

HACCP CERTIFIED FIRMS IN THE AGRI-FOOD PROCESSING SECTOR IN SRI LANKA: DO THEY REALIZE WHAT THEY EXPECT?

**B. B. Goroggoda¹, U. K. Jayasinghe-Mudalige², S. M. M. Ikram²,
J. M. M. Udugama², H. M. T. K. Herath², J. C. Edirisinghe² and S. N. Dissanayake¹**

¹Dept. of Agricultural Systems, Faculty of Agriculture

Rajarata University of Sri Lanka, Puliyankulama, Anuradhapura

*²Dept. of agribusiness management, Faculty of Agriculture and Plantation Management,
Wayamba University of Sri Lanka, Makandura, Gonawila (NWP)*

Parallel to the reforms of public food safety regulations both, locally and globally, private enterprises are themselves implementing new forms of food safety controls in response to the demands of market and/or internal economic and management pressures. These firms are adopting, for example, food quality and safety meta-systems such as HACCP and the ISO 22000. The decision to adopt these food safety and quality meta-systems by firms, however depends on perceptions of internal costs and benefits of adoption versus non-adoption, as well as the potential for improvements in industrial performance, for example market share, profitability, *etc.* In turn, this will reflect characteristics of the firm, its objectives, types of products the firm manufactures, and the environment in which firm operates. However, the same firm tends to evaluate, *ex-post*, whether those intended benefits of adoption have been realized against its *ex-ante* expectations. This evaluation and subsequent judgments are critical factors that will influence the firm's decision on whether to continue with the certification in the future^{1,2}.

The specific objective of this study was to investigate, based on the Expectation Disconfirmation theory from consumer behavior literature, extent to which those HACCP certified agri-food processing firms (*i.e.* meat/fish, diary, fruits/vegetables) in Sri Lanka have “*realized*” (*i.e.* firm's post-adoption experience) those “*intended*” (*i.e.* pre-adoption expectations) benefits upon having a food safety and quality meta-system in place. A multi-phase program of research was followed to achieve the objectives. First, in order to identify the intended benefits, a qualitative exploratory study was undertaken with: (1) Quality Assurance/General Managers (n=15) from large scale HACCP certified agri-food processing firms; (2) Senior Academics from national universities (n=12), specialized in food technology, food marketing and quality assurance; and (3) Quality Management System Auditors/Executives (n=5) from the Sri Lanka Standards Institution (SLSI). The interviews and discussion sessions were voice-recorded and transcribed. The data collected from the exploratory and review sessions were, then, analyzed through N-Vivo (version 7.0) qualitative data analysis software.

The outcome of this process led to the categorization of firm's level of expectation (E) and subsequent realization (R) with regard to 14 different incentives, which can be attributed to four major types of economic incentives that motivate a firm to act on food quality management. They include: (1) Internal market-based (*e.g.* higher price, increased sales); (2) External market-based (*e.g.* customer complains, company image); (3) Increased efficiency (*e.g.* product shelf life, productivity), and (4) Regulatory (*e.g.* government, judiciary/liability). These were incorporated into a structured questionnaire in the form of attitudinal statements on which the respondents were asked to score on a two-way, four-point likert-scale to elicit their expectations and realizations. The responses were used to obtain an ExpectationRealization diagram to differentiate those incentives on three criteria,

i.e. $R > E$, $R = E$ and $R < E$.

The results showed that the most realized incentives (*i.e.* R=E), the gap between realization and expectations was largest, include those classified under the external market-based incentives (*i.e.* ability to better deal with external market forces/incentives such as company image and customer complaints) followed by improved internal efficiency in comparison to those internal market-based incentives such as charging a premium for their products, increased sales/revenue and dealing with regulatory pressure (Figure 1).

