

# ONE HEALTH POULTRY HUB

**Towards safer, more sustainable poultry production**



UK Research  
and Innovation



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# Animal health expenditures and losses in poultry farms in Chattogram, Bangladesh

Fatema Jannat<sup>1</sup>, Ivo Syndicus<sup>2</sup>, Mahabub Alam<sup>1</sup>, Rashed Mahmud<sup>1</sup>, Md Ahasanul Hoque<sup>1</sup>, Pablo Alarcon<sup>2</sup>

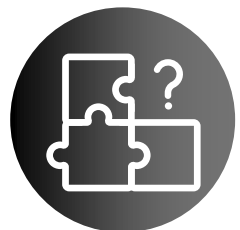
<sup>1</sup>Chattogram Veterinary and Animal Sciences University, Khulshi, Chattogram, Bangladesh  
<sup>2</sup>Royal Veterinary College, London, United Kingdom



## Introduction

The poultry industry is a significant contributor to Bangladesh's livestock sector, contributing **1.9%** to the country's GDP. It is a rapidly growing sector, with an annual growth rate of **20%**.

Despite its potential, Bangladesh's small-scale chicken industry is facing challenges such as **unstable markets, high input costs, low product prices, disease outbreaks, and natural disasters**. Bangladesh's poultry industry is expected to experience rapid growth to meet the increasing internal demand.



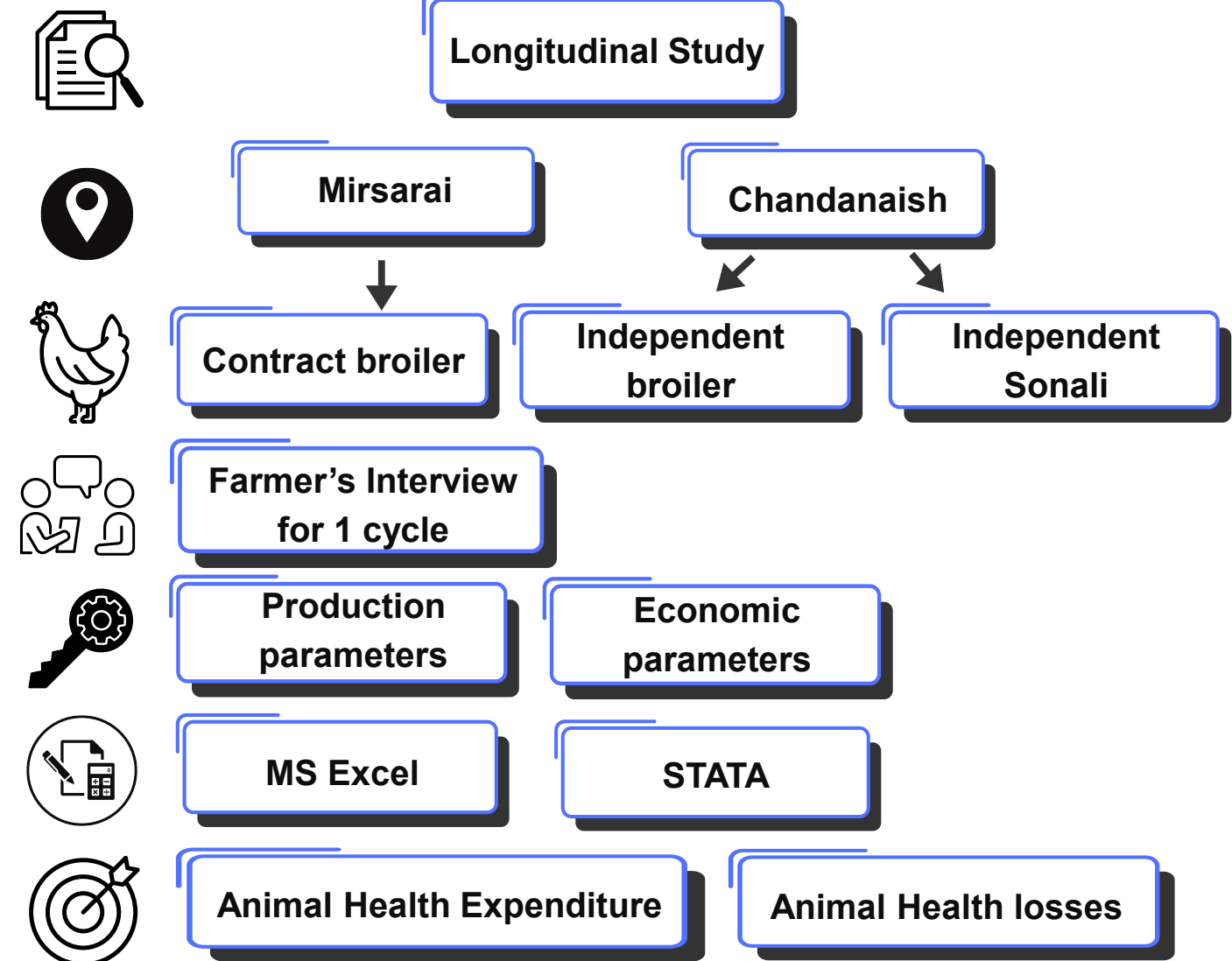
- Lack of industry data on **farms' performance**
- The **large disease burden**, which affects **chicken welfare** and **farmers' incomes** alike.

