CHAPTER 1

INTRODUCTION

1.1 Background of Study

Agriculture remains one of the most influential sectors in Bangladesh, serving as the foundation of rural livelihoods and a major driver of national economic growth. As of 2023, the agricultural sector contributed 11.2% to the national GDP and absorbed nearly 37% of the country's labor force, demonstrating its indispensability for employment generation, food security, and economic stability (BBS, 2024). Apart from its economic function, farming helps many related industries, is important for lowering poverty in rural areas, and makes sure that millions of families have the nutrition they need. Over the past decade, the structure of agriculture has shifted from predominantly cereal-based production toward more diversified systems, with horticulture especially vegetable cultivation gaining prominence. Bangladesh currently produces over 3.8 million metric tons of vegetables annually, reflecting strong growth driven by increasing urban demand, improved production technologies, and expanded market opportunities (DAE, 2023). This shift highlights the growing importance of vegetables as a high-value crop group that contributes significantly to income generation for small and marginal farmers.

Pabna District, found in the Rajshahi Division, is well-known as a significant place for growing vegetables in northwestern Bangladesh. The district's favorable agro-ecological characteristics including fertile alluvial soils, an established network of deep and shallow tube-well irrigation systems, a moderately dry climate,

and a long-standing farming tradition make it ideal for intensive vegetable cultivation. Farmers in Pabna cultivate a diverse range of vegetables such as brinjal, tomato, chili, bean, cauliflower and cucumber throughout the year. The Department of Agricultural Extension (DAE) stated that from 2018 to 2023, Pabna saw a 12% rise in vegetable production. This growth has put Pabna ahead of many nearby districts in both how much was produced and the total area used for farming (DAE, 2023). In addition, the district benefits from its proximity to major wholesale markets in Pabna Sadar, Ishwardi, Kushtia, and Natore, as well as access to transportation routes that connect farmers to Dhaka and other urban centers. These structural advantages not only enhance production potential but also create opportunities for agribusiness expansion, value-chain development, and rural employment generation.

Even though the district does very well in growing vegetables, small farmers still deal with many problems that limit how much they can produce and sell in the market. Price volatility remains one of the most critical constraints, with vegetable prices fluctuating drastically due to seasonal supply patterns, weather-related shocks, and market intermediaries' control over pricing structures. These fluctuations sometimes exceed 40% within a single production cycle, leading to unstable farm incomes and discouraging long-term investment (Rahman & Akter, 2022).

Moreover, farmers frequently encounter post-harvest losses ranging from 15% to 25%, primarily due to a lack of cold storage, limited preservation technologies, inadequate packaging systems, and inefficient transportation networks (Hossain *et al.,* 2023). Not having enough good seeds, fertilizers, and pesticides makes it harder

to boost productivity. Also, when formal loans are not available, many farmers have to turn to informal lenders who ask for high interest rates. At the market level, smallholders often depend heavily on intermediaries because of limited bargaining power, poor access to market information, and a weakly organized producer system. These persistent challenges collectively reduce profitability, restrict market opportunities, and expose smallholder farmers to significant production and marketing risks.

In response to these structural constraints, contract farming (CF) has gained increasing attention as a potential institutional mechanism to enhance smallholders' integration into agricultural value chains. Contract farming allows farmers to enter into formal agreements with buyers such as private companies, processors, wholesalers, or exporters which typically offer assured markets, technical guidance, quality inputs, and predetermined price structures. These arrangements can help stabilize prices, ensure access to improved technologies, and reduce the uncertainty commonly associated with traditional open-market systems. Empirical studies have shown that farmers participating in contract arrangements experience 20–35% improvements in market access, higher productivity, and lower price volatility compared to non-contract farmers (Uddin, Karim, & Rahman, 2023). Contract farming is also connected to lower losses after harvest, better quality of products, and stronger connections with people involved further along in the value chain.

However, despite its growing relevance in Bangladesh, the implementation of CF remains uneven, and its performance varies widely across regions and crops. In districts like Pabna, where vegetable production is high but marketing inefficiencies

persist, there is still limited empirical research evaluating how contract farming affects smallholders' market access and economic outcomes.

