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Exit from Bangladesh's poultry industry: Causes and solutions

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The poultry industry is growing, but a steady stream of exits

In Bangladesh, commercial poultry production using improved genetics, feeds and management has grown rapidly since the early 1990s in response to increased market demand. The country's poultry population increased from 91 million in 1990 to 101 million in 1992, 123 million in 1995 and 153 million in 1997. This increase occurred almost entirely in the commercial poultry sector. In 1998, there was a sharp decline in the population to 138 million due to a severe flood. The population then stabilized at around 140 million in 2006 (figures from FAOSTAT—<http://faostat.fao.org/default.aspx>).

During the last few years, print and electronic media in the country have several times reported drop-out or exit of large numbers of poultry firms from the industry. Such reports offered an 'external' explanation—e.g. market-induced losses due to high input prices and low product prices, or losses inflicted by

disasters like floods or a major disease outbreak—but rarely explored reasons internal to the industry or to the exiting firms. Therefore the reports generally ended up with a plea from the media on behalf of drop-out firms for government subsidies, tax and credit waivers and market price regulations to enable industry re-entry.

A survey among commercial poultry producers conducted in 2000–01 identified two trends: some firms changed from broiler to layer farming or vice versa, and others dropped out of the poultry business altogether (Jabbar et al. 2005). A similar pattern was observed during a survey in 2005 (Jabbar et al. 2007). Change from one type of poultry enterprise to another indicates that producers responded to anticipated market opportunities and were able to adapt their fixed infrastructure easily or quickly. Enterprise-specific statistics, e.g. for the layer firms alone, may wrongly report such firms as drop-outs. Meanwhile, many reasons may contribute to the business failures that lead producers to drop out of the business altogether.

Entry and exit conditions in a competitive industry

Low barriers to entry and exit characterize competitive industries. However, all business activities feature some such barriers due to education, experience or skill levels, personal contacts or other aspects of getting started. In a non-competitive industry, incumbent firms may raise further barriers by collusion on areas of operation, access to key inputs, or in pricing. Such barriers may also appear due to government action in regulation, particularly that involving fixed costs. Naturally, incumbent firms would support policy-related entry barriers as forces that strengthen their position.

Barriers to exit are usually employed by powerful firms or vested interests to preserve supply patterns or ensure market access at non-competitive costs and prices. However, local bodies and government agencies may also preserve loss-making firms in an industry for reasons of local employment, generation of local taxes, and objectives of local food security. Such policies might also be applied where firms can make the case of extraordinary market conditions that justify government assistance.

Transaction costs play a significant role in barriers to entry in food industry markets, principally in the form of high unit costs associated with small-scale production. Experience in other countries has shown that scale of operation at all stages of the poultry industry is a significant determinant of profitability and growth. As unit costs are lower for larger firms, new entrants face an entry barrier in the form of cost disadvantage. As capital is a requirement for expansion, lack of easy access to credit on appropriate terms (e.g. comparable to those applied to other sectors) may act as a barrier.

Survey reveals causes of exit from the poultry industry

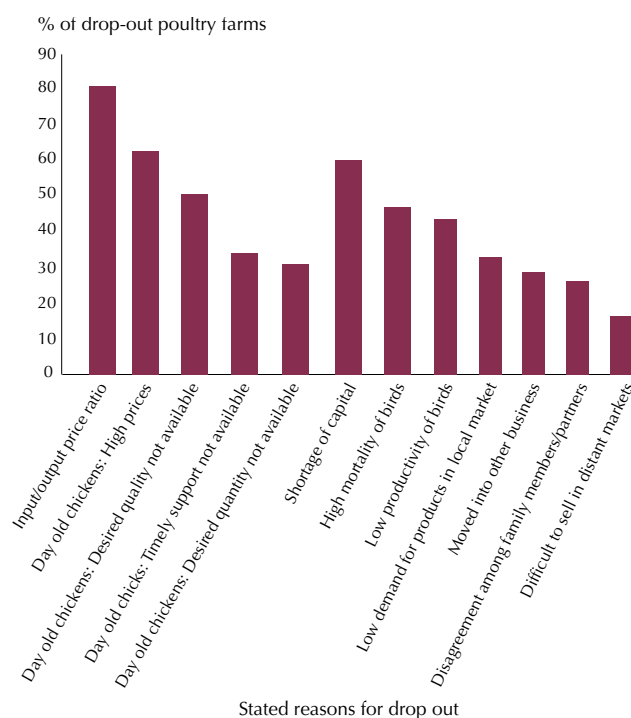
A study conducted by Jabbar et al. (2007) highlighted the causes of dropping out of poultry production. It entailed surveys of 305 operational commercial poultry farms, 140 commercial poultry farms that had dropped out of business before the survey, and 84 input (feeds, day old chicks, drugs and equipment) traders. It included industry-level analyses of poultry hatchery and feed manufacturing. The study targeted 'internal' causes of industry exit by linking the nature of the firms to their stated reasons for dropping out.

