

AGRI-FOOD PROCESSING FIRMS' INSIGHTS ON EXPECTED BENEFITS OF ADOPTION OF A FOOD SAFETY METASYSTEM: A CASE OF THE AGRI-FOOD PROCESSING SECTOR IN SRI LANKA

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INTRODUCTION

The agri-food industry of Sri Lanka is one of the strong pillars of its economy and the issue of food safety is one among the seriously discussed issues in the sector. In the post-conflict period, Sri Lanka is expected to grow in all spheres of the economy. A crucial role in this regard is played by the agri-food processing sector, as means of a growth generator in the local and international market contexts. The role of quality assurance, in general, and food safety, in particular, as strategic orientation for economic development has long been established by economists and trade experts. Obtaining food that is appropriately priced and deemed safe to eat is the right of every consumer. The quality of the food consumed by the people of a country is directly related to their physical and mental well-being. Given that a number of food-borne illnesses and deficiencies are related to the inefficiencies associated with the food system, agri-food processing firms have a great responsibility in providing food that is safer for human consumption (Jayasinghe-Mudalige, 2009).

As a result of reforms in food safety controls, requirements from customers and changes in regulations, these firms are adopting different forms of food quality and safety metasystems including ISO 22000 and HACCP. In this regard, a series of economic incentives have been identified as having an impact upon firm decision to adopt or not adopt enhanced food safety metasystems (Jayasinghe-Mudalige and Henson, 2006; 2007). Moving beyond this perspective, we argue that profit motivated firms will be guided by the inherent and indirect costs of providing a certain level of food safety, and if they perceive that the benefits of such an initiative does not materialize or believe that the costs of non-adoption are very low, they might not be motivated to maintain appropriate standards within the food processing chain. In other words, prior to adoption of such enhanced food safety metasystems, firms are guided by number of intended benefits, which the decision-makers within the firms believe, will be obtained as an outcome of adoption. During the post-implementation period firms evaluate whether the intended benefits of adoption have been realized or whether unexpected costs have risen in comparison. This evaluation and subsequent judgments are critical factors that will influence firm decisions on whether to continue with the certification into the future and also decision that might arise on upcoming or novel quality assurance systems in the long term. If these firms are unsatisfied with the outcomes received from food safety system adoption, they might be motivated to discontinue implementation of controls. Understanding these dynamics of adoption, being essential to maximize the safety of food products in an effective and efficient manner, has nevertheless been poorly studied in the local context. This paper is the first step, in a multistage research project to resolve this gap in literature. It aims to synthesize the conceptual and theoretical aspects of this organizational-managerial phenomenon, and expand on these concepts empirically by assessing the views of key stakeholders of the agri-food processing industry.

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METHODOLOGY

The principal proposition put forward here is that a given agri-food processing firm may consider the adoption of an enhanced food safety metasytems as a project having implications with the administrative, technical, social and financial spheres of the enterprise. Addressing this issue with elements from project management literature, it can be stated that for a firm, the adoption of a food control system is a *process*, with the investment of resources being the *inputs*, and the achievement of food safety certification as the *output*. For the firm, the increased benefits and/or reduced costs that result from adoption can be defined as *outcomes* of the project (Figure 1).

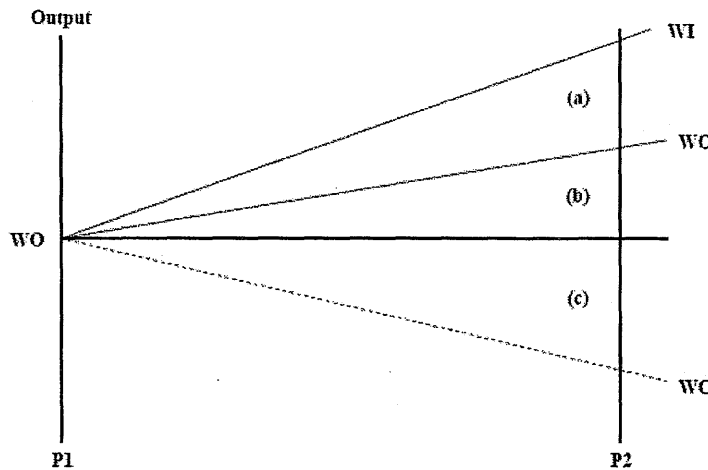


Figure 1. Conceptualization of Incremental Net Benefit of adoption of a food safety metasytem

Consider this firm at two points in time, P1 and P2 (with P2 occurring after time t). The firm does not have a food control system in place at P1 (pre-adoption), that is, it is without a food control system (WO). Two scenarios are possible at P2: (1) The firm has adopted a food control system – with food control system (WI), and (2) The firm has not adopted a food control system (WO). At P2, with condition WO, the firm could continue with the same level of output, or it could have gained benefits (given as b), or it could have incurred losses (given as c). With condition WI, a firm could have gained benefits from the baseline level (inferred as a + b), or it could have gained benefits while overcoming the potential costs that have been prevented by adoption (inferred as a + b + c). The Incremental Net Benefit obtained by adopting an enhanced food safety control system is (a).

Drawing from research on the expectation-disconfirmation theory from consumer behavior literature (Oliver, 1980) and perception-minus-expectation model from service marketing literature (Parasuraman et al. 1988), it is hypothesized that a decision-maker within a firm has pre-adoption expectations of benefits (EB) when implementing a food control system and perceived benefits (PB) based on post-adoption experience and; to what extent the expected benefits would be realized by the firm. The level of satisfaction with a given food control system will depend on the relationship between the expected and perceived benefits:

- PB – EB = (+) Satisfied (1)
- PB – EB = (0) Neutral (2)
- PB – EB = (-) Dissatisfied (3)

It can be argued that the INB realized by a firm (given as (a)), and perceived by the firm’s management (EB) is the principal determinant on the continued implementation of a food safety system within that firm (Spathis and Ananiadis, 2005). The first step in applying this

conceptual framework is the accurate identification of benefits expected by agri-food processing firms; defined from the firms' perspective.