## Objectives



- Assess the **economic performance** of commercial broiler and sonali chicken farms in Bangladesh
- Quantify the **animal health-related expenditures and losses (AHEL)**
- Determine the **impact of these on farmers' income**

## Methodology



Some visuals of data collection



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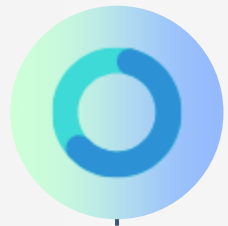
<sup>2</sup>Veterinary Epidemiology, Economics & Public Health Group, Department of Pathobiology and Population Sciences, Royal Veterinary College, London, United Kingdom

## Results

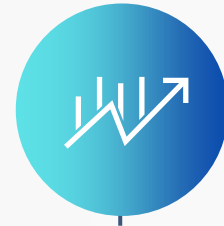


### Production parameters

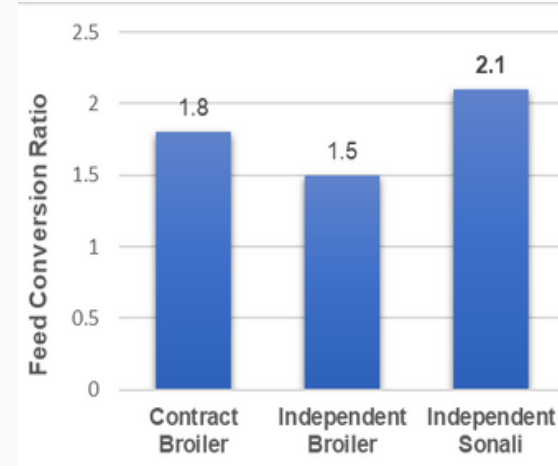
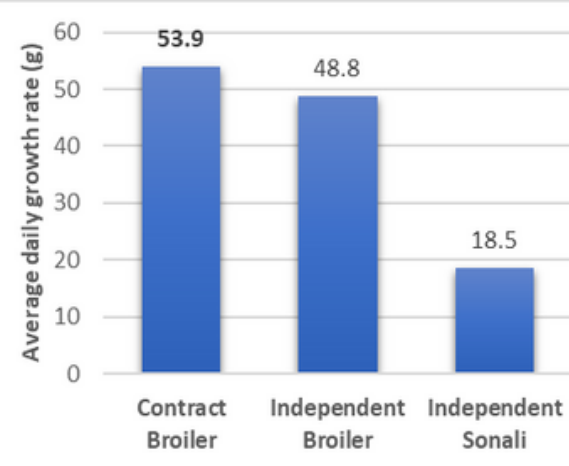
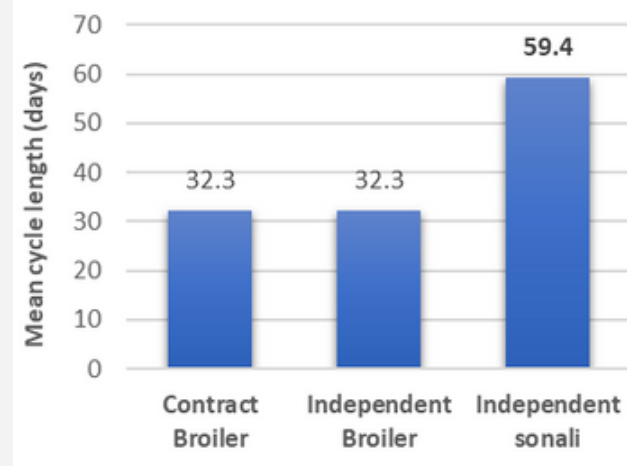
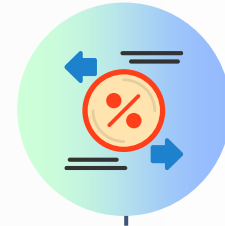
Mean cycle length (days)



