## ACADEMIC PROJECT SUBMISSION DETAILS:

<table>
<thead>
<tr>
<th>Supervisor/s:</th>
<th>Zack Dorner</th>
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</thead>
<tbody>
<tr>
<td>Project Title:</td>
<td>Understanding profitability and efficiency of dairy farms in the Waikato</td>
</tr>
<tr>
<td>Field:</td>
<td>Agricultural economics</td>
</tr>
<tr>
<td>Division/School:</td>
<td>Division of Management</td>
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</table>

## PROJECT #: 51

## EXPECTED OUTCOMES:

1. A 5,000 word report provided to DairyNZ to inform their economics team in their on-going research to improve dairy farming performance in NZ.
2. The project will be informed through a strong relationship with DairyNZ's Principal Economist Professor Graeme Doole. This project will help strengthen that relationship and could lead to future collaborations between myself and Professor Doole, as well as future opportunities for the student.
3. A poster will be provided to University of Waikato for promotion of this summer research project.
4. The poster will also be provided to DairyNZ so that their communications team can assess whether the information presented in the poster could be formatted in a way that is useful for dairy farmers.

## STUDENT TASKS:

1. Perform a literature review to identify prior use of the Operating Profit Margin in agriculture and key factors that influence this measure.
2. Prepare the data by determining the Operating Profit Margin for a sample of owner-operator farms in the Waikato region over the last five years.
3. Analyse the data by identifying correlations between the Operating Profit Margin and other metrics of farm performance available in the sample.
4. Compile a 5,000 word report from tasks 1 through 3. In discussing the results, the student will comment on the direction, significance, and potential cause for the correlations found in step #3. They will also identify the implications of the analysis for farm management and economic analysis of far
5. Create a final research poster highlighting key insights and findings from their report.

## REQUIRED SKILLS:

1. Review literature in the field of agricultural economics
2. Basic data cleaning and manipulation
3. Perform a correlative analysis on time series data
4. Write up a discussion of the findings from the data
PROJECT ABSTRACT:

The profitable management of NZ dairy farms is challenging due to several factors. First, its significant reliance on pasture means that farmers face substantial climatic uncertainty. Second, farmers are unable to significantly influence the market price; therefore, they can face wide scale changes in the milk price annually. Last, as a land-based sector, it requires substantial investment of debt finance to enter the industry. New Zealand is a leading competitor in many global markets for milk products. However, its ongoing competitiveness will require a substantial focus on cost efficiency/the capacity to minimise the cost of producing a given level of revenue moving forward. This is important given that costs associated with environmental mitigation are increasing, while significant increases in intensity over the last three decades have been driven by input growth, rather than improvements in productivity.

The primary objective of this study is to identify the key factors correlated with cost efficiency for Waikato dairy farms over the last five years. This temporal component is important because milk price has experienced significant fluctuations over the last five years, influencing efficiency. The secondary objectives of the study are to:

1. Perform a literature review to identify prior use of the Operating Profit Margin in agriculture and key factors that influence this measure.
2. Determine the Operating Profit Margin for a sample of owner-operator farms in the Waikato region over the last five years.
3. Identify correlations between the Operating Profit Margin and other metrics of farm performance available in the sample.
4. Comment on the direction, significance, and potential cause for the correlations found in step #3.
5. Identify the implications of the analysis for farm management and economic analysis.

The Operating Profit Margin is the ratio of Operating Profit and Gross Farm Revenue. A higher value of the Dairy Operating Profit Margin indicates that the farm business employs a lower level of cost to produce the same level of Dairy Gross Farm Revenue. As a measure, it is particularly useful because the use of a ratio helps to remove the noise associated with broad variation in the relationship between Dairy Operating Expenses and Dairy Operating Profit across different farms. It also allows comparison with businesses in other sectors.

A high Operating Profit Margin is important to help businesses survive through turbulent market and production environments, as a low cost of production helps to buffer changes in the milk price and help sustain debt payments in years of a low milk price. However, this measure is under-utilised in the NZ dairy sector and economics more generally. This is a key motivation for this study.