The surveys on operational farms and input traders were conducted in Gazipur, Kishoreganj and My-mensingh districts in 2005. The surveys on drop-out farms were conducted during July–September 2007 in five districts (Gazipur, Kishoreganj, Jamalpur, Bogra

and Rangpur). Flood-affected areas were avoided to control for those exit effects. As no list of drop-out firms is maintained, purposive sampling was used. Thanas (subdistricts) in each of the selected districts were visited and drop-out farms were identified by talking to such key informants as feed and output traders, Department of Livestock staff and others. Information was sought on the nature and management of firms, including scale (flock size), experience, contacts (sources of input supply and veterinary services), skills, quality of poultry houses, feeding, labour employed and reason(s) for exit.

Eighty-four percent of the sampled drop-out farms had raised broilers and the remainder, layers. Average time in business was 6.3 years for layers and 3.1 years for broilers. Forty-six percent of the layer farms operated for more than 7 years before dropping out, while 61% of broiler farms dropped out within 3 years of establishment.

A summary of the interviewees' stated reasons for dropping out is presented in Figure 1. Most respondents gave multiple answers, so the percentages do not sum to 100. It appears that a narrow difference between input and output prices, several problems related to the supply and price of day-old chicks, shortage of capital, high mortality and low productivity, restricted local demand for products, and difficulty in accessing distant markets are the major stated reasons. All the stated reasons for dropping out of business were found to be enterprise neutral (i.e. there was a similar pattern among broiler and layer farms) as well as scale neutral (for each stated reason or combination of reasons there was no significant difference between large and small firms).



Source: Jabbar et al. (2007).

Figure 1. Stated reasons for poultry farms' industry exit.

The farm level problems with supply and prices of day old chicks and feeds can be explained by the structure and functioning of these industries. The analysis of input traders and hatchery and feed industries showed that the problems in these industries, especially in the hatchery industry, relate to under-investment, as well as to supply/demand imbalances. A dual structure has been emerging in both the hatchery and feed industries: a few large operators enjoying economies of scale controlled large market shares while small firms operated at higher unit cost. The large firms appeared to push smaller operators out due to some favourable policy distortions including cheaper credit, import subsidy on raw materials and tax relief. There appears to have been underinvestment in the hatchery industry, resulting in a production shortfall of day old chicks. Consequently, to maintain the production cycle poultry producers were required to make advance orders and advance payments at higher prices. Advance payment requirements might also result from the perishable nature of the product, which means that hatchery owners might want to schedule production based on orders and concomitant delivery schedules. The feed industry was found to operate on a more competitive basis than the hatchery industry, perhaps because of the less perishable nature of the product. However, there was room for expansion of investment in this industry as well. Dependence on imported raw materials, and uncertain electrical supply were, however, reported as major bottlenecks constraining its expansion.

Underlying the claimed shortage of capital is the fact that small-scale commercial poultry farms have limited access to credit. The survey of the commercial poultry farms revealed that less than 30% of the sample farms borrowed funds, but very few did so from formal credit institutions (Jabbar et al. 2007). Small-scale commercial poultry is not recognized as an industry qualifying for the preferential low interest loans available to larger scale hatchery and feed firms. Access to credit for small-scale producers from specialized credit institutions involves high transaction costs, and resultant high interest rates.

