



FINAL REPORT 2017

For Public Release

Part 1 - Summary Details

Please use your TAB key to complete Parts 1 & 2.

CRDC Project Number: USQ1403

Project Title: Investigating Cotton Farm Workers’
Experiences of Job Satisfaction Using Social
Cognitive Career Theory

Project Commencement Date: 28/01/2014 **Project Completion Date:** 19/05/2017

CRDC Research Program: 4 People

Part 2 – Contact Details

Administrator: Mr Lester Norris
Organisation: Student Manager, Office of Research Graduate Studies
University of Queensland

Postal Address: West Street, Toowoomba

Ph: **Fax:** **E-mail:** orgsadmin@usq.edu.au

Principal Researcher: Nicole McDonald
Organisation: University of Southern Queensland
Postal Address: 23 Bayliss Street, Preston, Vic, 3072

Ph: 0403204199 **Fax:** **E-mail:** Nicole.mcdonald@usq.edu.au

Supervisor: Associate Professor Peter McIlveen
Organisation: University of Southern Queensland

Postal Address: West St, Darling Heights 4350

Ph: 0746312375 **Fax:** **E-mail:** peter.mcilveen@usq.edu.au

Signature of Research Provider Representative: _____

Date Submitted: _____

Part 3 – Final Report

(The points below are to be used as a guideline when completing your final report.)

Background

1. Outline the background to the project.

In 2017, there has been plenty of good news for the Australian agricultural sector with the value of farm production forecast to increase by 8.3 percent, making it a record production year across a number of crop industries (ABARES, 2017). Although there are concerns that the productivity of Australian farms is plateauing, and understandably there is concerted efforts to improve research and technology to address this issue (Hall, Dijkman, Taylor, Williams, & Kelly, 2017). It is widely recognised that a key component required for driving agricultural production gains is a capable and motivated workforce, both throughout the supply chain and on-farm (Commonwealth of Australia, 2015).

Recognising the value of people in production outcomes, the Cotton Research Development Corporation (CRDC) has been investing in research and developing a workforce development strategy for the cotton industry. In the workforce development strategy action plan, it is noted:

While cotton growers lead the world in many areas of farm management, general evidence suggests that, like other agrifood industries, human resource management is not keeping pace with changing business models...The challenge for the cotton industry is whether the talent for innovation can be adapted to developing a more sustainable approach to securing a workforce (Agrifood Skills Solutions, 2015, p. 19).

A key aspect of persuading and engaging cotton growers to implement changes in their business is the use of evidence specific to the cotton farm context. The CRDC's (2013a) multi-disciplinary "People" program of research aims to capture evidence to inform the practical implementation of the workforce development strategy and demonstrate the impacts that different aspects of workforce development has in improving cotton farm productivity. The current research project is funded by the CRDC and contributes to this agenda.

In attempting to tackle current on-farm workforce attraction and retention issues, the cotton industry aims for each cotton farm to be viewed as a desirable workplace where employees can achieve overall job satisfaction (Agrifood Skills Solutions, 2015). For the individual, job satisfaction has been linked to a number of positive health and wellbeing outcomes, and is one domain that can influence overall life satisfaction (Faragher, Cass & Cooper, 2005; Ford, Heinen, & Langkamer, 2007; Lent et al., 2005). Job satisfaction also has been linked to worker productivity, commitment and reduced turnover intentions (Judge, Thoresen, Bono, & Patton, 2001; Griffeth, Hom, Gaertner, 2000; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). In seeking to understand the antecedents of job satisfaction in the cotton farm context, I argue that there is a need to better understand the psychological factors that impact a farm worker's career experiences and result in the individual's attitudinal appraisal. Vocational Psychology and, more specifically, Social Cognitive Career Theory (SCCT) offers an ideal lense through which to view such a phenomena.

Objectives

2. List the project objectives and the extent to which these have been achieved, with reference to the Milestones and Performance indicators.