Given these circumstances, conducting an empirical assessment of the challenges faced by small-scale bean farmers and evaluating contract farming plays a crucial role in helping farmers reach markets more easily. Such an investigation can contribute to a better understanding of the opportunities and constraints within Pabna's vegetable value chains and provide crucial insights for policymakers, development practitioners, and agribusiness stakeholders. The results of this study are likely to help in creating a plan of more effective institutional arrangements, strengthen smallholders' market participation, and promote sustainable agribusiness development in one of Bangladesh's most important vegetable production zones. The agricultural land use pattern in Pabna reflects intensive cultivation practices, as shown in Table 1.1.

Table 1.1: Agricultural Land Use and Crop Area in Pabna District, 2024

Land Use Category	Area (Hectares)	Percentage of Total Land (%)	Main Crops/Use
Net Cultivated Area	207,850	65.7	Rice, Vegetables, Fruits etc.
Non-Agricultural Land	71,200	22.6	Homestead, Roads, Infrastructure
Fallow Land	37,000	11.7	Temporarily uncultivated for soil recovery
Total Geographical Area	3,16,050	100	---

Source: *Bangladesh Bureau of Statistics (BBS), 2024. Statistical Yearbook of Bangladesh 2024 (44th Edition).*

Table 1.1 presents the agricultural land use and crop distribution in the Pabna District as of 2024. The data show that the district is predominantly agricultural, with 65.7% of the total area under cultivation. Rice and vegetables are the primary

crops, indicating the importance of both staple and high-value crop production. The presence of double- and triple-cropped areas suggests crop diversification and intensive land utilization, which reflect the potential for commercialized farming practices. Furthermore, a substantial portion of non-agricultural land (22.6%) demonstrates ongoing rural development and infrastructure expansion.

These contextual characteristics highlight why Pabna District serves as an appropriate area for exploring agribusiness development and contract farming practices. The strong presence of vegetable cultivation supports the relevance of studying how small-scale farmers engage with markets through contractual arrangements and how these experiences affect their livelihoods.

Growing vegetables is very important for the farming economy in the district. It helps a lot with the income of families and provides jobs for people in the countryside. Farmers cultivate various vegetables throughout the year, such as bean, brinjal, tomato, chili, cauliflower, cucumber etc. These crops are essential for both local consumption and regional trade. However, production and income levels vary across households depending on market access, irrigation facilities, and support services. Table 1.2 summarizes the major vegetable crops cultivated in the district.

Table 1.2 Major Vegetable Production and Yield in Pabna District (2024)

Crop	Area (Hectares)	Total Production (Metric Tons)	Average Yield (Tons/ha)	Major Producing (Area)
Eggplant (Brinjal) *S. melongena*	9,250	123,600	13.4	Ishwardi, Atgharia
Tomato *S. lycopersicum*	6,480	91,200	14.1	Atgharia, Ishwardi
Chili *Capsicum annuum*	5,900	40,500	6.9	Atgharia, Chatmohar

Cauliflower *Brassica oleracea*	4,320	61,800	14.3	Pabna Sadar, Santhia
Bean (Green Bean) *Phaseolus vulgaris*	3,600	51,200	14.2	Atgharia, Ishwardi
Cucumber *Cucumis sativus*	3,850	49,300	12.8	Ishwardi, Santhia, Faridpur

Source: *Department of Agricultural Extension (DAE, 2023)*

Table 1.2 provides an overview of major vegetable crops cultivated in Pabna District. The data reveal that brinjal, tomato, chili, cauliflower, cucumber and beans are the most prominent crops, collectively covering more than 30,000 hectares of land. Among them, brinjal occupies the largest area and yields the highest total production, particularly concentrated in Ishwardi and Pabna Sadar upazilas. The consistent productivity levels ranging from 12.8 to 14.3 tons per hectare for most crops reflect both favorable agroecological conditions and strong farmer engagement in commercial vegetable production.

These figures demonstrate that vegetable farming is not only central to the district's agricultural economy but also a potential driver of agribusiness development. This context justifies the selection of small-scale bean farmers in Pabna as participants in the present qualitative study, which explores their experiences with contract farming and its influence on market access and livelihoods.

