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## Modelling Factors Affecting the Decision to Exit Dairy Farming in Bangladesh: A Two-Stage Regression Analysis

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### Abstract

Dairying is seen as means to improve rural livelihoods by increasing income and creating opportunities for employment for both rural and urban farmers. The increasing demand for milk and milk product due to increasing urbanisation, rise in income and increase population signifies to motivate dairy farmers to keep their business. But in reality, the fluctuating milk price and ever increasing feed price are considered as the obstacle for dairying and hence are postulated as the primary reason for exits from dairying. Therefore, it is high of interest to see whether milk price alone or there are some other factors that drive away the dairy farmers. A field survey was conducted to collect data from 218 dairy farmers from north and north-eastern part of Bangladesh. The sample dairy farmers represent three major production systems such as traditional, extensive and intensive production systems. Out of 218 farms, 67 farmers (31%) indicated an imminent exit from dairying, whereas 151 dairy farmers (69%) expected to remain in dairying for  $\geq 5$  years. A binary choice logit regression model, based upon the dependent variable decision to exit or to remain in the dairying, was used as part of a two-stage regression process to ascertain why dairy farmers prefer to exit from dairying. The hypothesis states that decision is a function of four independent variable category: socio-demographic, farm management, farm economics and opportunity costs. Eight variables were found that significantly influence the exit decision. Return over variable cost, farm profit, total costs for purchased concentrates, farm efficiency, milk yield, herd size, use of pasture, access to veterinary services and opportunities for off-farm income were like to be associated with a decision to leave the dairy farming. This study suggests adopting strategies beyond milk price which focus to improve farm economics in order to establish a sustainable dairy farming and thus a reduction in the rate of dairy farms exit. The policy framework for keeping dairying as profitable business and attractive for dairy farmers might play significant role in increasing milk production to meet the growing demand especially for the urban consumers.

**Keywords:** Bangladesh, dairy farms, exit, farm economics and logit model