At the start of the project, a broad set of aims were identified including:

1. The vocational characteristics of the cotton farm employee, how he/she is positioned within their workplace, how he/she has been educated/trained and his/her knowledge and skills, how he/she views their position in the industry specifically and his/her perspective of the world-of-work as a source of other, competing opportunities;
2. Employees' motivational beliefs, attitudes, and values that affect their attraction to and remaining in the industry

3. Employee-related motivational factors that affect employee-employer relations as a workplace team;
4. The key employability skills, knowledge and attitudes that growers' need in their employees; and
5. The correspondence between employees' perspectives of growers' perspectives on those employability skills

Of these, the project successfully focused on aim 1,2, and 4. Aims 3, and 5 require a more organisational psychological approach and the current project was positioned within vocational psychology. However the current research has produced evidence that will help inform future research or educational programs on team dynamics, and employer-employee communication.

The current research project was undertaken as part of the Postgraduate Doctor of Philosophy Program at the University of Southern Queensland. The thesis has been completed and is due for submission for examination on the 1st September, 2017. The milestones of the project related to the stages required for the Doctoral Program. The principal researcher, Nicole McDonald was responsible for identifying the research issues, developing the research questions and hypotheses, study design, analysis of data, interpretation of results, and drafting of the thesis.

Methods

3. Detail the methodology and justify the methodology used. Include any discoveries in methods that may benefit other related research.

The current research project sought to investigate the usefulness of Social Cognitive Career Theory (SCCT) to better understand farm worker's job satisfaction.

The SCCT Model of Job Satisfaction is a process model which incorporates both dispositional and situational approaches to understanding wellbeing at work. The initial model mapped the relationships between five predictor variables: (a) personality and affective traits; (b) goal and efficacy-relevant environmental supports, resources, and obstacles; (c) self-efficacy; (d) expected work conditions and outcomes; and (e) participation in/progress at goals and goal-directed activity, and their direct and indirect influence on fostering (or inhibiting) the individual's experience of work satisfaction (Lent & Brown, 2006a). This has more recently been extended to include overall life satisfaction, as demonstrated in Figure 1.1 (Lent & Brown, 2008).

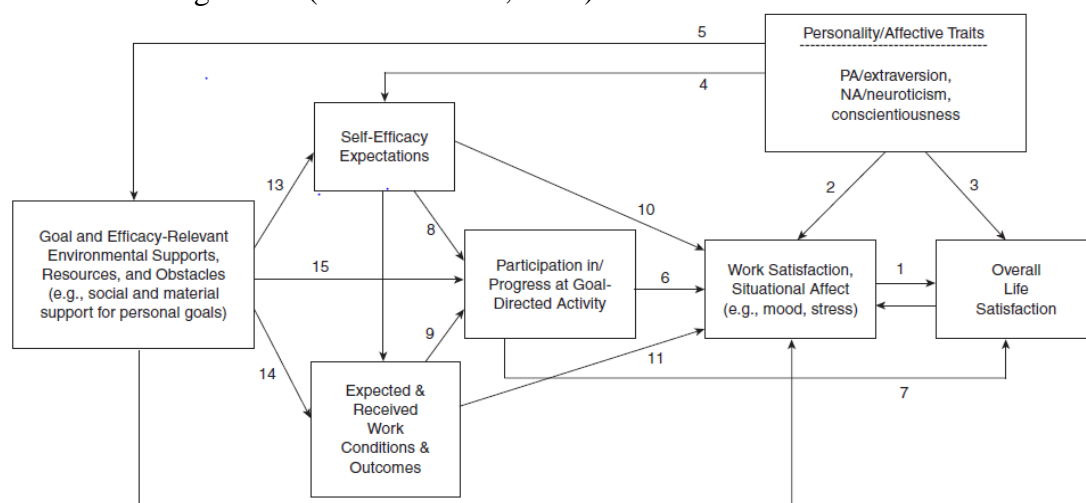


Figure 1. A process model of work satisfaction. This model highlights theorised interrelations among personality, affective, cognitive, behavioural, and environmental variables. Reproduced with permission (Lent & Brown, 2008).