Even though growing vegetables plays a big role in helping families earn money, there are still important challenges. These include having a hard time getting formal loans, prices that change a lot, and not having enough contracts to sell their produce in the market. To address these barriers, contract farming (CF) has increasingly been promoted as a partnership model between farmers and

agribusiness firms to ensure assured markets, stable pricing, and technical assistance (Roy *et al.,* 2021). Nonetheless, the success of CF depends on local conditions, institutional support, and the trust between stakeholders. Earlier research on contract farming in Bangladesh mainly looked at numbers related to how much money farmers can make, how productive they are, how their income has changed, and what factors influence small farmers to take part in these contracts. While these studies provide important economic insights, limited attention has been given to the lived experiences of small-scale bean farmers, particularly regarding bargaining power, trust relationships, institutional dependency, and perceived market security within contract farming arrangements. In addition, qualitative investigations exploring how farmers experience contract farming in relation to agribusiness challenges and market access remain limited in Pabna District, despite its importance as a major commercial vegetable and bean producing region in Bangladesh. Therefore, a context-specific qualitative investigation is necessary to better understand how small-scale bean farmers experience contract farming within the broader agribusiness system and how these experiences shape their market participation and livelihood conditions.

This study responds to that need by exploring the lived experiences of small-scale bean farmers who are part of or influenced by contract farming deals in Pabna District. It seeks to understand how CF influences their access to markets, their relationships with buyers, and their sense of agency and security within the agribusiness system. By applying the perspectives of Agribusiness Systems Theory and Transaction Cost Economics, the study situates farmers' narratives within broader structural realities, revealing how coordination, trust, and institutional

support shape agribusiness outcomes. Therefore, this study aims to explore the barriers to agribusiness development and Look into how contract farming affects market access and the living conditions of small-scale bean farmers in Pabna District. By focusing on farmers' lived experiences, this qualitative study generates context-specific insights that can inform more inclusive agribusiness policies in Bangladesh.

1.2 Problem Formulation

Small bean farmers in Pabna District struggle with ongoing challenges in growing their businesses, even though the area has great potential for agricultural production. Various structural, economic, and institutional barriers continue to restrict their ability to participate effectively in profitable value chains. Contract farming has emerged as a promising institutional mechanism to improve market access, reduce marketing uncertainty, and strengthen farmer buyer relationships. However, the experiences and perceptions of small-scale bean farmers regarding contract farming arrangements in Pabna District remain insufficiently explored.

In view of these conditions, the problems in this study can be formulated in the following research questions:

1. What agribusiness challenges are experienced by small-scale bean farmers in Pabna District?
2. How does contract farming affect market access among small-scale bean farmers in Pabna District?
3. How does participation in contract farming help farmers address agribusiness development constraints in Pabna District?

1.3 Research Objectives

The main objective of this study is to look into the difficulties of developing agribusiness and to understand how contract farming impacts the ability of small-scale bean farmers in the Pabna District of Bangladesh to access markets. To achieve this aim, the study pursues the following specific objectives:

1. Identify and evaluate the main agribusiness challenges faced by small-scale bean producers.
2. Examine the impact of contract farming on farmers' market access, particularly in terms of price certainty, buyer linkage, and market stability.
3. Analyze how participation in contract farming helps farmers address production, marketing, and institutional constraints.

1.4 Significance of the Research

The study enriches understanding related to rural institutions, agribusiness systems, and inclusive market participation among smallholder farmers in Bangladesh. The results could help researchers, policymakers, people in agribusiness, and those working on rural development understand market access, the relationships between institutions, and how farmers get involved in contract farming systems.

1.4.1 Theoretical Benefits

Theoretically, This study helps us understand agribusiness systems and contract farming by looking at it from a qualitative point of view. The study provides insight into how small-scale bean farmers experience market access, institutional support, bargaining relationships, and contractual arrangements within the agribusiness system. It also contributes to the application of Agribusiness

Systems Theory and Transaction Cost Economics in explaining how institutional coordination, market uncertainty, and contractual relationships shape farmers' experiences in rural Bangladesh. Furthermore, the findings may function as a useful guide for future studies qualitative studies related to contract farming, rural livelihoods, and inclusive agribusiness development in developing countries.

1.4.2 Practical Benefits

Practically, the study's findings can serve decision-makers, agribusiness companies, and development organizations design better strategies to support small-scale farmers. The research provides evidence to improve the implementation of contract farming practices, enhance farmers' bargaining power, and promote fairer and more sustainable market systems. For farmers and local communities, this study can increase awareness regarding the opportunities and challenges of agribusiness participation, thereby encouraging stronger farmer participation, collaboration, and rural empowerment.