Faculty of Business and Law

2021 Australian Government Research Training Program Scholarships

Strategic Project Profile

PROJECT TITLE: Developing resilient food supply chains from an investment perspective

FIELD OF RESEARCH CODE: 1503

PROJECT SYNOPSIS:

The need for the research: Agri-food supply chains have long been concerned about resilience to biotic and abiotic vulnerabilities, mainly due to the variability of growing conditions and fluctuating commodity prices. The emergence of climate change and increased natural disasters have brought resilience to the forefront of our minds in industry and academia. The Covid-19 pandemic has exacerbated the situation by recently exposing and revealing an increase in food chain vulnerabilities (The Economist, 2020), such as: labour shortages due to the transient worker immobility, long-term reliance on single suppliers in ultra-lean supply chains and closures of key transport hubs like ports and airports. Whilst supply chain resilience is a mature topic of agri-food scholarly enquiry, there is a critical area of importance that is under explored and needs attention: what metrics can agri-food chains use to claim “resilience” and demonstrate long-term sustainability to investors in these uncertain times?
The importance of this question comes from an investment perspective. We have seen measures of consumer sentiment and corporate social responsibility (CSR) developed to inform investment: the better firms perform in these areas, the more attractive they are to investors. But what measures of resilience can agri-food supply chains signal to become more attractive to investors? This question comes at a time when data on agri-food supply chain activities are abundant from sources like ABARES, USDA and FAOSTAT. When it comes to resilience, the literature is silent on definite measures of supply chain resilience (Herrera, 2017) and has not received the attention that issues like sentiment and CSR have enjoyed. Therefore, despite its popularity as a term, resilience remains an abstract theoretical aspiration that is yet to be quantified in domains that straddle agri-supply chain management and finance.

The proposed research will build on existing measures of non-financial performance to go beyond individuals and their businesses to focus on agri-food supply chain resilience emerging as an attractive determinant of securing investment through a case study approach; this is based on the premise that investment is attractive if it supports a supply chain that will “bounce forward” and adapt from the shocks that are becoming the new normal. Against this background, we propose the following Research Objectives (RO):

1) Explore the appetite amongst agri-food investors for quantifying supply chain resilience (if not, why not?).

2) Develop potential measures of agri-food supply chain resilience with a focus on benefits to investment attractiveness.

3) Apply the findings of Objectives 1 & 2 to WA agri-food supply chains to appropriate the usefulness of the developed measures.

Proposed approach: The proposed project will benefit from a mixed-method research approach to combine the advantages of qualitative and quantitative methodologies. Starting with a conceptual model of WA agri-food systems, based on the framework of Béné et al. (2019), the project will then move into a qualitative phase (RO1) to explore the appetite amongst agri-food investors for quantifying supply chain resilience with WA agri-food debt investors and equity investors; it may transpire that investors are interested in different characteristics of the prospective asset in terms of how they impact future returns. With these results, RO2 will consist of analytical work based on the system dynamics modelling of Herrera (2017) to develop resilience measures. The confirmatory phase of the research (RO3) will test the findings of RO1 and RO2: the contemporary phenomenon of establishing resilience measures in the real-world context (Yin, 2014) of a social-ecological system (Herrera & Kopainsky, 2020).

Dissemination of results: The multi-disciplinary practical and theoretical applications of this work will make it attractive to industry and academia alike.


The Economist (2020), How to feed the planet - The global food supply chain is passing a severe test, The Economist, 435(9193): online.


FEASIBILITY AND RESOURCING – DESCRIPTION OF THE SUPPORT THIS PROJECT WILL RECEIVE:

The proposed project easily fits within the bounds of an RTP award (stipend, travel expenses, etc.). Data collection time and costs will be minimal; sophisticated data analysis software and data storage is also minimal. Industry contacts for data collection and dissemination of results are readily available from the supervisory team who have a broad network from recent work in WA agri-food supply chains and investment e.g., NAB Agribusiness have expressed an interest in collaborating with the student as an intern and Alterra is interested in being a test case for metrics developed from the research.

THE SIGNIFICANCE OF THE PROJECT/ PROGRAM FOR THE ENROLLING SCHOOL OR INSTITUTION:

The aim of this project is capacity building in further developing FBL's cadre of academics investigating agri-food supply chains and enhancing the Faculty’s existing collaboration with Murdoch University. The supervisory team has a track record of collaborating on Food Agility CRC proposals and funding from Curtin’s Centre of Research in Applied Economics, as well as joint publications. We aim to leverage existing industry networks to give the student exposure to industry to broaden his/her career opportunities. As this is an under-explored topic in an urgent, emerging area of enquiry, we expect that dissemination of findings to be significant.

Students must express interest in this scholarship opportunity by emailing the Project Lead listed below. Please provide a copy of your current curriculum vitae and detail your suitability to be involved in this strategic project.

PROJECT LEAD CONTACT:

Name: Elizabeth Jackson
School: School of Management
Faculty: Business and Law
Email: Elizabeth.jackson@curtin.edu.au
Contact Number: 08 9266 7706