The current research project used a sequential mixed-methods design outlined below:

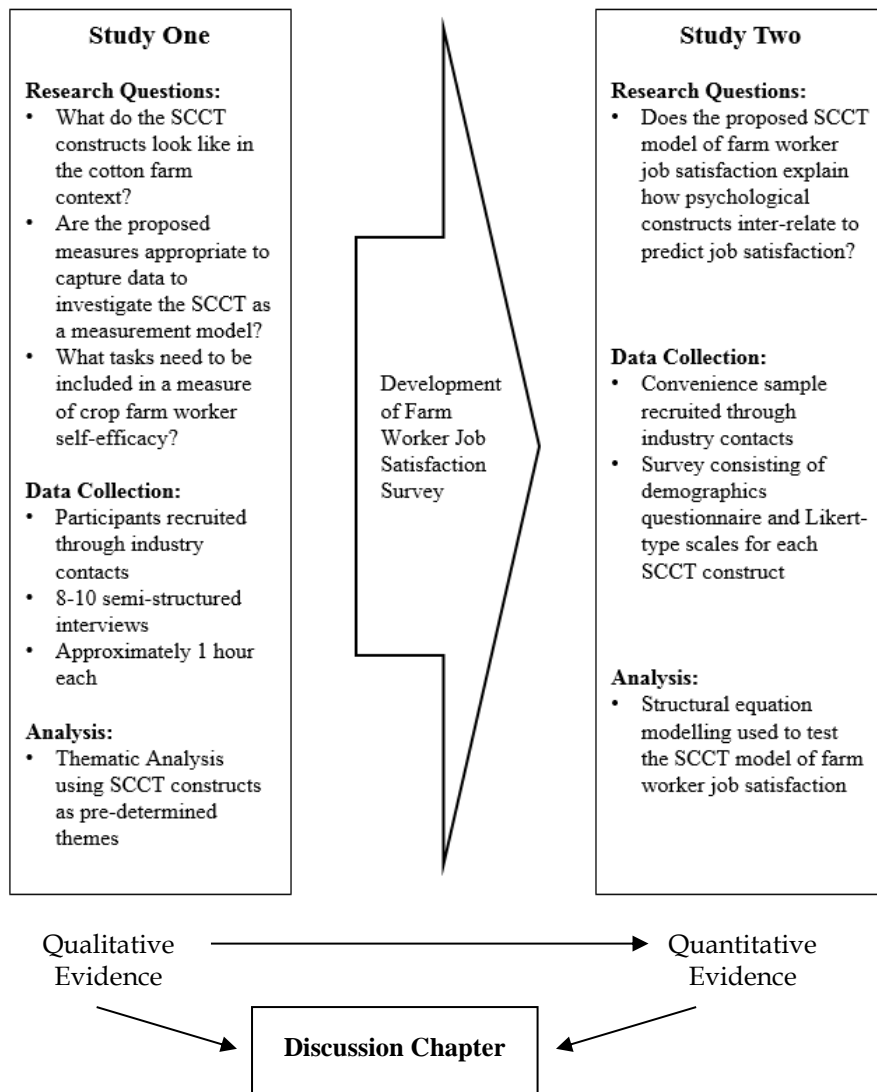


Figure 2. Sequential mixed-methods research design for the current research project.

Firstly, qualitative data, collected in semi-structured interviews, was analysed to address research questions one to three. Once the face validity of proposed measures was established and items for a new measure of farm worker task self-efficacy developed, the Farm Worker Job Satisfaction Survey was created and distributed. This survey captured Likert-type responses to measures of the SCCT job satisfaction constructs. The SCCT Model of Farm Worker Job Satisfaction was then tested using Structural Equation Modeling (SEM), with the results from Study Two answering research question four.