Out of 140 drop-out sample farms, 66 (47%) gave high bird mortality as the main reason for dropping out of business and 74 (53%) did not give mortality as a reason for drop out but mentioned other reasons. Several reasons might be responsible for high mortality. Farmers under both groups derived technical knowledge about flock management from different sources (Table 1). It was hypothesized that source of technical knowledge might be a significant factor in bird mortality induced drop out. A chi square test shows that, other things being equal, where farmers got their knowledge did not influence whether they cited high bird mortality as a reason for dropping out—or equivalently there is little evidence of a relationship between the farmer drop-out due to high bird mortality and their primary source of technical knowledge.

Table 1. Association between farms giving high mortality as reasons for drop-out and sources of technical knowledge

Sources of technical knowledge about poultry farming	% giving high bird mortality as a reason for drop-out (n = 66)	% giving other reasons for drop-out (n = 74)
Observing and talking to neighbours	42	31
Through trial and error	20	11
Traders of day-old chicks and feeds	21	42
Drug suppliers or agents of pharmaceutical companies	17	16
Total	100	100

Chi square not significant at less than 10% level.
Source: Jabbar et al. (2007).

Of the drop out sample, 60 (43%) gave losses arising from low productivity or poor growth of birds as the main reason for dropping out, 80 (57%) did not give this reason but gave other reasons for drop out. Both groups mentioned several problems related to input supply (Table 2). Since the problems mentioned were not mutually exclusive, a farm could mention more than one problem. The question was whether farms who mentioned low productivity as a reason for drop out also mentioned more problems related to input supply. This was tested by conducting a chi-square test on each row individually (where there is an imaginary second row of 'No' for that problem). Significant differences were found in each row. This means that farmers who cited poor productivity in their poultry operation as a reason for dropping out also cited more problems with inputs and their provision.

Table 2. Association between farms giving low productivity as a reason for dropping out and problems faced in relation to input supply

Problems with day old chicks and drugs	% of those giving low productivity as a reason for drop-out (n = 60)	% of those giving other reasons for drop-out (n = 80)
Poor quality of day old chicks	97	75*
Untimely delivery of day old chicks	75	60**
Inadequate supply of day old chicks	70	50*
Low/average quality of vet drugs	89	63*

** and * chi square significant at less than 5 and 10% level respectively.
Source: Jabbar et al (2007).

The best response

Care is needed in addressing entry and exit so as to preserve the competitive forces that ensure a robust industry and the supply of cheap poultry products to the population. Some consolidation of the poultry industry is inevitable, and is likely to be a good thing provided smallholders are not disadvantaged by the process of consolidation. This can be avoided through appropriate policy actions on concentration, particularly on a regional basis or in specific service or input areas.

A competitive financial and trading system that minimizes transaction costs will be of particular benefit to small-scale producers. Organizational change in the industry may also have a role to play in reducing transaction costs, for which contract farming and producer marketing organizations show some promise. Contract arrangements have the primary function of removing price and delivery uncertainty, both for input and output markets. In Bangladesh, contract farming currently covers a tiny share of the poultry industry. It has been pioneered by Aftab Bahumukhi Farms Ltd, which has been successfully operating since 1991, and Biman and BRAC poultry are also operating contract farming at a smaller scale. An insurance scheme devised by Aftab for managing risks has proved very successful and deserves attention from other integrators for adaptation to their situations. Details about the evolution, characteristics and performance of contract farming by different enterprises are given by Jabbar et al. (2007). The findings show wide scope for expanding this type of market organization for the mutual benefit of poultry producers, hatchery owners, feed manufacturers and integrators, and to promote the stable growth of the industry. Lessons learned from the experiences of the existing contract farming institutions in Bangladesh and elsewhere can be useful for designing new contract farming arrangements.

Resolving problems of supply shortage in the hatchery and feed industries will require significant expansion of these industries. There is no regulatory barrier to entry for these industries, but incentives for investment can be provided through assured electrical supply and access to capital on terms applicable to other industries. Insurance to cover risks should also be helpful. However, it is desirable to promote competition in both industries as it will be beneficial for input producers, input traders and producers, as it will keep prices low and improve the quality of products and services.

Capital constraints for small-scale commercial producers can be addressed in several ways. Contract arrangements can entail supply of stock and access to technologies, and in the longer term access to credit from a wider range of credit institutions can be achieved by reducing transaction costs of credit provision. Access to credit can also be improved by provision-related innovation, for example, by the collateralization of poultry herds or equipment, or by recognition of contracts as risk reduction instruments, or indeed as collateral.

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