Ave. daily growth rate (g)



Feed Conversion ratio



### Economic parameters

Overall proportion of Total production cost

Feed cost = 65% or more

Antibiotic cost = 1.36% to 5.67%

Comparing price analysis between three types

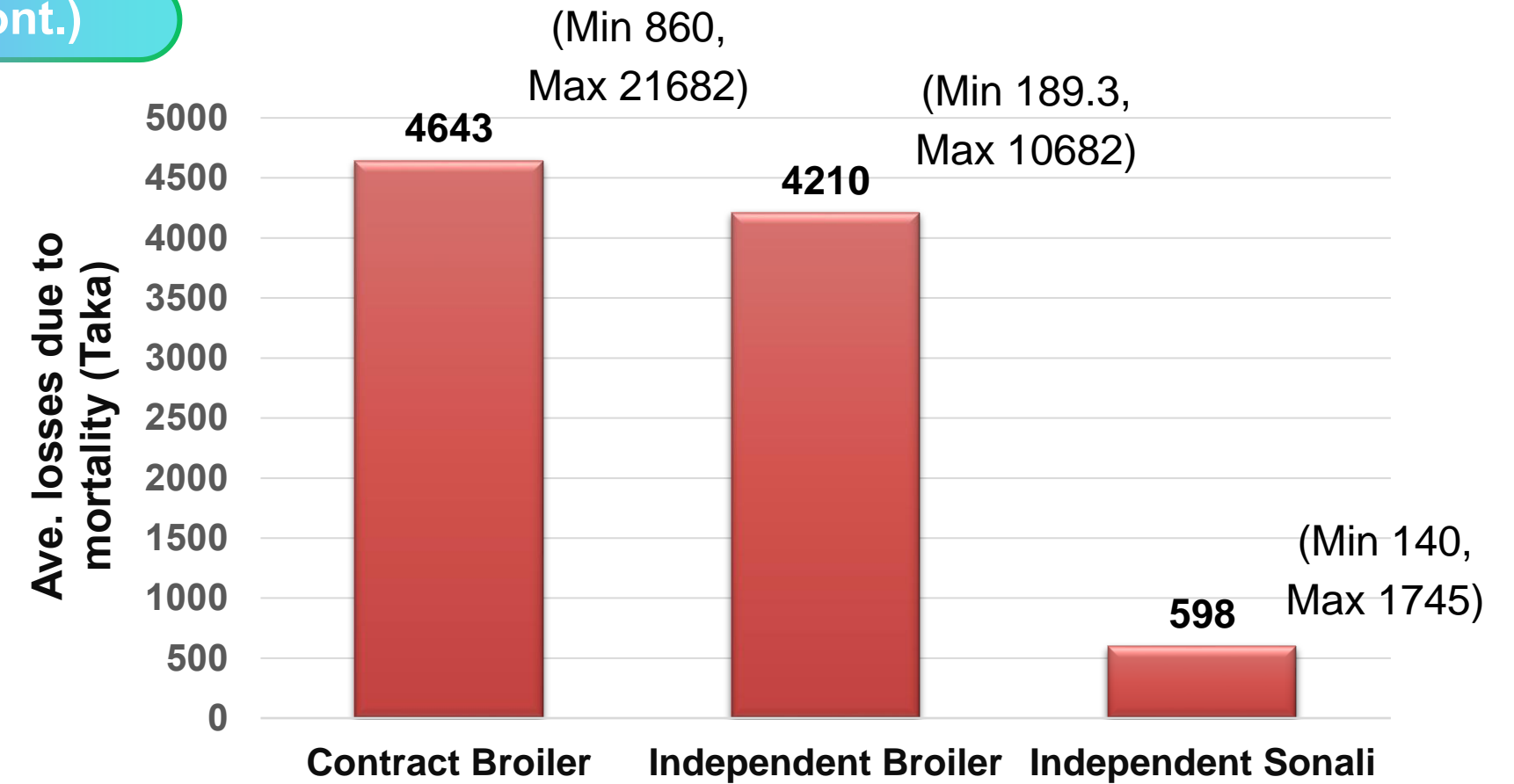
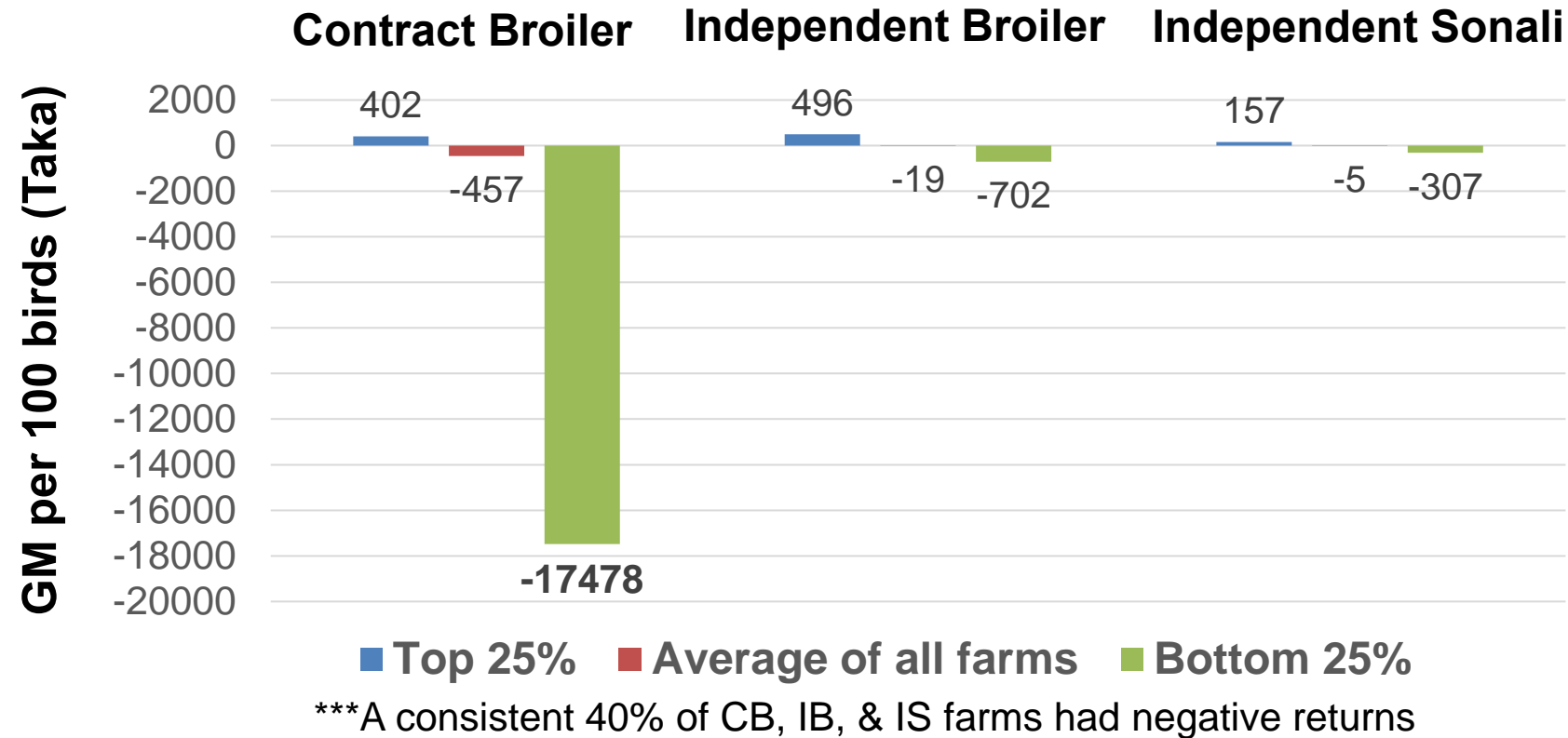
	Contract Broiler	Independent Sonali
Day-old chicken discount	21.4%	39.2%
Feed Cost discount	12%	2%

> Independent Broiler

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## Results (Cont.)



## Conclusions

### Impact

**FCDO priorities – Trade & economic development**

The study shows the importance of Animal Health Expenditure & Losses to farmers sustainability

### Action

**Output – mathematical models with inputs from multiple disciplines**

The models generated can be valuable tools for assessing the benefit of interventions and for farmer training to improve animal health and incomes.

## Recommendations

Promote ongoing research on the economic impact of poultry diseases and assess the effectiveness of newly developed economic model to ensure sustainability in context of Bangladesh

## References

- Islam et al., First Evidence of Fowl Adenovirus Induced Inclusion Body Hepatitis in Chicken in Bangladesh. Canadian Journal of Infectious Diseases and Medical Microbiology. 2023;2023.
- Islam et al., Systematic Review on the Occurrence of Antimicrobial-Resistant Escherichia coli in Poultry and Poultry Environments in Bangladesh between 2010 and 2021. Biomed Res Int. 2023;2023.
- Rahman et al., Small-scale poultry production in Bangladesh: challenges and impact of COVID-19 on sustainability. German Journal of Veterinary Research. 2021;1(1):19-27.