In order to identify these intended benefits of adopting a food safety metasystem, an exploratory qualitative grounded theory approach was adopted. Initially an extensive review of literature in this area was carried out to identify factors related to benefits, costs, motives, constraints, and impacts of adopting enhanced food safety controls. Three sets of respondents were selected for assessment: (1) Managers (*quality assurance/general managers*) from 15 large-scale agri-food processing firms (*HACCP/ISO 22000 adopted at least two years ago, and having implemented more than one quality management system*); (2) 12 academics from national universities (*specialized in the areas of food technology, food marketing, and food quality assurance*); and (3) Five quality management system auditors/executives from the Sri Lanka Standards Institution. Focus Group Discussions (supported by a Discussion Guide) and face-to-face in-depth interviews (supported by a Structured Interview Schedule) were carried out with the above resource persons to extract their views, perceptions and ideas on this matter and also to expand and scrutinize on the factors extracted from literature. The interview and discussion session were voice recorded and transcribed. The data collected from the exploratory and review sessions were analyzed through N-Vivo (version 7.0) qualitative data analysis software.

RESULTS AND DISCUSSION

Utilizing the coding-retrieval and node development functionalities in N-Vivo, it was possible to develop a qualitative model to link the different cognitive parameters unearthed from the interviews and discussions and relate and/or interpret them in terms of concepts from existing literature (Figure 2).

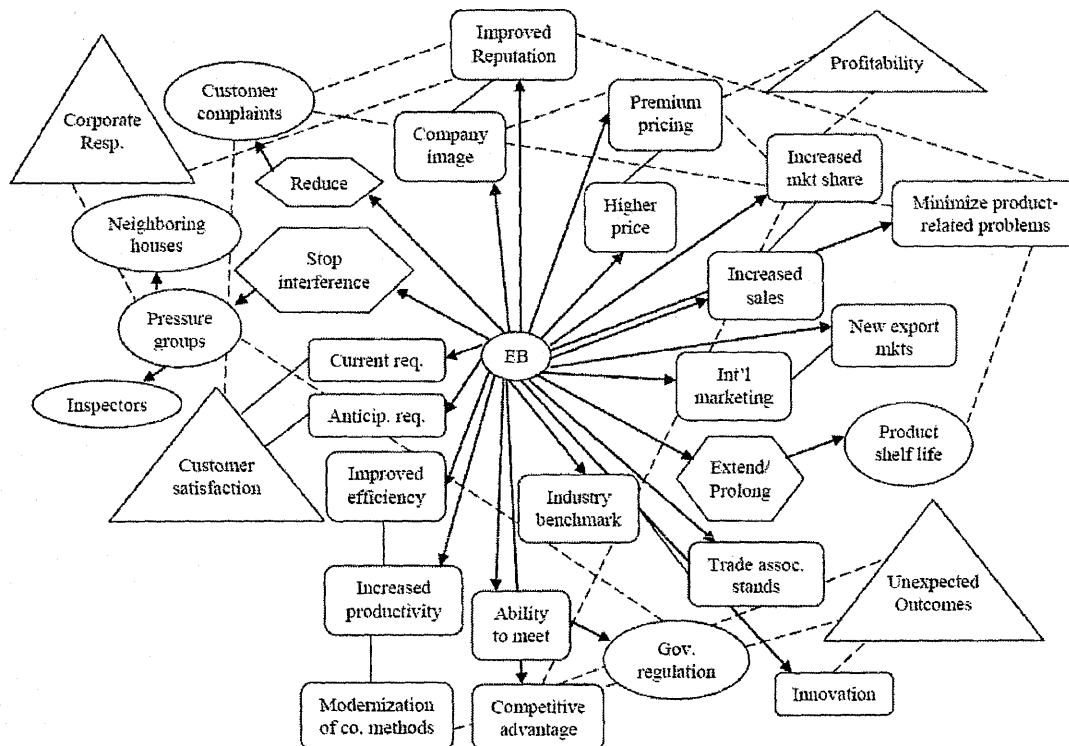


Figure 2. Qualitative model illustrating the outcomes of adopting a food safety metasystem

The most common benefits expected were increase in sales and market share, engaging in international marketing, and improvement in the image of the company. The ability to charge a higher price for their products and meeting the industry benchmark were also strongly

expected benefits of certification. Food processors further expect a reduction in product related problems and customer complaints. Some interesting expectations of companies from food safety management system adoption were improvement in productivity, meeting regulatory requirements and reducing the interference of various pressure groups. It was not altogether surprising that firms have associated HACCP/ISO 22000 implementation with profitability and customer satisfaction. However these companies have also equated certification with corporate responsibility, competitive advantage and organizational innovation.

CONCLUSIONS/RECOMMENDATIONS

The exploratory analysis revealed diverse categories of benefits intended by agri-food processing firms when adopting an enhanced food safety metasystem. These have ranged from internal benefits (like improved efficiency), external benefits (like enhanced marketing capabilities) to outcomes that were previously not considered (such as HACCP/ISO 22000 as an element of innovativeness). The next stage in this study would require the utilization of these findings; in quantitatively assessing the extent to which the firms have realized the expected benefits identified in this stage.

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