Results

4. Detail and discuss the results for each objective including the statistical analysis of results.

The results demonstrated that the SCCT Model of Farm Worker Job Satisfaction was adaptable for the cotton farm work context. The SCCT Model of Farm Worker Job Satisfaction demonstrated good fit to the data ($N = 156$, $RMSEA = 0.054$, $CFI = .956$, $TLI = .952$) and adequate fit with the inclusion of work volition ($N = 157$, $RMSEA = 0.06$, $CFI = .910$, $TLI = .904$). Furthermore the model including work volition was able to account for up to 71% of the variance in farm worker's job satisfaction scores (see Figure 3).

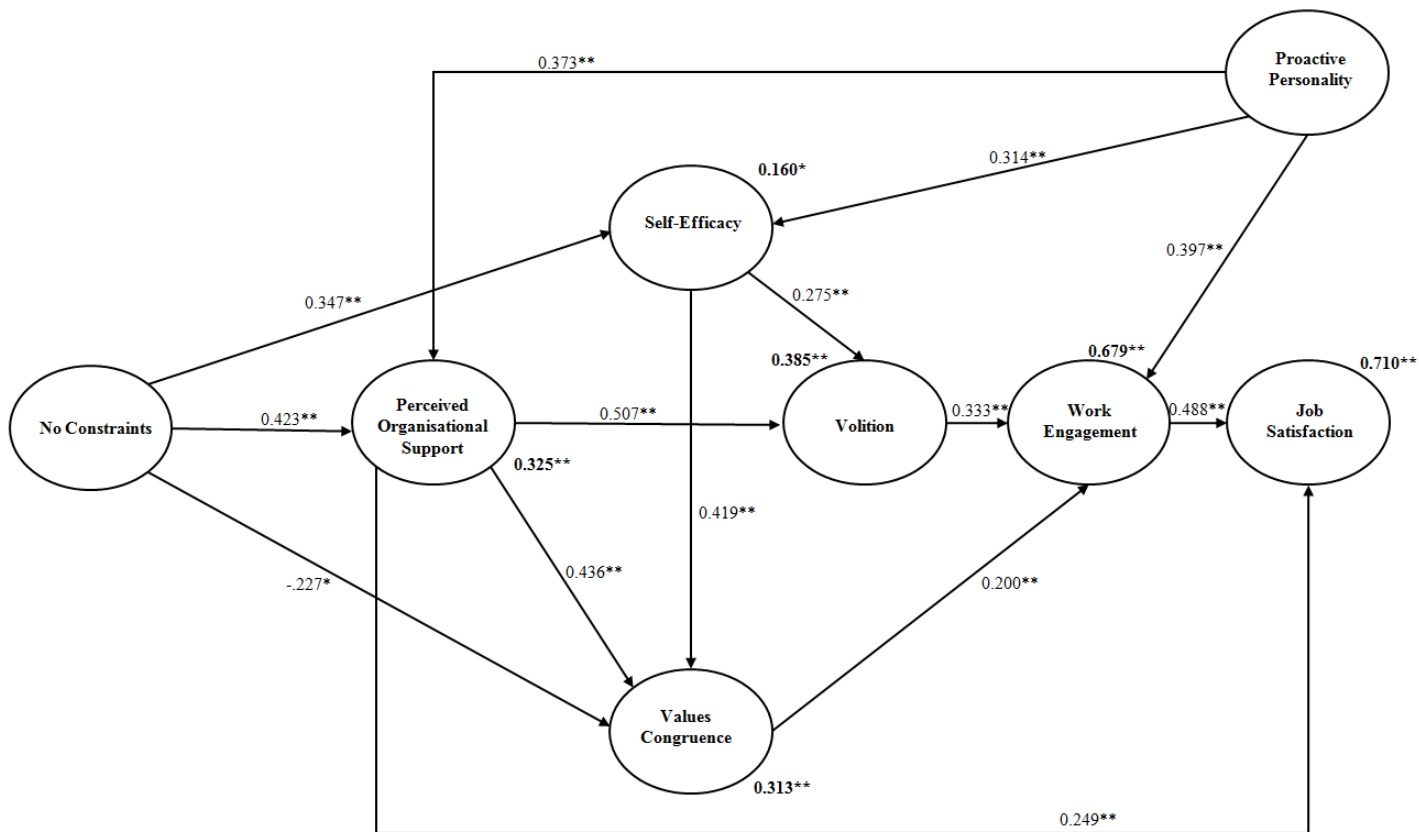


Figure 3. Model 2.1 SCCT Model of Farm Worker Job Satisfaction including work volition. Only statistically significant paths are drawn. Standardised regression weights are reported on paths. The variance predicted in latent constructs are in bold. * $p < .05$, ** $p < .01$.

Outcomes

5. Describe how the project's outputs will contribute to the planned outcomes identified in the project application. Describe the planned outcomes achieved to date.

There were several important theoretical outcomes and practical outcomes. In terms of practical outcomes, the four main findings of the research relevant to the project's original aims include:

- Perceptions that workers are valued and their employer cares about their wellbeing are directly related to their sense of job satisfaction
- Farm workers job satisfaction is important for farm businesses productivity as this factor closely aligns with work engagement
- Investment in improving farm worker's confidence in their skills and ensuring they feel valued and cared for may help those that are doing this work due to limited career options to regain a sense of capacity for choice of career which improves their current work engagement.
- Investment in improving farm worker's confidence in their skills and ensuring they feel valued and cared for improve work engagement as these strategies lead to workers increased identification with the values of farming.

6. Please describe any:-

- a) technical advances achieved (eg commercially significant developments, patents applied for or granted licenses, etc.);**
- b) other information developed from research (eg discoveries in methodology, equipment design, etc.); and**
- c) required changes to the Intellectual Property register.**

(a) This project did not have any technical advances achieved

(b) N/A

(c) No changes required

Conclusion

7. Provide an assessment of the likely impact of the results and conclusions of the research project for the cotton industry. What are the take home messages?

