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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**

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## **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

AB	Accreditation Body
BRC	British Retail Consortium
BSE	Bovine Spongiform Encephalopathy
CB	Certification Body
CFIA	Canadian Food Inspection Agency
CNCA	Certification and Accreditation Administration of the People's Republic of China
EFSA	European Food Safety Authority
FAO	Food and Agriculture Organisation of the United Nations
FDA	U.S. Food and Drug Administration
FMD	Foot and mouth disease
FSMS	Food safety management schemes
FSP	Food Safety Programme
FSSC 22000	Food Safety System Certification 22000
GAP	Good Agriculture Practice
GFSI	Global Food Safety Initiative
GMP	Good Manufacturing Practice
HACCP	Hazard Analysis and Critical Control Point
IAF	International Accreditation Forum
IEC	International Electrotechnical Commission
IFS	International Featured Standards
ISO	International Organisation for Standardization

ISO 22000	ISO 22000 Food Safety Management System
JAS-ANZ	Joint Accreditation System of Australia & New Zealand
KPI	Key Performance Indicator
MIBE	Ministry of Business, Innovation and Employment, New Zealand
MPI	Ministry for Primary Industries, New Zealand
NGO	Non-government organisation
NZTE	New Zealand Trade and Enterprise
RABSQA	RABQSA International Inc.
RMP	Risk Management Programme
SMART	Specific, Measurable, Achievable, Realistic, Traceable and Time bound
SME	Small and medium sized enterprise
SQF	Safety Quality Food
USDA	U.S. Department of Agriculture
WHO	World Health Organisation of the United Nations
WQA	Woolworths Quality Assurance
WTO	World Trade Organisation

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