The findings of the study will help inform the on-going work of the economics team at DairyNZ. The chosen student will be supervised by Zack Dorner at University of Waikato, while also being integrated into the office at DairyNZ. Thus, the student will be able to sharpen their economic research skills, learn how economic analysis works in a company like DairyNZ, and build connections at DairyNZ.
ACADEMIC PROJECT SUBMISSION DETAILS:

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<tr>
<th>Supervisor/s:</th>
<th>John Gibson</th>
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<tbody>
<tr>
<td>Project Title:</td>
<td>Returns to bad behaviour? The impact of retractions on subsequent scientometric and academic labour market outcomes</td>
</tr>
<tr>
<td>Field:</td>
<td>Economics/Scientometrics</td>
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<tr>
<td>Division/School:</td>
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EXPECTED OUTCOMES:

1. The research project will contribute to a journal article
2. The research project will contribute to a conference presentation (including poster)

STUDENT TASKS:

1. Extracting data from the Retraction Watch database
2. Extracting citations and other bibliometric data for articles with retractions notices
3. Extracting citations and other bibliometric data for a control group of articles without retractions notices
4. Obtaining Google Scholar citations data for all papers by the authors of retracted articles
5. Searching public disclosure databases of academic and researcher salaries in the United States
6. Assisting with data analysis of pre-retraction and post-retraction trends in article-specific metrics

REQUIRED SKILLS:

1. Data management skills
2. Economics at least to the level of second year university study
3. Statistics and mathematics at least to the level of first year university study
4. Competent user of bibliometric software (Google Scholar, Scopus, Web of Science)

PROJECT ABSTRACT:

The retraction of articles from peer reviewed scientific journals is a growing problem and may reflect a growing rate of cheating by researchers. Retraction notices are typically issued for ethical misconduct, such as (self-) plagiarism, missing credit, authorship issues, manipulating citations and interference with (or fake) peer review or else are due to scientific distortion such as data manipulation and the use of fraudulent data.

The small literature on the impact of retraction notices finds that retracted articles continue to be cited after the retraction notice is issued, partly due to self-citing behaviour of authors. Thus, from a scientometrics standpoint, it is unclear if there are negative consequences for authors of having articles retracted. There are also high profile cases of authors with retracted articles who subsequently receive professional accolades, such as elected fellowships of scholarly societies, which adds to the perception that retractions do not cause negative consequences for academic careers.
ACADEMIC PROJECT SUBMISSION DETAILS:  

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<tr>
<th>Supervisors:</th>
<th>Abhishek Mukherjee</th>
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<tr>
<td>Project Title:</td>
<td>Managing cash flow during a period of crisis.</td>
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<tr>
<td>Field:</td>
<td>Management Accounting</td>
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<td>Division/School:</td>
<td>Division of Management</td>
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<tr>
<td></td>
<td>School of Accounting, Finance &amp; Economics</td>
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EXPECTED OUTCOMES:
1. Research poster.
2. Research report.
3. Publishable journal article.

STUDENT TASKS:
1. Conduct interviews with business owners.
2. Assist in developing questionnaire.
3. Visit local business and collect data using questionnaire survey.
4. Assist in conducting data analysis.
5. Prepare final research poster.
6. Write a project report.

REQUIRED SKILLS:
1. Studied ACCTN303 (Management Accounting).
2. Survey research experience (preferred).
3. Must live in Tauranga.
4. Must have some local business contacts.

PROJECT ABSTRACT:
COVID-19 is a unique simultaneous supply shock, demand shock and market shock event. Businesses in sectors such as tourism, hospitality, entertainment and air transportation have been particularly hard-hit in the short term (KPMG, 2020). Businesses in consumer goods and retail may also be at higher than-normal financial risk, especially those with high exposure to China (Deloitte, 2020). Companies were needed to develop a plan for cash management as part of their overall business risk and continuity plan. This project aims to explore the measures taken by small and medium-size enterprises of New Zealand in the areas of cash, inventory, accounts receivable, accounts payable and risk management to survive the COVID-19 economic impact.
ACADEMIC PROJECT SUBMISSION DETAILS:

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<tr>
<th>Supervisor/s:</th>
<th>Ou Wang</th>
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<tr>
<td>Project Title:</td>
<td>Consumer adoption of blockchain technology in food traceability in New Zealand</td>
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<tr>
<td>Field:</td>
<td>Agricultural marketing</td>
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ALIGNMENT WITH FUNDERS PRIORITIES:

The rapid development of blockchain technology is co-evolving with food traceability to help solve trust problems in traditional food traceability systems. This will meet the increasing consumer demand for safety-assured food products which the trend is strengthened by the Covid-19 crisis. The proposed project will explore consumer adoption of blockchain technology in food traceability in New Zealand. The innovative findings will help stakeholders to better understand consumers’ perceptions and attitudes towards the use of blockchain technology in food traceability in order to make effective strategies and policies to introduce the blockchain-based traceability system to food industry in the future. This is vital for New Zealand where the food production and exporting are key economic lifelines, particularly in and after the Covid-19 crisis.

RESEARCH FUNDING USAGE:

The additional $4,000 of Flower Summer Research Scholarship Fund will cover the consumer survey cost - using the sample panel service of a research agency e.g. Qualtrics. The study population will consist of 600 consumers based on regional population distribution across New Zealand: Auckland 34%, Waikato 10%, Wellington 18%, Canterbury 18%, Otago 8%, Bay of Plenty 6% and other New Zealand regions. The survey cost is estimated based on the survey expenses of Dr. Ou Wang’s previous projects.

EXPECTED OUTCOMES:

1. An final research poster will be created based on the research findings.
2. The first draft of an academic article will be written which are publishable in an international reputed journal in the near future.
3. The student can better understand the procedure.

STUDENT TASKS:

1. Create a final research poster based on the findings
2. Assist designing the survey questionnaire
3. Create application files for ethics approval of the consumer survey
4. Program the questionnaire on the survey platform of the research agency
5. Assist analysing the survey data
6. Write some sections in the academic article e.g. Introduction section
REQUIRED SKILLS:

1. Good ability of academic English writing
2. Followed university papers in the fields of food consumer behaviour or agribusiness

PROJECT ABSTRACT:

Due to the Covid-19 epidemic, consumers globally are increasingly seeking safety-assured food products and keen to know where a food product comes from, what its components and origin are, and about its processing history. This results into an increased importance for the implementation of an efficient and effective traceability system in food industry which can transmit accurate, timely, complete and consistent information about food products through the whole supply chain to final consumers. Blockchain technology plays a key role to fulfill the task and is approved by global scholars as an emerging tool to enhance the transparency of a food chain, strengthen the information credibility, and realize the real-time tracking of food products. A decentralized blockchain-based traceability system can well solve trust problems in traditional food traceability systems such as fraud, corruption, tampering and falsifying information.

However, although blockchain technology has become a hot topic across the world, only one empirical study could be found with consumer and industry analyses and it is only related to the use of blockchain-based traceability technology in meat industry. Other studies related to the current research topic are either conceptual not directly linkable to food industry. There is still a lack of empirical studies to contribute first-hand knowledge in the field, particularly regarding consumers’ perceptions, attitudes, motivations and behaviours towards the use of blockchain technology in food traceability.

The University of Waikato (UOW) funded a summer research project last year related to the lack of understanding area. Under supervision by Dr. Ou Wang, an UOW student conducted a systematic literature review and other relevant research activities in terms of strategic analysis for the use of blockchain-based traceability system in food industry.

In this year, the proposed summer project will expand the research by conducting an empirical consumer study in the field. A consumer survey will be designed based on the findings from the literature review in the last summer project. It will explore consumers’ perceptions and attitudes towards the use of blockchain technology in food traceability in New Zealand. The additional $4,000 of Flower Summer Research Scholarship Fund will cover the consumer survey cost using the sample panel service of a research agency e.g. Qualtrics. The study population will consist of 600 consumers based on regional population distribution across New Zealand: Auckland 34%, Waikato 10%, Wellington 18%, Canterbury 18%, Otago 8%, Bay of Plenty 6% and other New Zealand regions. The findings will be written in an academic article publishable in an international reputed journal.

The student who receives the Flower Summer Research Scholarship will be expected to complete the following tasks in the project: 1) assist designing the survey questionnaire; 2) create application files for ethics approval of the consumer survey; 3) program the questionnaire on the survey platform of the research agency; 4) assist analyzing the survey data; 5) make a poster based on the findings; 6) write some sections in the academic article e.g. Introduction section.