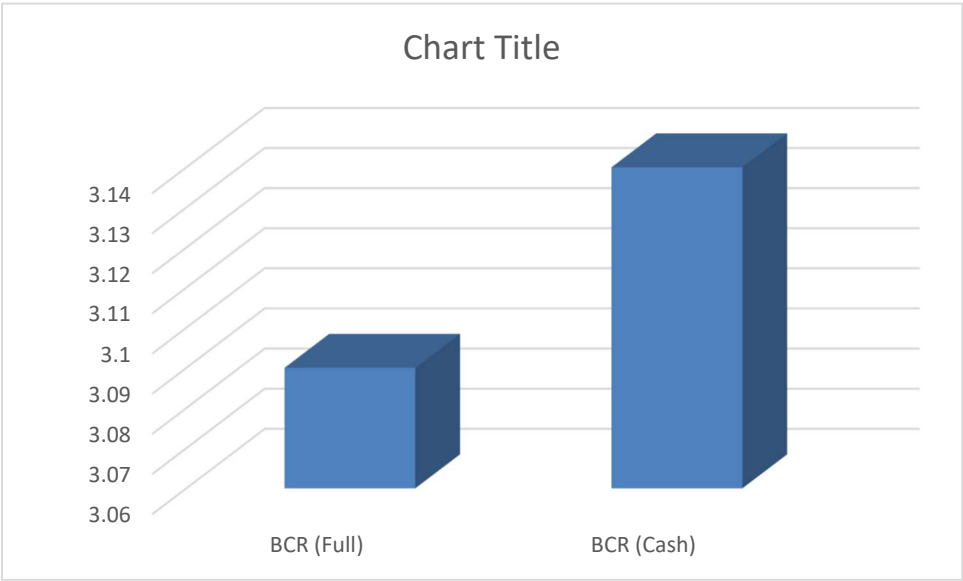


Figure 6. Comparison of Benefit Cost Ratio.

The benefit-cost ratio measures the return on investment. BCR is greater than 1 indicates that the benefits outweigh the costs. From Table 6. Benefit cost ratio (cash cost basis) and Benefit cost ratio (full cost basis) were 3.14 and 3.09, respectively. Both BCR suggest that the operation is generating a reasonable return on investment. However, BCR 3.14 indicates that pig farming is economically profitable and sustainable in the study area.

Chapter 4: MARKETING CHANNEL

Marketing channel refers to the channel in which products are supplied from producers to the consumers.

In the study area six marketing channels were found for pig and pork marketing. The marketing channels are following:

1. Pig farmer → Consumer
2. Pig farmer → Local trader → Slaughter → Local market → Consumer
3. Pig farmer → Local trader → Consumer
4. Pig farmer → Local trader → wholesale trader → big market → Slaughter → Consumer
5. Pig farmer → Local trader → wholesale trader → Consumer
6. Pig farmer → Local trader → wholesale trader → big market → Slaughter → Restaurant owner → Consumer