The results from the current research project provide further information of the psychological processes that effectively contribute to on-farm workers work engagement and job satisfaction. It is the first of its kind in the cotton industry to use equal weighted qualitative and quantitative methods to do so, and to attempt a large scale collection of quantitative data to model the predictors of job satisfaction. Hopefully the data can be used to demonstrate the value and return on investment that is possible if cotton growers create farm work environments that (a) make workers feel valued and supported, (b) help workers develop their skill confidence, and (c) lead workers to identify with the values the drive sustainable farming. In this way the evidence from the current research may be used to further engage and support cotton grower's to effectively implement workforce development strategies as part of their farming business plans.

Extension Opportunities

8. Detail a plan for the activities or other steps that may be taken:

- (a) to further develop or to exploit the project technology.**
- (b) for the future presentation and dissemination of the project outcomes.**
- (c) for future research.**

It is my intention to continue to research workforce development in the cotton industry. I have plans to develop a podcast (with CRDC approval) that will be a mix of anecdotal industry stories that demonstrate practical workforce strategies and research that may give cotton growers' some new

ideas in terms of making sure they are considered an employer-of-choice. I will be presenting at the Australian Association of Cotton Scientists Conference in September, 2017, and further promoting the research to colleagues in other science disciplines.

**9. A. List the publications arising from the research project and/or a publication plan.
(NB: Where possible, please provide a copy of any publication/s)**

I have not formally published in academic journal articles yet, but have presented at the following conferences:

McDonald, N. (2016). *Farm workers' career engagement*. Paper presented at the 2016 Biennial Conference of the Society for Vocational Psychology, 16-17 May, Florida State University, Tallahassee, FL, USA

McIlveen, P., McDonald, N., McLennan, B., Oliver, M. E., & Perera, H. N. (2016). *The SCCT in Australia: Empirical models for di(e)sperate industries*. Paper presented at the 2016 Biennial Conference of the Society for Vocational Psychology, 16-17 May, Florida State University, Tallahassee, FL, USA

McDonald, N. (2016). *What motivates people in the cotton industry? It's not always about the money*. Three minute thesis presented at the 2016 Biennial Australian Cotton Conference, 2-4 August, Gold Coast Convention Centre, Gold Coast, Qld, Australia.