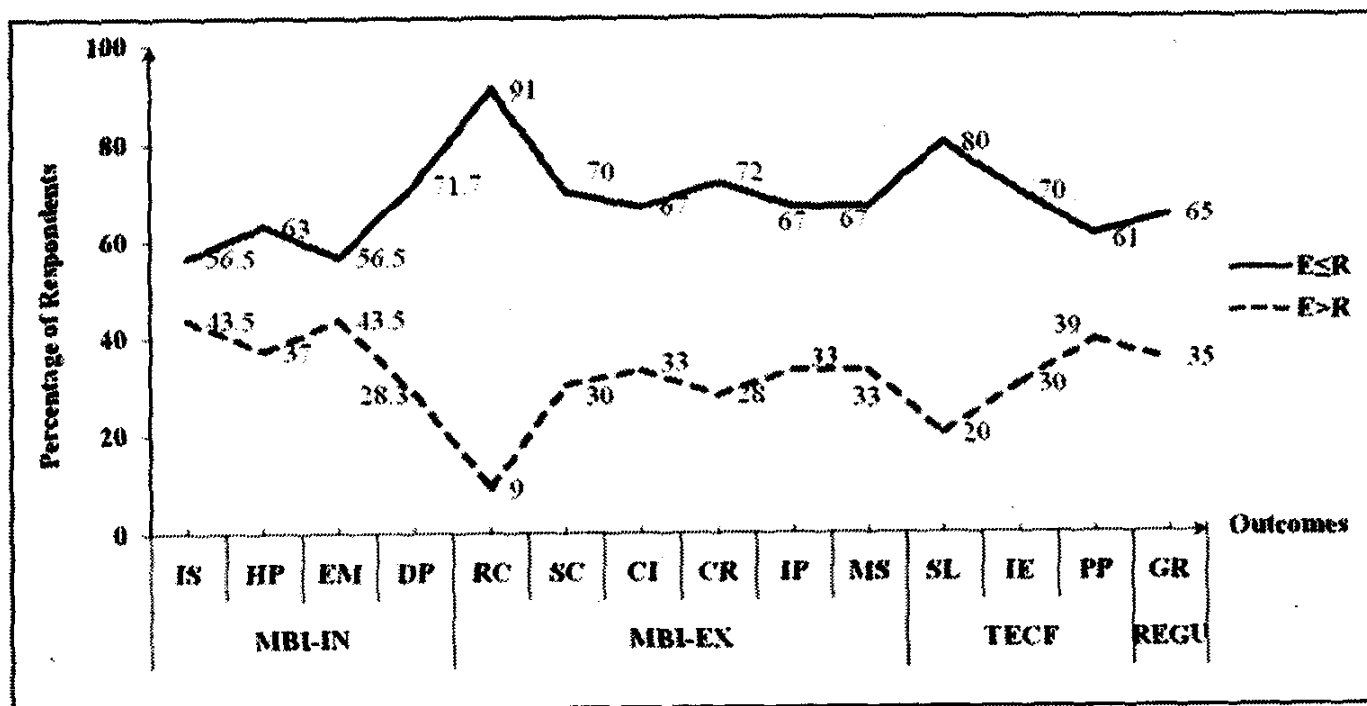


Fig 1: Firms' Realization and Expectation level of each incentive

Note: IS = Increased Sales; HP = Obtain Higher Price; EM= Access to Export Markets; DP = Differentiation of Products; RC = Reduction in Customer Complaints; SC = Satisfaction of Customer Requirements; CI = Improvement in Reputation; CR = Meet Anticipated Customer Requirements; IP = Interference of Pressure Groups; MS = Meeting Industry standards; SL = Shelf life of Products; IE = Improved Efficiency of the Firm; PP = Minimizing Product Related Problems; GR = Meet Regulatory Requirements

Further, the results highlighted that those dairy, meat/fish processing firms realized more of those benefits than fruit/vegetable firms while firm's size and turnover also had variable impacts. Overall, the outcome of analysis implied that those certified firms are "happy" with the multi-faceted incentives generated by the meta-system *ex-post* over the investments made on it (*i.e.* financial, human and physical resources) *ex-ante*.

Keywords: Agri-food processing sector, Economic incentives, Food safety & quality, HACCP

REFERENCES

1. Caswell, J. A., M. E. Bredahl and N. H. Hooker (1998), "How Quality Management Metasystems Are Affecting Food Industry", *Review of Agricultural Economics*, 20: 547-557 pp.
2. Jayasinghe-Mudalige, U. K. and S. Henson (2006), "Economic Incentives for Firms to Implement Enhanced Food Safety Controls: Case of the Canadian Red Meat and Poultry Processing Sector", *Review of Agricultural Economics*, 28(4): 494-514 pp.