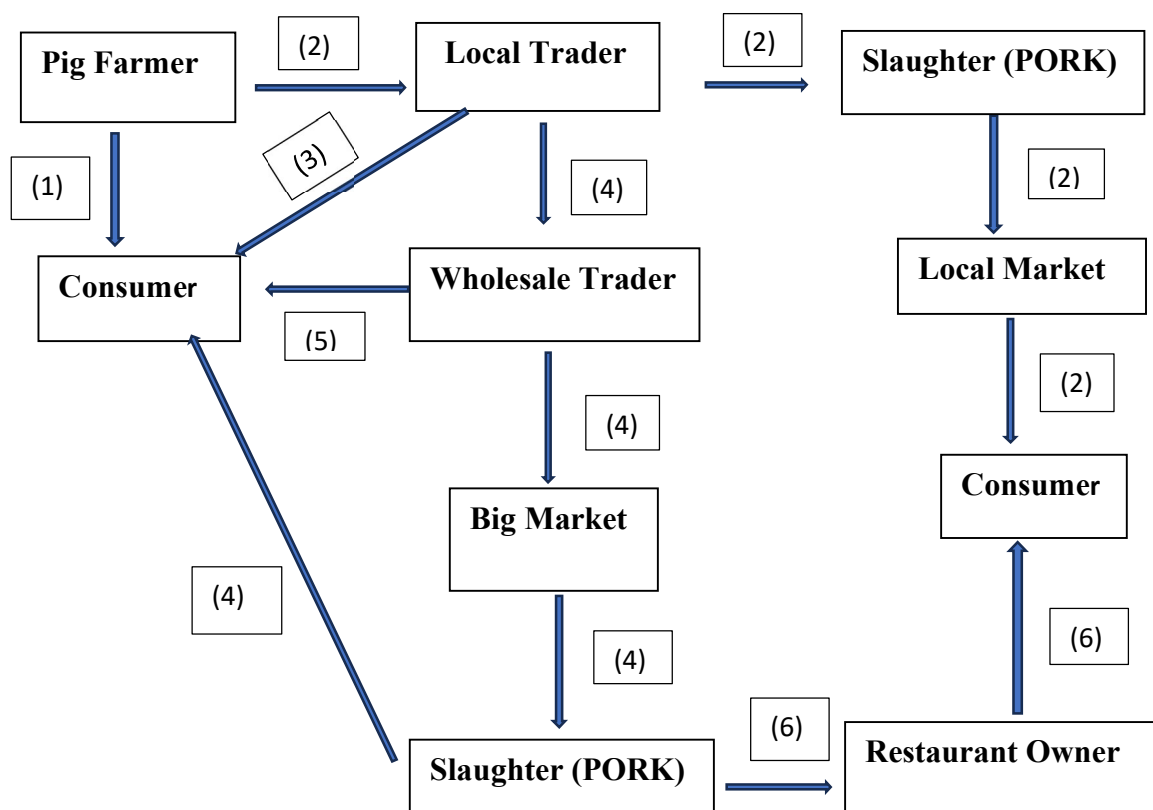


Figure 7. Pig and pork marketing channel in the study area.

Channel 1 is a direct marketing channel which is directly from the producers to the consumers. Here, the most important marketing channel is the local trader who act as the middlemen in three ways: firstly supplying pork in the local market (Local Trader also can act as the slaughterer), secondly by supplying directly to the consumers and thirdly by introducing wholesale trader in the marketing channel. Wholesale trader contributes his role by supplying pig in the big market and also directly to the consumers. From big market it gets supplied to the consumers directly or by restaurant owners after being slaughtered. This scenario of the marketing channel of pig and pork was found in the study area (Figure 7).

Chapter 5: PROBLEMS FACED BY FARMERS

Table 7. Problems faced by the farmers in the study area.

Problems	Frequency	%
Lack of land	48	96
Lack of capital	40	80
Feed cost	39	78
Lack of veterinary service	50	100
Demand fluctuations	43	86
Disease outbreaks	24	48
Climate related issues	48	96
Predation	48	96

The provided table highlights the significant challenges faced by farmers in the study area. The most prevalent problems include:

- **Lack of land:** This is the most pressing issue, affecting 96% of the farmers. Limited land availability restricts their ability to expand their operations and increase production.
- **Lack of capital:** 80% of farmers identified this as a problem, suggesting that access to financial resources is limited, hindering their ability to invest in inputs, equipment, or expansion.
- **Feed cost:** 78% of farmers cited feed costs as a challenge, indicating that the cost of feed is a significant burden on their operations.
- Every respondent (100%) reported that the absence of veterinary services is a critical issue. This means they cannot get help for sick animals, which can lead to larger problems.

Other significant problems include demand fluctuations, disease outbreaks, climate-related issues, and predation. These challenges collectively contribute to the difficulties faced by farmers in the study area.

Addressing these problems is crucial for improving the livelihoods of farmers and ensuring the sustainability of agricultural production in the region. Potential solutions could include land reforms, access to credit facilities, subsidies for feed, improved veterinary services, market information systems, disease control programs, climate-resilient agricultural practices, and predator management strategies.

CHAPTER 6: DISCUSSION

In the study of V. Ramesh, et al. (2018), it was observed that the highest respondents were marginal (59.11 per cent) followed by small (19.01 per cent) and landless (16.41 per cent) and large farmers (5.47 per cent). Most of the lands (94.80 per cent) were under unirrigated and only 5.20 per cent of land area was under irrigated category while the sample farmers of the following study have their own lands.

All the respondents reared the desi pigs for fattening purpose and not for breeding purpose V. Ramesh, et al. (2018),. The same scenario is also found in this study.

In other countries where pig farming in rural areas has been investigated, different authors found that pig farmers had very low education. Nsoso et al. (2006) in Botswana found that only 25% of the respondents had secondary education, while Kamuribo et al. (2011) in Tanzania reported that only 14.6% of respondents had secondary education; and in Bangladesh, Hossain et al. (2011) found that only 20.8% of pig farmers had secondary or higher education. The study also reveals low education in the study area where 58% farmers had only maximum 4 years of schooling.

According to de Villiers (2005) more older people were involved in agriculture, while people younger than 30 did not want to get involved. Nsoso et al. (2006) found that 62.5% of the respondents in Botswana who kept pigs were over 41 years old. Kamuribo et al. (2011) found that in Tanzania those who kept pigs had a mean age of 38 years (range 18 -70 years). But in the study, this is a opposite scenario as it is found that 72% pig farmers are of young population.

