

## EFFECT OF CHANGES TO THE INCENTIVE-BASE ON THE STATE OF ADOPTION OF HACCP FOOD SAFETY METASYSTEM IN DAIRY PROCESSING FIRMS IN SRI LANKA: A PANEL DATA ANALYSIS

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The aim of this study was to assess the effects of changes occurred to the incentive-base of management of dairy processing firms in Sri Lanka on state of adoption of the Hazard Analysis and Critical Control Point (HACCP) food safety metasytem in a firm. The incentive-base considered in the analysis comprised of: (1) “market-based” (i.e. cost/financial implications, reputation, technical efficiency, human resource efficiency, commercial pressure, sales and revenue); (2) “regulatory” (i.e. existing and anticipated government regulation), and (3) “liability” incentives. Data collected from 26 firms during February – March 2010 (i.e. stage-two of the two-stage comprehensive program of research) were considered with that from the same firms participated to the stage-one of the study during March – April 2008 (i.e. panel data with two years interval). The *face-to-face* in-depth interviews were carried out with the help of a structured questionnaire to collect panel data from the owner or manager who possesses executive powers with regard to assurance of food safety and quality in the firm. Like in stage-one, the respondents were asked to indicate the current situation of firm with regard to the adoption of HACCP and the relative strength of individual incentives on this behavior was evaluated using validated attitudinal statements and multi-point likert-scales. For the nine economic incentives of interest, the comparisons were made using a number of quantitative techniques, including the Mean Importance Scores (MIS) and Mean Ranks (MR).

The results show that almost all small firms had neither “implemented” nor “in the process” of implementing HACCP, i.e. about 80.0% had “no plans”. However, the level of adoption of HACCP in large firms was increased by 13.9% within this period. The matrix of MIS and MR derived for nine incentives for all sizes of firms for both stages indicated that the early adopters consider reputation and liability laws played a key role in their decision to adopt and maintain the system overtime. The late adopters (i.e. after March 2008) stressed that financial implications prevent them from having it much earlier. The outcome of analysis can be used to develop appropriate market-friendly (i.e. “carrots”) and regulatory/legal (i.e. “sticks”) policy instruments and inject such into the process of quality assurance systems in the key and most sensitive food processing sectors like dairy processing sector in Sri Lanka.

**Key words:** Adoption, Dairy processing sector, Economic incentives, Food safety and quality, HACCP, Quality assurance