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NON-REGULATORY FOOD SAFETY MANAGEMENT IN NEW ZEALAND: MOTIVATION, EFFECTIVENESS, AND IMPLICATIONS

A thesis presented in partial fulfilment of the requirements of the degree of Doctor of Philosophy in Food Safety Management at Massey University, Palmerston North, New Zealand

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2015
ABSTRACT

Non-regulatory food safety management schemes, as a complement or alternative to mandatory regulation, have become a prevalent component of the food safety control system of the global food supply chain. This study focused on non-regulatory food safety management schemes implemented by the New Zealand food manufacturing industry, and examined the motivation for, challenges and impacts of, and the role of third-party certification bodies in the implementation of non-regulatory food safety management schemes. In particular, factors influencing the effectiveness of non-regulatory food safety management schemes and the quality of third-party food safety audits were examined.

It was found that non-regulatory food safety management is a key component of the entire food safety management system in New Zealand. The implementation of non-regulatory food safety management schemes was mainly driven by major customers’ requirements, a desire to improve product quality and safety, and the desire to be recognized by the industry and the public. After the implementation of these schemes, enterprises experienced many desirable changes such as the improvement of product traceability, increasing food safety awareness of employees, and reduced customer complaints. Notably, the implementation improved the food safety culture. The major challenges encountered during the implementation of these schemes were increased paper work, and the cost of development and implementation. The service of third-party certification bodies was important for food companies to continuously improve their food safety management.
Enterprise characteristics made a substantial difference to the propensity of food manufacturing enterprises to implement non-regulatory schemes. These characteristics made notable differences to the relative importance of different incentives to implement non-regulatory schemes and the food manufacturing enterprise’s experiences of the implementation of non-regulatory schemes.

The effectiveness of non-regulatory food safety management schemes was largely influenced by the food safety culture in food manufacturing companies and the quality of third-party food safety audits. A relatively robust food safety culture is in place in the food manufacturing industry, although there are areas needing improvement and change. The audit quality could be affected by accreditation, competition in the certification market, competency and integrity of auditors, audit scope, audit time, and surveillance activities of scheme owners.
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# ABBREVIATIONS

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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AB</td>
<td>Accreditation Body</td>
</tr>
<tr>
<td>BRC</td>
<td>British Retail Consortium</td>
</tr>
<tr>
<td>BSE</td>
<td>Bovine Spongiform Encephalopathy</td>
</tr>
<tr>
<td>CB</td>
<td>Certification Body</td>
</tr>
<tr>
<td>CFIA</td>
<td>Canadian Food Inspection Agency</td>
</tr>
<tr>
<td>CNCA</td>
<td>Certification and Accreditation Administration of the People’s Republic of China</td>
</tr>
<tr>
<td>EFSA</td>
<td>European Food Safety Authority</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organisation of the United Nations</td>
</tr>
<tr>
<td>FDA</td>
<td>U.S. Food and Drug Administration</td>
</tr>
<tr>
<td>FMD</td>
<td>Foot and mouth disease</td>
</tr>
<tr>
<td>FSMS</td>
<td>Food safety management schemes</td>
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<tr>
<td>FSP</td>
<td>Food Safety Programme</td>
</tr>
<tr>
<td>FSSC 22000</td>
<td>Food Safety System Certification 22000</td>
</tr>
<tr>
<td>GAP</td>
<td>Good Agriculture Practice</td>
</tr>
<tr>
<td>GFSI</td>
<td>Global Food Safety Initiative</td>
</tr>
<tr>
<td>GMP</td>
<td>Good Manufacturing Practice</td>
</tr>
<tr>
<td>HACCP</td>
<td>Hazard Analysis and Critical Control Point</td>
</tr>
<tr>
<td>IAF</td>
<td>International Accreditation Forum</td>
</tr>
<tr>
<td>IEC</td>
<td>International Electrotechnical Commission</td>
</tr>
<tr>
<td>IFS</td>
<td>International Featured Standards</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organisation for Standardization</td>
</tr>
<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>ISO 22000</td>
<td>ISO 22000 Food Safety Management System</td>
</tr>
<tr>
<td>JAS-ANZ</td>
<td>Joint Accreditation System of Australia &amp; New Zealand</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
</tr>
<tr>
<td>MIBE</td>
<td>Ministry of Business, Innovation and Employment, New Zealand</td>
</tr>
<tr>
<td>MPI</td>
<td>Ministry for Primary Industries, New Zealand</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-government organisation</td>
</tr>
<tr>
<td>NZTE</td>
<td>New Zealand Trade and Enterprise</td>
</tr>
<tr>
<td>RABSQA</td>
<td>RABQSA International Inc.</td>
</tr>
<tr>
<td>RMP</td>
<td>Risk Management Programme</td>
</tr>
<tr>
<td>SMART</td>
<td>Specific, Measurable, Achievable, Realistic, Traceable and Time bound</td>
</tr>
<tr>
<td>SME</td>
<td>Small and medium sized enterprise</td>
</tr>
<tr>
<td>SQF</td>
<td>Safety Quality Food</td>
</tr>
<tr>
<td>USDA</td>
<td>U.S. Department of Agriculture</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation of the United Nations</td>
</tr>
<tr>
<td>WQA</td>
<td>Woolworths Quality Assurance</td>
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