McDonald, N. (2017). *Stepping up to the plate: Using social cognitive career theory to inform the Australian agriculture industry's workforce strategies*. Paper presented at the 2017 Annual Conference of the Career Development Association of Australia, 18-19 May, Pullman Brisbane King George Square, Brisbane, Qld, Australia

B. Have you developed any online resources and what is the website address?

N/A

Part 4 – Final Report Executive Summary

Provide a one page Summary of your research that is not commercial in confidence, and that can be published on the World Wide Web. Explain the main outcomes of the research and provide contact details for more information. It is important that the Executive Summary highlights concisely the key outputs from the project and, when they are adopted, what this will mean to the cotton industry.

As discussed with Amy Withington, please find attached the abstract for my Doctoral Thesis which is titled “Exploring Cotton Farm Workers’ Job Satisfaction by Adapting Social Cognitive Career Theory to the Farm Work Context”. I will submit the final copy of my thesis once it is returned from examination.

ABSTRACT

This thesis reports on research into the application of the Social Cognitive Career Theory (SCCT) of job satisfaction in a sample of Australian farm workers. The SCCT job satisfaction model maps the relationships between five predictor variables: (a) personality and affective traits; (b) goal and efficacy-relevant environmental barriers, supports and resources; (c) self-efficacy; (d) expected and received work conditions and outcomes; and (e) goals and goal-directed activity, and their direct and indirect influence on fostering (or inhibiting) the individual’s experience of work satisfaction (Lent & Brown, 2006a). SCCT is a dominant theory in the Vocational Psychology discipline and has been tested for generalisability in a wide range of cultures and work contexts. As yet, it has not been extensively applied to understand the career motivations of the Australian agricultural workforce. The current research addresses this gap in the vocational psychology literature

and attempts to counter the agentic assumptions of the SCCT by proposing the addition of work volition to the model.

The literature on career motivations for Australian agricultural workers is reviewed, informing consideration for the application of the SCCT in this context. The proposed testing of the SCCT Model of Job Satisfaction in the Australian farming context draws on other existing theories and frameworks including, the Psychology of Working, self-efficacy theory, person-organisation fit theory, organisational support theory, and job demands-resources theory. In this way, the SCCT is used to synthesise multiple perspectives of contributing factors to job satisfaction and provide a comprehensive understanding of psychological factors that influence attraction and retention of workers to the Australian agricultural industry and more specifically to the Australian cotton industry.

A sequential mixed methods design is used to position the farm work context as central to testing the SCCT Model of Job Satisfaction. Firstly, semi-structured interviews conducted with Australian cotton farm workers and growers were used to collect data which described the SCCT constructs in the farming context. Following thematic analysis of these data, the face validity of measures that operationalised the SCCT constructs was discussed. Furthermore, a new measure to capture farm worker self-efficacy was developed. Respondent's descriptions of work volition were used to inform the integration of this construct into the newly proposed SCCT Model of Farm Worker Job Satisfaction. The second study surveyed farm workers and used Structural Equation Modeling (SEM) to test two conceptual models; (a) the SCCT Model of Farm Worker Job Satisfaction and (b) the SCCT Model of Farm Worker Job Satisfaction including work volition.

The results found sufficient evidence to support the generalisability of the SCCT Model of Job Satisfaction to the Australian agricultural context and the cotton farm context. Although, it would appear that the relationships between self-efficacy and the SCCT antecedent and outcome constructs are more complex than the direct relationships hypothesised. While the addition of work volition to the SCCT Model of Farm Worker Job Satisfaction added little to the prediction of reported levels of job satisfaction, this did contribute to the explanation of the relationships between the SCCT predictor variables. The theoretical and practical implications of the results are discussed and recommendations for application of the findings and future research are made.