Chapter 7: CONCLUSION

The study on pig farming in the Bilaichari Upazila of Rangamati district provides valuable insights into the economic viability and social impact of this agricultural activity. The findings demonstrate that pig farming is a profitable enterprise, with a benefit-cost ratio exceeding 3.0, indicating a significant return on investment. Moreover, the study highlights the positive impact of pig farming on the livelihoods of farmers, particularly tribal women, who have benefited from increased income and improved knowledge of husbandry practices.

However, the study also identifies several challenges faced by pig farmers, including limited access to veterinary services, fluctuations in demand, and disease outbreaks. Addressing these challenges is crucial for ensuring the long-term sustainability of pig farming in the region.

Overall, the study concludes that pig farming is a promising economic activity in the Bilaichari Upazila, capable of contributing to improved livelihoods and economic development. By addressing the identified challenges and providing appropriate support to farmers, the potential of pig farming can be fully realized, leading to a more prosperous and sustainable future for the local community.

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BIOGRAPHY

I am Apurba Chakma, daughter of Bishnu Dev Chakma and Sujana Chakma. I have completed my Secondary School Certificate examination from Rangamati Govt. Girl's High school, Rangamati in 2015 and Higher Secondary School Certificate from Bandarban Cantonment Public School and College, Bandarban in 2017. Now I am an intern veterinarian at Chattogram Veterinary and Animal Sciences University, Bangladesh under the Faculty of Veterinary Medicine. I hold a profound passion for veterinary medical research, and I am eager to leverage my skills and creativity to make a positive impact on our country's challenges in this field. My goal is to contribute significantly to overcoming the current difficulties we encounter in veterinary medicine through innovative research and solutions.

APPENDIX

Questionnaire for Backyard Pig Rearing in Tribal Households of Bilaichari Upazilla

This questionnaire aims to understand the economic viability and supply chain of backyard pig rearing in tribal households of Bilaichari Upazilla, Rangamati district, Bangladesh. Your Participation is completely voluntary and anonymous. All responses will be kept confidential and used solely for research purposes.

General Information

Name		Year of schooling	
Gender		Tribal affiliation	
Age		Income of woman	
Marital status		Other household income	
Occupation		Family size	

Pig Rearing Practices

1. How many years have you been raising pigs in your backyard?
2. Training Received in Pig Rearing: Yes/ No
3. Land Ownership/Access for Pig Rearing:
 - a. Own Land
 - b. Leased Land
 - c. Community Land
 - d. No Land
4. What is the primary purpose of raising pigs?
 - Meat consumption,
 - Income generation,
 - Both.
5. How many family members are involved in pig rearing activities?
6. On average, how many pigs do you raise at a time?
7. What type of housing do you provide for your pigs (e.g., fenced area, sty)?
8. Describe your typical feeding practices for the pigs (e.g., household scraps, purchased feed, foraged food).

9. Farm size at the beginning and after one year:
10. How often do you typically sell your pigs?
11. What is the average age/weight at which you sell your pigs?

Economics of Pig Rearing

Cost items	Taka (monthly)	Taka (yearly)
Feed cost		
Housing cost		
Vet cost		
Medicine cost		
Labor cost		
Transportation cost		
Miscellaneous cost		

Return items:

Piglets selling:

Pigs selling:

Meat selling:

Supply Chain

- a. Where do you typically purchase your piglets? (Local market, breeder, etc.)
 - i. Self-bred
 - ii. Purchased from local breeders
 - iii. Other (please specify):
- b. What is the process of selling pigs from your backyard?
 - i. Direct to Consumers
 - ii. Through Local Markets
 - iii. Through Traders/Middlemen
 - iv. Other (please specify):
- c. Do you slaughter the pigs yourself, or do you use a butcher?
- d. How far do you typically transport your pigs to market?
- e. Are there any government or NGO programs that support pig rearing in your community?

Marketing and Market Dynamics:

	Buying price(tk)	Selling price(tk)
Farmer		
Bepari		
Koshai		
Consumer		

Additional Information

1. What are the biggest challenges you face in raising pigs in your backyard?

- a) Lack of Capital
- b) Feed Cost
- c) Lack of Veterinary Services
- d) Demand Fluctuations
- e) Transportation Costs
- f) Disease Outbreaks
- g) Predation
- h) Climate-related Issues
- i) Market Access
- j) Government Regulations
- k) Other (please specify)

2. What improvements could be made to make backyard pig rearing more efficient and profitable?